## Important note to Applicants

# Damming of Water

The damming or impounding of water is controlled by section 14 of the Resource Management Act 1991. The damming of water is prohibited unless expressly allowed by a National Environmental Standard, regional rule or resource consent.

Where the damming of water does not comply with Permitted Activity Rule 12.3.2.1 of the Regional Plan: Water for Otago (RPW) a resource consent (water permit) is required from Otago Regional Council (ORC). This applies to the damming of water both in a natural watercourse (instream dams) and outside of a natural watercourse (e.g., storage or detention ponds and reservoirs which may also be called off-line dams). This applies to both new and existing dams.

Resource consent (land use) may also be required for the dam structure if it is located within the bed of a watercourse and for works associated with constructing the dam (if it is new). Depending on the scale of the damming, a resource consent (discharge permit) may also be required for discharges from the dam e.g., spillway or outflow discharges.

**Existing dams**

- Unless permitted by Rule 12.3.2.1, a **water permit** is required for the damming of water by an existing dam.
- If water is taken out of the dam reservoir or pond for use than a **water permit** will be required for this taking if it is not permitted by rules in 12.1 of the RPW. If it is a retake of water that has been delivered to the dam reservoir from another source, the water permit for the source of the water in the reservoir could include the retake component (i.e. only one water permit to take water needs to be granted which will include both take locations). If not, a water permit for the retake will be required.
- Existing dam structures within a natural watercourse may also require **land use consent** in accordance with the rules in Chapter 13 of the RPW if you do not have a current resource consent in place for the structure.
- Existing dam structures located outside of a natural watercourse do not require land use consent from Otago Regional Council. Provided these structures were lawfully established, they form part of the existing environment.

**New dams**

- Unless permitted by Rule 12.3.2.1, a **water permit** is required for the damming of water in a new dam or pond. A **water permit** may also be required for taking and using of water from the dam and/or for the retaking of water delivered to the dam from another source. Form 4 can be used for that purpose.
- New dam or pond structures located outside of a natural watercourse do not require land use consent from Otago Regional Council but may require land use consent from the relevant District or City Council.
- Unless permitted by Rule 13.2.1.3, a **land use consent** is required for a new dam within a natural watercourse. Such structures are discretionary activities in accordance with Rule 13.2.3.1 of the Regional Plan: Water for Otago. A **land use consent** may also be required for disturbance of the bed of a natural watercourse under rules in Chapter 13.5 of the Water Plan during construction of the structure. This includes the associated remobilisation and re-deposition of bed material. Use Form 10A for these applications.

### Definitions

**Dam:** A structure used or to be used for the damming of any water, or water body.

**Large dam (Building Act 2004 definition):** Means a dam that has a height of 4 or more metres and holds 20,000 or more cubic metres volume of water or other fluid.

**Small dam:** A dam:

(a) Where the size of the catchment upstream of the dam is no more than 50 hectares; and

(b) where the water stored immediately upstream of the dam is no more than 3 metres deep; and

(c) where the volume of water stored by the dam is no more than 20,000 cubic metres.

**To dam:** In relation to the damming of water, is the process of impounding the water for any purpose and for any period of time, as in a reservoir.

- A **water permit** may be required to divert water if flows are to be diverted during dam construction and permitted activity Rule 12.3.2.3 cannot be met. Form 3 can be used for this purpose.

- A **discharge permit** for the discharge of water from a dam (e.g. spillway discharge) may be required if permitted activity Rule 12.B.1.10 cannot be met for 'large' dams (dams that would require a consent for the original structure placement). Most damming discharges cannot meet this permitted activity because the discharge includes settled sediment. Consent is required under Rule 12.B.4.1. For 'small' dams the relevant permitted activity rules are 12.C.1.1 and 12.C.1.2. Both of these need to be met for the activity to be permitted. If a discharge permit is required, use Form 7 for this application.

- Separate discretionary resource consent for a weir may also be required under **Regulation 73 of the NESFW**. Under these standards, a weir means *an open-topped structure across the full width of any river or connected area that— (a) alters the water level and the flow characteristics of the water; and (b) allows water to flow passively through or over the top.* Note: a weir is to be considered as a dam under the RPW irrespective of how it is defined in the NES-FW. This may mean that consent is required for a weir to dam under the RPW and under Regulation 73 of the NES-FW (or one or the other).

- **Regulations 58-74 of the NESFW** require information on the location, dimensions and design of any new dams in rivers to be provided to ORC. This applies regardless of whether the dam structure is permitted or not.

- Large dams will also require **Building Consent.** Building Consents for dams in the Otago Region are currently processed by Environment Canterbury. Further advice can be found here: https://www.ecan.govt.nz/do-it-online/resource-consents/building-consent-for-large-dams/

Where the damming of water requires a water permit, regardless of whether the dam structure requires a land use consent or building consent, applicants are required to provide details of the suitability and safety of the dam structure to impound the proposed (or existing) volume of water. This is particularly important for existing dams that may be ageing.

Applications for a water permit for the damming of water can be made by completing Form 1 and Form 2 (attached).

# Resource Consent Application Form 2

## To dam water

This application is made under Section 88 of the Resource Management Act 1991.

## PLEASE READ THIS PAGE BEFORE COMPLETING THE APPLICATION FORM

This form is to be used for applications seeking to dam water. This form applies to both the damming of water within a watercourse ('**instream dams'**), or outside of a watercourse (**'off-line dams'**).

A number of resource consents may be required for the construction of a dam and / or the impoundment of water behind a dam. This Form addresses the requirements for a **water permit** to **dam water** only.

Depending on the location of your dam structure, and if the dam structure is existing or new, you may not need to fill out all parts of this Form.

Please note that additional permits may be required when damming water. These include:

- a water permit to take surface water or groundwater, should the dam impound water for which no consent is held to take the water (see Form 4 or 5), and
- a water permit to divert water, if flows are to be diverted during dam construction (see Form 3).
- a discharge permit to discharge water from a dam (see Form 7),
- a land use consent to erect a dam structure in the bed of a watercourse (see Form 10A),
- a discharge permit to discharge contaminants to water during dam construction (see Form 7); and
- a building consent for the dam structure. Please note that dam structures and dam modifications require a building consent under the Building Act (2004). Environment Canterbury currently issue building consents for dams in the Otago region. You will need to apply to Environment Canterbury directly for a building consent. https://www.ecan.govt.nz/do-it-online/resource-consents/building-consent-for-large-dams/

Form 1 and Form 2, when properly completed, may provide an adequate "Assessment of Effects on the Environment" (AEE) if the effects of the damming are small and limited. Where the effects of the proposal are larger, a separate AEE should be provided and should be supported by a report by a professional advisor. The required detail for an AEE should reflect the scale and significance of the potential adverse effects the proposed damming activity may have on the environment. We encourage applicants to provide as much information as possible in their application to avoid processing delays and increased costs.

Guidance to answering the questions appear at the end of this form: "Notes to provide Guidance on Completing Form 2". Details of the information required in an AEE are included in the Fourth Schedule of the Resource Management Act 1991 appended to Form 1: Resource Consent Application.

**If all the necessary information is not supplied with the application then Otago Regional Council may return your application, request further information or decline your application. This will lead to delays in the processing of your application and may increase processing costs.**

## PART A: Description of the Proposed Damming and Associated Activities

**A.1** **Is the application to dam water:**

☐ a new consent, or

☐ to replace an existing consent?_____(consent number)

**A.2** **Please Indicate what provisions of Permitted Activity Rule 12.3.2.1 of the Regional Plan: Water for Otago cannot be met by the proposed damming activity. A copy of the permitted activity rule can be found in the RPW** Water (orc.govt.nz)**:**

☐ The size of the catchment upstream of the dam is greater than 50 hectares in area (**note**: this does not apply to off-line dams where no catchment runoff is collected).

*Size of catchment upstream of dam:*_____

☐ The water immediately upstream of the dam is more than 3 metres deep.

*Maximum water depth immediately behind dam:*_____

☐ The volume of water stored by the dam is more than 20,000 cubic metres.

*Maximum volume of water able to be stored behind dam:*_____

☐ A lawful take will be adversely affected by the damming.

*Identify take(s) affected, and water permit numbers, if known:*_____

☐ A wetland identified in Schedule 9 of the Regional Plan: Water or any wetland higher than 800 metres above sea level will be adversely affected by the dam.

*Name/describe the wetland(s):* _____

☐ The dam will cause either flooding, erosion, land instability, sedimentation or damage of another person's property.

*Name which effect above, and whose property (if relevant):* _____

**A.3** **Prohibited damming**

**The damming/diversion of the following rivers is prohibited by Rules 12.3.1.1 to 12.3.1.4 of the RPW.**

- Kawarau River main stem from Scrubby Stream to the Lake Wakatipu control gates (F41:035680 to F41:738667).
- Shotover River main stem at or about F41:765680 to E40:662173);
- Dart River/Te Awa Whakatipu main stem from Lake Wakatipu to confluence with Beans Burn (at or about E41:438853 to E40:375077).
- Rees River main stem from Lake Wakatipu to confluence with Hunter Creek (at or about E41:448852 to E40:499117).
- Diamond Lake, Diamond Creek and Lake Reid (at or about E40:435975; E40:444963 to E40:450918).
- Lake Wanaka and the Upper Clutha River/Mata-Au between F40:050089 to F40:088067, other than for the duration of an emergency as declared by the Guardians of Lake Wanaka under the Lake Wanaka Preservation Act 1973.

**Damming is prohibited for the below water bodies except for stock water supply purposes only**

- Pomahaka River, including its tributaries, from its sources to its confluence (G45:447454) with the Clutha River/Mata-Au;
- Waipahi River from its source to its confluence(G45:194520) with the Pomahaka River; and
- Lower Clutha River/Mata-Au from its confluence (G45:447454) with the Pomahaka River to the sea at the mouths of the Matau and Koau Branches.

**Is your proposal in one of the above catchments?**

☐ Yes *(please speak with a Consent Planner – you may be unable to apply for a consent)*

☐ No *(go to question A.4)*

**A.4 Purpose for damming water:** (Tick as appropriate)

☐ Irrigation

☐ Water harvesting / storage

☐ Stock water supply

☐ Domestic water supply

☐ Stormwater treatment

☐ Hydroelectric power generation

☐ Ornamental (specify):_____

☐ Other (specify):_____

**A.5 Other Resource Consents required**

**A5.1 (a) Do you hold a water permit to take the water that supplies the dam/reservoir and/or do you hold a water permit for taking water from the dam/reservoir?**

☐ Yes *(permit number/s):*_____*(go to Question A.4.2)*

☐ No *(go to question A.4.1(b))*

☐ Not applicable *(specify why):* _____

**(b)** Do you comply with any of the Permitted Activity Rules 12.1.2 or 12.2.2 of the Regional Plan: Water for the taking and use of water that supplies the dam and/or for taking and using water from the dam reservoir?

