APPENDIX T

Canterbury Policy Assessment

Part A: Canterbury Regional Policy Statement Assessment

Provision	Comment
Land Use and Infrastructure	
Chapter 5 of the CRPS recognises that the strategic integration of land use with regionally significant infrastructure is important for the functioning of communities and economic wellbeing at the national, regional and local scale.	The CRPS specifies that electricity generation, transmission and distribution are regionally significant infrastructure and that the Waitaki Hydro Scheme is nationally significant. The Tekapo PS is regionally and nationally significant infrastructure.
Objective 5.2.1 aims to have development well designed and located so that people and communities, including future generations, are able to provide for their social, economic and cultural well-being and health and safety, while the quality of the environment is maintained and in a manner that "avoids adverse effects on significant natural and physical resources including regionally significant infrastructure, and where avoidance is impracticable, remedies or mitigates those effects on those resources and infrastructure".	The approach taken to these replacement resource consent applications includes consideration of the significance of natural and physical resources in the vicinity of the Tekapo PS and includes measures to mitigate those effects such as the proposed continuation and increase in funding for an Indigenous Biodiversity Enhancement Programme (previously Project River Recovery).
Objective 5.2.2 recognises the benefits of enabling people and communities to provide for their social, economic and cultural wellbeing and this objective also aims to provide for infrastructure that is regionally significant to the extent that it promotes sustainable management (including the ensuring that the adverse effects resulting from the operation of regionally significant infrastructure be avoided, remedied and / or mitigated).	As detailed in this AEE, the continued operation of the Tekapo PS has significant social and economic benefits, and the effects of its operation can be appropriately managed.
Policy 5.3.2 (development conditions) and Policy 5.3.9 (regionally significant infrastructure) implement the key objectives of this section of the CRPS. These policies enable the development and operation of regionally significant infrastructure. Policy 5.3.9 is set out in full below:	These policies provide for the continued operation and maintenance of regionally significant infrastructure. Importantly, Policy 5.3.9 recognises that some activities, such as hydro-electricity generation, can only occur where the natural or physical resource exists (referred to has having logistical, technical or operational constraints). The policy also requires that adverse

Provision	Comment
Policy 5.3.9: Regionally significant infrastructure (Wider Region) *In relation to regionally significant infrastructure (including transport hubs):* *1. avoid development which constrains the ability of this infrastructure to be developed and used without time or other operational constraints that may arise from adverse effects relating to reverse sensitivity or safety;* *2. provide for the continuation of existing infrastructure, including its maintenance and operation, without prejudice to any future decision that may be required for the ongoing operation or expansion of that infrastructure; and* *3. provide for the expansion of existing infrastructure and development of new infrastructure, while:* *(a) recognising the logistical, technical or operational constraints of this infrastructure and any need to locate activities where a natural or physical resource base exists;* *(b) avoiding any adverse effects on significant natural and physical resources and cultural values and where this is not practicable, remedying or mitigating them, and appropriately controlling other adverse effects on the environment; and* *(c) when determining any proposal within a sensitive environment (including any environment the subject of section 6 of the RMA), requiring that alternative sites, routes, methods and design of all components and associated structures are considered so that the proposal satisfies sections 5(2)(a) – (c) as fully as is practicable.*	effects on significant natural and physical resources and cultural values resulting from an activity be avoided where possible, and where this is not practicable, then the effects should be remedied, mitigated or controlled. As detailed throughout this AEE, the Tekapo PS has formed part of the environment for several decades; the significant effects of the Tekapo PS generally occurred during its construction when it did substantially modify the environment. The technical assessments supporting these resource consent applications have assessed the ongoing effects of the Tekapo PS and conclude that the operation will sustain the existing values of the environment.
Freshwater	
Chapter 7 sets out the provisions in relation to freshwater. The CRPS recognises that the abstraction and use of groundwater and surface water is necessary for a variety of economic activities (including hydro-electricity generation).	The operation of the Tekapo PS as proposed will result in the current hydrological characteristics of the Takapō River being maintained. There is strong policy direction recognising the special characteristics of the braided river systems in the region and providing for the maintenance of these characteristics. The provisions do not restrict the continued operation,

Provision	Comment
The objectives and policies of the freshwater chapter requires the sustainable management of water resources, setting out that the quality of freshwater is to be maintained or improved. Objective 7.2.4 aims to manage water in an integrated manner, including recognising the Ngāi Tahu ethic of Ki Uta Ki Tai (from the mountains to the sea).	maintenance or upgrading of an existing hydro-generation scheme provided they remain of a similar scale, intensity and character, and do not result on any additional significant effects on the natural characteristics of a river or lake.
Policy 7.3.1 is applicable to the replacement resource consents sought by Genesis in that it recognises a situation where natural character values have been modified by infrastructure, but those modified character values are highly valued.	Genesis is not proposing any changes to the operation of the Tekapo PS that would affect the existing natural character values of the environment.
Policy 7.3.2 is relevant to these replacement resource consent applications. It reads as follows: ***Policy 7.3.2: Natural character of braided rivers and lakes*** *To maintain the natural character of braided rivers, and of natural lakes by:* *1. subject to clause (3), by prohibiting the damming of each of the main-stem of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki rivers;* *2. in respect of every other braided river in the region; by ensuring any damming of a braided river does not reduce the braided character of the main stem;* *3. in respect of every natural lake by limiting any use of the lake for water storage so its level does not exceed or fall below the upper or lower levels of its natural operating range;* *4. clauses 1 – 3 do not restrict continued operation, maintenance or upgrading of any water storage scheme, irrigation scheme or hydro-electricity generation scheme for which lawful consent was in effect when this regional policy statement becomes operative, subject to the activity:* *(a) remaining a similar scale, intensity and character; and* (b) *not resulting in any additional significant adverse effect on the natural character of the river or lake.*	Policy 7.3.2 requires that the natural character of braided rivers and natural lakes be maintained. This policy recognises the ongoing operation, maintenance and upgrading of the Tekapo PS (as a hydro generation scheme with a lawful consent when the CRPS became operative provided for under clause 4) as Genesis is not proposing any changes that result in a change in scale, intensity or character of the activity or its effects. It is important to note that clause (4) (b) relates to an additional significant effect. As Genesis is not proposing any material changes to the operation of the Tekapo PS there will be no additional effects (let alone "additional significant" effects) on the natural character of Takapō or the Takapō River.

Provision	Comment
Policy 7.3.2 is relevant to these replacement resource consent applications. It reads as follows: ***Policy 7.3.3: Enhancing fresh water environments and biodiversity*** *To promote, and where appropriate require the protection, restoration and improvement of lakes, rivers, wetlands and their riparian zones and associated Ngāi Tahu values, and to:* *1. identify and protect areas of significant indigenous vegetation and significant habitats, sites of significant cultural value, wetlands, lakes and lagoons/hapua, and other outstanding water bodies; and* *2. require the maintenance and promote the enhancement of indigenous biodiversity, inland basin ecosystems and riparian zones; and* *3. promote, facilitate or undertake pest control.*	It is considered that the continuation of and increase in funding for the Indigenous Biodiversity Enhancement Programme, as proffered by Genesis, assists in implementing Policy 7.3.3 in that this programme focusses on restoring areas of significant indigenous vegetation and significant habitats (including wetlands), including aspects such as pest control.
Policy 7.3.4 (water quantity) sets out how environmental flow regimes and how water is to be allocated to activities and is therefore applicable to the CRC rather than consent applicants.	For completeness, it is noted that the WAP sets out the environmental flow regimes and water allocation regimes applicable to the Waitaki Catchment and that the consents as sought will not result in any change to those environmental flow regimes and water allocation regimes.
Policy 7.3.6 is similar to Policy 7.3.4 in that is directs how the CRC is to establish and implement minimum water quality standards for surface water and groundwater resources in the region.	This policy has been implemented through the water quality standards in the CLWRP which are discussed later in this AEE.
Policy 7.3.11 states: ***Policy 7.3.11: Existing activities and infrastructure*** *In relation to existing activities and infrastructure:* *1. to recognise and provide for the continuation of existing hydro-electricity generation and irrigation schemes, and other activities which involve substantial investment in infrastructure; but*	Policy 7.3.11 explicitly recognises and provides for the continuation of the Tekapo PS. As set out in the Tekapo PS AEE, Genesis' ongoing upgrades to the Tekapo PS, including canal lining and turbine upgrades, ensures the efficient use of the water passing through the scheme.

Provision	Comment
2. *require improvements in water use efficiency and reductions in adverse environmental effects of these activities, where appropriate.*	
Policy 7.3.12 requires a precautionary approach to the allocation of water for abstraction, the damming or diversion of water, or the intensification of land uses or discharge of contaminants, in circumstances where the effects of these activities on freshwater bodies, singularly or cumulatively, are unknown or uncertain.	This policy does not apply to this reconsenting process. There is no requirement for a precautionary approach be applied because the activities for which replacement resource consents are sought have occurred for many decades, the effects of the ongoing operation of the Tekapo PS are known and well understood and no changes to the present operating regime are proposed.
Policy 7.3.13 encourages the involvement of people and communities in the management of freshwater: ***Policy 7.3.13: Resolution of freshwater management issues*** *To encourage the involvement of people and communities in the management of fresh water, including:* *1. community stewardship of water resources and programmes to address fresh water issues at a local catchment level;* *2. Ngāi Tahu, as tāngata whenua, exercising kaitiakitanga in accordance with tikanga Māori; and* 3. *providing opportunities for consent holders to take greater stewardship of fresh water resources, within consent conditions.*	The engagement undertaken by Genesis, and the way in which Genesis manages its activities, is consistent with this policy, noting that agreement has been reached with the Waitaki Rūnanga (as manawhenua) and with the Director-General of Conservation with respect to mitigating the effects of the Tekapo PS.
Ecosystems and Indigenous Biodiversity	
Within the biodiversity section of the CRPS, the objectives and policies require the protection of areas identified as significant to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities. Of relevance: • Objective 9.2.1 aims to halt the decline of Canterbury's ecosystem and indigenous biodiversity;	These objectives are implemented through policies 9.3.1 to 9.3. and are discussed below.

