To be made operative

Otago Regional Council

Proposed Otago Regional Policy Statement June 2021

Integrating the management of Otago's natural and physical resources

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Purpose

As a community, we in Otago are moving into an age that requires solutions to both entrenched legacy issues and significant emerging issues in order to promote positive sustainable change while also enabling the Otago community to flourish, and to enjoy all that the region has to offer.

The Otago Regional Policy Statement (ORPS) provides a policy framework that aims to achieve long-term environmental sustainability by integrating the protection, restoration, enhancement, use and development of Otago's natural and physical resources. The ORPS also aims to provide communities, including mana whenua, with opportunities to carry out their activities to achieve their economic, cultural and social needs and intentions, while at the same time promoting a thriving and healthy natural *environment* as being vital to sustaining our well-being.

The ORPS responds to identified significant regional values and resource management issues relating to Otago's *environment*, *historic heritage*, economy, food production, recreational opportunities and communities. The ORPS sets out objectives, policies, and methods to address and resolve, over time, the identified issues as effectively and efficiently as possible. The ORPS gives effect to the statutory requirements set out in the Resource Management Act 1991 (RMA), as well as relevant national direction instruments, and is informed by iwi authority planning documents. *Regional plans* and *district plans* must give effect to the ORPS.

Description of the region

At 32,000 km^2, the Otago region is the third largest region in New Zealand, making up 12% of New Zealand's land mass.

The region's eastern edge is entirely marine, extending 12 nautical miles out to sea from a scenic and varied coastline. Otago meets Canterbury at the southern bank of the Waitaki River, its northern border following the river upstream then branching off along Awamoko Stream/Te Awamoko, following the north branch of the Kakanui/Kākaunui River before heading inland once again along the Hawkdun Range, following catchment boundaries and ridgelines into the Southern Alps at Otago's westernmost border. In the south, beginning at Brother's Point in the scenic Catlins, the border with Southland tends northeasterly, taking in the Pomahaka/Poumāhaka River catchment, and Umbrella and Kōpūwai Ranges to encompass the headwaters of the glacial alpine lakes, Whakatipu Waimāori (Lake Wakatipu), Wānaka, and Hāwea.

Otago is made up of five *territorial authorities*: Dunedin City Council, and Queenstown Lakes, Waitaki, Central Otago, and Clutha District Councils.

Otago's population at the 2018 Census was 225,186.[1] Dunedin City has the largest population of the Otago *territorial authorities* at 126,255, followed by Queenstown Lakes District at 39,153, Waitaki District at 22,308, Central Otago District at 21,558, and Clutha District at 17,667. Growth is not evenly distributed across the region, with the fastest growing district being Queenstown Lakes.

Otago's history recognises the early exploration and occupation of Otago by Māori followed by the arrival of settlers from Europe and Asia. Otago's economy centres around construction, *primary production*, tourism, and education. The construction industry is a major contributor to employment numbers in Otago, supported by the region's population growth. The primary production sector is a source of domestic and export revenue and employment for the districts and the wider region and the nation. Otago's farms are also a key contributor to the national food supply network. The University of Otago enrols approximately 20,000 students each year from around New Zealand and internationally, contributing to annual population spikes in Dunedin and significantly boosting the economy. Tourism also has a significant impact on the regional economy, contributing about a quarter of the region's total gross domestic product. This is the highest of any region in New Zealand, and primarily concentrated in the Queenstown Lakes District.

Renewable electricity generation facilities[2] meet a large portion of regional and national energy requirements. Significant hydroelectric generation facilities in Otago are located in the Central Otago, Clutha, and Queenstown Lakes Districts. Additionally, Otago has two wind farms, located in the Clutha District.

Otago is home to important *indigenous biodiversity* for Aotearoa, some of which is specific to Otago. Nationally significant *indigenous biodiversity* features include inland saline habitats, ephemeral wetlands, endemic and threatened inland galaxiid fish and lizard populations, western forest habitats, and coastal fauna.

[1] 2018 Census place summaries: Stats NZ (n.d.) https://www.stats.govt.nz/tools/2018-census-place-summaries/otago-region (accessed 26 May 2021).
[2] W Fitzgerald (2019) *Dunedin Energy Study 2017–2018*. University of Otago.

Climate

The Otago region experiences two distinct climates due to the geographic variety between the temperate coastal areas, and the almost continental inland areas. The coastal settlements experience a cyclic weather pattern that alternates frequently between a warmer and drier climate, and a cooler, damper climate. Central Otago's climate is characterised by hot, dry summers and contrastingly cold, frosty winters. The unique climate supports many of the diverse industries in Otago.

General temperature ranges for the region fall between 18°C and 24°C on summer afternoons, and -2°C and 3°C during winter nights.[3] The mean daily temperatures in summer in Central Otago range between approximately 10°C and 25°C, while the mean daily temperatures in winter range between approximately -1°C and 10°C.[4] Central Otago has held national records for both the hottest and coldest temperature readings in New Zealand. Ophir, a small settlement in Central Otago, has recorded temperatures of 35.2°C in 1959 and -21.6°C in 1995. Significant rises in the use of heating sources occur during the drastically colder winter periods. The highest regional rainfalls, averaging 2000mm per year, occur typically over western areas of Otago such as around the Lakes District and Southern Alps. In contrast, the average rainfall in Central Otago is the lowest in New Zealand averaging around 400-500mm per year.

Coast

The Otago coastline stretches for 480 km and is extremely diverse, encompassing pebble and sandy beaches, basalt formations, dune systems, eelgrass and saltmarshes, estuaries, rolling downlands, and striking cliff heads. Working farms abut most of the coastline, while remnant swathes of native bush clad coastline are a distinct feature of the Catlins area. Significant coastal settlements include Dunedin and Ōamaru. The Otago port is based in Port Chalmers within the Otago Harbour, and is the region's only commercial freight handling harbour. However commercial fishing ramps (supporting fishing fleets) are present in Ōamaru, Moeraki, Karitāne, and Taieri Mouth. Coastal erosion and the decline of the regional coastline is well documented, posing a long-term threat to residential and commercial coastal developments and *historic heritage*, particularly *wāhi tūpuna*.

Otago's benthic and marine ecosystems are varied and diverse including rocky reef systems, sponge gardens, bryozoan and horse mussel beds, biogenic reefs, kelp forests and submarine canyons within 12 nautical miles of the shore. More than thirty species of seabird are regularly found off the coast of Otago. Rare sea birds such as the Royal Albatross and hoiho (Yellow-eyed penguin) can be found along the landward coastal environment. Surfing is a significant recreational activity, in Dunedin particularly, and there are four *surf breaks* of national significance along the Otago coastline.

Water bodies

The Otago region has significant *freshwater* resources in the form of surface water, natural and artificial *lakes*, *groundwater*, and *wetlands*. Otago's communities are reliant on the use of these *water* resources for their social, cultural and economic well-being. *Rivers* and *lakes* make up most of the regional surface *water*. The big *lakes*, such as Wānaka, Whakatipu- Waimāori (Lake Wakatipu) and Hāwea and including artificial *lakes* Te Wairere/Dunstan, Roxburgh and Onslow, constitute about 23% of New Zealand's total *lake* surface area. The primary catchments are Lakes Wānaka, Whakatipu Waimāori (Lake Wakatipu) and Hāwea, which feed into Otago's largest *river*, the Clutha River/Mata-Au. Otago also has many *groundwater* sources. *Wetlands* make up many significant landscape and ecosystem elements in Otago,

[3] GR Macara (2015). The Climate and Weather of Otago, Second Edition. *NIWA SCIENCE AND TECHNOLOGY SERIES,* 67th ser.
[4] Central Otago Climate (n.d.) https://centralotagonz.com/opportunities/working-here (accessed 26 May 2021).

including blanket and string bogs, saline areas, swamp forest remnants, shallow *lake* complexes, estuarine saltmarshes, and valley floor swamps.

Natural character and landscapes

Otago's landscapes are diverse. Moving inland from Otago's diverse and varied coastline, the landscapes change dramatically. Rolling plains separated by mountain ranges, steep hillsides of tussock, and deep gorges make up a lot of rural Otago. This *land* is dissected by flowing bodies of water, towering mountainscapes, and fascinating geological formations. Modified landscapes encompassing farmland and remnants of the region's early gold mining activity are ever- present, creating a rich sense of heritage and regional identity. National Parks and other Public Conservation areas provide important areas of unmodified *land* and water.

Urban form

Urbanised areas in Otago occupy only about 1% of total *land* area, however 87% of people live in urban settlements. Dunedin is Otago's largest urban area, surrounded by hills and harbour, and has a large suburban area and commuter catchment especially to the south, with more recent expansion moving out to connect with an expanding Mosgiel. The Queenstown Lakes District population is approximately 91% urban. Its outstanding landscape has, and will continue to, influence how urban form develops.

In the remainder of the region, smaller urban settlements are geographically scattered, maintaining clear distinctions between rural and urban forms, and with significant variability in growth pressures and infrastructure capacity. Growth in overall numbers of people is not the only driver of urban change pressures in Otago; many areas face low or no growth, and all areas are expected to have an aging population.

How the policy statement works

Statutory context

Resource Management Act 1991

The Resource Management Act 1991 is the primary resource management statute in New Zealand and sets out the related responsibilities and powers of national, regional, and city/district government.

The RMA requires regional councils to have a regional policy statement (RPS) under Section 60, prepared in accordance with the process set out in Schedule 1. The purpose of the RPS, as set out in Section 59 of the RMA, is to provide an overview of the specific resource management issues for the region and establish policies and methods to achieve the integrated management of both the *natural and physical resources* of the region. The RPS must be prepared in accordance with and contain the matters set out in Sections 30, 60, 61, and 62 of the RMA.