☐ Yes *(permitted activity rules comply with):*_____

☐ No *(a water permit may be required, use Form 4 or5)*

- *Tick if Form 4 or 5 are attached.*

**A5.2** **(a) Do you intend on discharging water from the dam into water or onto land where it may enter water?**

☐ Yes *(please specify how):*_____*(go to Question A.4.2(b))*

☐ No *(go to Question A.4.3)*

☐ Not applicable *(specify why):* _____

**(b)** Do you hold a Discharge Permit to discharge water to water from the dam?

☐ Yes *(permit number):*_____*(go to Question A.4.3)*

☐ No *(if consent is required for the damming activity, a discharge permit is required under Rule 12.B.4.1. Use Form 7.)*

- *Tick if Form 7 attached.*

**A5.3** **(a) Do you propose to construct a new dam in a watercourse?**

☐ Yes *(go to Question A.4.3(b))*

☐ No *(go to Part B)*

**(b)** **For the associated bed disturbance,** if consent to dam water is needed you will be unable to comply with the Permitted Activity Rules given in Section 13.5.1 of the Regional Plan: Water. As such a land use consent is required for the bed disturbance, please fill out Form 10A.

☐ *Tick if Form 10A attached*

**(c)** **For the erection/placement/alteration of the proposed dam structure within the bed of a lake or river,** if consent to dam water is needed you will be unable to comply with the Permitted Activity Rules given in Section 13.2.1 and 13.3.1 of the Regional Plan: Water, and a land use consent is required, please fill out Form 10A).

☐ *Tick if Form 10A attached*

**(d)** **If you propose to divert the flow of the watercourse to construct a dam, are you able to comply with the Permitted Activity Rules given in Section 12.3.2 of the Regional Plan: Water?**

☐ Yes (*no water permit - divert is required*)

☐ No (a *water permit for the diversion is required, use Form 3)*

- *Tick if Form 3 is attached*

## PART B: Location of the Proposed Activity

**B.1** **Describe the property on which the proposed/existing dam structure is to be located** *(if the dam is located on Crown Land River Bed, please note on (e) below)*

(a) Full name(s) of owner(s)_____

(b) Full name(s) of occupier(s)_____

(c) Address/Location_____

_____

(d) Legal Description(s) *(as shown on Record of Title, a copy of your Record of Title can be obtained from* Toitū Te Whenua Land Information New Zealand (linz.govt.nz)*)*

Lot_____DP_____Sec _____

Survey District (SD)_____

Area (Nearby town etc.)_____

Other (specify)_____

(e) Is the dam located on Crown Land River Bed: Yes: ☐ No ☐

If Yes, give the legal description of the property adjacent to the proposed structure

_____

**B.2 If land is currently/will be inundated as a result of the proposed dam structure, please describe the property(s) to be inundated**

(a) Full name(s) of owner(s)_____

(b) Full name(s) of occupier(s)_____

(c) Address/Location _____

_____

(d) Legal Description(s) *(as shown on Record of Title)*

Lot_____DP_____Sec _____

Survey District (SD) _____

Area (Nearby town etc.)_____

Other (specify)_____

**B.3 Map reference of the proposed/existing dam structure in NZTM 2000:**

NZTM 2000: E_____N_____

**B.4 If your proposed/existing dam structure is to be located within a natural water body, please provide the name of the water body:**

_____

*(If the water body is unnamed then note this and give the name of the water body to which it flows into)*

**B.5 Please provide a plan (A4 or A3 size) with this application that shows the following:**

(a) The location of the proposed/existing dam structure.

(b) Natural ground contours.

(c) The pattern of land inundation that will occur when the proposed dam is full and land inundation at different operating levels (if relevant).

(d) The legal boundaries of all property(s) that will be affected by the proposal, including the names of the owners and/or occupiers of those properties.

(e) The location of any spillway or overflow.

(f) The flow-path of any water body(s) *(please indicate the direction of flow with an arrow).*

(g) Any other relevant features, such as roads, bridges, dwellings, other structures (such as farm buildings) heritage or waahi tapu sites, cultural sites or other landmarks.

(h) The location of any known New Zealand Freshwater Fish Database (NZFFD) records, water quality monitoring sites, recreational river use locations.

(i) The location of any consented activities or known permitted activities including any upstream or downstream water users *(include name(s) and distance(s) if known).*

(j) Overflow / flood paths *(include buildings and infrastructure that may be within the flood path)*.

(k) A north symbol; and

(l) A scale

## PART C: Description of the Catchment

Please provide a description of the site and the receiving environment. This will include details of the catchment and land use, catchment hydrology, the natural and human use values and existing lawful users and existing lawful structures. Please provide the source of the information, where known.

## Land Use/Soils and Geology

For new damming activities only:

**C.1** What is the surrounding land used for upstream of the proposed dam? *(please ensure that land use upstream includes the proposed reservoir area).*

**C.2** Please describe the composition of the bed of the water body/soils of the land on which the dam is to be located.

For all damming activities:

**C.3** Please describe and identify on the map required by B.5 the existing locations on the water body and surrounding land where flooding, erosion, land instability and property damage currently occurs as a result of the existing dam or flows in the water body.

**C.4** What is the surrounding land used for downstream of the proposed dam? *(please ensure that land use downstream is described to a distance appropriate to the scale of possible downstream effects in the event of dam failure).*

## Hydrology

**C.5 If the proposed/existing damming is in a natural water body or there could be water bodies affected by the off-line damming:**

(a) Is the proposed damming located in a water body?

☐ Yes

☐ No, it is an off-line dam but there are nearby water bodies that could be affected by the damming

☐ No, it is an off-line dam and no nearby waterbodies will be affected by the damming

(b) Is the water body:

Perennial (flows all year round): ☐

Ephemeral (flows for parts of the year only e.g. spring): ☐

Intermittent (flows occasionally, e.g. after heavy rainfall) ☐

(c) Mean flow of water body *(if known)*:_____(L/s or $m^3/s$)

(d) Mean annual low flow of water body (7-day MALF) *(if known)*:_____(L/s or $m^3/s$)

(e) Describe frequency and duration of flows if ephemeral or intermittent *(if known)*_____

_____

_____

(f) Flow for 50 year return period flood *(if known)*_____(L/s or $m^3/s$)

(g) Flow for 100 year return period flood *(if known)*_____(L/s or $m^3/s$)

(h) Flow for 100 year plus/super design event *(if known)*_____(L/s or $m^3/s$)

## Natural and Human Use Values

**C.6 If the proposed/existing damming is in a natural water body or there could be water bodies affected by the off-line damming:**

(a) Please describe the aquatic life present in the water body(s) (including within any existing reservoir and the water body upstream and downstream of the damming). This may include fish (native and introduced species), invertebrates, aquatic vegetation and riparian vegetation. Schedule 1 of the RPW will provide some guidance on ecological values within the water body but this will not be a complete understanding of ecological values. *Note: An Ecological Report will often be needed to support an application*.

_____

_____

_____

_____

(b) Please describe the avian fauna including aquatic waterfowl associated with the water body (upstream downstream of the damming and within any existing reservoir).

_____

_____

_____

_____

(c) Please identify and describe any natural inland wetlands or Regional Significant Wetlands that are within or adjacent to the water body, inundation area and/or dam break area. Information about wetlands on the ORC website can be found here: Regionally Significant Wetlands (orc.govt.nz)

_____

_____

_____

(d) Please identify and describe any terrestrial values that are within or adjacent to the water body, inundation area and/or dam break area.

_____

_____

_____

(e) Please outline and describe the current water quality of the water body. Information about water quality on the ORC website can found here: Water Quality (orc.govt.nz). Water quality information can also be found at LAWA: Land, Air, Water Aotearoa (LAWA) - Can I swim here?

_____

_____

(f) Please identify any known pest species in the water body including within any existing reservoir.

(g) Please identify and describe any cultural values associated with the water body, inundation area and/or the dam break area. You may need to review Schedule 1D of the RPW, iwi management plans and undertake consultation with iwi to confirm what the specific values are. Some information may also be found here: Atlas — Cultural Mapping Project — Te Rūnanga o Ngāi Tahu (kahurumanu.co.nz)

(h) Please identify and describe any heritage values associated with the water body, inundation area and/or the dam break area. Heritage information can be found at: Heritage New Zealand and ArchSite - Archaeological site recording scheme - NZ Archaeological Association (nzarchaeology.org). There is also some guidance in Schedule 1B of the RPW.

(i) Please identify and describe any other water users, including existing consented users, community water supplies and recreational users within or adjacent to the water body. Information on regional consents can be found here: LocalMaps (orc.govt.nz)

(j) Please describe the existing natural character of the water body, inundation area and/or the dam break area

**B.6 If the proposed dam is located outside of a natural water body (e.g. it is an off-line dam):**

(a) Does the dam receive any natural runoff from the surrounding catchment?

- Yes (please describe): _____
- No

(b) Please outline and describe the existing natural values (terrestrial) of the land where the proposed dam and associated reservoir is to be located.

(c) Please show on the map required by B.5 the location of and describe any water bodies near the proposed dam and reservoir area.

(d) Please identify and describe any natural inland wetlands or Regional Significant Wetlands that are in the dam inundation area and/or dam break area.

## PART D: Dam Design Details

### D.1 Design and Construction Methodology

(a) Have you employed a professional advisor to design the dam?

☐ Yes (*give details*):_____

☐ No (*give reasons why not*) _____

(b) Have the New Zealand Society on Large Dams (NZSOLD) Guidelines (2015) been considered for this dam? https://nzsold.org.nz/wp-content/uploads/2019/10/nzsold_dam_safety_guidelines-may-2015-1.pdf

☐ Yes

☐ No (*describe why not*):_____

(c) What is the estimated start date of dam construction?_____

(d) What is the estimated completion date of dam construction?_____

(e) When will initial filling of the reservoir commence?_____

(f) When will initial filling of the reservoir finish?_____

(g) Give a description of site conditions and construction methodology, including (but not limited to) •

Foundation conditions, including any bore logs, results of shear strength testing etc.