Provision	Comment
• Objective 9.2.2 promotes the restoration or engagement of ecosystems and biodiversity where it where it can contribute to Canterbury's distinctive natural character and identity and to the social, cultural, environmental and economic well-being of its people and communities; and • Objective 9.2.3 sets out that of significant indigenous vegetation and significant habitats of indigenous fauna are to be identified and their values and ecosystem functions are to be protected.	
Policy 9.3.1 provides the framework for identifying the significance of ecosystems and indigenous biodiversity (including aspects such as representativeness, rarity, diversity and ecological context) and directs those assessments are to use the criteria in Appendix 3 of the CRPS. ***Policy 9.3.1: Protecting significant natural areas*** *1. Significance, with respect to ecosystems and indigenous biodiversity, will be determined by assessing areas and habitats against the following matters:* *(a) Representativeness* *(b) Rarity or distinctive features* *(c) Diversity and pattern* *(d) Ecological context* *The assessment of each matter will be made using the criteria listed in Appendix 3.* *2. Areas or habitats are considered to be significant if they meet one or more of the criteria in Appendix 3.* 3. *Areas identified as significant will be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities.*	While this provision is generally implemented through district plans (i.e., the MDP) for completeness it is noted that the operation of the Tekapo PS will not result in additional effects on indigenous biodiversity. In that regard, existing biodiversity will be maintained. In additions, a continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme is proposed to continue to enhance biodiversity in the vicinity of the Tekapo PS. Changes to the status quo could, depending on what the changes are, have effects, including significant effects on ecosystems and indigenous biodiversity. It is therefore important that any potential changes to the present operations (and Genesis is not proposing any) are very carefully assessed.
Policy 9.3.2 sets out the priorities for protection, including:	The Indigenous Biodiversity Enhancement Programme as proposed is inherently consistent with these priorities.

Provision	Comment
• Indigenous vegetation in land environments where less than 20% of the original indigenous vegetation cover remains; • Areas of indigenous vegetation associated with sand dunes and wetlands; • Areas of indigenous vegetation located in "originally rare" terrestrial ecosystem types not covered by the two points above; and • Habitats of threatened and at-risk indigenous species.	
Policy 9.3.4 is to promote the enhancement and restoration of Canterbury's ecosystems and indigenous biodiversity, in appropriate locations, where this will improve the functioning and long term sustainability of these ecosystems.	The Genesis approach to the continuation of and increase in funding for an Indigenous Biodiversity Enhancement Programme is inherently consistent with this policy and is an appropriate environmental mitigation measure.
Policy 9.3.4 identifies limitation to the use of biodiversity offsets: ***Policy 9.3.6: Limitations on the use of biodiversity offsets*** *The following criteria will apply to the use of biodiversity offsets:* *1. the offset will only compensate for residual adverse effects that cannot otherwise be avoided, remedied or mitigated;* *2. the residual adverse effects on biodiversity are capable of being offset and will be fully compensated by the offset to ensure no net loss of biodiversity;* *3. where the area to be offset is identified as a national priority for protection under Policy 9.3.2, the offset must deliver a net gain for biodiversity;* *4. there is a strong likelihood that the offsets will be achieved in perpetuity; and* *5. where the offset involves the ongoing protection of a separate site, it will deliver no net loss, and preferably a net gain for indigenous biodiversity conservation. Offsets should re-establish or protect the same type of ecosystem or habitat that is adversely affected, unless an alternative ecosystem or habitat will provide a net gain for indigenous biodiversity.*	In terms of (promote ecological enhancement and restoration), it is considered that Genesis approach to the continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme is inherently consistent with this policy. The technical assessments supporting this AEE demonstrate the tangible benefits the works associated with Project River Recovery have had and will continue to have (with the funding for the Indigenous Biodiversity Enhancement Programme) on terrestrial invertebrates, lizards, water-birds and vegetation.

Provision	Comment
Beds of Rivers and Lakes and their Riparian Zones	
The objectives and policies of chapter 10 of the CRPS are applicable to activities on the beds of rivers and lakes, and riparian areas. These provisions seek to: • Provide for activities in the beds of lakes and rivers, and their riparian zones while protecting the significant values of those areas and avoiding significant adverse effects unless they are necessary for the maintenance, operation and upgrading and repair of essential structures (Objective 10.2.1 and Policy 10.3.1); • Enhancing the values of the beds of rivers and lakes, and riparian zones, where appropriate and protecting the natural character of these areas (Objective 10.2.1 and Policy 10.3.2). Policy 10.3.2 also provides the framework for where the enhancement of these areas should be prioritised (i.e., where they have ecological values, are in a degraded state and where enhancement will achieve a long-term improvement in those values); • Maintain the flood carrying capacity of rivers (Objective 10.2.2 and Policy 10.3.3); • Protect the stability, performance and operation and essential structures from activities in the beds or rivers / lakes (Objective 10.2.3, Policy 10.3.3 and Policy 10.3.4); and • Maintain or enhance public and Ngāi Tahu access to and along rivers and lakes (Objective 10.2.4).	Genesis is not proposing to alter the operation of the Tekapo PS and in that regard, there will be no additional effects on the exiting values of the beds of rivers or lakes, or their riparian zones.

Provision	Comment
Natural Hazards	
The provisions of the natural hazards chapter of the CRPS are largely applicable to new subdivision, use and development and are therefore not of substantial relevance to the ongoing operation of the Tekapo PS.	To the extent these provisions are applicable to the Tekapo PS, it is noted that: • The technical assessments supporting these resource consent applications (for example PDP, 2023) have considered the effects of climate change on the operation of the Tekapo PS and the potential effects of the Tekapo PS into the future which is consistent with Objective 11.2.3 (climate change and natural hazards) and Policy 11.3.8 (climate change); and • The Tekapo PS infrastructure is designed to specific criteria and standards to limit the effects of flood events or seismic events on this infrastructure and is maintained and continually assessed against performance criteria (as part of a process safety framework) (Policy 11.2.3, Policy 11.3.3 and Policy 11.3.9). • Recent upgrades to the Tekapo PS infrastructure addressed the need to limit the effects of flood events and seismic events, while the modified flood rules address matters relating to Gate 16 and the Lake George Scott weir. For example, the upgrade to the Tekapo Intake Gate is designed to be resilient in a 1 in 10,000 annual exceedance probability seismic event (and associated aftershocks) and the modifications to the high flow management rules discussed in the AEE address Lake Takapō gate safety matters

Provision	Comment
Landscape	
The key provisions of this chapter of the CRPS, relate to outstanding natural features and landscapes, with the Mackenzie Basin being identified as such in the MDP. The key provisions are therefore: ***Objective 12.2.1: Identification and protection of outstanding natural features and landscapes*** *Outstanding natural features and landscapes within the Canterbury region are identified and their values are specifically recognised and protected from inappropriate subdivision, use, and development.* ***Policy 12.3.2: Management methods for outstanding natural features and landscapes*** *To ensure management methods in relation to subdivision, use or development, seek to achieve protection of outstanding natural features and landscapes from inappropriate subdivision, use and development.*	The provisions in this chapter require the identification and management of other important landscapes, including natural character, amenity, historic and cultural heritage. Boffa Miskell Landscape, 2023 has undertaken an assessment of the natural character, landscape and visual amenity values of the waterbodies influenced by the Tekapo PS. This assessment concludes that there will be no additional effects of the ongoing operation of the Tekapo PS on the values and characteristics of the various waterbodies and landscapes. It is also noted that the MDP (which implements the CRPS direction in respect of outstanding landscapes), recognises the Waitaki Power Scheme (of which the Tekapo PS is part) as being part of the Mackenzie Basin outstanding natural landscape.
Historic Heritage	
The objectives and policies of this chapter of the CRPS relate to the identification and protection of historical heritage and cultural heritage. This section of the CRPS aims to: • Identify and protect significant historic heritage items, places and areas, and their particular values (Objective 13.2.1, Policy 13.3.1 and Policy 13.3.3); • Recognise that cultural and heritage values are often expressed in a landscape setting and to make provision for the protection of such landscapes from inappropriate subdivision, use and development (Objective 13.2.2);	Genesis acknowledges the importance of Takapō, Lake Pūkaki, the Takapō River and the wider environment to the Waitaki Rūnaka and has sought to engage with Waitaki Rūnaka to understand these values in greater detail.

Provision	Comment
• Recognise places of cultural heritage significance to Ngāi Tahu (Policy 13.3.2).	
Energy	
The provisions of the energy chapter seek to reduce the dependence on non-sustainable energy sources, promote the use of energy from renewable sources and to enable existing hydro-electricity generation infrastructure to be maintained, upgraded and enhanced. The provisions set out a framework whereby adverse effects on significant natural and physical resources and cultural values are to be avoided as a first priority and where avoidance is not practicable, remediation and mitigation are appropriate. For all other effects, the direction is to appropriately "control" them. Objective 16.2.1 seeks that development be located and designed to enable the efficient use of energy, including by avoiding impacts on the ability to operate energy infrastructure efficiently. Policy 16.3.1 also requires the promotion of the efficient end use of energy.	The Tekapo PS is consistent with Objective 16.2.1 and Policy 16.3.1 in that it enables the efficient use of a renewable energy resource to provide electricity to enable others to use energy efficiently.
Objective 16.2.2 states: ***Objective 16.2.2: Promote a diverse and secure supply of energy*** *Reliable and resilient generation and supply of energy for the region, and wider contributions beyond Canterbury, with a particular emphasis on renewable energy, which:* *1. provides for the appropriate use of the region's renewable resources to generate energy* *2. reduces dependency on fossil fuels;* *3. improves the efficient end-use of energy;* *4. minimises transmission losses;* *5. is diverse in the location, type and scale of renewable energy development;*	In respect to this policy: • These replacement resource consent applications are necessary for the continued operation of the Tekapo PS which generates a significant amount of renewable electricity from resources in the Canterbury Region; and • The ongoing operation of the Tekapo PS is critical to meeting New Zealand's climate change aspirations, and any reduction in generation of the Tekapo PS may necessitate an increase in electricity generation using fossil fuels (at least in the short term).

Provision	Comment
6. recognises the locational constraints in the development of renewable electricity generation activities; and *(a) avoids any adverse effects on significant natural and physical resources and cultural values or where this is not practicable, remedies or mitigates; and* *(b) appropriately controls other adverse effects on the environment.*	While clause 6 is primarily focused on the development of new renewable electricity generation activities, the Tekapo PS applications seek to replace consents for the water and discharge related aspects for a renewable electricity generation activity that can only be located in and around water. In that regard, the mitigation measures set out in this AEE and the proposed conditions of consent will ensure that effects on the environment of the ongoing operation of the Tekapo PS are appropriately managed.
Policy 16.3.3 requires the recognition of the benefits of renewable energy generation facilities: ***Policy 16.3.3: Benefits of renewable energy generation facilities*** *To recognise and provide for the local, regional and national benefits when considering proposed or existing renewable energy generation facilities, having particular regard to the following:* *1. maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;* *2. maintaining or increasing the security of supply at local and regional levels, and also wider contributions beyond Canterbury; by diversifying the type and/or location of electricity generation;* *3. using renewable natural resources rather than finite resources;* *4. the reversibility of the adverse effects on the environment of some renewable electricity generation facilities;* 5. *avoiding reliance on imported fuels for the purposes of generating electricity; and 6. assisting in meeting international climate obligations.*	The resource consents sought for the Tekapo PS provide for the maintenance of electricity generation capacity from a renewable energy resource, avoid greenhouse gas emissions and maintains security of supply at local, regional and national levels. Retaining the resource consents for the Tekapo PS and maintaining its generation capacity reduces reliance on fossil fuels for generating electricity.
Policy 16.3.5 seeks to recognise and provide for efficient, reliable and resilient electricity generation within Canterbury: ***Policy 16.3.5: Efficient, reliable and resilient electricity generation within Canterbury***	Reconsenting the Tekapo PS will provide for efficient, reliable and resilient electricity generation within Canterbury and is consistent with this policy.