The regional policy statement must be prepared in accordance with and/or give effect to higher order national direction instruments, including any regulations, National Policy Statements (NPS), the New Zealand Coastal Policy Statement (NZCPS) and be written to comply with the National Planning Standards. Further ORC must observe and enforce observance of any National Environmental Standards (NES) to the extent to which their powers enable them to do so. The RPS sets out requirements that *regional plans, district plans*, and regional coastal plans must give effect to. More information about the relevant national direction instruments can be found in the 'national direction instruments' section of this Regional Policy Statement.

Figure 1 – Position of the Regional Policy Statement within the resource management planning framework

Partnership, Te Tiriti o Waitangi and Kāi Tahu[5]

The Otago Regional Policy Statement has been developed in partnership with Kāi Tahu, the iwi and *tangata whenua* of Otago. The partnership between the Otago Regional Council and Kāi Tahu is an important and valuable relationship, evident throughout the ORPS and woven into its provisions. The RMA requires Regional and Local Councils to address matters of National Importance, including matters associated with Te Tiriti o Waitangi (The Treaty of Waitangi) and key issues and concerns of iwi.[6]

The ORC has also considered the Kāi Tahu ki Otago 2005 Resource Management Plan and Te Tangi a Tauira: Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008. ORPS chapters on Significant Resource Management Issues for Iwi and on *Mana Whenua* provide an in- depth discussion of iwi issues and set a basis for the remaining policy framework.

The key issues identified by Kāi Tahu include:

- recognising the rights and interests of Kāi Tahu in natural and resource management processes;
- recognising the important role of mātauraka in natural resource management;
- recognising the integral relationship of Kāi Tahu with *natural and physical resources*, including the coast, waterways, *lakes*, *wetlands* and indigenous flora and fauna, protecting these resources from degradation, improving them where they have been degraded, and sustaining them for future generations;
- protecting and restoring the abundance of *mahika kai* and restoring access to *mahika kai* areas;
- protecting the values of *wāhi tūpuna* and the ability for Kāi Tahu to maintain their relationship with these areas;
- enabling development of *land* and resources within native reserves, including *papakāika*; and
- the need for integrated management that recognises the interconnections between resources and across different parts of the environment.

Cross-boundary matters

Ecosystems and human activities cross jurisdictional boundaries. When different jurisdictions manage similar activities or resources in different ways there is potential for inconsistent outcomes, resulting in inefficient and ineffective management.

To achieve integration, those involved in resource management need to coordinate their policies, plans and actions. This is encompassed by the philosophy "ki uta ki tai", often translated as "from the mountains to the sea". Accordingly, section 62 of the RMA 1991 requires regional councils to include in the RPS the processes to be used to deal with issues that cross *local authority* boundaries, and issues between *territorial authorities* or between regions.

Cross-boundary issues can arise in several ways, and generally manifest in issues for either plan preparation and review, or plan administration and the processing of applications for *resource consents*. Otago's cross-boundary matters include:

[5] In the South Island, the local Māori dialect uses a 'k' interchangeably with 'ng'. The preference in Otago is to use a 'k' so southern Māori are known as Kāi Tahu, rather than Ngāi Tahu. In this RPS, the 'ng' is used for iwi in general or where there is reference to Ngāi Tahu ki Murihiku (Southland).

[6] These matters are addressed throughout the Resource Management Act 1991, see in particular sections 6, 8 and 62.

- *effects* in one jurisdiction due to the activities in another, including where *territorial authority* boundaries do not match catchment boundaries, as with the Clutha Mata-au, or the Waitaki River catchment over which Otago and Canterbury Regional Councils share jurisdiction, or Otago's coastal environment, which covers three *territorial authorities'* jurisdictions, and may be affected by *land* uses and dam *structures* in the other two (through sediment flowing down the Clutha Mata-au, for instance). *Effects* within the Otago Coastal environment may also have *effects* on adjoining regional council jurisdiction;
- Kāi Tahu interests, which span Otago as a whole, across *local authority* boundaries;
- natural resources that cross *local authority* boundaries which must be managed in a uniform manner, such as water, outstanding natural features, outstanding natural landscapes and *significant natural areas*;
- differences in policies or methods across plans, particularly where *district plans* and *regional plans* are at different planning stages and may be out of step with current regulation;
- physical resources such as local, *regionally significant infrastructure* or *nationally significant infrastructure* being developed and operated across *local authority* boundaries, as with transport and electricity networks, and potentially shared services such as *waste* management and minimisation; and
- duplicated effort for *local authorities* and increased cost for people seeking consents for activities that occur across *local authority* boundaries or require *resource consent* from two or more consent authorities.

Processes that will be used to address these matters are described in the sections below.

Clear direction in the ORPS

The ORPS provides a vision and broad policy framework for all resource management in Otago, including various methods that require *local authorities* to work together to achieve good outcomes and, in some cases, set implementation timeframes. *Regional plans* and *district plans* as they develop over the next 10 years and beyond, are required to give effect to the ORPS. In doing so one result should be consistency between them. The ORPS has been drafted using direct language and clarity of outcomes sought.

ORPS methods also indicate actions that fall outside the RMA framework. This recognises that only *district plans* and *regional plans* are required to give effect to a regional policy statement, and non- regulatory methods may sometimes be useful to help address cross-boundary matters and achieve desired outcomes.

Cooperation and partnerships with stakeholders

Stakeholders, including Government agencies, industry representatives, landowners, and community-based volunteer groups, provide valuable strategic input to planning and decision-making. Inter-agency groups, such as Te Roopu Taiao, can assist with managing cross-boundary issues and issues affecting people across Otago strategically and collaboratively.

ORC will seek to establish and build upon working relationships with other resource management stakeholders. This will help ensure that the processes it undertakes are efficient and, wherever possible, reduce duplication of effort. As new issues emerge in the region and work on existing issues continues, they are best managed through collaboration, which will improve effectiveness and deliver better outcomes. This is particularly important for enhancing and managing important region-wide matters such as *regionally significant infrastructure* and *significant natural areas*.

Cooperation and partnerships with other *local authorities*

There are many opportunities to work more closely with other *local authorities* to achieve a consistent and integrated approach to managing *natural and physical resources*.

Local authorities together can:

- share information, for instance to understand the long-term growth and economic development opportunities and threats and the spatial pattern of *land use* and development, or to ensure natural resources are not artificially fragmented;
- hold joint processes for processing *resource consents* and associated hearings where activities or *effects* cross jurisdictional boundaries. This allows all *effects* of activities to be considered holistically at the same time, including any cumulative *effects*. Joint processes could also reduce the processing cost (in both money and time) for the applicant;
- work collaboratively on plan changes and develop combined planning documents for shared areas of responsibility;
- clearly define their resource management roles and responsibilities to reduce duplication of effort and streamline processes for Otago's communities; and
- cooperate and budget for joint processes and major projects through Annual and Long-term Planning processes under the LGA. This allows pooling resources, reducing inefficiency and integrating management approaches through time, to ensure that cooperation between agencies is budgeted for, including setting up structures and processes for joint management.

These approaches are more likely to properly address cross-boundary issues and *effects* than *local authorities* working alone.

Triennial agreement

Triennial agreements under the LGA are an opportunity for *local authorities* within a region to set out processes for consultation, protocols and processes for resolving cross-boundary issues.

Cooperation at a national level

Cross-boundary issues may arise that are significant at a national level. This is particularly likely when addressing nationally significant infrastructure such as the National Grid or *land* transport infrastructure.

In such cases, ORC will advise and work with the Minister for the Environment, the Minister of Conservation in the *coastal marine area* and any other relevant agency to identify and resolve cross boundary issues or proposals, to ensure that consideration of the matter occurs in a transparent and timely manner. ORC will endeavour to represent its communities' interests in such situations.

Transferring and delegating functions, powers and duties to other authorities

The RMA enables ORC to transfer its powers, functions and duties to another public authority, including an iwi authority or other statutory body. It may also delegate these to committees, community boards, commissioners or employees. ORC can also enter joint management agreements with other statutory bodies and an iwi authority (such as Te Rūnanga o Ngāi Tahu).

These tools can be used to achieve integrated management and to reduce duplication of effort by local and public authorities, and to enable a Treaty partnership approach to resource management. Joint management agreements enable iwi partners and important stakeholders to have an active role in the

management of specific resources, and for specific purposes. They can also be used to build community capacity and share understanding in resource management.

Helping to build capacity for, and improve, *takata whenua* involvement

Takata whenua have the prerogative to express and explain how their tikaka and mātauraka should be realised in resource management. Councils have a vital role in assisting this process through finding ways to partner, resource, and upskill rūnaka so they can be fully involved in the resource management partnership.

Establishing and implementing relationship agreements such as Mana Whakahono a Rohe agreements, protocols and charters can provide a framework for the council to provide necessary support. Increasing skills and capacity within council staff and decision-makers through training in Te Tiriti o Waitangi, locally relevant Treaty Settlement mechanisms and tikanga Māori, and developing familiarity with Kāi Tahu documents, are also important means of improving takata whenua involvement in council processes.

