

Response ID ANON-URZ4-5FST-Q

Submitted to Fast-track approval applications
Submitted on 2024-05-03 16:07:06

Submitter details

Is this application for section 2a or 2b?

2A

1 Submitter name

Individual or organisation name:
Strath Taieri Irrigation Company

2 Contact person

Contact person name:
Bevan Wilson

3 What is your job title

Job title:
Company Chairman

4 What is your contact email address?

Email:
s 9(2)(a)

5 What is your phone number?

Phone number:
s 9(2)(a)

6 What is your postal address?

Postal address:

260 Hartfield Road
RD3
Middlemarch 9598

7 Is your address for service different from your postal address?

No

Organisation:

Contact person:

Phone number:

Email address:

Job title:

Please enter your service address:

Section 1: Project location

Site address or location

Add the address or describe the location:

Sutton Creek, Stony Creek, Burgan Stream, and the Loganburn Reservoir in the Strath Taieri area of Otago, north west of Dunedin and farmland around the town of Middlemarch.

File upload:

Scheme location map.png was uploaded

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Do you have a current copy of the relevant Record(s) of Title?

No

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Who are the registered legal land owner(s)?

Please write your answer here:

Government Agencies

- Ministry of Agriculture and Forestry (now Ministry for Primary Industries)

- Land Information New Zealand – Queenstown

- Department of Conservation

Private Landowners

- Hopefield Investments Limited

- See Enterprises Limited

- Stevenson Family Trust

- John and Susan Elliot

- Maniototo Irrigation Company Limited

Detail the nature of the applicant's legal interest (if any) in the land on which the project will occur

Please write your answer here:

The applicant is the Strath Taieri Irrigation Company Limited. The company itself does not own land to be used for the project. Affected landowners will either become shareholders of the company or are current project partners.

Section 2: Project details

What is the project name?

Please write your answer here:

Strath Taieri water storage and community resilience project

What is the project summary?

Please write your answer here:

This project seeks to increase water storage in the Loganburn reservoir in Otago to increase hydro-electricity output from two hydroelectric power stations and to develop an irrigation scheme in the Strath Taieri area (including water for community supply and for gold-mining purposes at Macraes mine).

What are the project details?

Please write your answer here:

The Loganburn water storage reservoir in the north-west Taieri area of Otago currently provides water to the Maniototo Irrigation Company for irrigation of approximately 10,000 hectares and to Manawa Energy for generation from the Paerau Gorge and Patearoa hydroelectric assets.

Independent farmer-irrigators in the Strath-Taieri currently source water on a run-of river basis from the Taieri River (and its tributaries) and irrigate approximately 1,500 hectares of land. However, these takes are highly unreliable, being at best 60 percent reliable (which is extremely poor). These irrigators have recognised the potential for multiple community benefits from increased water storage in the reservoir, including electricity generation, an option for a new community water supply for the town of Middlemarch, water for gold mining operations, and irrigation of a further 2,000 hectares. This will enable land use diversification from predominantly sheep and beef production to higher-value horticulture. The proposed project is supported by Horticulture New Zealand.

These multiple benefits mean this project will have regional significance for Otago.

It is proposed that up to 1,500 litres per second will be diverted from both Stony Creek and Burgan Stream in the headwaters of the Sutton Stream catchment (i.e. 3,000 litres per second at peak flow) via new weir structures and race conveyance channels, into the Loganburn reservoir. The level of the reservoir will potentially be raised by up to 800mm through works on the existing weir and spillway structures. This will allow for the storage of an additional 10 million cubic metres of water in the Loganburn reservoir.

The additional water will then be released from the reservoir through the existing Maniototo Irrigation Company infrastructure to both the Paerau gorge and Patearoa electricity generation assets, before being conveyed to the Taieri River, which will be used as the conveyance mechanism to distribute water to the Strath Taieri Irrigators and to Middlemarch town. The water for Oceana Gold at Macraes will be conveyed via existing pumping infrastructure.

Although led by the Strath Taieri Irrigation Company, the project is supported in principle (through a Memorandum of Understanding) and in practice (through previous and proposed funding) by Manawa Energy.