Provision	Comment
To recognise and provide for efficient, reliable and resilient electricity generation within Canterbury by: *1. avoiding subdivision, use and development which limits the generation capacity from existing or consented electricity generation infrastructure to be used, upgraded or maintained;* *2. enabling the upgrade of existing, or development of new electricity generation infrastructure, with a particular emphasis on encouraging the operation, maintenance and upgrade of renewable electricity generation activities and associated infrastructure:* *(a) having particular regard to the locational, functional, operational or technical constraints that result in renewable electricity generation activities being located or designed in the manner proposed;* *(b) provided that, as a result of site, design and method selection:* *i. the adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable remedied, mitigated or offset; and* *ii. other adverse effects on the environment are appropriately controlled.* *3. providing for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation;* 4. *maintaining the generation output and enabling the maximum electricity supply benefit to be obtained from the existing electricity generation facilities within Canterbury, where this can be achieved without resulting in additional significant adverse effects on the environment which are not fully offset or compensated.*	
Hazardous Substances	
The provisions of this chapter seek to manage the effects on the environment from the storage and use of hazardous substances.	The application relates to the water permits and the reconsenting will not trigger these provisions. However, Genesis ensures that the storage and use of hazardous substances at the Tekapo PS are undertaken in a manner that is

Provision	Comment
	compliant with all of the applicable hazardous substances regulations and is therefore consistent with the provisions of this chapter.

Part B: Waitaki Catchment Water Allocation Regional Plan Assessment

Provision	Comment
Objectives	
Objective 1 To sustain the qualities of the environment of the Waitaki River and associated beds, banks, margins, tributaries, islands, lakes, wetlands and aquifers by: a. recognising the importance of maintaining the integrity of the mauri in meeting the specific spiritual and cultural needs of the tangata whenua, and by recognising the interconnected nature of the river b. safeguarding the life supporting capacity of the river and its ecosystems c. managing the water bodies in a way that maintains natural landscape and amenity characteristics and qualities that people appreciate and enjoy d. safeguarding the integrity, form, functioning and resilience of the braided river system e. providing for individuals' reasonable domestic water needs f. providing for individuals' reasonable needs for their animals' drinking-water g. providing for fire-fighting water needs.	Reconsenting the Tekapo PS as proposed will maintain the existing environment and will safeguard the present life supporting capacity of the ecosystems associated with the Tekapo PS. The proposed Indigenous Biodiversity Enhancement Programme will provide for ecological enhancements in the area. It will maintain the present landscape and amenity characteristics that people use and enjoy while providing for important renewable electricity generation.
Objective 2	Reconsenting the Tekapo PS as proposed will continue to provide for important renewable electricity generation assisting New Zealand to meet its national and international Climate Change targets. In addition, the supply of

Provision	Comment
To the extent consistent with Objective 1, to enable people and communities to provide for their social, economic and cultural wellbeing and their health and safety, by providing for water for: a. town and community water supplies b. hydro-electricity generation c. agricultural and horticultural activities d. industrial and commercial activities e. tourism and recreation facilities f. any other activities.	electricity is recognised as enabling people and communities to provide for their social, economic and cultural wellbeing and their health and safety.
Objective 3 In allocating water, to recognise beneficial and adverse effects on the environment and both the national and local costs and benefits (environmental, social, cultural and economic).	Reconsenting the Tekapo PS as proposed will maintain the existing environment and will safeguard the present life supporting capacity of the ecosystems associated with the Tekapo PS. The proposed Indigenous Biodiversity Enhancement Programme will provide for ecological enhancements in the area. The Tekapo PS provides electricity generation that is national and regionally significant and takes that into account when considering adverse effects on the environment.
Objective 4 To promote the achievement of a high level of technical efficiency in the use of allocated water.	The Tekapo PS uses water efficiently for the generation of electricity. Upgrades undertaken by Genesis, including canal lining, runner replacements at Tekapo B, and the Tekapo A upgrade have all contributed to improving the Tekapo PS efficiency.
Objective 5 To provide for a practical and fair sharing of allocated water during times of low water availability.	The Tekapo PS will continue to operate in accordance with the requirements set out in the Waitaki Catchment Water Allocation Regional Plan.

Provision	Comment
Policies	
Policy 1 By recognising the importance of connectedness between all parts of the catchment from the mountains to the sea and between all parts of freshwater systems of the Waitaki River and associated beds, banks, margins, tributaries, islands, lakes, wetlands and aquifers.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.
Policy 2 By recognising that the following water bodies have a high natural character worthy of a high level of protection, because they are currently either in largely unmodified parts of the catchment; or contain rare or important species and habitat or habitat assemblages: a. tributaries of Lakes Tekapo, Pūkaki and Ōhau; b. mainstems and tributaries of Fork Stream, Irishman Creek and Mary Burn, upstream of the Braemar Road; c. mainstem and tributaries of the Twizel River, upstream of the Pūkaki Canal; d. wetlands with a moderate or higher significance throughout the catchment; e. Lakes Alexandrina, McGregor and Middleton and their tributaries and other lakes upstream of Lakes Tekapo, Pūkaki and Ōhau.	The resource consents sought for the Tekapo PS do not involve the taking of water from or discharges to any of the water bodies listed in Policy 2 a – e.
Policy 3	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the

Provision	Comment
By setting environmental flow and level regimes in the water bodies of the Waitaki catchment (other than those identified in Policy 2) that enable access to water for the activities identified in Objective 2, to the extent consistent with Objective 1.	environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 4 By considering the following matters when setting environmental flow and level regimes: a. mauri and healthy ecosystems of indigenous species, including mahinga kai species; b. wāhi tapu sites or areas, and wāhi taonga; c. natural character, landscape, and visual amenity; d. vegetation within and adjacent to the water body; e. habitats including those of invertebrates, birds and fish; f. fish passage, as appropriate, including controlling spread of non-indigenous species into new areas; g. undesirable periphyton and sediment accumulation; h. effects on water quality; i. maintenance of groundwater flows; j. naturally occurring dry river or stream beds; k. the potential for establishment of invading exotic vegetation; l. bedload and sediment transport processes; m. shoreline or bank erosion; n. functioning of the river mouth;	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.

Provision	Comment
o. recreation opportunities; p. existing flow and level regimes, physical resources and activities; q. the amount and reliability of water that can be taken, used, dammed or diverted; and r. accessibility to water bodies and their margins.	
Policy 5 By considering the following additional matters when setting groundwater flow and level regimes: a. any surface water body into which the groundwater flows, in particular wetlands and springs; b. the long-term water level and/or artesian pressure in each aquifer; c. the location of the salt-water interface; d. the potential for deterioration in water quality through water loss from one aquifer to another as a result of cross-connection and/or reversed pressure gradients between aquifers; and e. the potential for land subsidence.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and will not change the present groundwater flow and level regimes in the vicinity of the scheme.
Policy 6 To recognise the close connection between groundwater and surface water in some locations, by requiring any take, use or diversion of: a. connected groundwater; b. shallow groundwater upstream of Lake Benmore; and c. shallow groundwater in the Hakataramea and Maerewhenua catchments	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and will not change the present groundwater flow and level regimes in the vicinity of the scheme. It will not affect shallow groundwater in the Hakataramea and Maerewhenua catchments.

Provision	Comment
to comply with environmental flow and level regimes set for the relevant surface water body.	
Policy 7 In considering whether to grant or refuse consent to take, dam, divert or use water from streams where the mean annual low flow is less than 100 litres per second, the consent authority will have regard to whether there are alternative locations for the activity on larger water bodies.	The resource consents sought for the Tekapo PS do not involve consents for the taking, damming, diverting or use of water from streams where the mean annual low flow is less than 100 litres per second.
Policy 8 By promoting water harvesting, outside of the water bodies identified in Policy 2, as a means of capturing water for use when flows are low by allowing the taking, damming or diversion of water at flows in the water body that are above the mean and in a manner that avoids or mitigates the loss of physical and ecological benefits of high flow events.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan. The proposed consent conditions provide for the discharge of water from Takapō during high flow events that protect the integrity of the structures controlling the lake level and Takapō River flow in a way that provides for physical and ecological benefits of high flow events.
Policy 9 1. By discouraging further taking, use or diverting of water so that it mixes with water of another catchment or sub-catchment. 2. The adverse effects of taking, use or diverting of water so that it mixes with water of another catchment or sub-catchment may be mitigated: (a) if the mixing has no significant adverse effect on the ability of people and communities (including tāngata whenua) to provide for their cultural wellbeing. (b) if the water taken, used or diverted passes through earth before it mixes with water of another catchment or sub-catchment.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and will not change the existing levels of taking, use or diverting of water for the Tekapo PS or result in adverse changes to the existing environment.