Interpretation

Definitions

Term	Definition
Active transport	has the same meaning as in clause 1.3 of the National Policy Statement on Urban Development 2020 (as set out in the box below) means forms of transport that involve physical exercise, such as walking or cycling, and includes transport that may use a mobility aid such as a wheelchair
Additional infrastructure	has the same meaning as in clause 1.3 of the National Policy Statement on Urban Development 2020 (as set out in the box below) means: (a) public open space (b) community infrastructure as defined in section 197 of the Local Government Act 2002 (c) land transport (as defined in the Land Transport Management Act 2003) that is not controlled by local authorities (d) social infrastructure, such as schools and healthcare facilities (e) a network operated for the purpose of telecommunications (as defined in section 5 of the Telecommunications Act 2001) (f) a network operated for the purpose of transmitting or distributing electricity or gas
Airshed	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as set out in the box below) means— (a) the region of a regional council excluding any area specified in a notice under paragraph (b): (b) a part of the region of a regional council specified by the Minister by notice in the Gazette to be a separate airshed

Term	Definition
Afforestation	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (as set out in the box below) (a) means planting and growing commercial forestry trees on land where there is no commercial forestry and where commercial forestry harvesting has not occurred within the last 5 years; but (b) does not include vegetation clearance from the land before planting
Ambient air quality standards	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as set out in the box below) means the standard prescribed by regulation 13(1)
Amenity values	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes
Ancillary activity	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means an activity that supports and is subsidiary to a primary activity
Aquaculture activities	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) (a) means any activity described in section 12 done for the purpose of the breeding, hatching, cultivating, rearing, or ongrowing of fish, aquatic life, or seaweed for harvest if the breeding, hatching, cultivating, rearing, or ongrowing involves the occupation of a coastal marine area; and (b) includes the taking of harvestable spat if the taking involves the occupation of a coastal marine area; but (c) does not include an activity specified in paragraph (a) if the fish, aquatic life, or seaweed— (i) are not in the exclusive and continuous possession or control of the person undertaking the activity; or (ii) cannot be distinguished or kept separate from naturally occurring fish, aquatic life, or seaweed; and (d) does not include an activity specified in paragraph (a) or (b) if the activity is carried out solely for the purpose of monitoring the environment

Term	Definition
Aquatic compensation	has the same meaning as in clause 3.21(1) of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means a conservation outcome resulting from actions that are intended to compensate for any more than minor residual adverse effects on a wetland or river after all appropriate avoidance, minimisation, remediation, and aquatic offset measures have been sequentially applied
Aquatic offset	has the same meaning as in clause 3.21(1) of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means a measurable conservation outcome resulting from actions that are intended to: (a) redress any more than minor residual adverse effects on a wetland or river after all appropriate avoidance, minimisation, and remediation, measures have been sequentially applied; and (b) achieve no net loss, and preferably a net gain, in the extent and values of the wetland or river, where: (i) **no net loss** means that the measurable positive effects of actions match any loss of extent or values over space and time, taking into account the type and location of the wetland or river, and (ii) **net gain** means that the measurable positive effects of actions exceed the point of no net loss
Archaeological site	Has the same meaning as in section 6 of the Heritage New Zealand Pouhere Taonga Act 2014 (as set out in the box below) means (a) any place in New Zealand, including any building or structure (or part of a building or structure), that— (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and (b) includes a site for which a declaration is made under section 43(1) of the Heritage New Zealand Pouhere Taonga Act 2014.
Attribute (in relation to freshwater)	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means a measurable characteristic (numeric, narrative, or both) that can be used to assess the extent to which a particular value is provided for

Term	Definition
Bed	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means,— (a) in relation to any river— (i) for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks: (ii) in all other cases, the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and (b) in relation to any lake, except a lake controlled by artificial means,— (i) for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin: (ii) in all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and (c) in relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and (d) in relation to the sea, the submarine areas covered by the internal waters and the territorial sea
Biodiversity	see *biological diversity*
Biological diversity	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means the variability among living organisms, and the ecological complexes of which they are a part, including diversity within species, between species, and of ecosystems
Biodiversity compensation	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means a conservation outcome that meets the requirements in Appendix 4 and results from actions that are intended to compensate for any more than minor residual adverse effects on indigenous biodiversity after all appropriate avoidance, minimisation, remediation, and biodiversity offsetting measures have been sequentially applied

Term	Definition
Biodiversity offset	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means a measurable conservation outcome that meets the requirements in Appendix 3 and results from actions that are intended to: (a) redress any more than minor residual adverse effects on indigenous biodiversity after all appropriate avoidance, minimisation, and remediation measures have been sequentially applied; and (b) achieve a net gain in type, amount, and condition of indigenous biodiversity compared to that lost.
Building	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means a temporary or permanent movable or immovable physical construction that is: (a) partially or fully roofed; and (b) fixed or located on or in land; but excludes any motorised vehicle or other mode of transport that could be moved under its own power
Business land	has the same meaning as in clause 1.3 of the National Policy Statement on Urban Development 2020 (as set out in the box below) means land that is zoned, or identified in an FDS or similar strategy or plan, for business uses in urban environments, including but not limited to land in the following: (a) any industrial zone (b) the commercial zone (c) the large format retail zone (d) any centre zone, to the extent it allows business uses (e) the mixed use zone, to the extent it allows business uses (f) any special purpose zone, to the extent it allows business uses
Cascading hazards	means where the occurrence of one natural hazard is likely to trigger another natural hazard event e.g. an earthquake triggering a landslide which dams a river causing flooding.
Certified freshwater farm plan	has the same meaning as section 217B of the Resource Management Act 1991 (as set out in the box below) means a freshwater farm plan certified under section 217G, as amended from time to time in accordance with section 217E(2) or (3)

Term	Definition
Climate change	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods
Climate change adaptation	means the process of adjustment to actual or expected climate and its effects
Climate change mitigation	means a human intervention to reduce the sources of, or enhance the sinks of *greenhouse gases*
Coastal hazard	means a subset of *natural hazards* covering tidal or coastal storm inundation, rising sea level, tsunami or meteorological tsunami inundation, coastal erosion (shorelines or cliffs), rise in *groundwater* levels from storm tides and sea-level rise (plus associated liquefaction), and salinisation of surface *fresh waters* and *groundwater* aquifers
Coastal marine area	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means the foreshore, seabed, and coastal water, and the air space above the water— (a) of which the seaward boundary is the outer limits of the territorial sea: (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of— (i) 1 kilometre upstream from the mouth of the river; or (ii) the point upstream that is calculated by multiplying the width of the river mouth by 5
Coastal water	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means seawater within the outer limits of the territorial sea and includes— (a) seawater with a substantial fresh water component; and (b) seawater in estuaries, fiords, inlets, harbours, or embayments
Commercial activity	has the same meaning as in the Standard 14 of the National Planning Standards 2019 (as set out in the box below) means any activity trading in goods, equipment or services. It includes any ancillary activity to the commercial activity (for example administrative or head offices)

Term	Definition
Commercial forestry	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (as set out in the box below) means exotic continuous-cover forestry or plantation forestry
Commercial port activity	means activities carried out to service commercial ship operators calling at Port Chalmers and Dunedin, (including the wharves at Ravensbourne and Careys Bay) which include: (a) Operation of marine services vessels; (b) Loading and unloading of goods and passengers carried by sea (except for loading and unloading of passengers at Ravensbourne); (c) Facilities for the storage of goods carried by sea; (d) Buildings, installations, other structures or equipment at or adjacent to a port and used in connection with the ports' operation or administration; (e) Structures, facilities and pipelines for fuel storage, and refuelling of ships; (f) Provision, maintenance and development of shipping channels and swing basins; (g) Disposal of dredged materials at A0 Heyward Point, Aramoana and Shelly Beach referred to at MAP3; (h) Installation and maintenance of beacons and markers for navigation safety; and (i) Provision and maintenance of the mole at Aramoana.
Community-scale irrigation and stockwater infrastructure	means *infrastructure* to take, convey or store water for irrigation or stock drinking water that supplies water to five or more properties and that is administered by a trust, company, incorporated society, or other legal entity.
Competitiveness margin	has the same meaning as in clause 3.22 of the National Policy Statement on Urban Development 2020 (as set out in the box below) means a margin of development capacity, over and above the expected demand that tier 1 and tier 2 local authorities are required to provide, that is required in order to support choice and competitiveness in housing and business land markets
Contaminant	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat— (a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or (b) when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged

Term	Definition
Contaminated land	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means land that has a hazardous substance in or on it that— (a) has significant adverse effects on the environment; or (b) is reasonably likely to have significant adverse effects on the environment
Critical buildings	for the purposes of the consequence table within APP8, these are buildings which have a post-disaster function. These include: (a) Buildings and facilities designed as essential facilities; (b) Buildings and facilities with special post-disaster function; (c) Medical emergency or surgical facilities; (d) Emergency service facilities such as fire and police stations; (e) Designated emergency shelters; (f) Designated emergency centres and ancillary facilities; and (g) Buildings and facilities containing hazardous materials capable of causing hazardous conditions that extends beyond the property boundaries.
Degraded (in relation to freshwater)	where it is used in the *LF – Land and freshwater* chapter, has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) in relation to an FMU or part of an FMU, means that as a result of something other than a naturally occurring process: (a) a site or sites in the FMU or part of the FMU to which a target attribute state applies: (i) is below a national bottom line; or (ii) is not achieving or is not likely to achieve a target attribute state; or (b) the FMU or part of the FMU is not achieving or is not likely to achieve an environmental flow and level set for it; or (c) the FMU or part of the FMU is less able (when compared to 7 September 2017) to provide for any value described in Appendix 1A or any other value identified for it under the NOF
Depositional landform	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below); means a landform that is alluvial (matter deposited by water, (eg, fans, river flats, and terraces), colluvial (matter deposited by gravity at the base of hillslopes, (eg, talus), or glacial (matter deposited by glaciers, (eg, moraines and outwash).