Project purpose

- Increasing generation output from the Manawa Energy Paerau hydroelectricity asset.
- Increasing generation output from the Manawa Energy Patearoa hydroelectricity asset, which currently only operates in winter months, depending on flow. This project will allow for generation duration summer months.
- Improving flows in significant stretches of the Taieri River during periods of typically low flows in summer (likely to worsen under climate change), thereby increasing habitat to support ecological values and flows for recreation values such as fishing, swimming, boating and general amenity values.
- Providing water for the irrigation of around 3,500 hectares of farmland (replacing 1,500 hectares of current independent irrigation and providing for a further 2,000 hectares) in the Strath Taieri area near the town of Middlemarch, thereby significantly improving the economic output of the farms in question and improving rural resilience under climate change.
- Providing the option for a community water supply to Middlemarch (residents currently take water from individual bores).
- Providing reliable water to the Oceana gold mining operation at Macraes mine near Palmerston, East Otago (New Zealand's largest operating gold-producing mine).

Project objectives

The objective of this project is to improve community wellbeing through the enhancement of existing water storage and the development of new conveyance infrastructure. The project aims to improve community wellbeing in the following areas:

- Improving social wellbeing through the provision of a community drinking water supply to the town of Middlemarch. All residents of Middlemarch currently source water from (at times unreliable) individual bores, meaning single-dwelling treatment is required. A community supply will improve health outcomes and efficiency, through community-level water supply protection planning and treatment.
- Improving economic wellbeing through supporting the three major sectors in the area: farming and agriculture (through increasing the area under irrigation), gold mining, and electricity generation.
- Improving environmental and social wellbeing through improving flows in a significant stretch (100 kilometres) of the Taieri River during the summer irrigation season, a period of typically low flows. This will improve habitat for the native aquatic species (such as the nationally vulnerable Taieri flathead galaxiid, which has a habitat of only 21 hectares), whilst also improving recreational values for sports fishing, boating, and swimming.

Activities:

- Upgrading Loganburn reservoir embankment and spillway
- Construction of weirs and conveyance infrastructure from Stony Creek and Burgan Stream
- Construction of access roads and tracks as required
- Construction of off take infrastructure
- Wetland and wildlife reserve remediation programme
- Infrastructure for drinking water for Middlemarch town

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

Governance and project management

o To date, the proposed project has been led by the Strath Taieri Irrigation Company, a limited-liability entity established to be the vehicle for progressing the proposal. A committee of farmer landholders has been leading the project on a volunteer basis.

o A new governance structure will be established as soon as possible to manage the next phase of the project. Whilst the make-up of a new governance group is not yet known, it is intended that there will be new governors, advisors, and contractors brought into the project to improve and diversify the expertise guiding the project. Identified skills and knowledge for these roles include (but are not necessarily limited to):

- Infrastructure project management and administration
- Planning and consenting
- Project financing and financial management
- Legal
- Tangata whenua
- Community liaison and engagement
- Representation from the major sectors involved in the project: irrigation, mining, and power generation
- Local authority, particularly in relation to the provision of drinking water supplies

o The project will seek input and advice from relevant government agencies and industry bodies to support the establishment of an appropriate governance structure.

o Following project completion, an operations governance entity with representatives from the shareholding entities will be established for the ongoing management and running of the scheme. Management will likely be provided by the Maniototo Irrigation Company to support effective catchment management and efficiency.

Funding

o Work will commence on developing the appropriate funding mechanism for the project immediately upon a new governance structure being established. An agreement in principle for funding contributions has already been made with Manawa Energy and discussions with Oceana Gold are already occurring.

o Much exploratory work has already been completed, through the completed Irrigation Acceleration Fund project.

Design work

o Design work has already been completed for the headworks required for the Loganburn reservoir, Stony Creek and Burgan Stream, and the conveyance races from the reservoir. Once initial project funding has been secured, work will commence on detailed design work for the distribution infrastructure to individual farmer irrigators alongside Middlemarch community town supply.

Capital works

o The capital works to be completed are:

- Increasing the height of Loganburn reservoir embankment and spillway
- Construction of required roading and access tracks to construction sites and for the purpose of ongoing operations.
- Construction of weirs in Stony Creek and Burgan Stream
- Construction of conveyance races from Stony creek and Burgan stream weirs
- Individual offtake works

Consenting and approvals

o Beyond the required approvals set out above, the individual irrigators in the scheme command area will be surrendering their water permits. This process will be facilitated by the project, in partnership with the Otago Regional Council.