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(c) if there is no significant adverse effect on the quality, amenity values or natural character of any receiving water body in the Waitaki catchment. (d) if there is no significant risk of an undesirable organism being introduced into a receiving water body that is in the Waitaki catchment.	
Policy 10 By enabling small amounts of water to be taken or diverted, outside of the water bodies identified in Policy 2, where singly and cumulatively with other such takes or diversions, the amounts are so small that the effects on the matters outlined in Policy 4 and 5 will be minor.	The resource consents sought for the Tekapo PS and will not change the existing levels of taking, use or diverting of water for the Tekapo PS or result in adverse changes to the existing environment.
Policy 11 In considering effects when allocating to activities under the provisions of this Plan: a. Tāngata whenua values are those held by Ngāi Tahu, and with respect to allocations to mahinga kai activities within the Lower Waitaki River, those held by Te Rūnanga o Arowhenua, Te Rūnanga o Waihao and Te Rūnanga o Moeraki b. national effects refer to those that arise within New Zealand. c. local effects refer to those that arise in the Mackenzie District, the Waimate District and the Waitaki District.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 12 To establish an allocation to each of the activities listed in Objective 2 by: a. having regard to the likely national and local effects of those activities;	Granting the resource consents sought for the Tekapo PS as proposed would provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water

Provision	Comment
b. reference to relevant national, regional and local plans and strategies; c. recognising the iconic nature of Lakes Tekapo, Pūkaki and Ōhau; d. recognising the importance of Lakes Tekapo, Pūkaki, Ōhau Ruataniwha, Benmore, Aviemore and Waitaki and their associated infrastructure to New Zealand's electricity system; e. recognising the importance of irrigation for agriculture and horticulture; f. considering the relative environmental effects of the activities including effects on landscape, water quality, mauri, and the beds of lakes and rivers; ga. reserving water within the Lower Waitaki for the enhancement of mahinga kai, and the associated tāngata whenua values and the augmentation of flows into Wainono Lagoon; g. assuming a high level of efficacy and technical efficiency; h. giving a preference to needs for water within the catchment; and i. expressing the allocation to activities in annual volumes: • upstream of the outlets of each of Lakes Tekapo, Pūkaki, and Ōhau; • upstream of Waitaki Dam; • downstream of Waitaki Dam but upstream of Black Point; and • downstream of Waitaki Dam but downstream of Black Point.	Allocation Regional Plan and will not change the existing levels of taking, use or diverting of water for the Tekapo PS or result in adverse changes to the existing environment and would: a. Have regard to the likely national and local effects of the Tekapo PS consents; b. Take account of the relevant national, regional and local plans and strategies; c. Recognise the nature of Lake Takapō; d. Recognise the importance of Lake Takapō, its associated infrastructure and the WPS infrastructure downstream of the Tekapo PS to New Zealand's electricity system; e. Take account of the environmental effects of the Tekapo PS activities on landscape, water quality, and the beds of lakes and rivers; f. Provide for a high level of efficacy and technical efficiency; and g. Not result in water being exported from the Waitaki catchment.
Policy 13 In considering whether to grant or refuse consent to take, divert, dam or use water allocated to agricultural and horticultural activities, the consent authority will have regard to the extent to which exercise of the consent could	The resource consents sought for the Tekapo PS do not involve consents for the taking, damming, diverting or use of water for agricultural or horticultural activities.

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result in the water quality objectives in the Natural Resources Regional Plan not being achieved.	
Policy 14 In considering whether to grant or refuse consents to take, divert or use water outside of the Waitaki catchment, the consent authority will have regard to the extent to which granting consent will reduce the availability of water to current and reasonably foreseeable in-catchment needs.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and do not involve consents for the taking, diverting or damming of water that would be used outside of the Waitaki Catchment.
Policy 15 By ensuring that the rate of abstraction, seasonal duration, and the annual volume of resource consents for taking, using, damming or diverting water are reasonable for the intended end use, and thereby avoiding significant wastage of water.	The rate of abstraction, seasonal duration, and the annual volume of water for the Tekapo PS water take and discharge resource consents are necessary for the operation of the scheme.
Policy 16 By requiring resource consent applications to: a. Consider whether the amount of water to be taken and used is reasonable for the proposed use. In assessing reasonable use for irrigation purposes, the application must meet a reasonable use test, in accordance with Schedule 2, in relation to the instantaneous rate of abstraction and the seasonal and annual volume necessary to efficiently irrigate the identified irrigation area; and b. Maximise the efficiency of systems used for the conveyance or application of water, taking into account practicable options to implement any change to existing systems, and the benefits and costs of achieving a higher level of efficiency.	The rate of abstraction, seasonal duration, and the annual volume of water for the Tekapo PS water take and discharge resource consents are necessary for the operation of the scheme.

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Policy 17 By requiring resource consent applications for town and community water supplies or stock drinking-water supply systems to meet a reasonable use test in relation to the rate of abstraction and the volume of the proposal to take water, using as guidelines: a. a volume of 300 litres per day per person based on the population to be supplied for domestic use; b. daily stock drinking-water requirements in Schedule 1; and c. a reasonable quantity for other water uses supplied from the water supply system.	The resource consents sought for the Tekapo PS do not involve consents for the town and community water supplies or stock drinking-water supply systems.
Policy 18 By encouraging and, where appropriate, requiring the water allocation specified on existing resource consents to reflect the actual quantity needed to undertake the activity.	The rate of abstraction, seasonal duration, allocation and the annual volume of water for the Tekapo PS water take and discharge resource consents are necessary for the operation of the scheme.
Policy 19 By encouraging the piping or otherwise sealing of water distribution systems to minimise water losses and maintain the quality of water and, where appropriate, requiring their progressive upgrade and piping where there is an environmental and/or economic net benefit for so doing, but recognising that some may provide significant habitats.	Genesis has undertaken significant lining works on the Tekapo Canal to minimise water losses and will continue to monitor water flows and losses in the system to identify potential further upgrading that may be necessary in future.
Policy 20 By promoting the integration of multiple uses of water.	The use of water in the Tekapo PS promotes multiple uses in that the electricity generated can be used for and enables a wide range of purposes, including domestic (such as home heating or cooking), community services (such as water treatment plant and drinking water distribution systems,

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	hospitals), manufacturing and processing, or transport (including road management systems and charging electric vehicles).
Policy 21 By requiring the installation and use of water-measuring and recording devices that accurately record the taking, using, or diverting water at the point of take or diversion, with reporting to the Canterbury Regional Council. The consent authority will consider the application of this policy: a. when resource consents are issued and given effect, (unless it is considered appropriate to install these at a later date); b. when any resource consents are reviewed under section 128 of the Act; c. when a resource consent is transferred; or d. by invoking an existing condition of consent requiring measuring and recording upon request.	The resource consents sought for the Tekapo PS include proposed conditions requiring water-measurement, recording and supply of information to CRC, consistent with the water-measurement, recording and supply of information presently undertaken for the Tekapo PS.
Policy 22 By facilitating the transfer of consents from one part of the catchment to another where this is consistent with the provision of this Plan, including being subject to the annual allocation to activities, environmental flow and level regimes and water metering.	The resource consents sought for the Tekapo PS do not involve the transfer of consents from one part of the catchment to another.
Policy 23 By ensuring environmental flow and level regimes are complied with by requiring all consent holders to restrict their rate of taking or diverting shallow groundwater (upstream of Lake Benmore, in the Maerewhenua catchment or in the Hakataramea catchment), connected groundwater, or surface water when the amount of water available for taking or diverting is low, except	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.

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where the water is used for essential domestic uses, essential animal drinking needs and for the processing and storage of perishable produce.	
Policy 24 By allowing consent holders to take water for domestic, stock drinking-water uses and for the processing and storage of perishable produce when rivers or lakes are at or below minimum flows or levels provided the amount taken does not exceed 250 litres per person per day based on the population being supplied at that time, plus actual stock drinking-water requirements, plus the minimum necessary to maintain fire-fighting capability and for the processing and storage of perishable produce. In addition, an allowance may be made for reasonable losses from reticulated supply schemes.	The resource consents sought for the Tekapo PS do not involve consents for domestic, stock drinking-water uses or for the processing and storage of perishable produce.
Policy 25 By allowing the restrictions on takes and diversions to be achieved by sharing the available water between resource consent holders within a water-users group, provided the total amount taken by any individual does not exceed their resource consent, and the sum of the takes does not exceed the water available above the minimum flow or minimum lake level.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 26 By providing a measure of certainty as to the likely frequency of restrictions to consent holders taking or diverting water on a run-of-river basis from upper or mid-catchment tributaries, the Ahuriri catchment, the Hakataramea catchment, or tributaries of the Lower Waitaki River (see Map 2) through setting priority bands. The first priority band will be set to provide a reliability which either:	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.

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a. allows at least 95 percent of the allocation specified on the consent to be taken in any 14-day period from August to May in 6 years out of 10, and at least 75 percent of the allocation specified on the consent to be taken in any 14-day period from August to May in 9 years out of 10; or b. if the existing reliability is less than that specified in Policy 26a, maintains the existing reliability.	
Policy 27 By giving priority during times of low flows or levels to integrated schemes in which water is used for more than one purpose.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 28 In considering whether to grant or refuse applications for replacement of existing consents, the consent authority will: a. consider whether all reasonable attempts to meet the efficiency expectations of this Plan have been undertaken; b. recognise the value of the investment of the existing consent holder; and c. maintain the inclusion of the consent, if granted, in any allocation limits and priority bands on the water body concerned.	Genesis has incurred significant expenditure to update and improve the existing Tekapo PS infrastructure to improve the efficiency of water use in the scheme, including canal lining, Tekapo A and B upgrades and improvements to the intake structure. The Tekapo PS has a present (2022) book value of approximately $971 million and a likely present value for substitute energy sources such as solar or wind farms of approximately $1.7 to $2.1 billion. The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 29 By recognising the high natural character of the water bodies listed in Policy 2 through restricting the cumulative allocation to activities from them.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 30 By preventing the taking, using, damming or diversion of water from Lakes Alexandrina, McGregor and Middleton and their tributaries, other lakes	The resource consents sought for the Tekapo PS do not involve consents for the taking, using, damming or diversion of water from Lakes Alexandrina,

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upstream of Lakes Tekapo, Pūkaki and Ōhau and wetlands, unless it is a wetland that is not a wetland with a moderate or higher significance, for the purpose of protecting their: a. natural character intrinsic and amenity values; b. ecosystems of indigenous species, including mahinga kai species c. Ngāi Tahu relationships; and d. trout and salmon habitat (where these species are currently found).	McGregor and Middleton and their tributaries, other lakes upstream of Lakes Tekapo, Pūkaki and Ōhau and wetlands.
Policy 31 By discouraging the taking, using, damming and diverting of water for irrigation purposes from the tributaries of Lakes Tekapo, Pūkaki and Ōhau identified in Policy 2 as having a high natural character worthy of a high level of protection.	The resource consents sought for the Tekapo PS do not involve consents for the taking, using, damming or diversion of water for irrigation purposes from the tributaries of Lakes Tekapo, Pūkaki and Ōhau.
Policy 32 In considering whether to grant or refuse consents to take, use, dam or divert water from the High Natural-Character Water Bodies, the consent authority will ensure that any taking, using, damming or diverting of water does not, by itself, or in combination with any other take, use, dam, or diversion in the same area, have a more than minor adverse effect on: a. the natural flow variability b. mauri, and ecosystems of indigenous species, including mahinga kai species c. indigenous vegetation within and adjacent to the water body d. natural character and landscape	The resource consents sought for the Tekapo PS do not involve consents for the taking, using, damming or diversion of water from High Natural-Character Water Bodies identified in Policy 2. However, it notes that Lake Takapō and the Tekapo PS are located within the Mackenzie Basin Subzone Outstanding Natural Landscape defined in the Mackenzie District Plan. Operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan as proposed will not: a. Alter the present flow variability; b. Result in further degradation of ecosystems of indigenous species, including mahinga kai species; c. Adversely affect indigenous vegetation within and adjacent to Lake Takapō;

Provision	Comment
e. sites of wāhi tapu f. sites of wāhi taonga g. habitats including those of invertebrates, birds and fish h. passage and spawning areas for trout and salmon (where these species are currently found) i. amenity values, including wild and scenic values j. existing water quality.	d. Alter the present natural character and landscape values; e. Result in no further effects on sites of wāhi tapu or wāhi taonga that Genesis is aware of; f. Result in further degradation of habitats including those of invertebrates, birds and fish; g. Affect passage and spawning areas for trout and salmon (where these species are currently found); h. Alter the present amenity values, including wild and scenic values i. Adversely affect existing water quality.
Policy 33 In considering whether to grant or refuse consents to take, use, dam or divert water from the High Natural-Character Water Bodies the consent authority will recognise the need for taking, using, damming and diverting of water to be distributed among High Natural-Character Water Bodies to avoid the concentration of effects on any one water body.	The resource consents sought for the Tekapo PS do not involve consents for the taking, using, damming or diversion of water from High Natural-Character Water Bodies identified in Policy 2.
Policy 34 In considering whether to grant or refuse consents to take, use, dam or divert water from the High Natural-Character Water Bodies the consent authority will, for activities for which water is taken and returned to the sub-catchment such as snow-making and micro hydro-electricity generation, have regard to any benefit of returning the water to the vicinity of the take or diversion point provided the take or diversion is consistent with Policies 32 and 33.	The resource consents sought for the Tekapo PS do not involve consents for the taking, using, damming or diversion of water from High Natural-Character Water Bodies identified in Policy 2.