Term	Definition
Development capacity	has the same meaning as in clause 1.4 of the National Policy Statement for Urban Development 2020 (as set out in the box below) means the capacity of the land to be developed for housing or for business use, based on: (a) the zoning, objectives, policies, rules, and overlays that apply in the relevant proposed and operative RMA planning documents; and (b) the provision of adequate development infrastructure to support the development of land for housing or business use
Development infrastructure	has the same meaning as in clause 1.4 of the National Policy Statement for Urban Development 2020 (as set out in the box below) means the following, to the extent that they are controlled by a local authority or council controlled organisation (as defined in section 6 of the Local Government Act 2002): (a) network infrastructure for water supply, wastewater, or stormwater (b) land transport (as defined in section 5 of the Land Transport Management Act 2003)
Discharge	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) includes emit, deposit, and allow to escape
Distribution network	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (as set out in the box below) (a) means lines and associated equipment that are used for conveying electricity and are operated by a business engaged in the distribution of electricity; but (b) does not include lines and associated equipment that are part of the national grid
District plan	has the same meaning as in section 43AA of the Resource Management Act 1991 (as set out in the box below) (a) means an operative plan approved by a territorial authority under Schedule 1; and (b) includes all operative changes to the plan (whether arising from a review or otherwise)
Drinking water	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means water intended to be used for human consumption; and includes water intended to be used for food preparation, utensil washing, and oral or other personal hygiene

Term	Definition
Dwelling	has the same meaning as that given for dwellinghouse in section 2 of the Resource Management Act 1991 (as set out in the box below) means any building, whether permanent or temporary, that is occupied, in whole or in part, as a residence; and includes any structure or outdoor living area that is accessory to, and used wholly or principally for the purposes of, the residence; but does not include the land upon which the residence is sited
Earthworks	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fence posts
Ecological district	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023, adapted to apply to the Otago context (as set out in the box below): means: the ecological districts as shown in McEwen, W Mary (ed), 1987. *Ecological regions and districts of New Zealand.* Wellington: Department of Conservation.
Ecological integrity	has the same meaning as in clause 1.6 of the National Policy Statement for Indigenous Biodiversity 2023 (as set out below) means the extent to which an ecosystem is able to support and maintain its: (a) composition (being its natural diversity of *indigenous species*, *habitats*, and communities); and (b) structure (being its biotic and abiotic physical features); and (c) functions (being its ecological and physical processes).
Ecosystem function	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below): means the abiotic (physical) and biotic (ecological and biological) flows that are properties of an ecosystem

Term	Definition
Effect	has the same meaning as in section 3 of the Resource Management Act 1991 (as set out in the box below) In this Act, unless the context otherwise requires, the term effect includes— (a) any positive or adverse effect; and (b) any temporary or permanent effect; and (c) any past, present, or future effect; and (d) any cumulative effect which arises over time or in combination with other effects— regardless of the scale, intensity, duration, or frequency of the effect, and also includes— (e) any potential effect of high probability; and (f) any potential effect of low probability which has a high potential impact
Effects management hierarchy (in relation to natural inland wetlands and rivers)	has the same meaning as in clause 3.21 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that: (a) adverse effects are avoided where practicable, (b) where adverse effects cannot be avoided, they are minimised where practicable, (c) where adverse effects cannot be minimised, they are remedied where practicable, (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided, and (e) if aquatic compensation is not appropriate, the activity itself is avoided

Term	Definition
Effects management hierarchy (in relation to indigenous biodiversity)	means an approach to managing the adverse effects of an activity of *indigenous biodiversity* that requires that: (a) adverse effects are avoided where practicable; then (b) where adverse effects cannot be avoided, they are minimised where practicable; then (c) where adverse effects cannot be minimised, they are remedied where practicable; then (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, *biodiversity offsetting* is provided where possible; then (e) where *biodiversity offsetting* of more than minor residual adverse effects is not possible, *biodiversity compensation* is provided; then (f) if *biodiversity compensation* is not appropriate, the activity itself is avoided, unless the activity is *regionally significant infrastructure* and *nationally significant infrastructure* that is either *renewable electricity generation* or the *National Grid* then: (i) for the *National Grid:* (I) the activity must be avoided if the residual adverse effects are significant; but (II) if the residual adverse effects are not significant, the activity must be enabled if the national significance and benefits of the activity outweigh the residual adverse effects; (ii) for *renewable electricity generation*, consider whether the activity should be allowed, including by considering whether the national significance and benefits of the activity outweigh the residual adverse effects.
Electricity sub-transmission infrastructure	means electricity infrastructure which conveys electricity between energy generation sources, the National Grid and zone substations and between zone substations.
Environment	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) includes— (a) ecosystems and their constituent parts, including people and communities; and (b) all natural and physical resources; and (c) amenity values; and (d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters

Term	Definition
Environmental outcome	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means, in relation to a value that applies to an FMU or part of an FMU, a desired outcome that a regional council identifies and then includes as an objective in its regional plan(s)
Esplanade reserve	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means a reserve within the meaning of the Reserves Act 1977— (a) which is either— (i) a local purpose reserve within the meaning of section 23 of that Act, if vested in the territorial authority under section 239; or (ii) a reserve vested in the Crown or a regional council under section 237D; and (b) which is vested in the territorial authority, regional council, or the Crown for a purpose or purposes set out in section 229
Esplanade strip	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means a strip of land created by the registration of an instrument in accordance with section 232 for a purpose or purposes set out in section 229
Established activity	has the same meaning as in clause 3.15 of the National Policy Statement for Indigenous Biodiversity 2023 (as set out below) means an activity (including maintenance, operation, and upgrade) that: (a) is in, or affects, an *SNA*; and (b) is not a new *subdivision*, use, or development.
Exceedance	has the same meaning as in regulation 13 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as set out in the box below) for a contaminant, means an instance where the contaminant exceeds its threshold concentration in an airshed
Existing, for a heat device (for the interpretation of EIT-EN-P16)	has the same meaning as in section 3 of the Resource Management (National Environment Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (as set out in the box below) (a) means a device that, before 27 July 2023, is installed and operational, or able to be operated, at a site; and (b) includes a device described in paragraph (a) after it is upgraded or improved; but (c) does not include a device that, on or after 27 July 2023, is installed in replacement of a device described in paragraph (a)

Term	Definition
Exotic pasture species	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means a pasture species identified in the National List of Exotic Pasture Species (see clause 1.8)
Food and fibre production	means the primary sector production industries (other than mining) including Arable, Dairy, Forestry and Wood Processing, Horticulture (including vegetables, viticulture and winemaking), Pork, Poultry, Bees, Red Meat and Wool (Sheep, Beef and Deer), Seafood and Cross-Sector and the related processing industries. Note: This definition is intended to describe the suite of activities that occur throughout Otago from a rural land use perspective and is not intended to prioritise one primary sector production industry over another.
Fossil fuel	has the same meaning as in section 3 of the Resource Management (National Environment Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (as set out in the box below) (a) means any carbon-based fuel sourced from fossil hydrocarbon deposits; and (b) includes— (i) coal, coke, diesel, liquid petroleum gas, natural gas, oil, peat, plastics, and used oil; and (ii) any fuel wholly or partly derived from a fuel described in paragraph (a), including tyres used as fuel; but (c) does not include biomass or biogas
Freshwater or fresh water	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means all water except coastal water and geothermal water
Freshwater management unit or FMU	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means all or any part of a water body or water bodies, and their related catchments, that a regional council determines under clause 3.8 is an appropriate unit for freshwater management and accounting purposes; and part of an FMU means any part of an FMU including, but not limited to, a specific site, river reach, water body, or part of a water body
Functional need	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment

Term	Definition
Future development strategy	has the same meaning as in the National Policy Statement for Urban Development 2020 (as set out in the box below) means the Future Development Strategy required by subpart 4 of Part 3
Greenhouse gas	has the same meaning as in section 4(1) of the Climate Change Response Act 2002 (as set in in the box below) means— (a) carbon dioxide (CO2): (b) methane (CH4): (c) nitrous oxide (N2O): (d) any hydrofluorocarbon: (e) any perfluorocarbon: (f) sulphur hexafluoride (SF6)
Greywater	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means liquid waste from domestic sources including sinks, basins, baths, showers and similar fixtures, but does not include *sewage,* or *industrial and trade waste.*
Groundwater	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means water occupying openings, cavities, or spaces in soils or rocks beneath the surface of the ground
Habitat (in relation to indigenous biodiversity)	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means the area or environment where an organism or ecological community lives or occurs naturally for some or all of its life cycle, or as part of its seasonal feeding or breeding pattern; but does not include built structures or an area or environment where an organism is present only fleetingly.
Hard protection structure	within the coastal environment, has the same meaning as in the Glossary of the New Zealand Coastal Policy Statement 2010 (as set out in the box below) includes a seawall, rock revetment, groyne, breakwater, stop bank, retaining wall or comparable structure or modification to the seabed, foreshore or coastal land that has the primary purpose or effect of protecting an activity from a coastal hazard, including erosion and outside the coastal environment, means any kind of structure which is specifically established for the purpose of natural hazard risk mitigation, including dams, weirs, stopbanks, carriageways, groynes, reservoirs and rip rap.