Community and stakeholder engagement

o Facilitated engagement will commence once the project governance structure is established. This will build on engagement and consultation completed through the Irrigation Acceleration Fund programme.

What are the details of the regime under which approval is being sought?

Please write your answer here:

- Resource Management Act 1991
- Conservation Act 1987
- Public Works Act 1981

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

- Dunedin City Council
- Central Otago District Council
- Otago Regional Council

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

- The Loganburn reservoir infrastructure is owned and operated by the Maniototo Irrigation Company, for which they hold multiple permits and consents.
- The Strath Taieri Agriculture and Rural Tourism Trust has already led a process with the Otago Regional Council and affected consent holders to amend water permits held in relation to Stony Creek and Burgan Stream. This process meant the streams were no longer over-allocated, and ensured that an effective environmental flow regime was in place, and that water would be available for diversion to the Loganburn Reservoir.

Is approval required for the project by someone other than the applicant?

Yes

Please explain your answer here:

Variations will be required to consents and permits held by Maniototo Irrigation Company and Manawa Energy for increasing damming, discharges, and associated works.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

Project establishment – commence immediately; estimated completion date 30 November 2024

- o Establishment project governance group
- o Finalise and Implement procurement strategy
- o Update MoU with Manawa Energy
- o Engage with project partners and stakeholders
- o Develop land and infrastructure access strategy

Funding – commence immediately; estimated completion date 31 December 2025

- o Secure funding support from Manawa Energy as development investor
- o Secure funding support from potential water users

- o Development of financial model and secure loan funding
- o Finalisation of financial model and share price
- o Drafting of Information Memorandum for eligible investors as per clause 41 of Schedule 1 of the Financial Markets Conduct Act 2013
- o Release of Information Memorandum
- o Share purchase process

Procurement - commence 1 December 2024; estimated completion date 30 April 2025

- o Revise and update existing procurement strategy
- o Approach and contract expertise for relevant project aspects
- o Develop RFP(s) for relevant project aspect(s)
- o Assessment of relevant proposals
- o Complete contracting processes

Design work – has already commenced, to be completed 31 August 2025

- o Confirm final designs for headworks
- o Receive and accept design work for distribution and offtake infrastructure

Site works commencement November 2025

Site works completion 30 June 2026

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

Local authorities

- Dunedin City Council
- Central Otago District Council
- Otago Regional Council

Iwi authorities

- Kāi Tahu

Local landowners

Department of Conservation

Manawa Energy

Oceana Mining operation at Macraes

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

Community

- o The Strath Taieri Irrigation Company has developed a Memorandum of Understanding with Manawa Energy (then Trustpower). This
- o The Strath Taieri Irrigation Company has completed significant community consultation with affected landowners, irrigators and other stakeholders, in 2018 and 2019. This was completed as part of the Irrigation Acceleration Fund programme, which involved several facilitated community meetings, newsletters, and one-on-one engagement.

Relevant local authorities

- o The Strath Taieri Irrigation Company has maintained open dialogue with the relevant territorial authorities, the Dunedin City Council and the Central Otago District Council, since project conception.

Relevant iwi authorities

Kāi Tahu have been regularly engaged with for several years through their designated consultant resource management company, Aukaha.

Relevant Treaty settlement entities

The project area is within the rohe of Kāi Tahu iwi. However, there is no land within the project area that are subject to Treaty settlement provisions under the Ngāi Tahu Claims Settlement deed or the Ngāi Tahu Claims Settlement Act 1998.

Protected customary rights groups

The project area does not include any Māori land or protected customary rights areas.

Any person with a registered interest in land that may need to be acquired under Public Works Act 1981

All affected landowners (specifically those who own land that would be affected by the increase in volume of the Loganburn Reservoir and associated works) have been regularly engaged with for several years. These parties have provided support in principle, although no formal agreements have been put in place to date.

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Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

None

Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

The project area is within the rohe of Kāi Tahu iwi. However, there is no land within the project area that are subject to Treaty settlement provisions under the Ngāi Tahu Claims Settlement deed or the Ngāi Tahu Claims Settlement Act 1998.

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

No

If yes, what are they?:

There are no parcels of Māori land or marae within the project area.

A number of Māori values have been identified through cultural impact assessment and will be supported and addressed as part of the project rollout.