- Excavation and key requirements
- Compaction requirements
- Proposed construction

*(please note that for all dams of greater than "low" risk (as defined by NZSOLD), a professional engineering report will be required):*

_____

_____

_____

_____

_____

(h) Please enclose labelled photographs of the site with this application, including

(i) Proposed dam site, or ☐

(ii) If an existing structure, the upstream batter, downstream batter, abutments, spillway, outflow pipe, dam crest, overflow path; and ☐

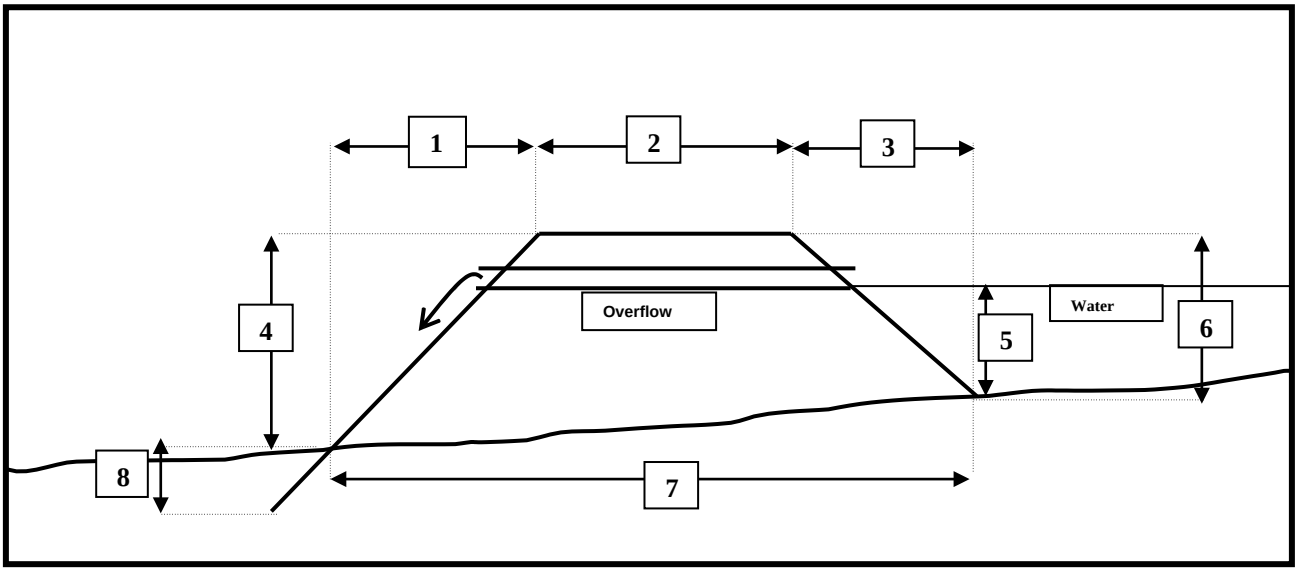
(iii) View upstream of the dam site ☐

(iv) View downstream of the dam site ☐

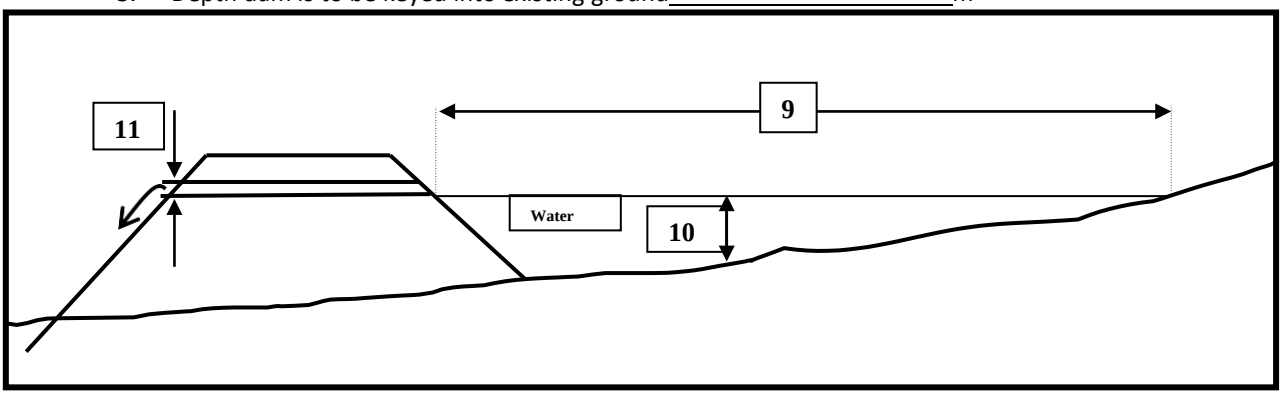
(v) Other (anything else of relevance e.g. sites of identified natural and cultural values) ☐

## D.2 Dam Design and Dimensions

**D.2.1** Please fill in the dimensions shown on the diagrams in the lists below (if the dam design is different from that shown below, please include a diagram showing all dimensions).




1. Downstream batter width _____m
2. Crest width _____m
3. Upstream batter _____m
4. Downstream batter height _____m
5. Overflow pipe height or spillway crest _____m
6. Upstream batter height _____m
7. Dam base width _____m
8. Depth dam is to be keyed into existing ground_____m




9. Length of pond behind dam _____ m
10. Maximum depth of reservoir _____ m
11. Diameter of overflow pipe _____ m

Other dimensions not shown on diagrams

12. Crest length: _____m
13. Spillway width: _____m
14. Spillway depth: _____m
15. Spillway inlet height: _____m
16. Spillway gradient: _____
17. Spillway surface material: _____
18. Material used for erosion protection of dam faces:

19. Surface area of reservoir behind dam (when water level at overflow pipe or spillway level):

Normal level_____m

Low level_____m

Flood level_____m

20. Volume of water retained by dam (when water level at overflow pipe or spillway level):

Normal level_____m

Low level_____m

Flood level_____m

21. Describe in detail the junction between the shoulders and the dam: _____

**D.2.2.** What material/materials is the dam made from (or to be made of)?

**D.2.3.** What are the design flow capacities of the spillway?

**D.2.4.** Details of any proposed or current mitigation measures, including low flow outlets/bypasses and fish passes:

**D.2.5** For dams for the creation of stormwater treatment ponds, please provide details of the ways in which the dam will be operated to allow for appropriate stormwater detention or treatment.

**D.2.6.** Supply accurate design drawings of the dam, including:

- Profile / elevation showing embankment cross section, design of foundations / key, conduits and drainage, service outlet and flood spillway design, and erosion protection.
- Location and design of any proposed mitigation measures, including low flow outlets / bypasses and fish passes.

### D.3 Dam Safety

**D.3.1** What is the potential hazard category for the dam in accordance with the NZSOLD Guidelines 2015?

☐ High potential impact structure

☐ Medium potential impact structure

☐ Low potential impact structure

☐ Very low potential impact structure

**D.3.2** What is the design life of the dam?

_____

**D.3.3** What maximum flood event is the dam designed to pass? _____

_____

_____

*(note that all dams should be able to pass a probable maximum flood (PMF) event)*

Estimated flow rate of design flood event: _____ $m^3/s$

Any other comments: _____

_____

_____

_____

_____

**D.3.4** Will the public and/or stock be prevented from accessing the dam structure and its banks?

☐ Yes (please describe):_____

_____

_____

☐ No (detail why):_____

_____

_____

**D.3.5** Will a Dam Safety Review, in accordance with the NZSOLD Guidelines (2015) be undertaken for the dam at regular intervals?

☐ Yes (please describe, including frequency of review, or the circumstances when review will be initiated, and how the review will occur):_____

_____

_____

_____

☐ No (detail why):_____

_____

_____

**D.3.6** Has an Emergency Action Plan been prepared for the dam, in accordance with the NZSOLD Guidelines (2015)?

☐ Yes (please attach a copy to the application

☐ No (detail why):_____

_____

_____

***D.4*** **Dam Operation and Management *(applicable to dams with a risk greater than "low", as defined by NZSOLD)***

Describe the operating regime of the dam on a separate page (or include an up-to-date copy of your operations and maintenance manual), including:

- Management of water levels.
- Management of discharges, including low flows/flow releases and flows over fish passes.
- If the dam will be used for water supply, demonstrate that the dam will provide sufficient storage to meet the projected demand, whilst providing for any proposed flow discharges.
- Maintenance and inspection of the dam embankment and spillways.
- Maintenance of reservoir including water quality control and removal of sediment and aquatic vegetation.

**D.5 Dam Break Risk Assessment**

**D.5.1** Please provide a risk assessment report on downstream impacts in the event of dam failure. This report should be prepared by a suitably qualified person, such as an engineer. For dams with a risk greater than "low", inundation maps should be supplied. Please ensure that the location of any dams or infrastructure is shown.

**D.5.2** Do you propose to hold public liability insurance for the dam in event of dam failure?

☐ Yes (please describe, including to what value the insurance is held for): _____

_____

_____

_____

_____

☐ No (please describe why not): _____

_____

_____

_____

_____

**D.6 Have you identified any fault zones, flood zones, landslip areas or other natural hazards that may impact on the dam structure (Refer to the ORC Natural Hazards database: Otago Natural Hazards Database (orc.govt.nz))?**

☐ Yes (please describe): _____

_____

_____

_____

_____

☐ No

## PART E: Assessment of Environmental Effects

*Note: Pursuant to Schedule 4 of the Resource Management Act, 1991, there are a number of matters that must be addressed by an assessment of environmental effects. These matters are listed in Form 1, with additional or specific matters relating to consents for damming listed below. An assessment of effects should be proportional to the scale and significance of the proposed activity and should relate to all the activities that have been applied for (e.g. water permits for damming and taking, discharge permits for discharges, land use consents for instream works and structures)*

**E.1 Outline and describe the receiving environment that the assessment of effects is based on.** Council advice can be found here: https://www.orc.govt.nz/media/9377/general-guidance-note-1-summary-of-legal-advice-obtained-for-consent-processing.pdf

**E.2 Assess effects on surface and/or groundwater hydrology.**
Yes (attached to application)
No (please outline reasons why this has not been provided in your application)

Some considerations:

- Effects to the natural flow regime e.g flat lining of flows, unnatural fluctuations, unnatural low flows
- Fluctuating lake levels and draw down rates for controlled lakes
- Hydrological interactions between the damming of surface water and groundwater hydrology

**E.3 For instream dams (and off-line dams that may affect water bodies), provide an independent ecological assessment of the effects the damming will have on the water body and any connected water bodies including existing reservoirs.**
Yes (attached to application)
No (please outline reasons why an independent ecological assessment has not been undertaken in your application).