Term	Definition
Heat device	has the same meaning as in section 3 of the Resource Management (National Environment Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (as set out in the box below) (a) means a device that produces *industrial process heat* (for example, a boiler, furnace, engine, or other combustion device); but (b) does not include a device used for the primary purpose of— (i) generating electricity, including a generator used for back-up electricity or for maintaining the electricity network; or (ii) transmitting electricity, including in mobile and fixed substations
Highly mobile fauna area	has the same meaning as in the Interpretation in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means an area outside an *SNA* that is an area used intermittently by *specified highly mobile fauna*
Highly productive land	has the same meaning as in clause 1.3 of the National Policy Statement for Highly Productive Land (as set out in the box below) means *land* that has been mapped in accordance with clause 3.4 and is included in an operative regional policy statement as required by clause 3.5 (but see clause 3.5(7) for what is treated as highly productive land before the maps are included in an operative regional policy statement and clause 3.5(6) for when *land* is rezoned and therefore ceases to be highly productive land
Highly valued natural features and landscapes	means areas which contain attributes and values of significance under Sections 7(c) and 7(f) of the RMA 1991, which have been identified in accordance with APP11.
Historic heritage	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) (a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities: (i) archaeological: (ii) architectural: (iii) cultural: (iv) historic: (v) scientific: (vi) technological; and (b) includes— (i) historic sites, structures, places, and areas; and

Term	Definition
	(ii) archaeological sites; and (iii) sites of significance to Māori, including wāhi tapu; and (iv) surroundings associated with the natural and physical resources
Housing and Business Development Capacity Assessment	has the same meaning as in the National Policy Statement for Urban Development Capacity 2020 (as set out in the box below) means the Housing and Business Development Capacity Assessment (HBA) required by subpart 5 of Part 3
Identified for future urban development	has the same meaning as in clause 1.3 of the National Policy Statement for Highly Productive Land (as set out in the box below) (a) identified in a published Future Development Strategy as land suitable for commencing urban development over the next 10 years; or (b) identified: (i) in a strategic planning document as an area suitable for commencing urban development over the next 10 years; and (ii) at a level of detail that makes the boundaries of the area identifiable in practice
Improved pasture	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below): means an area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing.
Indigenous biodiversity	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means the living organisms that occur naturally in New Zealand, and the ecological complexes of which they are part, including all forms of indigenous flora, fauna, and fungi, and their *habitats.*
Indigenous species (in relation to the ECO chapter)	means species that occur naturally in Otago.
Indigenous vegetation	means vascular and non-vascular plants that, in relation to a particular area, are native to the ecological district[7] or freshwater or marine bioregion in which that area is located

[7] WM McEwen (ed.) (1987) Ecological regions and districts of New Zealand. Wellington: Department of Conservation.

Term	Definition
Industrial activities	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means an activity that manufactures, fabricates, processes, packages, distributes, repairs, stores, or disposes of materials (including raw, processed, or partly processed materials) or goods. It includes any ancillary activity to the industrial activity
Industrial and trade waste	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means liquid *waste,* with or without matter in suspension, from the receipt, manufacture or processing of materials as part of a commercial, industrial or trade process, but excludes *sewage* and greywater.
Industrial process heat	has the same meaning as in section 3 of the Resource Management (National Environment Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (as set out in the box below) (a) means thermal energy that is used— (i) in industrial processes, including in manufacturing and in the processing of raw materials; or (ii) to grow plants or other photosynthesising organisms indoors; but (b) does not include thermal energy used in the warming of spaces for people's comfort (for example, heating of commercial offices)
Infrastructure	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means— (a) pipelines that distribute or transmit natural or manufactured gas, petroleum, biofuel, or geothermal energy: (b) a network for the purpose of telecommunication as defined in section 5 of the Telecommunications Act 2001: (c) a network for the purpose of radiocommunication as defined in section 2(1) of the Radiocommunications Act 1989: (d) facilities for the generation of electricity, lines used or intended to be used to convey electricity, and support structures for lines used or intended to be used to convey electricity, excluding facilities, lines, and support structures if a person— (i) uses them in connection with the generation of electricity for the person's use; and (ii) does not use them to generate any electricity for supply to any other person:

Term	Definition
	(e) a water supply distribution system, including a system for irrigation: (f) a drainage or sewerage system: (g) structures for transport on land by cycleways, rail, roads, walkways, or any other means: (h) facilities for the loading or unloading of cargo or passengers transported on land by any means: (i) an airport as defined in section 2 of the Airport Authorities Act 1966: (j) a navigation installation as defined in section 2 of the Civil Aviation Act 1990: (k) facilities for the loading or unloading of cargo or passengers carried by sea, including a port related commercial undertaking as defined in section 2(1) of the Port Companies Act 1988: (l) anything described as a network utility operation in regulations made for the purposes of the definition of network utility operator in section 166
Intrinsic values	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including – (a) their biological and genetic diversity; and (b) the essential characteristics that determine an ecosystem's integrity, form, functioning and resilience
Kāika	means a settlement of Kāi Tahu or their tūpuna.
Kaitiakitanga or kaitiakitaka	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship
Lake	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means a body of fresh water which is entirely or nearly surrounded by land

Term	Definition
Land	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) (a) includes land covered by water and the airspace above land; and (b) in a national environmental standard dealing with a regional council function under section 30 or a regional rule, does not include the bed of a lake or river; and (c) in a national environmental standard dealing with a territorial authority function under section 31 or a district rule, includes the surface of water in a lake or river
Land-based primary production	has the same meaning as in clause 1.3 of the National Policy Statement for Highly Productive Land 2022 (as set out in the box below) means production, from agricultural, pastoral, horticulture, or forestry activities, that is reliant on the soil resource of the *land*
Landfill	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means an area used for, or previously used for, the disposal of solid waste. It excludes cleanfill areas
Lifeline utilities	means utilities provided by those entities listed in Schedule 1 of the Civil Defence Emergency Management Act 2002
Limit	In the LF – Land and Freshwater chapter, has the same meaning defined in the NPSFM, and elsewhere, "limit" has its natural and ordinary meaning
Limit (in relation to freshwater)	has the same meaning as in clause 1.4(1) of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means either a limit on resource use or a take limit
Limit (in relation to IM-P8)	means: (a) minimum acceptable state of an aspect of the natural environment, or (b) maximum amount of acceptable harm or pressure on the natural environment.
Local authority	has the same meaning as in section 5 of the Local Government Act 2002 (as set out in the box below) means a regional council or *territorial authority*

Term	Definition
Loss of values	has the same meaning as in clause 3.21(1) of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) in relation to a natural inland *wetland* or *river*, means the *wetland* or *river* is less able to provide for the following existing or potential values: (a) the value identified for it under the NOF process; or (b) any of the following, whether or not they are identified under the NOF process: (i) ecosystem health (ii) indigenous biodiversity (iii) hydrological functioning (iv) Māori *freshwater* values (v) amenity values
LUC 1, 2, or 3 land	has the same meaning as in clause 1.3 of the National Policy Statement for Highly Productive Land (as set out in the box below) means *land* identified as Land Use Capability Class 1, 2, or 3, as mapped by the New Zealand Land Resource Inventory or by any more detailed mapping that uses the Land Use Capability classification
Mahika kai	means gathering of food and natural materials by Kāi Tahu whānui in accordance with tikaka, the places where those resources are gathered, and the work, methods and cultural activities involved in obtaining them
Maintenance of improved pasture	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below): includes the removal of indigenous vegetation for the purpose of maintaining the improved pasture, whether the removal is by way of cutting, crushing, applying chemicals, draining, burning, cultivating, over-planting, applying seed of exotic pasture species, mob stocking, or making changes to soils, hydrology, or landforms.

Term	Definition
Maintenance of indigenous biodiversity	has the same meaning as in the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below): means: (a) the maintenance and at least no overall reduction of all the following: (i) the size of populations of *indigenous* species: (ii) indigenous species occupancy across their natural range: (iii) the properties and function of ecosystems and *habitats* used or occupied by *indigenous biodiversity:* (iv) the full range and extent of ecosystems and *habitats* used or occupied by *indigenous biodiversity:* (v) connectivity between, and buffering around, ecosystems used or occupied by *indigenous biodiversity:* (vi) the resilience and adaptability of ecosystems; and (b) where necessary, the restoration and enhancement of ecosystems and *habitats.*
Māori land	for the purposes of this RPS, means land within the region that is: (a) owned by Te Rūnanga o Ngāi Tahu or its constituent papatipu rūnaka, (b) Māori communal land gazetted as Māori reservation under s338 Te Ture Whenua Māori Act 1993, (c) Māori customary land and Māori freehold land as defined in s4 and s129 Te Ture Whenua Māori Act 1993, (d) former Māori land or general land owned by Māori (as those terms are defined in Te Ture Whenua Māori Act 1993) that has at any time been acquired by the Crown or any local or public body for a public work or other public purpose, and has been subsequently returned to its former Kāi Tahu owners or their successors and remains in their ownership, (e) general land owned by Māori (as defined in Te Ture Whenua Māori Act 1993) that was previously Māori freehold land, has ceased to have that status under an order of the Māori Land Court made on or after 1 July 1993 or under Part 1 of the Māori Affairs Amendment Act 1967 on or after 1 April 1968, that is in the ownership of Kāi Tahu whānui, (f) vested in a Trust or Māori incorporation under Te Ture Whenua Māori Act 1993, (g) held or claimed (whether as an entitlement, part of an ancillary claim, or because it was transferred or vested) either, (i) as part of redress for the settlement of Treaty of Waitangi

Term	Definition
	claims, or (ii) by the exercise of rights under a Treaty settlement Act or Treaty settlement deed (as those terms are defined under the Urban Development Act 2020), or (iii) as SILNA lands, (h) owned by a person or persons with documentary evidence of Kāi Tahu whakapapa connection to the land (not simply being evidence of whakapapa to Kāi Tahu whānui), where evidence of that connection is provided to, and confirmed by either: (i) the Māori Land Court (under its jurisdiction over General land owned by Māori); or (ii) the Te Rūnanga o Ngāi Tahu Whakapapa Unit.
Mana whenua	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) and in this RPS also refers to the people who hold customary authority means customary authority exercised by an iwi or hapu in an identified area
Mineral	has the same meaning as in section 2(1) of the Crown Minerals Act 1991 (as set out in the box below) means a naturally occurring inorganic substance beneath or at the surface of the earth, whether or not under water; and includes all metallic minerals, non-metallic minerals, fuel minerals, precious stones, industrial rocks and building stones, and a prescribed substance within the meaning of the Atomic Energy Act 1945
Mixing zone	has the same meaning as in the Glossary of the New Zealand Coastal Policy Statement 2010 (as set out in the box below) the area within which 'reasonable mixing' of contaminants from discharges occurs in receiving waters and within which the relevant water quality standards do not apply
National grid	has the same meaning as in the Interpretation section of the National Policy Statement on Electricity Transmission 2008 (as set out in the box below) means the assets used or owned by Transpower New Zealand
National Objectives Framework	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means the framework for managing freshwater as described in subpart 2 of Part 3