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

No

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

Upload your assessment if necessary:
No file uploaded

Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

A comprehensive aquatic ecological assessment of the project was completed by Ryder Consulting in 2006. The report concluded:
o There is a risk of galaxiids entering the reservoir. This can be mitigated through fish screening at the weir sites on the stream diversions.

o Fencing and replanting of endangered plant species (see below) will be required to remediate lost remnant subalpine wetland areas.

The proposed irrigation scheme would reduce flows in Stony Creek and Burgan Stream, and therefore the Sutton Stream. However, it is proposed that an environmental flow has been established through the existing consenting framework so that:

o Water may only be diverted/abstracted from Stony Creek and Burgan Stream when flows in the Sutton Stream are:

- between 175 and 700 litres per second; or
- over 1060 litres per second.

o When the flow of Stony Creek falls below 92 litres per second (double the 7-day mean annual low flow), all abstraction must cease.

o When the flow of Burgan Stream falls below 48 litres per second (the 7-day mean annual low flow), all abstraction must cease.

The Cultural Health Assessment for the project completed by Tipa and Associates in 2008 states that Kāi Tahu are concerned about the diversion of the streams to the Loganburn Reservoir through artificial means and to be managed by a private company. However, it notes that there is an opportunity for Kāi Tahu to “develop a relationship with the irrigation company and derive a measure of control on water use and management.” It also considered that the project provided the opportunity for Kāi Tahu to “negotiate initiatives that could enhance downstream habitats.”

Parts of a regionally significant wetland, Te Paruparu-a-Te-Kaunia/Great Moss Swamp will be inundated as part of the project (i.e. through the raising of the level of the Loganburn reservoir). These are the remnants of the natural wetland which existed prior to the construction of the Loganburn Reservoir in the late 1970s. The swamp is subalpine and is within the Rock and Pillar Ecological District. There are a number of threatened plant species in the swamp. However, the inundation will increase the wetted area around reservoir and allow for areas of new wetland to regenerate. This will be enhanced and supported by the project, which will undertake a comprehensive planting programme in conjunction with papatipu rūnaka to increase biodiversity and protect the new wetland area created by the inundation.

The creation of a weir and conveyance infrastructure will have an effect on the Department of Conservation Stony Creek Wildlife Reserve. As with the wetland inundation affects, a remediation plan has been discussed with the Department and would be implemented in partnership with them and kaitiaki rūnaka.

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Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

National policy statements and national environmental standards

National Policy Statement for Renewable Electricity Generation 2011 (NPSREG)

The project supports the overarching Objective of the NPSREG, which is:

To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation.

It will do this through increasing the renewable (hydroelectric) energy production of the Manawa Energy hydroelectric power stations at Paerau and Patearoa. Although a small generation increase when considered on the national scale, all increases in renewable generation are important. As stated in the preamble to the NPSREG, “the contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment.”

The Paerau and Patearoa hydroelectricity generation assets are owned and operated by Manawa Energy (formerly Trust Power). They were commissioned in 1984 and currently have a maximum capacity output of 12.3 megawatts and an annual output of 62 gigawatt hours.

The project would increase the energy production from the Paerau asset by up to three gigawatt hours per year (a five percent increase) which was estimated in 2018 to translate to an increase in annual revenue of \$156,000 within the local network and is likely to be over \$250,000 today. The increase in generation from Patearoa asset will also be significant, as the project will allow generation during the summer season, whereas the asset currently generates when sufficient flows are available during winter.

The increased generation opportunity provided by this project means it has national significance. As stated in the NPSREG, matters of national significance to which the NPSREG applies are:

- (a) The need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand; and
- (b) The benefits of renewable electricity generation.

Policies A, B, and C1 of the NPSREG are also applicable to this project's application, and it is worth including these in full, below:

POLICY A

Decision-makers shall recognise and provide for the national significance of renewable electricity generation activities, including the national, regional and local benefits relevant to renewable electricity generation activities. These benefits include, but are not limited to:

- a) maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;

- b) maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation;
- c) using renewable natural resources rather than finite resources;
- d) the reversibility of the adverse effects on the environment of some renewable electricity generation technologies;
- e) avoiding reliance on imported fuels for the purposes of generating electricity.

POLICY B

Decision-makers shall have particular regard to the following matters:

- a) maintenance of the generation output of existing renewable electricity generation activities can require protection of the assets, operational capacity, and continued availability of the renewable energy resource; and
- b) even minor reductions in the generation output of existing renewable electricity generation activities can cumulatively have significant adverse effects on national, regional, and local renewable electricity generation output; and
- c) meeting or exceeding the New Zealand Government's national target for the generation of electricity from renewable resources will require the significant development of renewable electricity generation activities.