Some considerations:

- Consider the natural values identified for the water body(ies) in Schedule 1A of the RPW, however the assessment should not be limited to those values.
- Effects on aquatic life including invertebrates, native fish and sports fish with consideration of effects on spawning and juvenile rearing locations as a result of changes in flow process/sediment movement and food availability.
    - Effects on fish passage including trout movement upstream from providing fish passage
    - Effects on mahika kai (e.g. long-fin eels, waikōura)
    - The need for residual flows to maintain aquatic values downstream of the damming
    - The need for flushing flows to remove algal biomass build-up or sediment build up downstream of the dam
    - The effects of habitat loss (on terrestrial and aquatic habitat) from reservoir existence/creation.
- Effects on avian fauna e.g. removal of nesting river environment, creation/removal of pond/lake habitat.
- Any off-set measures proposed for loss of indigenous biological diversity.
- Water quality effects including consideration of any contaminants within the dam reservoir
- Pest species management and the potential for the activity to increase the spread of weeds/pests
- Effects on the functioning and operation of any natural inland wetlands, Regionally Significant Wetlands and/or any regionally significant wetland values
- Specific effects during construction including to water quality.

**E.4 For new off-line dams assess any effects on existing ecological values** e.g. existing terrestrial ecology within the inundation area.

**E.5 Assess any effects on natural hazards including dam safety**
Some considerations:

- Flooding of land upstream of the dam by the reservoir including property damage
- Flooding of land downstream of the dam from spillway/emergency management operation including property damage
- Flooding of land downstream as a result of a dam break and overall risk of dam break (fault lines and landslip risk, nature, age and condition of the dam structure) including property damage.
- Effects of sediment build-up upstream and behind the dam
- Erosion effects downstream of the dam including from discharges associated with the damming
- Effects to bank stability/land instability
- Effects during construction including potential flooding effects
- Consideration of property damage, effects on any existing lawful activity including existing structures and consented/permitted activities
- Consideration of climate change effects e.g. increased storm events

**E.6 Assess any physical effect on the locality, including any landscape, visual, natural character or amenity (e.g. recreation) effect**
Yes (attached to application)
No (please outline reasons why this has not been provided)

Some considerations:

- Specifically assess the effects that the change in the hydrology, ecology, landscape etc will have on the natural character, amenity, landscape values you identified in B.3.
- Policies 5.4.8 and 5.4.9 provide some guidance on what to consider when assessing natural character and amenity effects.
- Consider any outstanding natural features and landscapes.

**E.7 Assess any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity of the damming.**
Yes (attached to application)
No (please outline reasons why this has not been provided)

**E.8 Assess any effect of the damming activities on cultural values.**
Yes (attached to application)
No (please outline reasons why this has not been provided)

Some considerations:

- Effects on local rūnaka/iwi and the stated cultural values as identified in B.3 and through consultation with local iwi.
- Consideration of statutory acknowledgement areas
- Consider the need for a cultural impact assessment

**E.9 Assess any effect on other water users or other human use values.**
Yes (attached to application)
No (please outline reasons why this has not been provided)

Some considerations:

- What will the changes to the hydrology, ecology, water quality, natural hazard risk have on the following:
    - Recreational users and activities in and adjacent to the water bodies that will be affected (e.g. swimming, fishing, boating, game bird hunting)
    - Permitted activity operations – located upstream and downstream of the dam
    - Consented activities (e.g. surface water takes, groundwater takes, land use consents, discharges) - located upstream and downstream of the dam
    - Public access – will the damming activity restrict legal public access?
    - Heritage values of any site, building, place or area that could be affected by the damming (inundation, changes in operating levels, located within the dam break, at the site of the dam)
- Depending on the scale and nature of the proposal and the significance of the above values you may need to support your application with expert technical assessment e.g. from an amenity effects expert, heritage expert.
- Include any consultation with parties and the outcomes of that consultation. This will help to define the values and effects associated with the proposal.

**E.10 Describe any positive effects.**
Yes (attached to application)
No (please outline reasons why this has not been provided)

**E.11 Outline and describe any mitigation you propose. This could include consideration of the following:**

- Residual flows
- Flushing flows
- Fish screening on water intakes
- Measures for management where there are low flows
- Flow sharing measures
- Flood attenuation
- Wetland creation
- Provision of pass for migratory fish – e.g. fish pass, diversions, climbing surfaces
- Fencing of reservoir and riparian planting
- Dam safety management

**E.12 Outline any proposed off-set or compensation measures**

**E.13 Outline monitoring proposed to measure any effects of your proposed dam on the environment (e.g. flow monitoring, water quality and/or ecological monitoring, dam safety monitoring)**

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## PART F: Alternative Locations and Methods

**F.1 Does your property have alternative locations for the dam *(*such as out of river locations, or rivers of lower**

**environmental value)?**

☐ No

☐ Yes *(please detail why your chosen location is considered the best option for you)*

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## PART G: Statutory Assessment

The Resource Management Act requires your application to include an assessment of the proposed activity against the relevant statutory documents. In this case, the Regional Plan: Water, proposed Regional Policy Statement and Iwi Management Plans are the most relevant documents. For larger applications, assessment against higher order documents may also be required.

If you are unable to assess the application against the relevant statutory document or you believe your proposal is inconsistent with the relevant policies and documents, it is recommended you seek professional planning assistance to help you with your application.

**G.1 Please provide an assessment of your proposal against the following statutory documents.** There may be other policy provisions that are relevant to your application and you should refer to the source document for any other objectives and policies that may need to be assessed. Potentially relevant objectives and policies are attached at the end of this form.

- Regional Plan: Water for Otago (RPW)
- Partially Operative Regional Policy Statement 2021 (PO-RPS)
- Proposed Regional Policy Statement 2021 (pRPS)
- National Policy Statement for Freshwater Management 2020 (NPS-FM 2020)
- National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG 2011)
- National Environmental Standard for Freshwater Management 2020 (NES-FW 2020)
- National Environmental Standard for Sources of Human Drinking Water 2007 (NES-HDW 2007)
- Kai Tahu ki Otago Natural Resource Management Plan 2005 (NRMP)
- For activities located south of the Clutha River/ Mata-Au, the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 - The Cry of the People, Te Tangi a Tauira

## PART H: Consultation

**H.1 Please outline any consultation undertaken with those persons/parties who may be interested in or potentially affected by your proposal to dam water (e.g. other water users, Department of Conservation, Fish and Game Council, Iwi, Forest and Bird, Waka Kotahi). Please provide evidence of this consultation and summarise/highlight key values and issues of concern raised by any parties.**

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**H.2 Please provide any written approvals to the activity using Council's written approval Form 8A:** Ready to Apply for a Consent (orc.govt.nz)

## PART I: Is Your Application Complete?

**I.1 In order to provide a complete application have you remembered to:**

(a) Fully complete this form and Form 1 (Resource Consent Application) ☐

(b) Paid your deposit or attached a cheque – see Form 1 for details ☐

(c) Include a detailed location / site plan? ☐

(d) Attached relevant photographs? ☐

(e) Enclosed a Record of Title less than 3 months old? ☐

(f) Attached any written approvals? ☐

(g) Assessed the activity against the relevant planning provisions ☐

(h) Attached any appropriate additional information? ☐

Including:

(i) An emergency action plan? ☐

(ii) The dam maintenance and operations manual? ☐

(iii) Ecological assessment ☐

(iv) AEE ☐

(i) Completed and attached any additional forms for associated resource consents?

(i) Form 3 (to divert water) ☐

(ii) Form 4 or 5 (to take surface water or groundwater) ☐

(iii) Form 7 (to discharge contaminants or water to water) ☐

(iv) Form 10A (to disturb a water body and to erect a structure within the bed of a water body) ☐

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## APPENDIX 1: Planning Provisions for Damming Applications

| Provisions | Assessment |
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| **Regional Plan Water for Otago** | |
| Objective 5.3.3 To protect the natural character of Otago's lakes and rivers and their margins from inappropriate subdivision, use or development | |
| Objective 5.3.4 To maintain or enhance the amenity values associated with Otago's lakes and rivers and their margins | |
| Policy 5.4.2 Avoid, remedy or mitigate adverse effects and flooding, erosion, land instability, sedimentation or property damage from the management of surface water, groundwater, beds and margins of lakes and rivers | |
| Policy 5.4.3 Avoid adverse effects on existing lawful uses and priorities | |
| Policy 5.4.5 recognise the Water Conservation (Kawarau) Order 1997 by preserving, as far as possible, the waters set out in Schedule 1 of the Water Conservation Order | |

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| in their natural state, protecting the outstanding characteristics of waters set out in Schedule 2 of the Water Conservation Order, and sustaining the outstanding amenity and intrinsic values set out in both Schedules of this order | |
| Policy 5.4.6 legal public access to and along the margins of lakes and rivers will only be restricted where necessary…to protect the health or safety of people and communities, to ensure a level of security consistent with the purposes of a resource consent; or in other exceptional circumstances sufficient to justify the restriction notwithstanding the national importance of maintaining that access | |
| Policy 5.4.7 where existing public access to or along the margins of Otago's lakes or rivers is restricted, the provision or enhancement of alternative access may be required with respect to the restriction of existing legal public access, and will be promoted with respect to the restriction of informal access arrangements | |
| Policy 5.4.8 requires regard to topography, natural flow characteristics or water levels, water colour and clarity, ecology, the extent of use or development within the catchment, when considering adverse effects on natural character of lakes, rivers and their margins | |
| Policy 5.4.9 requires regard to aesthetic values and recreational opportunities provided by a lake or river, or its margins when considering adverse effects on amenity values | |
| Policy 5.4.10 requires regard to any heritage values of any site, building, place or area for any activity involving surface water or the bed or margin of any lake or river | |
| Policy 6.5.4 In regulating the management of flows, other than in association with a small dam or any dam designed to contain contaminants, to have regard to provision for:<br>a) The requirements of:<br>i. Natural and human use values identified in Schedule 1;<br>ii. The natural character of the water body; and<br>iii. Amenity values supported by the water body; and<br>b) The periodic release of sufficient quantities of water at appropriate flow rates, where necessary to remove excess algal growth or an accumulation of sediment downstream of the dam; and<br>c) The existing needs of consumptive users of water, while taking into account, where appropriate, the extent to which the water body has been modified by resource use and development. | |
| Policy 6.6.2 To promote the storage of water at periods of high water availability through the collection and storage of rainwater; and the use of reservoirs for holding water that has been taken from any lake or river | |
| Policy 6.6A.4 – *Policy relating to the Waitaki catchment only* - In considering whether to grant or refuse consent to take, divert, dam or use water allocated for agricultural and horticultural activities, the consent authority will have regard to the extent to which exercise of the consent could result in the water quality objectives in this Plan not being achieved. | |
| Policy 8.4.1 to give priority to avoiding changes in the nature of flow and sediment processes in those water bodies, where those changes will cause adverse effects on the stability and function of existing structures; associated erosion, sedimentation or land instability; or any reduction in the flood carrying capacity of any lake or river | |
| Policy 8.5.1 provides for fish migration through structures in watercourses | |
| Policy 8.5.3 to require the holder of any resource consent for a dam on the bed of a lake or river to remedy any adverse effects attributable to the failure or overtopping of the dam structure, either during or after its construction | |
| Policy 8.6.1 to have regard to any adverse effect on the spawning requirements of indigenous fauna, and trout or salmon; bed and bank stability; water quality; amenity values caused by any reduction in water clarity; and downstream users | |
| Policies 10.4.1-10.4.2A relate to regionally significant wetland values, the avoidance of adverse effects on these values and the need for financial contributions. | |
| **Partially Operative Regional Policy Statement 2021** | |
| • achieve integrated resource management (Policy 1.1.1)<br>• provide for economic wellbeing (Policy 1.1.2) | |