Term	Definition
Nationally significant infrastructure	has, to the extent applicable to the Otago Region, the same meaning as in clause 1.4(1) of the National Policy Statement for Urban Development 2020 (as set out in the box below): means all of the following: (a) State highways (b) the national grid electricity transmission network (c) renewable electricity generation facilities that connect with the national grid (d) the high-pressure gas transmission pipeline network operating in the North Island (e) the refinery pipeline between Marsden Point and Wiri (f) the New Zealand rail network (including light rail) (g) rapid transit services (as defined in this clause) (h) any airport (but not its ancillary commercial activities) used for regular air transport services by aeroplanes capable of carrying more than 30 passengers (i) the port facilities (but not the facilities of any ancillary commercial activities) of each port company referred to in item 6 of Part A of Schedule 1 of the Civil Defence Emergency Management Act 2002
Natural and physical resources	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures
Natural hazard	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment
Natural hazard works	has the same meaning as in regulation 51(1) of the National Environmental Standard for Freshwater 2020 (as set out in the box below) means works for the purpose of removing material, such as trees, debris, and sediment, that— (a) is deposited as the result of a natural hazard, and (b) is causing, or is likely to cause, an immediate hazard to people or property

Term	Definition
Naturally rare	has the same meaning as in the Glossary of the New Zealand Coastal Policy Statement 2010 (as set out in the box below) originally rare: Rare before the arrival of humans in New Zealand
Natural inland wetland	means a wetland (as defined in the Act) that is not: (a) in the coastal marine area; or (b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or (c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or (d) 700 or more consumers; or (e) a geothermal wetland; or (f) a wetland that; or (i) is within an area of pasture used for grazing; and (ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8 of the NPSFM)); unless (iii) the wetland is a location of a habitat of a threatened species identified under clause 3.8 of the NPSFM, in which case the exclusion in (e) does not apply
New, for a heat device (for the interpretation of EIT-EN-P16)	has the same meaning as in section 3 of the Resource Management (National Environment Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (as set out in the box below) means not *existing*
Nohoaka or nohoanga	means a site occupied by Kāi Tahu on a seasonal and temporary basis for mahika kai or other customary purposes.
Occupancy	means, in relation to measuring *indigenous biodiversity*, the number of units per area occupied by a species or taxa
Operational need	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints
Outstanding water body	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means a water body, or part of a water body, identified in a regional policy statement, a regional plan, or a water conservation order as having one or more outstanding values

Term	Definition
Over-allocation, or over-allocated	has the same meaning as in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) in relation to both the quantity and quality of freshwater, means the situation where: (a) resource use exceeds a limit; (b) if limits have not been set, an FMU or part of an FMU is degraded or degrading; or (c) an FMU or part of an FMU is not achieving an environmental flow or level set for it under clause 3.16
Papakāika	means *subdivision,* use and development of native reserves, *Māori land* and associated resources by *mana whenua* or owners of Māori land to provide for their communal living in accordance with Kāi Tahu tikaka which may include cultural, social, housing, educational, recreational, environmental or commercial purposes.
Pest	has the same meaning as in section 2 of the Biosecurity Act 1993 (as set out in the box below) means an organism specified as a pest in a pest management plan
Plantation forestry	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (as set out in the box below) means a forest deliberately established for commercial purposes, being— (a) at least 1 ha of continuous forest cover of forest species that has been planted and has or will be harvested or replanted; and (b) includes all associated forestry infrastructure; but (c) does not include— (i) a shelter belt of forest species, where the tree crown cover has, or is likely to have, an average width of less than 30 m; or (ii) forest species in urban areas; or (iii) nurseries and seed orchards; or (iv) trees grown for fruit or nuts; or (v) long-term ecological restoration planting of forest species; or (vi) willows and poplars space planted for soil conservation purposes

Term	Definition
PM_{10}	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as set out in the box below) means particulate matter that is— (a) less than 10 micrometres in aerodynamic diameter; and (b) measured in accordance with the United States Code of Federal Regulations, Title 40—Protection of Environment, Volume 2, Part 50, Appendix J — Reference method for the determination of particulate matter as PM10 in the atmosphere
$PM_{2.5}$	means particulate matter that is less than 2.5 micrometres in aerodynamic diameter.
Polluted airshed	has the same meaning as in regulation 17(4) of the National Environmental Standards for Air Quality 2004 (as set out in the box below) (a) an airshed becomes a polluted airshed on and from 1 September 2012 or any later day if, for the immediately prior 5-year period— (i) the airshed has meaningful PM10 data for at least a 12-month period; and (ii) the airshed's average exceedances of PM10 (as calculated under regulation 16D) was more than 1 per year; and (b) an airshed stops being a polluted airshed on and from any day if the PM10 standard was not breached in the airshed in the immediately prior 5-year period
Primary production	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means: (a) an aquaculture, agricultural, pastoral, horticultural, mining, quarrying or forestry activities; and (b) includes initial processing, as an ancillary activity, of commodities that result from the listed activities in a); (c) includes any land and buildings used for the production of the commodities from a) and used for the initial processing of the commodities in b); but (d) excludes further processing of those commodities into a different product

Term	Definition
Productive capacity	has the same meaning as in clause 1.3 of the National Policy Statement for Highly Productive Land (as set out in the box below) in relation to *land,* means the ability of the *land* to support land-based *primary production* over the long term, based on an assessment of: (a) physical characteristics (such as soil type, properties, and versatility); and (b) legal constraints (such as consent notices, *local authority* covenants, and easements); and (c) the size and shape of existing and proposed *land* parcels
Public transport	has the same meaning as in clause 1.4 of the National Policy Statement for Urban Development 2020 (as set out in the box below) means any existing or planned service for the carriage of passengers (other than an aeroplane) that is available to the public generally by means of: (a) a vehicle designed or adapted to carry more than 12 persons (including the driver), or (b) a rail vehicle, or (c) a ferry
Receiving environment (in relation to *freshwater* and the *coastal marine area)*	has the same meaning as in in clause 1.4 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) includes, but is not limited to, any water body (such as a river, lake, wetland or aquifer) and the coastal marine area (including estuaries)
Reclamation	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means the manmade formation of permanent dry land by the positioning of material into or onto any part of a waterbody, bed of a lake or river or the coastal marine area, and: (a) includes the construction of any causeway; but (b) excludes the construction of natural hazard protection structures such as seawalls, breakwaters or groynes except where the purpose of those structures is to form dry land
Regional plan	has the same meaning as in section 43AA of the Resource Management Act 1991 (as set out in the box below) (a) means an operative plan approved by a regional council under Schedule 1 (including all operative changes to the plan whether arising from a review or otherwise)); and (b) includes a regional coastal plan

Term	Definition
Regionally significant infrastructure	means: (a) roads which provide a lifeline connection for a community OR roads classified as being of regional importance in accordance with the One Network Framework, (b) *electricity sub-transmission infrastructure*, (c) *significant electricity distribution infrastructure*, (d) *renewable electricity generation facilities* that connect with the local distribution network but not including renewable electricity generation facilities designed and operated principally for supplying a single premise or facility, (e) networks for the purpose of telecommunication and radiocommunication as respectively defined in section 5 of the Telecommunications Act 2001 and in section 2 of the Radiocommunications Act 1989, (f) public transport, terminals and stations, (g) the following airports: Dunedin, Queenstown, Wānaka, Alexandra, Balclutha, Cromwell, Ōamaru, Taiari, (h) navigation infrastructure associated with airports and commercial ports which are nationally or regionally significant, (i) defence facilities for defence purposes in accordance with the Defence Act 1990, (j) established *community-scale irrigation and stockwater infrastructure*, (k) community *drinking water* abstraction, supply treatment and distribution *infrastructure* that provides no fewer than 25households with *drinking water* for not less than 90 days each calendar year, and community water supply abstraction, treatment and distribution *infrastructure* (excluding delivery systems or infrastructure primarily deployed for the delivery of water for irrigation of land or rural agricultural drinking water supplies), (l) community *stormwater infrastructure*, (m) *wastewater* and *sewage* collection, treatment and disposal infrastructure serving no fewer than 25 households, (n) oil terminals, bulk fuel storage and supply infrastructure, and ancillary pipelines at Port Chalmers and Dunedin Bulk Port, (o) Otago Regional Council's hazard mitigation works including flood protection infrastructure and drainage schemes, (p) *ski area infrastructure* at Remarkables, Cardrona, Treble Cone and Coronet Peak, and (q) any *infrastructure* identified as *nationally significant infrastructure*.