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Policy 35 By setting minimum lake levels that recognise the iconic nature and the mana of Lakes Tekapo, Pūkaki and Ōhau, and enable appropriate access to water for the activities identified in Objective 2, to the extent consistent with Objective 1. The minimum lake level applies to all takes, damming, diversion or uses of water for other than town and community water supplies, stock drinking-water, and tourism and recreational facilities from the lakes and from the canals leading from them.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan.
Policy 36 By providing for temporary lowering of Lakes Tekapo and Pukaki for the purpose of electricity generation only in times of national or South Island power shortage as established by the Electricity Commission.	The resource consents sought for the Tekapo PS provide for the temporary lowering of Lake Takapō for the purpose of electricity generation in times of national or South Island power shortage as established by the Electricity Authority (formerly the Electricity Commission).
Policy 37 By providing for the temporary lowering of Lakes Tekapo, Pūkaki and Ōhau where necessary for the purposes of maintenance or rehabilitation of electricity generation infrastructure.	The resource consents sought for the Tekapo PS provide for the temporary lowering of Lake Takapō during electricity supply constraints.
Policy 38 By acknowledging that the Tekapo, Pūkaki and Ōhau Rivers are associated with the mana of Lakes Tekapo, Pūkaki and Ōhau and that flows in these rivers could provide continuity of flow from the mountains to the sea.	Genesis acknowledges that the Takapō River is associated with the mana of Lake Takapō. These matters have been comprehensively addressed in the Treaty Impact Assessment prepared by the Waitaki Rūnaka for this application, as provided in Appendix A to the AEE.
Policy 39 By setting an environmental flow regime in the upper Ōhau River that recognises the importance of flow continuity from the mountains to the sea; healthy ecosystems of indigenous species; and the trout fishery.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and will not affect the flow regime in the upper Ōhau River.

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Policy 40 By setting environmental flow regimes in the rivers and streams (within the upper catchment tributary areas shown on Map 2) that recognise the connections of those rivers and streams to wetlands and groundwater systems of the Mackenzie and Ahuriri basins, and enable appropriate access to water for the activities identified in Objective 2, to the extent consistent with Objective 1.	The resource consents sought for the Tekapo PS provide for the continued operation of the Tekapo PS in accordance with environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and will not affect the flow regimes in the upper catchment tributary areas shown on Map 2.
Policy 41: Policy for the tributaries of Lakes Benmore, Aviemore and Waitaki	This policy does not apply to the Tekapo PS.
Policy 42: Policy for Lakes Ruataniwha, Benmore, Aviemore and Waitaki	This policy does not apply to the Tekapo PS.
Policy 43: Policy for the Hakataramea catchment.	This policy does not apply to the Tekapo PS.
Policy 44: Policy for tributaries of the Lower Waitaki River	This policy does not apply to the Tekapo PS.
Policies 45 – 47: Policies for the Lower Waitaki River	These policies do not apply to the Tekapo PS.

Part C: Canterbury Land and Water Regional Plan Assessment

Provision	Comment
Objectives	
3.1 Land and water are managed as integrated natural resources to recognise and enable Ngāi Tahu culture, traditions, customary uses and relationships with land and water.	Genesis has worked in consultation with Meridian in respect of the replacement of resource consents for the combined Waitaki Power Scheme resource consents to ensure that an integrated approach is taken to managing water in the Waitaki Catchment. Genesis acknowledges that Lake Takapō / Tekapo and the Takapō / Tekapo River are significant to Ngāi Tahu culture, traditions, customary uses and relationships with land and water.
3.2 Water management applies the ethic of ki uta ki tai – from the mountains to the sea – and land and water are managed as integrated natural resources recognising the connectivity between surface water and groundwater, and between fresh water, land and the coast.	These matters have been comprehensively addressed in the Treaty Impact Assessment prepared by the Waitaki Rūnaka for this application, as provided in Appendix A to the AEE.
3.3 Nationally and regionally significant infrastructure is enabled and is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, on-going maintenance, repair, development and upgrading.	The Tekapo PS is nationally and regionally significant infrastructure that is resilient and positively contributes to economic and social wellbeing throughout New Zealand. The resource consents sought provide for its efficient and effective operation, on-going maintenance, repair, development and upgrading.
3.6 Water is recognised as essential to all life and is respected for its intrinsic values.	The continued operation of the Tekapo PS will enable electricity generation from a renewable energy source, which is essential to economic and social wellbeing throughout New Zealand. The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing

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	environment against which the resource consents were assessed is retained or enhanced.
3.7 Fresh water is managed prudently as a shared resource with many in-stream and out-of-stream values.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.
3.8 The quality and quantity of water in fresh water bodies and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in a way that does not affect the existing quality and quantity of water and that safeguards the existing life-supporting capacity of ecosystems and ecosystem processes such that existing habitat, feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds, trout and salmon are maintained.
3.9 Abstracted water is shown to be necessary and reasonable for its intended use and any water that is abstracted is used efficiently.	The rate of abstraction, seasonal duration, and the annual volume of water for the Tekapo PS water take and discharge resource consents are necessary for the operation of the scheme.
3.10 Water is available for sustainable abstraction or use to support social and economic activities and social and economic benefits are maximised by the efficient storage, distribution and use of the water made available within the allocation limits or management regimes which are set in this Plan.	The continued operation of the Tekapo PS will enable electricity generation from a renewable energy source and will contribute to economic and social wellbeing throughout New Zealand.

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3.11 Water is recognised as an enabler of the economic and social wellbeing of the region.	The continued operation of the Tekapo PS will enable electricity generation from a renewable energy source and will contribute to economic and social wellbeing throughout New Zealand.
3.12 When setting and managing within limits, regard is had to community outcomes for water quality and quantity.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.
3.14 High naturalness waterbodies and hāpua and their margins are maintained in a healthy state or are improved where degraded.	The continued operation of the Tekapo PS will maintain existing river and lake margin values.
3.15 Those parts of lakes and rivers that are valued by the community for recreation are suitable for contact recreation.	The continued operation of the Tekapo PS will maintain existing recreational values and will not result in water quality falling below contact recreation standards in those parts of lakes and rivers that are valued by the community for recreation are suitable for contact recreation.
3.16 Freshwater bodies and their catchments are maintained in a healthy state, including through hydrological and geomorphic processes such as flushing and opening hāpua and river mouths, flushing algal and weed growth, and transporting sediment.	The continued operation of the Tekapo PS will maintain existing hydrological and geomorphic processes and will not result in a degradation of existing water quality.
3.18 Wetlands that contribute to cultural and community values, biodiversity, water quality, mahinga kai, water cleansing and flood mitigation are maintained.	The continued operation of the Tekapo PS will not adversely affect existing wetland values.
3.19 Natural character values of freshwater bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.	The continued operation of the Tekapo PS will not adversely affect existing natural character values.

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3.24 All activities operate at good environmental practice or better to optimise efficient resource use and protect the region's fresh water resources from quality and quantity degradation.	Genesis has an Environmental Management System to ensure that good environmental practices are implemented for the Tekapo PS.
Policies	
4.1 Lakes, rivers, wetlands and aquifers will meet the fresh water outcomes set in Sections 6 to 15 within the specified timeframes. If outcomes have not been established for a catchment, then each type of lake, river or aquifer should meet the outcomes set out in Table 1 by 2030.	The ongoing operation of the Tekapo PS does not impact the achievement of the freshwater outcomes set out in the CLWRP, noting that those outcomes recognise the Tekapo PS as being part of the existing environment.
4.2 The management of lakes, rivers, wetlands and aquifers will take account of the fresh water outcomes, water quantity limits and the individual and cumulative effects of land uses, discharges and abstractions will meet the water quality limits set in Sections 6 to 15 or Schedule 8 and the individual and cumulative effects of abstractions will meet the water quantity limits in Sections 6 to 15.	The ongoing operation of the Tekapo PS does not impact the achievement of the freshwater outcomes set out in the CLWRP, nor will discharges result in the water quality limits in the CLWRP being exceeded, noting that those outcomes recognise the Tekapo PS as being part of the existing environment.
4.3 Surface water bodies are managed so that: (a) toxin producing cyanobacteria do not render rivers or lakes unsuitable for recreation or human and animal drinking-water; (b) fish are not rendered unsuitable for human consumption by contaminants; (c) the natural colour of the water in a river is not altered; (d) the natural frequency of hāpua, coastal lakes, lagoons and river openings is not altered; (e) the passage for migratory fish species is maintained unless restrictions are required to protect populations of native fish;	In respect of Policy 4.3: The ongoing of the Tekapo PS does not result in: • Toxin producing cyanobacteria that would render rivers or lakes unsuitable for recreation or human and animal drinking-water; • Fish being rendered unsuitable for human consumption by contaminants; • The natural colour of Lake Takapō / Tekapo being altered; or • Any changes to the current level of fish passage. Genesis acknowledges that the present operation of the Tekapo PS with respect to the in the upper 7km reach of the Takapō / Tekapo River is not consistent with:

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(f) reaches of rivers are not induced to run dry, thereby maintaining the natural continuity of river flow from source to sea, (g) variability of flow, including floods and freshes, is maintained to avoid prolonged "flatlining" of rivers; to facilitate fish passage; and to mobilise bed material; and (h) the exercise of customary uses and values is supported.	• Clause (f) which sets out that reaches of rivers should not be induced to run dry; and • Clause (g) which requires that variability of flow, including floods and freshes, is maintained to avoid prolonged "flatlining" of rivers; to facilitate fish passage; and to mobilise bed material. While not consistent with these provisions, the ongoing operation of the Tekapo PS as sought in the Genesis applications reflects the existing environment. As detailed in respect of the analysis of the WAP provisions, the operation of the Tekapo PS in the manner sought by Genesis is consistent with the more specific environmental flow regime requirements of the WAP. In setting the flow regime for the Takapō / Tekapo River under the WAP, the benefits of providing a constant minimum flow were outweighed by the effects on electricity generation. These matters have also been comprehensively addressed in the Treaty Impact Assessment prepared by the Waitaki Rūnaka for this application, as provided in Appendix A to the AEE
4.5 Water is managed through the setting of limits to safeguard the life-supporting capacity of ecosystems, support customary uses, and provide for community drinking-water supplies and stock water, as a first priority and to meet the needs of people and communities for water for irrigation, hydro-electricity generation and other economic activities and to maintain river flows and lake levels needed for recreational activities, as a second priority.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan, which provide for community drinking water supplies and stock water as well as for hydro-electricity generation.