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| • provide for social and cultural wellbeing and health and safety (Policy 1.1.3) | |
| • taking the principles of Te Tiriti o Waitangi into account (Policy 2.1.2)<br>• managing the natural environment to support Kāi Tahu wellbeing (Policy 2.2.1)<br>• recognising and protecting important sites and values of cultural significance to Kāi Tahu (Policy 2.2.2)<br>• promote sustainable use of Māori land (Policy 2.2.4) | |
| • managing for freshwater values including<br>o Maintain or enhance ecosystem health in all Otago aquifers, and rivers, lakes, wetlands, and their margins<br>o Maintain or enhance the range and extent of habitats provided by fresh water, including the habitat of trout and salmon<br>o Recognise and provide for the migratory patterns of freshwater species, unless detrimental to indigenous biological diversity<br>o Avoid aquifer compaction and seawater intrusion in aquifers<br>o Maintain good water quality, including in the coastal marine area, or enhance it where it has been degraded<br>o Maintain or enhance coastal values<br>o Maintain or enhance the natural functioning of rivers, lakes, and wetlands, their riparian margins, and aquifers<br>o Maintain or enhance the quality and reliability of existing drinking and stock water supplies<br>o Recognise and provide for important recreation values<br>o Maintain or enhance the amenity and landscape values of rivers, lakes, and wetlands<br>o Control the adverse effects of pest species, prevent their introduction and reduce their spread<br>o Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion<br>o Avoid, remedy, or mitigate adverse effects on existing infrastructure that is reliant on fresh water (Policy 3.1.1) | |
| • manage the beds of rivers, lakes, wetlands, their margins, and riparian vegetation to achieve all of the following<br>o Maintain or enhance their natural functioning<br>o Maintain good water quality, or enhance it where it has been degraded<br>o Maintain or enhance ecosystem health and indigenous biological diversity<br>o Maintain or enhance natural character<br>o Maintain or enhance amenity values<br>o Control the adverse effects of pest species, prevent their introduction and reduce their spread<br>o Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion<br>o Maintain or enhance bank stability (3.1.2) | |
| • identify and protect outstanding freshwater bodies (Policy 3.2.13 & 3.2.14)<br>• identify and protect the significant values of wetlands (Policy 3.2.15 & 3.2.16) | |
| • identify and manage natural hazards that may adversely affect Otago's communities (Policy 4.1.1, 4.1.4 to 4.1.6)<br>• assess the consequences of natural hazard events (Policy 4.1.3)<br>• reduce existing natural hazard risk to people and communities (Policy 4.1.7)<br>• where natural hazard risk to people and communities is uncertain or unknown, but potentially significant or irreversible, apply a precautionary approach to identifying, assessing and managing that risk (Policy 4.1.8)<br>• avoid, remedy or mitigate adverse effects on natural or modified features and systems, which contribute to mitigating the effects of both natural hazards and climate change (Policy 4.1.9)<br>• give preference to risk management approaches that reduce the need for hard protection structures or similar engineering interventions, and provide for hard protection structures only when all of the following apply:<br>o Those measures are essential to reduce risk to a level the community is able to tolerate;<br>o There are no reasonable alternatives;<br>o It would not result in an increase in risk to people and | |

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| communities, including displacement of risk off-site;<br>o The adverse effects can be adequately managed;<br>o The mitigation is viable in the reasonably foreseeable long term (Policy 4.1.10)<br>• enable the location of hard protection structures or similar engineering interventions on public land only when either or both of the following apply:<br>o There is significant public or environmental benefit in doing so;<br>o The work relates to the functioning ability of a lifeline utility, or a facility for essential or emergency services (Policy 4.1.11)<br>• managing hazard mitigation measures, lifeline utilities, and essential and emergency services (Policy 4.1.12) | |
| • managing infrastructure activities<br>o Maintain or enhance the health and safety of the community<br>o Reduce adverse effects of those activities, including cumulative adverse effects on<br>natural and physical resources<br>o Support economic, social and community activities<br>o Improve efficiency of use of natural resources<br>o Protect infrastructure corridors for infrastructure needs, now and for the future<br>o Increase the ability of communities to respond and adapt to emergencies, and disruptive or natural hazard events<br>o Protect the functioning of lifeline utilities and essential or emergency services (Policy 4.3.1)<br>• recognising national and regional significance of infrastructure, managing adverse effects of infrastructure that has national or regional significance and protecting infrastructure of national or regional significance (Policy 4.3.2 to 4.3.4) | |
| • using existing renewable electricity generation structures and facilities, promoting small scale renewable electricity generation, protecting the capacity of renewable electricity generation, enabling more efficient transport of energy and protecting electricity generation infrastructure (Policy 4.4.2 -4.4.6) | |
| • maintaining and enhancing public access (Policy 5.1.1) | |
| • recognising heritage themes and managing historic heritage values (Policy 5.2.1 and 5.2.3) | |
| • apply an adaptive management approach, to avoid, remedy or mitigate actual and potential adverse effects that might arise and that can be remedied before they become irreversible (Policy 5.4.2)<br>• apply a precautionary approach to activities where adverse effects may be uncertain, not able to be determined, or poorly understood but are potentially significant (Policy 4.4.3) | |
| • consider the offsetting of indigenous biological diversity, when:<br>o Adverse effects of activities cannot be avoided, remedied or mitigated;<br>o The offset achieves no net loss and preferably a net gain in indigenous biological diversity;<br>o The offset ensures there is no loss of rare or vulnerable species;<br>o The offset is undertaken close to the location of development, where this will result in the best ecological outcome;<br>o The offset is applied so that the ecological values being achieved are the same or similar to those being lost;<br>o The positive ecological outcomes of the offset last at least as long as the impact of the activity | |
| **Proposed Otago Regional Policy Statement (P-ORPS) 2021** | |

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| ***MW–O1 – Principles of Te Tiriti o Waitangi***<br>***MW–P2 – Treaty principles***<br>***MW–P3 – Supporting Kāi Tahu well-being***<br>***IM–O2 – Ki uta ki tai*** | |
| ***IM–P2 – Decision priorities*** Unless expressly stated otherwise, all decision making under this RPS shall:<br>1. first, secure the long-term life-supporting capacity and mauri of the natural environment,<br>2. secondly, promote the health needs of people, and<br>3. thirdly, safeguard the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.<br><br>***IM–P4 – Setting a strategic approach to ecosystem health*** Healthy ecosystems and ecosystem services are achieved through a planning framework that:<br>(1) protects their intrinsic values,<br>(2) takes a long-term strategic approach that recognises changing environments,<br>(3) recognises and provides for ecosystem complexity and interconnections, and<br>(4) anticipates, or responds swiftly to, changes in activities, pressures, and trends. | |
| ***IM–P5 – Managing environmental interconnections***<br>Coordinate the management of interconnected natural and physical resources by recognising and providing for:<br>(1) situations where the value and function of a natural or physical resource extends beyond the immediate, or directly adjacent, area of interest,<br>(2) the effects of activities on a natural or physical resource as a whole when that resource is managed as sub-units, and<br>(3) the impacts of management of one natural or physical resource on the values of another, or on the environment. | |
| ***IM–P6 – Acting on best available information***. Avoid unreasonable delays in decision-making processes by using the best information available at the time, including but not limited to mātauraka Māori, local knowledge, and reliable partial data. | |
| ***IM–P14 – Human impact*** Preserve opportunities for future generations by:<br>(1) identifying limits to both growth and adverse effects of human activities beyond which the environment will be degraded,<br>(2) requiring that activities are established in places, and carried out in ways, that are within those limits and are compatible with the natural capabilities and capacities of the resources they rely on, and<br>(3) regularly assessing and adjusting limits and thresholds for activities over time in light of the actual and potential environmental impacts | |
| ***IM–P15 – Precautionary approach*** Adopt a precautionary approach towards proposed activities whose *effects* are uncertain, unknown or little understood, but could be significantly adverse, particularly where the areas and values within Otago have not been identified in plans as required by this RPS. | |
| ***LF–WAI–O1 – Te Mana o te Wai*** The mauri of Otago's *water bodies* and their health and well-being is protected, and restored where it is *degraded*, and the management of *land* and *water* recognises and reflects that:<br>1. *water* is the foundation and source of all life – na te wai ko te hauora o ngā mea katoa,<br>2. there is an integral kinship relationship between water and Kāi Tahu whānui, and this relationship endures through time, connecting past, present and future,<br>3. each *water body* has a unique whakapapa and characteristics,<br>4. *water* and *land* have a connectedness that supports and perpetuates life, and<br>5. Kāi Tahu exercise rakatirataka, manaakitaka and their *kaitiakitaka* duty of care and attention over wai and all the life it supports. | |