Term	Definition
Renewable electricity generation	has the same meaning as in the Interpretation section of the National Policy Statement for Renewable Electricity Generation 2011 (as set out in the box below) means generation of electricity from solar, wind, hydroelectricity, geothermal, biomass, tidal, wave, or ocean current energy sources
Renewable electricity generation activities	has the same meaning as in the Interpretation section of the National Policy Statement for Renewable Electricity Generation 2011 (as set out in the box below) means the construction, operation and maintenance of structures associated with renewable electricity generation. This includes small and community-scale distributed renewable generation activities and the system of electricity conveyance required to convey electricity to the distribution network and/or the national grid and electricity storage technologies associated with renewable electricity
Replanting	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (as set out in the box below) means the planting and growing of commercial forestry trees on land less than 5 years after commercial forestry harvesting has occurred
Resilient or resilience	means the capacity and ability to withstand or recover quickly from adverse conditions.
Resource consent	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) has the meaning set out in section 87; and includes all conditions to which the consent is subject
Restoration (in relation to indigenous biodiversity)	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means the active intervention and management of modified or degraded *habitats*, ecosystems, landforms, and landscapes in order to maintain or reinstate indigenous natural character, ecological and physical processes, and cultural and visual qualities, and may include enhancement activities
Reverse sensitivity	means the potential for the operation of an existing lawfully established activity to be constrained or curtailed by the more recent establishment or intensification of other activities which are sensitive to the effects of the established activity.
Riprap	a permanent layer or large, angular rocks, concrete or boulders typically used to armour, stabilize and protect the *land* surface and margins of *water bodies* against erosion and scour in areas of concentrated *water* flow or wave energy

Term	Definition
River	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal)
Rural area	means any area of *land* that is not an *urban area*
Rural industry	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means an industry or business undertaken in a rural *environment* that directly supports, services, or is dependent on *primary production*
Sensitive activities	has the same meaning as in the Interpretation section of the National Policy Statement on Electricity Transmission 2008 (as set out in the box below) includes schools, residential buildings and hospitals
Sewage	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means human excrement and urine
Ship	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) has the same meaning as in section 2(1) of the Maritime Transport Act 1994
Significant electricity distribution infrastructure	means electricity infrastructure which supplies: (a) essential public services (such as emergency services *lifeline utilities*); (b) other *regionally significant infrastructure* or individual consumers requiring supply of 1MW or more; (c) 700 or more consumers; or (d) communities that are isolated and which do not have an alternative supply in the event the line or cable is compromised and where the assets are difficult to replace in the event of failure.

Term	Definition
Significant natural area	means: (a) any area that, after the commencement date, is notified or included in a *regional plan* or *district plan* as an SNA following an assessment of the area in accordance with APP2; and (b) any area that, on the commencement date, is already identified in a policy statement or plan as an area of significant *indigenous vegetation* or significant *habitat* of indigenous fauna (regardless of how it is described); in which case it remains as an *significant natural area* unless or until a suitably qualified ecologist engaged by the relevant *local authority* determines that it is not an area of significant *indigenous vegetation* or significant *habitat* of indigenous fauna.
Ski area infrastructure	has the same meaning as in the clause 3.21(1) of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) *infrastructure* necessary for the operation of a ski area and includes: transport mechanisms (such as aerial and surface lifts, roads, and tracks); facilities for the loading or unloading of passengers or goods; facilities or systems for *water*, sewerage, electricity, and gas; communications networks; and snowmaking and snow safety systems
Small and community scale distributed electricity generation	has the same meaning as in the Interpretation section of the National Policy Statement for Renewable Electricity Generation 2011 (as set out in the box below) means renewable electricity generation for the purpose of using electricity on a particular site, or supplying an immediate community, or connecting into the distribution network
Social and cultural buildings	For the purposes of the consequence table within APP8, these are buildings that are of social and cultural importance. These include: (a) Places of worship; (b) Museums; (c) Art galleries; (d) Marae; and (e) Educational facilities
Solid fuel	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as set out in the box below) means a solid substance that releases useable energy when burnt (for example, wood and coal)
Specified highly mobile fauna	has the same meaning as in the Interpretation in the National Policy Statement for Indigenous Biodiversity 2023, except that reference to Appendix 2 is amended to APP14 (as set out in the box below): means the *Threatened or At Risk species* of highly mobile fauna that are identified in APP14.

Term	Definition
Specified infrastructure (in relation to indigenous biodiversity)	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below) means any of the following: (a) *infrastructure* that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002), (b) regionally or nationally significant infrastructure identified as such in a National Policy Statement, the New Zealand Coastal Policy Statement, or a regional policy statement or plan, (c) *infrastructure* that is necessary to support housing development, that is included in a proposed or operative plan or identified for development in any relevant strategy document (including a future development strategy or spatial strategy) adopted by a local authority, in an urban environment (as defined in the National Policy Statement on Urban Development 2020), (d) any public flood control, flood protection, or drainage works carried out: (i) by or on behalf of local authority, including works carried out for the purposes set out in section 133 of the Soil Conservation and Rivers Control Act 1941; or (ii) for the purpose of drainage, by drainage districts under the Land Drainage Act 1908, (e) defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990.
Specified rivers and lakes	has the same meaning as in Appendix 3 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means: (a) rivers that are fourth order or greater, using the methods outlined in the River Environment Classification System, National Institute of Water and Atmospheric Research, Version 1, and (b) lakes with a perimeter of 1.5km or more
Stormwater	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means run-off that has been intercepted, channelled, diverted, intensified or accelerated by human modification of a land surface, or run-off from the surface of any structure, as a result of precipitation and includes any contaminants contained within
Structure	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft

Term	Definition
Structure plan	means a framework to prescribe development of an area, including land use patterns, infrastructure, linkages and other key features and constraints that affect the development.
Subdivision	has the same meaning as "subdivision of land" in section 218(1) of the Resource Management Act 1991 (as set out in the box below) means— (a) the division of an allotment— (i) by an application to the Registrar-General of Land for the issue of a separate record of title for any part of the allotment; or (ii) by the disposition by way of sale or offer for sale of the fee simple to part of the allotment; or (iii) by a lease of part of the allotment which, including renewals, is or could be for a term of more than 35 years; or (iv) by the grant of a company lease or cross lease in respect of any part of the allotment; or (v) by the deposit of a unit plan, or an application to the Registrar-General of Land for the issue of a separate record of title for any part of a unit on a unit plan; or (b) an application to the Registrar-General of Land for the issue of a separate record of title in circumstances where the issue of that record of title is prohibited by section 226,— and the term subdivide land has a corresponding meaning
Surf break	has the same meaning as in the Glossary in the New Zealand Coastal Policy Statement 2010 (as set out in the box below) A natural feature that is comprised of swell, currents, water levels, seabed morphology, and wind. The hydrodynamic character of the ocean (swell, currents and water levels) combines with seabed morphology and winds to give rise to a 'surfable wave'. A surf break includes the 'swell corridor' through which the swell travels, and the morphology of the seabed of that wave corridor, through to the point where waves created by the swell dissipate and become non-surfable. 'Swell corridor' means the region offshore of a surf break where ocean swell travels and transforms to a 'surfable wave'. 'Surfable wave' means a wave that can be caught and ridden by a surfer. Surfable waves have a wave breaking point that peels along the unbroken wave crest so that the surfer is propelled laterally along the wave crest
Takata whenua or tangata whenua	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) in relation to a particular area, means the iwi, or hapu, that holds mana whenua over that area

Term	Definition
Taxa	has the same meaning as in the Glossary of the New Zealand Coastal Policy Statement 2010 (as set out in the box below) Named biological classification units assigned to individuals or sets of species (eg species, subspecies, genus, order, variety)
Te Mana o te Wai	has the same meaning as in clause 1.3 of the National Policy Statement for Freshwater Management 2020
Territorial authority	has the same meaning as in section 5 of the Local Government Act 2002 (as set out in the box below) means a city council or a district council named in Part 2 of Schedule 2
Threatened or At Risk, and Threatened or At Risk (declining)	has the same meaning as in the Interpretation section of the National Policy Statement for Indigenous Biodiversity 2023 (as set out in the box below); have, at any time, the meanings given in the New Zealand Threat Classification System Manual (Andrew J Townsend, Peter J de Lange, Clinton A J Duffy, Colin Miskelly, Janice Molloy and David A Norton, 2008. Science & Technical Publishing, Department of Conservation, Wellington), available at: https://www.doc.govt.nz/globalassets/documents/science-and-technical/sap244.pdf, or its current successor publication
Urban area	means any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that is, or is intended to be, predominantly urban in character. This includes but is not limited to any land identified in *district plans* as being within any urban growth boundary or equivalent however described, any residential zone, commercial and mixed use zone, industrial zone and future urban zone as listed in the National Planning Standards or its present *district plan* zone equivalent. *Urban environments* are a subset of *urban areas.*
Urban environment	has the same meaning as in clause 1.4 of the National Policy Statement on Urban Development 2020 (as set out in the box below) means any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that: (a) is, or is intended to be, predominantly urban in character; and (b) is, or is intended to be, part of a housing and labour market of at least 10,000 people
Vulnerability	means the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.
Wāhi tūpuna	means landscapes and places that embody the relationship of *mana whenua* and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taoka.

Term	Definition
Waste	has the same meaning as in the Waste Minimisation Act 2008 (as set out in the box below) (a) means any thing disposed of or discarded; and (b) includes a type of *waste* that is defined by its composition or source (for example, organic *waste*, electronic *waste,* or construction and demolition *waste*); and (c) to avoid doubt, includes any component or element of diverted material, if the component or element is disposed of or discarded
Wastewater	has the same meaning as in Standard 14 of the National Planning Standards 2019 (as set out in the box below) means any combination of two or more the following wastes: sewage, greywater or industrial and trade waste
Water	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) (a) means water in all its physical forms whether flowing or not and whether over or under the ground: (b) includes fresh water, coastal water, and geothermal water: (c) does not include water in any form while in any pipe, tank, or cistern
Water body	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area

Term	Definition
Well-functioning urban environments	has the same meaning as in Policy 1 of the National Policy Statement on Urban Development 2020 (as set out in the box below) well-functioning urban environments are urban environments that, as a minimum: (a) Have or enable a variety of homes that: (i) meet the needs, in terms of type, price, and location, of different households; and (ii) enable Māori to express their cultural traditions and norms; and (b) have or enable a variety of sites that are suitable for different business sectors in terms of location and site size; and (c) have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport; and (d) support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets; and (e) support reductions in greenhouse gas emissions; and (f) are resilient to the likely current and future effects of climate change
Wetland	has the same meaning as in section 2 of the Resource Management Act 1991 (as set out in the box below) includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions
Wetland utility structure	has the same meaning as in regulation 3 of the National Environmental Standard for Freshwater 2020 (as set out in the box below) (a) means a structure placed in or adjacent to a wetland whose purpose, in relation to the wetland, is recreation, education, conservation, restoration, or monitoring, and (b) for example, includes the following structures that are placed in or adjacent to a wetland for a purpose described in paragraph (a): (i) jetties (ii) boardwalks and bridges connecting them, (iii) walking tracks and bridges connecting them, (iv) signs, (v) bird-watching hides, (vi) monitoring devices, (vii) maimai