POLICY C1

Decision-makers shall have particular regard to the following matters:

- a) the need to locate the renewable electricity generation activity where the renewable energy resource is available;
- b) logistical or technical practicalities associated with developing, upgrading, operating or maintaining the renewable electricity generation activity;
- c) the location of existing structures and infrastructure including, but not limited to, roads, navigation and telecommunication structures and facilities, the distribution network and the national grid in relation to the renewable electricity generation activity, and the need to connect renewable electricity generation activity to the national grid; National Policy Statement for Renewable Electricity Generation 2011 6
- d) designing measures which allow operational requirements to complement and provide for mitigation opportunities; and
- e) adaptive management measures.

National Policy Statement for Freshwater Management 2020 (NPSFM)

This project will meet the Objective of the NPSFM by providing for all three of the priority needs and values:

- (a) First, the health and well-being of water bodies and freshwater ecosystems – through provision of flows for 100km of the Taieri River.
- (b) Second, the health needs of people – through the option of reticulated community drinking water for the town of Middelmarsh.
- (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

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

Part 2 – Standards for farming activities

The anticipated changes in land use on those farms receiving irrigation from the project will not trigger these standards. There is no intended land use conversion to dairy or dairy support.

Part 3 – Standards for other activities that relate to freshwater

Subpart 1 – Natural inland wetlands

This project involves activities that will occur in an inland wetland (that is the remnant swamp around the Loganburn reservoir), triggering the provisions of Subpart 1 of the NESF).

The activities will involve construction, vegetation clearance, earthworks, and the use of water. As two of the uses of the infrastructure are for electricity generation and community water supply, they are “specified infrastructure” within the definition of the National Policy Statement for Freshwater Management 2020. This means that are discretionary, rather than prohibited, activities.

This project will increase the storage capacity of an already-existing community-scale irrigation scheme infrastructure asset (the Loganburn reservoir). The hearing panel for the Proposed Regional Policy Statement for Otago has recommended to the Council that established community scale irrigation infrastructure be included in the definition of Regionally Significant Infrastructure. Although the Council have not yet ratified the recommendations of the panel, it is likely it will be adopted. Regionally significant infrastructure is also within the definition of “specified infrastructure.”

A restoration plan will be developed and implemented to mitigate and offset the areas of wetland to be inundated, to include extensive fencing, planting, and monitoring.

Subpart 3 – Passage of fish affected by structures

This subpart of the NESF will apply to activities within the project (such as the construction of weirs on Stony Creek and Burgan Stream), likely making these activities discretionary activities. However, the final specifications of the infrastructure in question will determine the applicability of this part of the Standards (i.e. whether they are permitted or discretionary activities).

File upload:

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Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

The proposed project achieves the purpose of the Fast-Track Approvals legislation, which is “to provide a fast-track decision-making process that facilitates the delivery of infrastructure and development projects with significant regional or national benefits.”

As a multi-use project which provides benefits across multiple areas of wellbeing, and supporting economic development and resilience in the three major sectors in the area, hydroelectric generation, gold mining, and farming (agriculture and horticulture), this project is regionally significant and provides a significant opportunity for the Strath Taieri community.

This project will increase the storage capacity of an already-existing community-scale irrigation scheme infrastructure asset (the Loganburn reservoir). The hearing panel for the Proposed Regional Policy Statement for Otago has recommended to the Council that established community scale irrigation infrastructure be included in the definition of Regionally Significant Infrastructure. Although the Council have not yet ratified the recommendations of the panel, it is likely it will be adopted.

As discussed below, as per the National Policy Statement for Renewable Energy Generation (NPSREG), increasing renewable energy production as this project will, gives it national significance.

As noted above, the project requires multiple approvals across multiple local government authorities. Obtaining consents through a regular pathway will be challenging for the project, particularly in relation to those administered by the Otago Regional Council, where there is little certainty of outcome due to fragmented, controversial, and uncertain planning frameworks around land use and water permitting.

Significant time, resources, and investment has already been devoted to this significant and important project for the community and region over the last twenty years. The Fast-track Approval process provides the opportunity for the benefits of this project to be finally realised for Otago.