Provision	Comment
4.6 In high naturalness water bodies listed in Sections 6 to 15, the damming, diverting or taking of water is limited to that for individual or community stock or drinking-water and water for the operation and maintenance of existing infrastructure.	Section 15 Waitaki and South Coastal Canterbury does not identify any high naturalness water bodies, while those identified in Section 15A Waitaki and South Coastal Canterbury do not involve Lake Takapō or the Takapō River.
4.7 Resource consents for new or existing activities will not be granted if the granting would cause a water quality or quantity limit set in Sections 6 to 15 to be breached or further over allocation (water quality and/or water quantity) to occur or in the absence of any water quality standards in Sections 6 to 15, the limits set in Schedule 8 to be breached. Replacement consents, or new consents for existing activities may be granted to: (a) allow the continuation of existing activities at the same or lesser rate or scale, provided the consent contains conditions that contribute to the phasing out of the over allocation (water quality and/or water quantity) within a specified timeframe; or (b) exceed the allocation limit (water quality and/or water quantity) to a minor extent and in the short-term if that exceedance is part of a proposal to phase out the overallocation within a specified timeframe included in Sections 6 to 15 of this Plan.	The ongoing operation of the Tekapo PS does not impact the achievement of the freshwater outcomes set out in the CLWRP, nor will discharges result in the water quality limits in the CLWRP being exceeded (noting that those outcomes recognise the Tekapo PS as being part of the existing environment). The resource consents sought will provide for a continuation of the existing scheme at the same rate and scale. Policy 4.7, as far as it is relevant to the applications, is achieved because: • The activities for which replacement consents are being sought comply with the water allocation, environmental flow and level regimes of the WAP and therefore do not constitute "over allocation" from a water quantity perspective; • Genesis does not discharge contaminants that result in an overallocation from a water quality perspective; and • As the CLWRP classifies the discharge activities associated with the ongoing operation of the Tekapo PS as controlled activities, the consent applications must be granted.
4.8 (New harvest and storage of water schemes). 4.9 (Reviews of sub-region sections). 4.10 (deleted). 4.11 (The setting of catchment specific water quality and quantity outcomes).	These policies are not applicable to the Tekapo PS reconsenting.

Provision	Comment
4.12 There are no direct discharges to surface water bodies or groundwater of: (a) untreated sewage, wastewater (except as a result of extreme weather related overflows or system failures) or bio-solids; (b) solid or hazardous waste or solid animal waste; (c) animal effluent from an effluent storage facility or a stock holding area; (d) organic waste or leachate from storage of organic material; and (e) untreated industrial or trade waste.	The resource consents sought for the Tekapo PS do not involve any of the activities identified in Policy 4.12.
4.13 (For other discharges of contaminants into or onto land). 4.14 (Any discharge of a contaminant into or onto land). 4.14A (The disposal of domestic effluent and wastewater).	The resource consents sought for the Tekapo PS do not involve any of these activities.
4.14B Have regard to Ngāi Tahu values, and in particular those expressed within an iwi management plan, when considering applications for discharges which may adversely affect statutory acknowledgement areas, nohoanga sites, surface waterbodies, silent file areas, culturally significant sites, Heritage New Zealand sites, any listed archaeological sites, and cultural landscapes, identified in this Plan, any relevant district plan, or in any iwi management plan.	These matters have been comprehensively addressed in the Treaty Impact Assessment prepared by the Waitaki Rūnaka for this application, as provided in Appendix A to the AEE Reconsenting the Tekapo PS will not affect any Heritage New Zealand sites.
4.15 (Adverse effects in urban areas). 4.16 (Reticulated stormwater systems for urban areas). 4.16A (Operators of reticulated stormwater systems). 4.17 (Stormwater run-off volumes and peak flows).	The resource consents sought for the Tekapo PS do not involve any of these activities.

Provision	Comment
4.18 (Loss or discharge of sediment from earthworks). 4.19 (Discharge of contaminants from earthworks). 4.20 (Earthworks, harvesting of forestry or other clearance of vegetation). 4.21 (Use of vegetation burning as a land management tool). 4.22 (Sedimentation from land clearance, earthworks and cultivation).	
4.23 (Water sources used for drinking-water supply). 4.23A (Quality of water for community drinking-water supply). 4.23B (Resource consent applications for community drinking water supply).	There are no surface water sources of drinking water immediately downstream of any of the Tekapo PS activities and therefore these provisions are not relevant to these applications. To the extent that they may be relevant, Genesis ensures that the activities relating to the ongoing operation and maintenance of the Tekapo PS carefully manage the potential for accidental release of contaminants to water (including, for example, having hazardous substances stored in bunded areas and ensuring the refuelling occurs well away from water bodies).
4.24 (Discharge of a hazardous substances). 4.25 (Hazardous Substances and New Organisms Act 1996). 4.26 (Discharges of hazardous substances from contaminated land).	The activities for which the resource consents sought for the Tekapo PS do not involve the discharge of hazardous substances. The hazardous substance provisions seek to manage the effects on the environment from the storage and use of hazardous substances. Genesis ensures that the storage and use of hazardous substances at the Tekapo PS are undertaken in a manner that is compliant with all of the applicable hazardous substances regulations and is therefore consistent with these policies.
4.27 (Landfills and other waste collection or disposal sites). 4.28 (Disposal of sewage sludge from the treatment of human effluent). 4.29 (On-site effluent treatment and disposal system). 4.30 (New cemetery locations).	The resource consents sought for the Tekapo PS do not involve any of these activities.

Provision	Comment
4.31 – 4.41D (Policies relating to farming activities and nutrient losses).	The resource consents sought for the Tekapo PS do not involve any farming activities.
4.42 Wetlands in the beds and margins of lakes and rivers are managed as an integral part of lakes and rivers.	The effect of the Tekapo PS on wetlands in the beds and margins of lakes and rivers has been considered as part of these applications for resource consents as discussed in this AEE.
4.43 In hāpua, coastal lakes, lagoons and wetlands, the damming, diversion or taking of water is limited to the temporary diversion of water as part of maintaining infrastructure, pest management, or habitat restoration or enhancement work, or the artificial opening of hāpua to assist in fish migration, achieving other conservation outcomes, customary uses, or to avoid land inundation.	The resource consents sought for the Tekapo PS do not involve the damming, diversion or taking of water in hāpua, coastal lakes, lagoons or wetlands.
4.44 The damming or diversion of any alpine or hill-fed river or high naturalness waterbody identified in Sections 6 to 15 does not have more than a minimal adverse effect on: (a) values of significance to Ngāi Tahu associated with the mainstem; (b) the passage of floods and freshes needed to maintain river processes, ecosystem health and the removal of vegetation encroaching onto the bed of the mainstem; (c) sediment transport within the river and to the coast; (d) fish passage; (e) downstream water quality; (f) the ecological values of the river and its margins; (g) threatened native riverbed populations and significant indigenous biodiversity; and	The resource consents sought for the Tekapo PS do not involve the damming, diversion of any alpine or hill-fed river or high naturalness waterbody.

Provision	Comment
(h) recreation activities.	
4.45 (Alteration to the level of any unmodified natural lake that was). 4.46 (Adverse effects of in-stream damming on water bodies). 4.47 (Small-scale diversions of water).	These are primarily RMA section 13 matters, the resource consents sought for the Tekapo PS do not involve these matters.
4.48 Any dam or infrastructure for the storage of water is sited, designed, constructed and operated to minimise any risk of overspill, leakage, slips or other dam failure, provides for the diversion of floodwaters, and any associated risk of inundation or other adverse effects on people, communities or their property.	The Tekapo PS infrastructure is designed to specific criteria and standards to limit the effects of flood events or seismic events on this infrastructure and is maintained and continually assessed against performance criteria (as part of a process safety framework). For example, the upgrade to the Tekapo Intake Gate is designed to be resilient in a 1 in 10,000 annual exceedance probability seismic event (and associated aftershocks) and the modifications to the high flow management rules discussed in the AEE address Lake Takapō gate safety matters.
4.49 (Enabling the taking of water for a community water supply). 4.50 (Exceedance of the environmental flow and water allocation limits).	These policies do not apply to the resource consents sought for the Tekapo PS.
4.51 In recognition of their national benefits, existing hydro-electricity generation, and irrigation schemes and principal water supplier schemes and their associated water takes, use, damming, diverting and discharge of water are to be considered as part of the existing environment. On considering an application for a replacement consent for an existing scheme consideration will be given to the need for, and appropriateness of, improvements in the efficiency of water use and conveyance assessed over the life of the consent and reductions in any adverse effects on the environment. The benefits derived from the use of water for the generation of electricity from existing and new renewable energy	This policy provides for the Tekapo PS infrastructure to be considered as part of the existing environment and the policy recognises that the structures and infrastructure have effects that last as long as the structures exist. The Tekapo PS is nationally and regionally significant infrastructure that is resilient and positively contributes to economic and social wellbeing throughout New Zealand. The resource consents sought provide for its efficient and effective operation, on-going maintenance, repair, development and upgrading. The Tekapo PS uses water efficiently for the generation of electricity. Upgrades undertaken by Genesis, including canal lining, runner replacements

Provision	Comment
sources are recognised and provided for in accordance with the National Policy Statement for Renewable Electricity Generation 2011 and the Regional Policy Statemen	at Tekapo B and Tekapo A upgrade have all contributed to improving the Tekapo PS efficiency.
4.52 (Abstraction of groundwater) 4.53 (Change to a resource consent to abstract surface water)	These policies are not applicable to the Tekapo PS.
4.54 In addition to the requirements in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, any new water permit, replacement of an expiring water permit, transfer or review of an existing permit: (a) to take water at a rate of more than 30 L/s; (b) to take water with a minimum flow or trigger level that signifies a restriction on take; or (c) to take water within a water users group; shall include a condition requiring water use records to be telemetered to the Canterbury Regional Council or its nominated agent.	Water measurement records are provided to Canterbury Regional Council as required by consent conditions.
4.55 Any discharge of water resulting from moving water from one catchment or waterbody to another in particular: (a) does not facilitate the unwanted transfer of fish species, plant pests or unwanted organisms into catchments where they are not already present; (b) takes into account Ngāi Tahu values; (c) does not have a more than a minor adverse effect on the natural character of the receiving water;	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.