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| ***LF–WAI–P1 – Prioritisation*** In all management of fresh water in Otago, prioritise:<br>(1) first, the health and well-being of water bodies and freshwater ecosystems, te hauora te wai and te hauora o te taiao, and the exercise of mana whenua to uphold these,<br>(2) second, the health and well-being needs of people, te hauora o te tangata; interacting with water through ingestion (such as drinking water and consuming harvested resources) and immersive activities (such as harvesting resources and bathing), and<br>(3) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. | |
| ***F–WAI–P2 – Mana whakahaere*** Recognise and give practical effect to Kāi Tahu rakatirataka in respect of fresh water by:<br>(1) facilitating partnership with, and the active involvement of, mana whenua in freshwater management and decision-making processes,<br>(2) sustaining the environmental, social, cultural and economic relationships of Kāi Tahu with water bodies,<br>(3) providing for a range of customary uses, including mahika kai, specific to each water body, and<br>(4) incorporating mātauraka into decision making, management and monitoring processes. | |
| ***LF–WAI–P3 – Integrated management/ki uta ki tai*** Manage the use of *freshwater* and *land* in accordance with tikanga and kawa, using an integrated approach that:<br>1. recognises and sustains the connections and interactions between *water bodies* (large and small, surface and ground, fresh and coastal, permanently flowing, intermittent and ephemeral),<br>2. sustains and, wherever possible, restores the connections and interactions between *land* and *water,* from the mountains to the sea,<br>3. sustains and, wherever possible, restores the habitats of mahika kai and indigenous species, including taoka species associated with the *water body*,<br>4. manages the *effects* of the use and development of *land* to maintain or enhance the health and well-being of *freshwater* and *coastal water*,<br>5. encourages the coordination and sequencing of regional or urban growth to ensure it is sustainable,<br>6. has regard to foreseeable *climate change* risks, and<br>7. has regard to cumulative *effects* and the need to apply a precautionary approach where there is limited available information or uncertainty about potential adverse *effects*. | |
| ***LF–WAI–P4 – Giving effect to Te Mana o te Wai***<br>All persons exercising functions and powers under this regional policy statement and all persons who use, develop or protect resources to which this regional policy statement applies must recognise that LF-WAI-O1, LF-WAI-P1, LF-WAI-P2 and LF-WAI-P3 are fundamental to upholding *Te Mana o te Wai*, and must be given effect to when making decisions affecting *freshwater,* including when interpreting and applying the provisions of the LF chapter. | |
| **Please read the proposed Regional Policy Statement and confirm which of the following 5 FMU's the damming is located in and confirm that the proposal supports the vision for this FMU https://www.orc.govt.nz/plans-policies-reports/regional-plans-and-policies/otago-regional-policy-statements/proposed-otago-regional-policy-statement-2021** | |
| ***LF–VM–O2 – Clutha Mata-au FMU vision***<br>In the Clutha Mata-au *FMU*:<br>(1) management of the *FMU* recognises that:<br>(a) the Clutha River / Mata-au is a single connected system ki uta ki tai, and<br>(b) the source of the wai is pure, coming directly from Tawhirimatea to the top of the mauka and into the awa,<br>(2) *freshwater* is managed in accordance with the LF–WAI objectives and policies,<br>(3) the ongoing relationship of Kāi Tahu with *wāhi tūpuna* is sustained,<br>(4) *water bodies* support thriving mahika kai and Kāi Tahu whānui have access to mahika kai,<br>(5) indigenous species migrate easily and as naturally as possible along and within the *river* system, | |

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| (6) the national significance of the Clutha hydro-electricity generation scheme is recognised,<br>(7) in addition to (1) to (6) above:<br>(a) in the Upper Lakes rohe, the high quality *waters* of the *lakes* and their tributaries are protected, recognising the significance of the purity of these *waters* to Kāi Tahu and to the wider community,<br>(b) in the Dunstan, Manuherekia and Roxburgh rohe:<br>(i) flows in *water bodies* sustain and, wherever possible, restore the natural form and function of main stems and tributaries to support Kāi Tahu values and practices, and<br>(ii) innovative and sustainable *land* and *water* management practices support food production in the area and reduce discharges of nutrients and other *contaminants* to *water bodies* so that they are safe for human contact, and<br>(iii) sustainable abstraction occurs from main stems or *groundwater* in preference to tributaries,<br>(c) in the Lower Clutha rohe:<br>(i) there is no further modification of the shape and behaviour of the *water bodies* and opportunities to restore the natural form and function of *water bodies* are promoted wherever possible,<br>(ii) the ecosystem connections between *freshwater*, *wetlands* and the coastal environment are preserved and, wherever possible, restored,<br>(iii) *land* management practices reduce discharges of nutrients and other *contaminants* to *water bodies* so that they are safe for human contact, and<br>(iv) there are no direct *discharges* of *wastewater* to *water bodies*, and<br>(8) the outcomes sought in (7) are to be achieved within the following timeframes:<br>(a) by 2030 in the Upper Lakes rohe,<br>(b) by 2045 in the Dunstan, Roxburgh and Lower Clutha rohe, and<br>(c) by 2050 in the Manuherekia rohe. | |
| **LF–VM–O3 – North Otago FMU vision**<br>By 2050 in the North Otago FMU:<br>(1) fresh water is managed in accordance with the LF–WAI objectives and policies, while recognising that the Waitaki River is influenced in part by catchment areas within the Canterbury region,<br>(2) the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained and Kāi Tahu maintain their connection with and use of the water bodies,<br>(3) healthy riparian margins, wetlands, estuaries and lagoons support thriving mahika kai, indigenous habitats and downstream coastal ecosystems,<br>(4) indigenous species can migrate easily and as naturally as possible to and from the coastal environment,<br>(5) land management practices reduce discharges of nutrients and other contaminants to water bodies so that they are safe for human contact, and<br>(6) innovative and sustainable land and water management practices support food production in the area and improve **resilience to the effects of climate change.** | |
| **LF–VM–O4 – Taieri FMU vision**<br>By 2050 in the Taieri FMU:<br>(1) fresh water is managed in accordance with the LF–WAI objectives and policies,<br>(2) the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained,<br>(3) healthy wetlands are restored in the upper and lower catchment wetland complexes, including the Waipori/Waihola Wetlands, Tunaheketaka/Lake Taieri, scroll plain, and tussock areas,<br>(4) the gravel bed of the lower Taieri is restored and sedimentation of the | |

Waipori/Waihola complex is reduced

(5) creative ecological approaches contribute to reduced occurrence of didymo,

(6) water bodies support healthy populations of galaxiid species,

(7) there are no direct discharges of wastewater to water bodies, and

(8) innovative and sustainable land and water management practices support food production in the area and improve resilience to the effects of climate change.

**LF–VM–O5 – Dunedin & Coast FMU vision**

By 2040 in the Dunedin & Coast FMU:

(1) fresh water is managed in accordance with the LF-WAI objectives and policies,

(2) the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained,

(3) healthy estuaries, lagoons and coastal waters support thriving mahika kai and downstream coastal ecosystems, and indigenous species can migrate easily and as naturally as possible to and from these areas,

(4) there is no further modification of the shape and behaviour of the water bodies and opportunities to restore the natural form and function of water bodies are promoted wherever possible, and

(5) discharges of contaminants from urban environments are reduced so that water bodies are safe for human contact.

**LF–VM–O6 – Catlins FMU vision**

By 2030 in the Catlins FMU:

(1) fresh water is managed in accordance with the LF-WAI objectives and policies,

(2) the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained,

(3) water bodies support thriving mahika kai and access of Kāi Tahu whānui to mahika kai,

(4) the high degree of naturalness and ecosystem connections between the forests, freshwater and coastal environment are preserved,

(5) water bodies and their catchment areas support the health and well-being of coastal water, ecosystems and indigenous species, including downstream kaimoana, and

(6) healthy, clear and clean water supports opportunities for recreation and sustainable food production for future generations.

***LF–VM–P5 – Freshwater Management Units (FMUs) and rohe*** Otago's freshwater resources are managed through the following freshwater management units or rohe which are shown on MAP1:

Table 3 – Freshwater Management Units and rohe

| ***Freshwater Management Unit*** | **Rohe** |
|---|---|
| Clutha/Mata-au | Upper Lakes<br>Dunstan<br>Manuherekia<br>Roxburgh<br>Lower Clutha |
| Taieri | n/a |
| North Otago | n/a |
| Dunedin & Coast | n/a |
| Catlins | n/a |

**LF–VM–O7 – Integrated management**

*Land* and *water* management apply the ethic of ki uta ki tai and are managed as integrated natural resources, recognising the connections and interactions between *freshwater*, *land* and the coastal environment, and between surface water, *groundwater* and *coastal water*.

**LF–FW–O8 – *Freshwater*** In Otago's *water bodies* and their catchments:

(1) the health of the wai supports the health of the people and thriving mahika

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| kai,<br>(2) *water* flow is continuous throughout the whole system,<br>(3) the interconnection of *freshwater* (including *groundwater*) and *coastal waters* is recognised,<br>(4) native fish can migrate easily and as naturally as possible and taoka species and their habitats are protected, and<br>(5) the significant and outstanding values of Otago's *outstanding water bodies* are identified and protected. | |
| **LF–FW–O9 – *Natural wetlands*** Otago's *natural wetlands* are protected or restored so that:<br>(1) mahika kai and other *mana whenua* values are sustained and enhanced now and for future generations,<br>(2) there is no decrease in the range and diversity of indigenous ecosystem types and habitats in *natural wetlands*,<br>(3) there is no reduction in their ecosystem health, hydrological functioning, *amenity values*, extent or *water* quality, and if degraded they are improved, and<br>(4) their flood attenuation capacity is maintained. | |
| **LF–FW–O10 – Natural character** The natural character of *wetlands, lakes* and *rivers* and their margins is preserved and protected from inappropriate subdivision, use and development. | |
| **LF–FW–P7 – *Freshwater*** *Environmental outcomes, attribute* states (including target *attribute* states) and *limits* ensure that:<br>(1) the health and well-being of *water bodies* is maintained or, if *degraded,* improved,<br>(2) the habitats of indigenous species associated with *water bodies* are protected, including by providing for fish passage,<br>(3) *specified rivers and lakes* are suitable for primary contact within the following timeframes:<br>(a) by 2030, 90% of *rivers* and 98% of *lakes*, and<br>(b) by 2040, 95% of *rivers* and 100% of *lakes*, and<br>(4) mahika kai and *drinking water* are safe for human consumption,<br>(5) existing *over-allocation* is phased out and future *over-allocation* is avoided, and<br>(6) *freshwater* is allocated within environmental limits and used efficiently.<br><br>**LF–FW–P9 – Protecting *natural wetlands*** Protect *natural wetlands* by:<br>(1) avoiding a reduction in their values or extent unless:<br>(a) the *loss of values* or extent arises from:<br>(i) the customary harvest of food or resources undertaken in accordance with tikaka Māori,<br>(ii) restoration activities,<br>(iii) scientific research,<br>(iv) the sustainable harvest of sphagnum moss,<br>(v) the construction or maintenance of *wetland utility structures*,<br>(vi) the maintenance of operation of *specific infrastructure*, or *other infrastructure*,<br>(vii) *natural hazard works*, or<br>(b) the Regional Council is satisfied that:<br>(i) the activity is necessary for the construction or upgrade of *specified infrastructure*,<br>(ii) the *specified infrastructure* will provide significant national or regional benefits,<br>(iii) there is a *functional need* for the *specified infrastructure* in that location,<br>(iv) the *effects* of the activity on indigenous biodiversity are managed by applying either ECO–P3 or ECO–P6 (whichever is applicable), and | |