The project does not include any activities that would make it ineligible under the legislation.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

The project supports the aims and objective of the process and will deliver multiple community benefits.

Has the project been identified as a priority project in a:

Not Answered

Please explain your answer here:

No

Will the project deliver regionally or nationally significant infrastructure?

Regional significant infrastructure

Please explain your answer here:

As a multi-use project which provides benefits across multiple areas of wellbeing, and supporting economic development and resilience in the three major sectors in the area, hydroelectric generation, gold mining, and farming (agriculture and horticulture), this project is regionally significant and provides a significant opportunity for the Strath Taieri community.

This project will increase the storage capacity of an already-existing community-scale irrigation scheme infrastructure asset (the Loganburn reservoir). The hearing panel for the Proposed Regional Policy Statement for Otago has recommended to the Council that established community scale irrigation infrastructure be included in the definition of Regionally Significant Infrastructure. Although the Council have not yet ratified the recommendations of the panel, it is likely it will be adopted.

As discussed below, as per the National Policy Statement for Renewable Energy Generation (NPSREG), increasing renewable energy production as this project will, gives it national significance.

Will the project:

Please explain your answer here:

N/A

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

Increased and highly reliable irrigation to over 3,000 hectares will significantly increase the agricultural output of the area and allow land use diversification to high value horticultural production. This will increase land value and farm gate value add by around 30%.

Increased hydroelectricity generation will increase energy generation by approximately \$250,000 per year for the local area.

Will the project support primary industries, including aquaculture?

Yes

Please explain your answer here:

This project will support the primary sector through increasing the area under irrigation and providing reliable supply to areas already irrigated. This will also enable land use diversification to high value horticultural production.

Will the project support development of natural resources, including minerals and petroleum?

Yes

Please explain your answer here:

The project will provide reliable water supply to New Zealand's largest operating gold mine at Macraes.

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

No

Please explain your answer here:

See below for discussion of climate change adaptation.

Will the project support adaptation, resilience, and recovery from natural hazards?

Yes

Please explain your answer here:

The project provides important climate change mitigation benefits for the community. The Dunedin City Council Climate Change Predictions policy document 2011 notes that under climate change there is an increased likelihood of fires across the district. The individual offtake infrastructure will provide for multiple fire-fighting appliance hook-in points across the command area.

Increased irrigation and improved reliability of supply will be critical for agriculture and horticulture in the project area under climate change. A report produced for the Otago Regional Council by NIWA in 2019 found that the annual mean temperature for the Taieri area is likely to increase by up to 2°C by 2090. During the summer and autumn seasons, mean temperatures are likely to increase by as much as 3.5 °C. The number of extreme hot days (over 30 °C) could increase from two a year to over ten.

Current rainfall in the catchment averages around 500mm. Although NIWA predicts this will increase in the future, it is likely that area will experience more significant periods of drought, punctuated by intense rainfall events. Water storage is therefore critical for harnessing such flows, both for irrigation purposes, but also for supporting instream habitat and ecology in the Taieri river when water will be released during periods of low flow.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

The project will improve flows in a 100km stretch of the Taieri River during periods of typically low flows in summer (likely to worsen under climate change), thereby increasing habitat to support ecological values and flows for recreation values such as fishing, swimming, boating and general amenity values.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

The project is consistent with current local and planning documents (although a large number of consents are required, and some of these will be very difficult to obtain), but it is unclear whether this will remain the case under a new Land and Water Regional Plan for Otago, which is currently being drafted.

Anything else?

Please write your answer here:

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

Yes

If yes, please explain:

Seismic risk

Preliminary geotechnical assessments of the planned works involving the stream weirs, diversions, and races were completed by Opus International Consultants in 2007. Although recommendations were made in the report that some further specific assessments and testing would be required before construction, Opus concluded that a technically feasible scheme can be created "generally as envisaged in the preliminary design."

The report noted that there are local active fault lines, namely the Waipiata and Hyde Faults. However, it found that seismic risk in the area is relatively low. There is a risk of bank failures at both the Stony Creek and Burgan Stream weir construction sites, but these can be addressed through appropriate construction design and implementation, and these specific requirements are set out the Opus report. Erosion protection works will be required for the construction phase of the project to protect instream values.

Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

None

Load your file here:

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Declaration

Do you acknowledge your submission will be published on environment.govt.nz if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:

Bevan Wilson

Important notes