Provision	Comment
(d) does not compromise the ability of existing drinking-water treatment systems to effectively treat the water to achieve the standards set out in the Drinking-water Standards for New Zealand; and (e) does not have a more than a minor adverse effect on fish migration.	
4.56 (Water is introduced from outside a catchment) 4.57 – 4.59 (Abstraction of groundwater) 4.60 (Water intakes)	These policies are not applicable to the resource consents sought for the Tekapo PS.
4.61 Any abstraction of surface water or stream depleting groundwater with direct, high, or moderate depletion, is subject to conditions specifying: (a) the maximum instantaneous rate of take; (b) except for hydro-electricity generation activities, a maximum volume based on reasonable use determined in accordance with Schedule 10 over the period the water is required; (c) a minimum flow at which abstraction ceases in accordance with the relevant flow and allocation limits; (d) the area or property within which the water is to be used; (e) the location of the take; (f) the prevention of fish entering any intake, in accordance with Schedule 2; (g) when partial restrictions (when rivers are flowing above the minimum or residual flow limit but below the sum of the minimum or residual flow and the allocation limit) come into force; and	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.

Provision	Comment
(h) where the water is used for irrigation, the need for, compliance with, and auditing of a Farm Environment Plan.	
4.62 To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water will be implemented. Regimes will be designed to: (a) have a single flow monitoring point for the whole catchment that all abstractors are referenced to, with additional flow monitoring points that some or all abstractors are subject to, should the hydrology of the surface waterbody justify it; (b) provide for groups of water permit holders in the same sub-catchment to share water when takes are operating under partial restrictions; and (c) except if otherwise specified in an applicable sub-region section, implement a stepped or pro rata restriction regime that applies equally to all taking within an allocation limit and does not induce the flow to fall below the minimum flow due to abstraction.	The resource consents sought for the Tekapo PS include proposed conditions requiring that the scheme is operated in accordance with the environmental flow and level regimes set in the Waitaki Catchment Water Allocation Regional Plan and that the existing environment against which the resource consents were assessed is retained or enhanced.
4.63 (Abstraction of groundwater) 4.64 (Seasonal or annual allocation)	These policies are not applicable to the resource consents sought for the Tekapo PS.
4.65 The rate, volume and seasonal duration for which water may be taken will be reasonable for the intended use. 4.69 Systems to convey or apply fresh water are designed to maximise efficient use of water, including the improvement over time of existing systems, taking into account:	The rate of abstraction, seasonal duration, and the annual volume of water for the Tekapo PS water take and discharge resource consents are necessary for the operation of the scheme. The systems used to convey water for the Tekapo PS are designed to maximise efficient use of water. The canal re-lining, intake structure upgrade and Tekapo B runner replacement projects are all examples where Genesis

Provision	Comment
(a) practicable options to implement any change to existing systems; and (b) the benefits and costs of achieving a higher level of efficiency.	has undertaken projects to improve existing systems and to increase efficiencies and generation consistent with these provisions.
4.66 – 4.68 (Irrigation water) 4.70 – 4.72 (Transfer of permits, water sharing) 4.73 – 4.74 (Lapse, farming activities) 4.75 – 4.80 (Protection of aquifers)	These policies are not applicable to the resource consents sought for the Tekapo PS.
4.81 Any take, use, damming or diversion of water, any discharge of contaminants onto land or into water, or any earthworks, structures, planting, vegetation removal or other land uses within a wetland boundary, do not adversely affect the significant values of wetlands, hāpua, coastal lakes and lagoons, except for: (a) a temporary and or minor adverse effect where that activity is part of installing, maintaining, operating or upgrading infrastructure, pest management, or habitat restoration or enhancement work; or (b) the artificial opening of hāpua, coastal lakes or lagoons to assist in fish migration or achieving other conservation outcomes, customary uses, or to avoid land inundation.	As detailed in the various technical reports supporting this AEE, including the PDP 2023 and Ecological Solutions 2023 assessments, the ongoing operation of the Tekapo PS will not affect the existing values of wetlands in the catchment. In addition, the continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme will actively promote the protection and enhancement of waterbodies and biodiversity in the catchments associated with and above the Tekapo PS.
4.84 (Wetlands and riparian planting) 4.85 (Enhancing water quality, indigenous biodiversity and ecosystem health)	As detailed in the various technical reports supporting this AEE, including the PDP 2023 and Ecological Solutions 2023 assessments, the ongoing operation of the Tekapo PS will not affect the existing values of wetlands in the catchment. In addition, the continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme will actively promote the

Provision	Comment
	protection and enhancement of waterbodies and biodiversity in the catchments associated with the Tekapo PS.
4.85A Indigenous biodiversity, habitats of indigenous fauna and flora, and the natural character of Canterbury's braided river systems is preserved through: (a) preventing further encroachment of activities onto the beds, banks and margins of lakes, braided rivers and associated wetlands and coastal lagoons; and (b) limiting vegetation clearance and cultivation within the bed, banks and margins of lakes, braided rivers and associated wetlands and coastal lagoons, unless the vegetation clearance or cultivation is for the purpose of pest management, habitat restoration, flood control purposes, the operation, maintenance, upgrade or repair of structures or infrastructure, or maintenance of public access.	As detailed in the various technical reports supporting this AEE, including the PDP 2023 and Ecological Solutions 2023 assessments, the ongoing operation of the Tekapo PS will not affect the existing values of wetlands in the catchment. In addition, the continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme will actively promote the protection and enhancement of waterbodies and biodiversity in the catchments above the Tekapo PS.
4.86 Activities that occur in the beds or margins of lakes, rivers, wetlands, hāpua, coastal lakes and, lagoons are managed or undertaken so that: (a) the character and channel characteristics of rivers including the variable channel characteristics of braided rivers are preserved; (b) sites and areas of significant indigenous biodiversity values or of cultural significance to Ngāi Tahu are protected; and (c) existing lawful access to the bed of the lake, river, wetland, hāpua, coastal lake, or lagoon for recreational, customary use, water intakes or supplies or flood control purposes, is not precluded, except where necessary to protect public health and safety	As detailed in the various technical reports supporting this AEE, including the PDP 2023 and Ecological Solutions 2023 assessments, the ongoing operation of the Tekapo PS will not affect the existing values of wetlands in the catchment. In addition, the continuation of, and increase in funding for, an Indigenous Biodiversity Enhancement Programme will actively promote the protection and enhancement of waterbodies and biodiversity in the catchments associated with the Tekapo PS. The granting of consents for the Tekapo PS will not affect existing character and channel characteristics of rivers or sites of significant indigenous biodiversity value, nor will existing lawful access to any lake, river, wetland be affected.

Provision	Comment
4.87 (Planting of unwanted species) 4.88 (Earthworks, structures). 4.89 (Earthworks, structures restricting flood flows).	These policies are not applicable to the resource consents sought for the Tekapo PS.
4.90 Any modification of the levels of lakes which are artificially managed does not create or exacerbate significant shoreline erosion. This policy does not apply to the artificial opening of hāpua, coastal lakes or lagoons to the sea.	The resource consents sought for the Tekapo PS include proposed conditions to ensure that the operation of the scheme does not create or exacerbate significant shoreline erosion.
4.91 (Land uses affecting the stability of infrastructure). 4.92 (Protecting communities from natural hazards) 4.92A (Enabling catchment restoration activities) 4.93 (Recognising the value of gravel extraction). 4.94 (Enabling extraction of gravel). 4.95 (Gravel removal from the beds of rivers). 4.95A (Management of rivers for flood control).	These policies are not applicable to the resource consents sought for the Tekapo PS.
4.96 The consequential effects of seismic activity are recognised and timely and appropriate responses to such activity are facilitated. 4.97 Remediation works which are necessary to enable people and communities to recover from natural hazard events (a) occur in a timely way, (b) the works are managed to minimise their duration and scale, (c) the works do not cause or exacerbate potential natural hazards elsewhere, and	The Tekapo PS infrastructure is designed to specific criteria and standards to limit the effects of flood events or seismic events on this infrastructure and is maintained and continually assessed against performance criteria (as part of a process safety framework). For example, the upgrade to the Tekapo Intake Gate is designed to be resilient in a 1 in 10,000 annual exceedance probability seismic event (and associated aftershocks) and the modifications to the high flow management rules discussed in the AEE address Lake Takapō / Tekapo gate safety matters.

Provision	Comment
(d) adverse effects on the environment resulting from the works are avoided, remedied or mitigated.	
4.98 Remediation for changes to groundwater hydrology in urban areas)	This policy is not applicable to the resource consents sought for the Tekapo PS.
15B.4.1 The management of water quality in the Waitaki supports the exercise of kaitiakitanga, and ensures freshwater mahinga kai species are sufficiently abundant for customary gathering and safe to consume or use.	These matters have been comprehensively addressed in the Treaty Impact Assessment prepared by the Waitaki Rūnaka for this application, as provided in Appendix A to the AEE.
Freshwater Outcomes	
Tables 15B(a), 15B(b), 15B(c) and 15B(d) set out Fresh Water Outcomes that are to be maintained or achieved by lakes and rivers in the Waitaki Catchment.	These matters are addressed in the following tables. Table 15B(b) Table 15B(b): Freshwater Outcomes for Lakes in the Upper Waitaki Freshwater Management Unit is not relevant to this assessment as Lake Takapō is upstream of the Tekapo PS.

Table 1: Assessment Against Table 15B(a): Freshwater Outcomes for Waitaki Rivers

Freshwater Management Unit	River Type	Ecological Health Attributes			Macrophyte Attributes		Periphyton Attributes		Siltation Attribute	Human Health for Recreation Attributes				Tangata Whenua Attribute
		QMCI[1] (min score) 80% of samples in a five year period	Dissolved oxygen (min saturation [%])	Temp. (Max) [degrees C]	Emergent macrophytes [max cover of bed] [%]	Total macrophytes [max cover of bed] [%]	Chlorophyll *a* [mg chl*a*/m^2][2]	Filamentous Algae >20mm [max cover of bed]	Fine sediment <2mm diameter [max cover of bed] [%]	Cyano-bacteria mat cover [%]	SFRG[3]	E. coli (E. coli /100ml) Annual Median	E. coli (E. coli /100ml) 95th Percentile	
Upper Waitaki	Lake fed[4]	6	90	19	No Values Set	No Values Set	200	30	10	20[5]	Good	<260	<260	Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat
Assessment		The continued operation of the Tekapo PS under the same operating conditions as provided for under the existing resource consents will not result in any deterioration in the ecological health, macrophyte, periphyton, siltation or human health for recreation attributes in the Takapō River.										The operation of the Tekapo PS does not affect E. Coli levels in the Takapō River.		Genesis has reached agreement with the Waitaki Rūnaka regarding the continued operation of the Tekapo PS.