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| (v) the other *effects* of the activity (excluding those managed under (1)(b)(iv)) are managed by applying the *effects management hierarchy,* and<br>(2) not granting resource consents for activities under (1)(b) unless the Regional Council is satisfied that:<br>(a) the application demonstrates how each step of the effects management hierarchies in (1)(b)(iv) and (1)(b)(v) will be applied to the *loss of values* or extent of the *natural wetland*, and<br>(b) any consent is granted subject to conditions that apply the effects management hierarchies in (1)(b)(iv) and (1)(b)(v). | |
| **LF–FW–P10 – Restoring *natural wetlands*** Improve the ecosystem health, hydrological functioning, *water* quality and extent of *natural wetlands* that have been degraded or lost by requiring, where possible::<br>(1) an increase in the extent and quality of habitat for indigenous species,<br>(2) the restoration of hydrological processes,<br>(3) control of pest species and vegetation clearance, and<br>(4) the exclusion of stock. | |
| **LF–FW–P11 – Identifying *outstanding water bodies*** Otago's *outstanding water bodies* are:<br>(1) the Kawarau River and tributaries described in the Water Conservation (Kawarau) Order 1997,<br>(2) Lake Wanaka and the outflow and tributaries described in the Lake Wanaka Preservation Act 1973,<br>(3) any *water bodies* identified as being wholly or partly within an outstanding natural feature or landscape in accordance with NFL–P1, and<br>(4) any other *water bodies* identified in accordance with APP1.<br>**LF–FW–P12 – Protecting *outstanding water bodies***The significant and outstanding values of *outstanding water bodies* are:<br>(1) identified in the relevant *regional* and *district plans*, and<br>(2) protected by avoiding adverse *effects* on those values. | |
| **LF–FW–P13 – Preserving natural character** Preserve the natural character of *lakes* and *rivers* and their *beds* and margins by:<br>(1) avoiding the *loss of values* or extent of a *river*, unless:<br>(a) there is a *functional need* for the activity in that location, and<br>(b) the *effects* of the activity are managed by applying:<br>(i) for effects on indigenous biodiversity, either ECO-P3 or ECO-P6 (whichever is applicable), and<br>(ii) for other effects, the *effects management hierarchy,*<br>(2) not granting resource consent for activities in (1) unless Otago Regional Council is satisfied that:<br>(a) the application demonstrates how each step of the effects management hierarchies in (1)(b) will be applied to the *loss of values* or extent of the river, and<br>(b) any consent is granted subject to conditions that apply the effects management hierarchies in (1)(b),<br>(3) establishing environmental flow and level regimes and *water* quality standards that support the health and well-being of the *water body,*<br>(4) wherever possible, sustaining the form and function of a *water body* that reflects its natural behaviours,<br>(5) recognising and implementing the restrictions in Water Conservation Orders,<br>(6) preventing the impounding or control of the level of Lake Wanaka,<br>(7) preventing modification that would reduce the braided character of a *river*, and<br>(8) controlling the *use* of *water* and *land* that would adversely affect the natural character of the *water body.* | |

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| **LF–LS–O11 – *Land* and soil**<br>The life-supporting capacity of Otago's soil resources is safeguarded and the availability and productive capacity of highly productive land for *primary production* is maintained now and for future generations.<br><br>**LF–LS–O12 – Use of land**<br>The use of *land* in Otago maintains soil quality and contributes to achieving *environmental outcomes* for *freshwater*.<br><br>**LF–LS–P16 – Integrated management**<br>Recognise that maintaining soil quality requires the integrated management of *land* and *freshwater* resources including the interconnections between soil health, vegetative cover and *water* quality and quantity.<br><br>**LF–LS–P17 – Soil values**<br>Maintain the mauri, health and productive potential of soils by managing the use and development of *land* in a way that is suited to the natural soil characteristics and that sustains healthy:<br>(1) soil biological activity and biodiversity,<br>(2) soil structure, and<br>(3) soil fertility. | |
| **EIT–INF–O4 – Provision of *infrastructure*** Effective, efficient and resilient *infrastructure* enables the people and communities of Otago to provide for their social and cultural well-being, their health and safety and supports sustainable economic development and growth within the region within environmental limits.<br><br>**EIT–INF–P13 – Locating and managing effects of *infrastructure*** When providing for new *infrastructure* outside the coastal environment:<br><br>(1) avoid, as the first priority, locating *infrastructure* in all of the following:<br>(a) *significant natural areas,*<br>(b) outstanding natural features and landscapes,<br>(c) *natural wetlands,*<br>(d) *outstanding water bodies*,<br>(e) areas of high or outstanding natural character,<br>(f) areas or places of significant or outstanding *historic heritage*,<br>(g wāhi tapu, wāhi taoka, and areas with protected customary rights, and<br>(h) areas of high recreational and high amenity value, and<br>(2) if it is not possible to avoid locating in the areas listed in (1) above because of the *functional* or *operational needs* of the *infrastructure* manage adverse effects as follows:<br>(a) for *nationally* or *regionally significant infrastructure*:<br>(i) in *significant natural areas,* in accordance with ECO–P4,<br>(ii) in *natural wetlands,* in accordance with the relevant provisions in the NESF,<br>(iii) in *outstanding water bodies,* in accordance with LF–P12,<br>(iv) in other areas listed in EIT–INF–P13 (1) above, minimise the adverse *effects* of the *infrastructure* on the values that contribute to the area's importance, and<br>(b) for all *infrastructure* that is not *nationally* or *regionally significant*, avoid adverse *effects* on the values that contribute to the area's outstanding nature or significance.<br><br>**EIT–INF–P14 – Decision-making considerations** When considering proposals to develop or upgrade *infrastructure*:<br>(1) require consideration of alternative sites, methods and designs if adverse *effects* are potentially significant or irreversible, and<br>(2) utilise the opportunity of substantial upgrades of *infrastructure* to reduce adverse *effects* that result from the existing *infrastructure*, including on *sensitive activities*. | |

**HAZ–NH–O1 – *Natural hazards*** Levels of *risk* to people, communities and property from *natural hazards* within Otago do not exceed a tolerable level.

**HAZ–NH–O2 – *Adaption*** Otago's people, property and communities are prepared for and able to adapt to the *effects* of natural hazards, including *climate change*.

**HAZ–NH–P2 – *Risk* assessments** Assess the level of *natural hazard risk* by determining a range of natural hazard event scenarios and their potential consequences in accordance with the criteria set out within APP6.

**HAZ–NH–P3 – New activities** Once the level of *natural hazard risk* associated with an activity has been determined in accordance with HAZ–NH–P2, manage new activities to achieve the following outcomes:

(1) when the *natural hazard risk* is significant, the activity is avoided,
(2) when the *natural hazard risk* is tolerable, manage the level of *risk* so that it does not become significant, and
(3) when the *natural hazard risk* is acceptable, maintain the level of *risk*.

**HAZ–NH–P4 – Existing activities** Reduce existing *natural hazard risk* by:

(1) encouraging activities that reduce *risk*, or reduce community vulnerability,
(2) restricting activities that increase *risk*, or increase community vulnerability,
(3) managing existing *land* uses within areas of significant *risk* to people and communities,
(4) encouraging design that facilitates:
    (a) recovery from *natural hazard* events, or
    (b) relocation to areas of acceptable *risk*, or
    (c) reduction of *risk*,
(5) relocating lifeline utilities, and facilities for essential and emergency services, away from areas of significant risk, where appropriate and practicable, and
(6) enabling development, upgrade, maintenance and operation of lifeline utilities and facilities for essential and emergency services.

**HAZ–NH–P5 – Precautionary approach to *natural hazard risk*** Where the *natural hazard risk,* either individually or cumulatively, is uncertain or unknown, but potentially significant or irreversible, apply a precautionary approach to identifying, assessing and managing that *risk* by adopting an avoidance or adaptive management response to diminish the risk and uncertainty.

**HAZ–NH–P6 – Protecting features and systems that provide hazard mitigation**

Protect natural or modified features and systems that contribute to mitigating the *effects* of *natural hazards* and *climate change.*

**HAZ–NH–P7 – Mitigating *natural hazards*** Prioritise *risk* management approaches that reduce the need for *hard protection structures* or similar engineering interventions, and provide for *hard protection structures* only when:

(1) *hard protection structures* are essential to manage *risk* to a level the community is able to tolerate,
(2) there are no reasonable alternatives that result in reducing the *risk* exposure,
(3) *hard protection structures* would not result in an increase in *risk* to people, communities and property, including displacement of *risk* off-site,
(4) the adverse *effects* of the *hard protection structures* can be adequately managed, and
(5) the mitigation is viable in the reasonably foreseeable long term or provides time for future adaptation methods to be implemented, or
(6) the *hard protection structure* protects a *lifeline utility*, or a facility for essential or emergency services.

**HAZ–NH–P9 – Protection of hazard mitigation measures** Protect the *functional needs* of hazard mitigation measures, *lifeline utilities*, and essential or emergency services, including by:

(1) avoiding significant adverse *effects* on those measures, utilities or services,
(2) avoiding, and only where avoidance is not practicable, remedying or mitigating