1 QMCI = quantitative macro invertebrate community index.
2 Outcomes shall only be exceeded in 1 out of 12 samples for rivers classified as default class in the River Environment Classification system, and only in 2 out of 12 samples for rivers classified as productive class.
3 SFRG = Suitability for Recreation Grade, from Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas, Ministry for the Environment, June 2003.
4 Excludes the Takapō River above its confluence with Forks Stream, the Pukaki River, and the Lower Ōhau River, to the extent that the achievement of any outcome in these waterbodies is affected by the effects of existing hydroelectricity infrastructure on river flows.
5 As required by the National Policy Statement for Freshwater Management 2014, lake-fed rivers shall also achieve additional cyanobacteria outcomes of <0.5mm^3 /L biovolume equivalent for all cyanobacteria or <500 cells/mL of total cyanobacteria.

Table 2: Assessment Against Table 15B(c): Water Quality Limits for Waitaki Rivers.

Freshwater Management Unit	River Type	River Name and Measurement Location	Dissolved Reactive Phosphorus (DRP) concentration [mg/L] [Annual Median]	Nitrate-nitrogen concentration (mg/L)		Ammoniacal nitrogen concentration (mg/L)	
				Annual Median	95th Percentile	Annual Median	Annual Maximum
Upper Waitaki	Lake fed	Takapō River – Above Grays Confluence: map reference 1388284 5098352[6]	0.002	0.017	0.097	0.005	0.029
		Assessment	DRP at Cawthron sites 1 – 5 on 4 – 6 March 2019 were all below detectable or at 0.002 (sites 2 and 5), and 0.0022 at site 2 on 1 March 2019 but below 0.002 at sites 2 and 5 in May, July, August, October and December. Environment Canterbury monitoring results at Above Grays Confluence 2006 – 2011 ranged between <0.001 and a high of 0.003 (January 2012).[7]	Nitrate-N at Cawthron sites 1, 2, 4 and 5 were 0.0069, 0.0042, < 0.001 and < 0.001 in March 2019 and remained below 0.03 g/m^3 at all sites during all sampling occasions.[8] Two Environment Canterbury samples in 2011 were 0.006 and 0.01.[9]		Total ammoniacal-N at Cawthron sites 1 – 5 were < 0.005 in March 2019.[10] Environment Canterbury monitoring upstream of Grays 2006 – 2011 reached a high of 0.029 in 2011 but is typically approximately 0.01.[11]	
		Takapō River – Steel Bridge: map reference 1379394 5090144[12]	0.002	0.016	0.144	0.005	0.031
		Assessment	DRP at Cawthron site 6 was 0.003 on 4 – 6 March 2019 and 0.002 or less at sites 7 and 8. DRP at Cawthron site 8 was slightly above 0.002 in August 2019 but below 0.002 in March, May, July, October and December samples. Environment Canterbury monitoring at Steel Bridge 1990 – 2023 ranged between <0.001 and a high of 0.17 (December 1990); median for 2020 – 2023 is 0.002.	Nitrate-N at Cawthron sites 6, 7, and 8 were <0.001, 0.0032 and 0.0056 in March 2019 and remained below 0.03 g/m^3 at all sites during all sampling occasions, consistent with Environment Canterbury monitoring at Steel Bridge 1990 – 2011.[13]		Total ammoniacal-N at Cawthron sites 6 – 8 were < 0.005 in March 2019. Environment Canterbury monitoring at Steel Bridge 2010 – 2023 reached a high of 0.031 in 2011 but is typically less than 0.01.[14]	
Assessment			The operation of the Tekapo PS does not affect DRP concentrations in the Takapō River, the DRP concentrations in the river likely reflect inputs from agricultural land use in the Grays River and Mary Burn.[15] The operation of the Tekapo PS does not affect compliance with the DRP limits specified in the CLWP.	The operation of the Tekapo PS does not affect nitrate-N concentrations in the Takapō River, the nitrate-N concentrations in the river likely reflect inputs from agricultural land use in the Grays River and Mary Burn.[16] The operation of the Tekapo PS does not affect compliance with the nitrate-N limits specified in the CLWP.		The operation of the Tekapo PS does not affect ammoniacal-N concentrations in the Takapō River, any ammoniacal-N concentrations in the river likely reflect inputs from agricultural land use. The operation of the Tekapo PS does not affect compliance with the ammoniacal-N limits specified in the CLWP.	

6 Cawthron Sites 1 – 5.
7 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ26848.
8 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 29; at sites 2 and 5, results were always below 0.017, at site 8 two samples exceeded 0.017.
9 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ26848.
10 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 29.
11 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ26748.
12 Cawthron Sites 6 – 8.
13 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ20785.
14 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ20785.
15 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 28.
16 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 28.

Table3: Assessment Against Table 15B(d): Water Quality Limits for Lakes in the Upper Waitaki Freshwater Management Unit.

Lake Type	Lake Name and measurement location	TLI [max. annual average]	Total Phosphorus (TP) concentration [mg/m^3] [annual median]	Total Nitrogen concentration [mg/m^3] [annual median]	Chlorophyll *a* concentration (mg/m^3)		Ammoniacal Nitrogen concentration (mg/l)	
					Annual Median	Annual Maximum	Annual median	Annual Maximum
Large High country lakes	Lake Takapō: map reference 2311557 5694042 Lake Pūkaki: map reference 2285797 5675254	1.7 for all lakes	<10	<160	<2	<10	<0.03	<0.05
Assessment		Lake Takapō "*is microtrophic with a TLI of 1.0–2.0…lake level variations as a result of the Tekapo PS are unlikely to have resulted in any appreciable changes to water quality*".[17] Lake Pūkaki "*The lake is microtrophic (very low nutrient levels) … Water entering the lake via the Tekapo Canal has excellent water quality, slightly better than that of the receiving environment. The existing operation of the Tekapo PS therefore has no adverse effect on Lake Pūkaki*"[18]	Lake Takapō "*water quality is excellent … and has consistently low concentrations of … nitrogen and phosphorus….lake level variations as a result of the Tekapo PS are unlikely to have resulted in any appreciable changes to water quality.*"[19] Lake Pūkaki "*has showed no indication of change in water quality based on … total phosphorus … concentrations since 2006, when routine monitoring data collection began*".[20] Environment Canterbury Lake Takapō monitoring results between 1991 and 2023 were typically <10, with a high of 17 in 2011.[21]	Lake Takapō "*water quality is excellent … and has consistently low concentrations of … nitrogen and phosphorus….lake level variations as a result of the Tekapo PS are unlikely to have resulted in any appreciable changes to water quality.*"[23] Lake Pūkaki "*has showed no indication of change in water quality based on total nitrogen … concentrations since 2006, when routine monitoring data collection began*".[24] Environment Canterbury Lake Takapō monitoring results between 2004 and 2023 were <100, apart from a high of 150 in 2007.[25]	"*Phytoplankton biomass and production, as indicated by concentrations of the photosynthetic pigment chlorophyll-a, are low in Lake Tekapo … The Tekapo PS is unlikely to have resulted in any appreciable changes to phytoplankton in Lake Tekapo*".[27] Lake Pūkaki "*has showed no indication of change in water quality based on … chlorophyll-a concentrations since 2006, when routine monitoring data collection began*".[28] Environment Canterbury Lake Takapō monitoring results between 2004 and 2023 ranged between <0.2 to a high of 1.3 in 2009.[29] Environment Canterbury Lake Pūkaki monitoring results between 2004 and 2023 ranged between <0.2 to a high of 1.8 in 2021.[30] Mount Cook Alpine Salmon data for the downstream end of the Tekapo Canal over the last two years shows median Chlorophyll *a* concentration of 0.7.	Cawthron – not measured. Environment Canterbury Lake Takapō monitoring results between 1991 and 2006 ranged between <0.005 to a high of 0.016 in 2006.[31] Environment Canterbury Lake Pūkaki monitoring results in 2006 ranged between <0.005 to a high of 0.018 in March 2006.[32] Mount Cook Alpine Salmon data for the downstream end of the Canal over the last two years shows median ammoniacal nitrogen concentration of 0.01 and maximum of 0.053 (recorded during a flow stoppage).

17 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 5 – 6.
18 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, Executive Summary, page iv – v.
19 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 6.
20 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 51.
21 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ32908.
23 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 6.
24 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 51.
25 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ32908.
27 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 7.
28 Tekapo Power Scheme reconsenting: assessment of aquatic environmental effects. Cawthron Report No. 3688, page 51.
29 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ32908.
30 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ34908.
31 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ32908.
32 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ34908.

Lake Type	Lake Name and measurement location	TLI [max. annual average]	Total Phosphorus (TP) concentration [mg/m^3] [annual median]	Total Nitrogen concentration [mg/m^3] [annual median]	Chlorophyll *a* concentration (mg/m^3)		Ammoniacal Nitrogen concentration (mg/l)	
					Annual Median	Annual Maximum	Annual median	Annual Maximum
			Environment Canterbury Lake Pūkaki monitoring results between 2006 and 2023 were typically <2, with a high of 48 in 2014.[22] Mount Cook Alpine Salmon data for the lower end of the Canal over the last two years shows median TP concentration of 4.	Environment Canterbury Lake Pūkaki monitoring results between 2004 and 2023 were typically <5, with a high of 20 in 2007.[26] Mount Cook Alpine Salmon data for the lower end of the Canal over the last two years shows median TN concentration of 66.				
Assessment		The operation of the Tekapo PS is unlikely to result in water changes to the TLI that would be contrary to the Water Quality Limit specified in the CLWP.	The operation of the Tekapo PS is unlikely to result in Total Phosphorus concentrations that would exceed the limit specified in the CLWP.	The operation of the Tekapo PS is unlikely to result in Total Nitrogen concentrations that would exceed the limit specified in the CLWP.	The operation of the Tekapo PS is unlikely to result in chlorophyll-*a* concentrations that would exceed the limits specified in the CLWP.		The operation of the Tekapo PS does not result in ammoniacal nitrogen concentrations that would exceed the limits specified in the CLWP.	

22 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ34908.
26 Canterbury Regional Council, https://www.Environment Canterbury.govt.nz/data/water-quality-data/wqdetails/?SiteID=SQ34908.