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| other adverse *effects* on those measures, utilities or services,<br>(3) maintaining access to those measures, utilities or services for maintenance and operational purposes, and<br>(4) restricting the establishment of other activities that may result in reverse sensitivity *effects* on those measures, utilities or services,<br><br>**HAZ–NH–P11 – Kaitiaki decision making** Recognise and provide for the role of Kāi Tahu as kaitiaki over *wāhi tūpuna*, Māori reserves and freehold land that is susceptible to natural hazards by involving *mana whenua* in decision making and management processes. | |
| **Kai Tahu ki Otago Natural Resource Management Plan 2005 (NRMP)** | |
| Chapter 5.3 Wai Maori<br>• To require a Cultural Impact Assessment for all proposals to dam<br>• To identify in conjunction with Local Government Agencies the location of all existing dams, new dams and water storage in the region, together with the level of river flow intercepted and the cumulative effect of interception on Käi Tahu ki Otago cultural values | |
| Chapter 5.8 Coastal Environment<br>• To require all hydro dam proposals include a complete evaluation of the effects of sediment trapping on coastal stability and water quality | |
| Chapter 9.2 Wai Maori in the Taieri catchment<br>• To require that a Cultural Impact Assessment is undertaken for any new dams or structures in the Taieri Catchments<br>• To require any new or existing dam consents to provide a regular flushing flow<br>• To discourage any further cross mixing of water.<br>• To promote the re-establishment of Lake Taieri as a mahika kai<br>• To require structures in the Taieri Catchments do not impede or obstruct flows, or fish migration | |
| Chapter 10.2 Wai Maori Issues in the Clutha/Mata-Au catchment<br>• To oppose the creation of new dams within this Catchment.<br>• To require gradual rather than instantaneous ramping to control fluctuations in river flow.<br>• To require flow regimes that mimic natural flows.<br>• To require effects associated with dam management (e.g. flow issues, changes to waterways upstream downstream, habitat changes, fish passage, inundation of values habitats, health and safety issues, siltation concerns, erosion) are addressed. Where the scale of effects is such that it cannot be addressed to the satisfaction of Kä Papatipu Rünaka and depending on the legal status of the dam Kä Papatipu Rünaka may advocate for either the removal of existing dams or decline consent to dam<br>• To discourage activities that increases the silt loading in waterways or reaches of waterways.<br>• To encourage the preparation of a sediment management strategy for the Clutha/Mata-au that describes patterns of deposition, movement, removal and flushing of sediment within the Catchment. Sediment must be managed on a Catchment basis and must be able to move through the system from the headwaters to replenish coastal habitats that are highly valued by Kä Papatipu Rünaka. Ad-hoc proposals for sediment removal, gravel takes, engineering river reaches may not be supported if Kä Papatipu Rünaka cannot see how they are part of a sediment management strategy.<br>• To require Contact Energy and the Otago Regional Council to agree on flow levels at which the flushing of sediment is permitted in conjunction with Kä Papatipu Rünaka.<br>• To discourage any inappropriate flushing of sediment at times of low flow or where the impacts are not of a temporary nature.<br>• To require native fish ingress and egress past all dams and structures. | |
| **Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 - The Cry of the People, Te Tangi a Tauira** | |
| *Section 3.4 – Takitimu me ona uri – High Country and Foothills includes the upper Queenstown/ Wanaka catchment including lakes and mountains between Whakatipu-Waitai (Lake McKerrow) and extends across to the eastern boundary of the Matau (Clutha) River* | |

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| Section 3.4.10 Plant Pests<br>• Policy 1 Ensure protection and enhancement of the mauri or life supporting capacity of all high country and foothill waterways<br>• Policy 2 Advocate that all management decisions shall take into account the protection and survival of indigenous species of flora and fauna (rare and not rare, and including taonga species contained in the Ngāi Tahu Claims Settlement Act 1998) in their natural habitats and ecosystems. | |
| Section 3.4.12 Mahinga kai<br>• Policy 2 Advocate for timely and appropriate consultation with Ngāi Tahu ki Murihiku with respect to areas that are considered particularly signifi cant in terms of mahinga kai. All endeavours should be taken to protect areas and avoid inappropriate use and development. Furthermore management plans should recognise for taonga species as listed in the Ngāi Tahu Claims Settlement Act 1998 and all other species considered taonga by Ngāi Tahu ki Murihiku<br>• Policy 4 Promote the protection, restoration and enhancement of indigenous biodiversity<br>• Policy 6 Maintain uninhibited fish passage within any waterway linking the high country lakes and rivers to the coast.<br>• Policy 7 Avoid compromising native aquatic species by building dams, culverts and weirs or through any other water abstraction methods | |
| *Section 3.5 Te rā a Takitimu – Southland Plains including the Mata-Au River catchment* | |
| Section 3.5.10 General Water Policy<br>• Policy 2 Work with local authorities and other statutory agencies involved in freshwater management to ensure that cultural values and perspectives associated with freshwater management are refl ected in statutory water plans, best practice guidelines and strategies, and in resource consent processes for activities involving water.<br>• Policy 3 Protect and enhance the mauri, or life supporting capacity, of freshwater resources throughout Murihiku.<br>• Policy 4 Manage our freshwater resources wisely, mō tātou, ā, mō ngā uri ā muri ake nei, for all of us and the generations that follow.<br>• Policy 5 Promote the management of freshwater according to the principle of ki uta ki tai, and thus the fl ow of water from source to sea.<br>• Policy 6 Promote catchment management planning (ki uta ki tai), as a means to recognise and provide for the relationship between land and water<br>• Policy 8 Protect and enhance the customary relationship of Ngāi Tahu ki Murihiku with freshwater resources. | |
| Section 3.5.11 Rivers<br>• Policy 1 . Promote catchment management planning (ki uta ki tai), as a means to recognise and provide for the relationship between land and water.<br>Section 3.5.14 Water Quantity (If there are water takes associated with the damming then further consideration of this section will be required)<br>• Policy 12 The establishment of environmental flow regimes must recognise and provide for a diversity of values, including the protection of tangata whenua values<br>• Policy 13 . Ensure that environmental flow allocation and water management regimes for rivers recognise and provide for the relationship between water quality and quantity. | |
| Section 3.5.15 Activities in the beds and margins of rivers<br>• Policy 11 Require that placement of culverts and other flood works activities in the beds or margins of waterways is such that the passage of native fish and other stream life is not impeded.<br>• Policy 13 Require that the placement of culverts and other flood works activities in the beds or margins of waterways occurs in a manner that minimises disturbance to the streambed<br>• Policy 15 Require that that placement of culverts and other flood works activities in the beds or margins of waterways occur at times of low or no flow<br>• Policy 16 Require that short term effects on water quality and appearance are mitigated during culvert or flood works construction, and for a settling period | |

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| following. For example, straw bales may be used to minimise turbidity, and contain discolouration and sedimentation | |
| Section 3.5.16 Mahinga kai and biodiversity<br>• Policy 2 Work towards the restoration of key mahinga kai areas and species, and the tikanga associated with managing those places and species.<br>• Policy 3 Support the concept of Mahinga kai Cultural Parks14, as a means of protecting and using specific cultural landscapes within the takiwā that have important mahinga kai associations.<br>• Policy 4 Consider the actual and potential effects of proposed activities on mahinga kai places, species and activities when assessing applications for resource consent<br>• Policy 5 Use the enhancement of mahinga kai places, species and activities to off set or mitigate the adverse effects of development and human activity on the land, water and biodiversity of Murihiku. | |
| 3.5.17 Ngā Pononga a Tāne a Tangaroa – Biodiversity<br>• Policy 3 For Ngāi Tahu ki Murihiku, all species are taonga, whether weta, snail or kiwi, and the eff ects of an activity on species must consider all species equally.<br>• Policy 4 Where practical, indigenous vegetation that is removed or damaged as a result of land use activity should be replaced.<br>• Policy 5 . Use as a consent condition, when applicable, the enhancement of indigenous biodiversity as a means to remove adverse impacts of proposed activities<br>• Policy 6 Recommend the planting of indigenous species as an appropriate mitigation measure for any adverse impacts as a result of land use activity.<br>• Policy 7 The cultural, spiritual, historic and traditional association of Ngāi Tahu ki Murihiku with taonga species must be recognised and provided for within all management and/ or recovery plans associated with those species. This includes taonga species as per the Ngāi Tahu Claims Settlement Act (Appendix 4), and all other species identifi ed as taonga by Ngāi Tahu ki Murihiku.<br>• Policy 8 . Promote the management of whole ecosystems and landscapes, in addition to single species.<br>• Policy 10 Promote the integration of biodiversity management across land ownership land use boundaries.<br>• Policy 11 Ensure efforts are directed at identifying solutions for biodiversity decline, not just the problems.<br>• Policy 12 Make full use of the knowledge of tangata whenua with regards to indigenous biodiversity, and the value of such knowledge in understanding how to protect and enhance biodiversity | |
| 3.5.18 Repo – Wetlands<br>Policy 1 Avoid the direct or indirect drainage or modification of any existing wetland area.<br>Policy 3 Advocate for the restoration and enhancement of wetland areas, as part of any consent application where it is deemed feasible to include such conditions. | |
| 3.5.19 Riparian Zones<br>Policy 2 Prioritise the restoration of riparian areas throughout the takiwā.<br>Policy 4 Require that riparian restoration or establishment, when used as a condition of consent or otherwise, uses plant species that are appropriate to the area in which they will be established.<br>Policy 5 Protect and enhance taonga Rāranga (plants which produce material used for weaving) associated with riparian areas. | |
| 3.5.20 Freshwater Fisheries<br>Policy 1 All Ngāi Tahu Whānui, current and future generations, must have the capacity to access, use and protect native fi sheries, and the history and traditions | |

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| that are part of customary use of such fisheries, as guaranteed by the Treaty of Waitangi.<br><br>Policy 2 Advocate for the protection, restoration and enhancement of waterways, riparian margins, and wetlands as a means of protecting and enhancing freshwater fishery values.<br><br>Policy 5 Avoid compromising freshwater fishery values as a result of diversion, extraction, or other competing use for water, or as a result of any activity in the bed or margin of a lake or river.<br><br>Policy 6 Ensure that all native fi sh species have uninhibited passage from the river to the sea at all times, through ensuring continuity of flow ki uta ki tai.<br><br>Policy 8 Ensure the protection of all sites identifi ed as Nohoanga under the Ngāi Tahu Claims Settlement Act 1998, as a means of providing tangata whenua with an opportunity to experience the landscape as our tūpuna once did, and to promote customary practices associated with mahinga kai. | |
| <u>3.5.21 Protection of Significant Sites</u><br><br>Policy 1 Ensure that Ngāi Tahu ki Murihiku are able to eff ectively exercise their role as kaitiaki over wāhi tapu and wāhi taonga in Murihiku.<br><br>Policy 5 Avoid compromising unidentified, or unknown, sites of cultural significance as a consequence of ground disturbance associated with land use, subdivision and development.<br><br>Policy 6 Ensure that oral history and customary knowledge is considered equally alongside documented evidence when determining the cultural heritage values of a region or site.<br><br>Policy 7. Applications for activities in areas of cultural significance where there are no known sites but the likelihood of finding sites is high, will require one or more of the following (at the cost of the applicant): a. site visit; b. archaeological survey (walk over/test pitting), or a full archaeological description, by an archaeologist approved by Ngāi Tahu ki Murihiku c. archaeological authority; d. cultural impact assessment; e. cultural monitoring; f. accidental discovery protocol agreement<br><br>Policy 8 Where an archaeological survey is required to assess the cultural heritage values in an area, the archaeologist must have the mandate of the appropriate kaitiaki rūnanga.<br><br>Policy 10 Ensure that resource consent applicants are aware that liaising with iwi on the cultural impacts of a development does not constitute an archaeological assessment | |

**If you have any queries relating to information requirements, please contact the Otago Regional Council Offices:**

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