Term	Definition
Wilding conifer	has the same meaning as in regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (as set out in the box below) means a self-established conifer species tree resulting from seed spread from commercial forestry, shelter belts, amenity planting, or an already established wilding conifer species tree population

Abbreviations

Abbreviation	Full Terms
Air Plan	Regional Plan: Air for Otago
FMU	Freshwater Management Unit
NESAQ	National Environmental Standards for Air Quality 2004
NESCS	National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011
NESF	National Environmental Standards for Freshwater 2020
NESCF	National Environmental Standards for Commercial Forestry 2017
NOF	National Objectives Framework
NPS	National Policy Statement
NPSET	National Policy Statement on Electricity Transmission 2008
NPSFM	National Policy Statement for Freshwater Management 2020
NPSHPL	National Policy Statement for Highly Productive Land 2022
NPSIB	National Policy Statement for Indigenous Biodiversity 2023
NPSREG	National Policy Statement for Renewable Electricity Generation 2011
NPSUD	National Policy Statement on Urban Development 2020
NTCSA	Ngāi Tahu Claims Settlement Act 1998
NZCPS	New Zealand Coastal Policy Statement 2010
ORC	Otago Regional Council
ORPS	Otago Regional Policy Statement
RPS	Regional Policy Statement
RMA	Resource Management Act 1991
SILNA	South Island Landless Natives Act 1906
SNA	Significant Natural Area

National direction instruments

National policy statements and New Zealand Coastal Policy Statement

National Policy Statements	
National policy statements (NPSs) and the New Zealand Coastal Policy Statement (NZCPS) form part of the Resource Management Act's policy framework and are prepared by central government. NPSs and the NZCPS contain objectives, polices and methods that must be given effect to by policy statements and plans. NPSs and the NZCPS must also be given regard to by consent authorities when making decisions on *resource consent* applications, alongside other considerations. The following table provides an overview of whether any relevant review/s of the Otago Regional Policy Statement has been undertaken in relation to NPSs and the NZCPS.	
National Policy Statement for Electricity Networks 2008 Transmission 2008	The policy statement has been reviewed in May 2021
National Policy Statement for Freshwater Management 2020	The policy statement has been reviewed in May 2021
National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat 2023	The policy statement has not yet been reviewed. The NPS came into force during the preparation of this RPS under Schedule 1 of the RMA and has been given effect to in this RPS to the extent doing so was within scope of submissions and appeals
National Policy Statement for Highly Productive Land 2022	The policy statement has not yet been reviewed. The NPS came into force during the preparation of this RPS under Schedule 1 of the RMA and has been given effect to in this RPS to the extent doing so was within scope of submissions and appeals
National Policy Statement for Indigenous Biodiversity 2023	The policy statement has not yet been reviewed. The NPS came into force during the preparation of this RPS under Schedule 1 of the RMA and has been given effect to in this RPS to the extent doing so was within scope of submissions and appeals
National Policy Statement for Infrastructure 2025	The policy statement has not yet been reviewed
National Policy Statement for Natural Hazards 2025	The policy statement has not yet been reviewed

National Policy Statement for Renewable Electricity Generation 2011	The policy statement has been reviewed in May 2021
National Policy Statement on Urban Development 2020	The policy statement has been reviewed in May 2021
New Zealand Coastal Policy Statement 2010	The policy statement has been reviewed in May 2021

National environmental standards

National Environmental Standards
National environmental standards (NESs) are prepared by central government and can prescribe technical standards, methods (including rules) and/or other requirements for environmental matters throughout the whole country or specific areas. The following relevant NESs are currently in force: • Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (amended 2011) • Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 • Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 • Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 • Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2016 • Resource Management (National Environmental Standard for Commercial Forestry) Regulations 2017 • Resource Management (National Environmental Standards for Freshwater) Regulations 2020 • Resource Management (National Environmental Standards for Marine Aquaculture) Regulations 2020 • Resource Management (National Environmental Standards for Detached Minor Residential Units) Regulations 2025 • Resource Management (National Environmental Standards for Greenhouse Gases from Industrial Process Heat) Regulations 2023 • Resource Management (National Environmental Standards for Storing Tyres Outdoors) Regulations 2021

Regulations

Regulations
The regulations included in this chapter come under the Resource Management Act 1991 (excluding the national environmental standards listed above). These regulations are: • Resource Management (Discount on Administrative Charges) Regulations 2010 • Resource Management (Exemption) Regulations 1996 • Resource Management (Exemption) Regulations 2017 • Resource Management (Forms, Fees, and Procedure) Regulations 2003 • Resource Management (Infringement Offences) Regulations 1999 • Resource Management (Marine Pollution) Regulations 1998 • Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 • Resource Management (Measurement and Reporting of Water Takes) Amendment Regulations 2020 • Resource Management (Network Utility Operations) Regulations 2016 • Resource Management (Transitional, Fees, Rents, and Royalties) Regulations 1991 • Resource Management (Stock Exclusion) Regulations 2020

Water conservation orders

Water Conservation Orders	
Regional policy statements, *regional plans* and *district plans* cannot be inconsistent with the provisions of a water conservation order. A water conservation order can prohibit or restrict a regional council issuing new water and discharge permits, although it cannot affect existing permits. The following table provides an overview of whether any relevant review/s of the Otago Regional Policy Statement have been undertaken in relation to relevant water conservation orders.	
Water Conservation (Kawarau) Order 1997	The policy statement has been reviewed in May 2021
Water Conservation (Mataura River) Order 1997	The policy statement has not yet been reviewed

MW – Mana whenua

Recognition of hapū and iwi

Kāi Tahu[8]

Kāi Tahu whānui are *takata whenua* of the Otago region. Waitaha were the first people of Te Waipounamu, the South Island. Led by Rākaihautū, they explored and settled Te Waipounamu, and their exploits are reflected in enduring place names and histories across the motu. Waitaha were followed by the arrival of Kāti Māmoe and finally Kāi Tahu. Through warfare, intermarriage and political alliances a common allegiance to Kāi Tahu was forged. Kāi Tahu means the 'people of Tahu', linking them by name to their common ancestor Tahu Pōtiki.

The Kāi Tahu tribal area extends from the sub Antarctic islands in the south to Te Parinuiowhiti (White Cliffs, Blenheim) in the north and to Kahurangi Point on Te Tai o Poutini (the West Coast).

Relationship of Kāi Tahu with their rohe

Te Rūnanga o Ngāi Tahu (the iwi authority) is made up of 18 papatipu rūnaka, of which seven have interests in the Otago region. Papatipu rūnaka are a focus for whānau and hapū (extended family groups) who have *mana whenua* status within their area. In addition, the rakatirataka of owners of Māori freehold *land* over their *land* and resources is acknowledged. *Mana whenua* hold traditional customary authority and maintain contemporary relationships within an area determined by whakapapa (genealogical ties), resource use and ahikāroa (the long burning fires of occupation). Te Rūnanga o Ngāi Tahu encourages consultation with the papatipu rūnaka and takes into account the views of kā Rūnaka when determining its own position.

Three Kāi Tahu ki Otago papatipu rūnaka have marae based in Otago, Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou, whilst the fourth, Hokonui Rūnanga, is based in neighbouring Southland. Three Ngāi Tahu ki Murihiku Rūnanga – Awarua Rūnanga, Waihopai Rūnanga and Ōraka-Aparima Rūnanga – are based in Southland but also share interests with Kāi Tahu ki Otago in South Otago, the Mata-au Clutha River, and the inland *lakes* and mountains. The areas of shared interest originate from the seasonal hunting and gathering economy that was a distinctive feature of the southern Kāi Tahu lifestyle. Seasonal mobility was an important means by which hāpu and whānau maintained customary rights to the resources of the interior and ahi kā.

Te Rūnanga o Moeraki

The takiwā of Te Rūnanga o Moeraki is centred on Moeraki and extends from the Waitaki River to the Waihemo Shag River and inland to the Main Divide. The coastal interests of Te Rūnanga o Moeraki are concentrated in the Moeraki Peninsula area and surrounds, including Te Raka-a-Hineatea Pā, Koekohe Hampden Beach, and Te Kai Hinaki with its famed boulders.

https://www.terunangaomoeraki.org/

[8] In the south of the South Island, the local Māori dialect uses a 'k' interchangeably with 'ng'. The preference of Kāi Tahu ki Otago is to use a 'k' so southern Māori are known as Kāi Tahu, rather than Ngāi Tahu. In this document, the "ng" is used for the iwi in general, and the "k" for southern Māori in particular.

Te Rūnanga o Moeraki Marae, Moeraki

Kāti Huirapa ki Puketeraki

The takiwā of Kāti Huirapa ki Puketeraki centres on Karitāne and extends from the Waihemo, Shag River to Purehurehu Heyward Point, and includes an interest in Ōtepoti and the greater harbour of Ōtākou. The takiwā extends inland to the Main Divide sharing an interest in the *lakes* and mountains to Whakatipu-Waitai with kā Rūnaka to the south. The kaimoana resources of the coast from Karitāne to Okahau Blueskin Bay and Pūrākaunui, and the kai awa of the Waikōuaiti River and estuary are treasured and well utilised *mahika kai* for Kāti Huirapa ki Puketeraki.

http://www.puketeraki.nz/

Puketeraki Marae

Te Rūnanga o Ōtākou

The takiwā of Te Rūnaka o Ōtākou centres on Muaupoko Otago Peninsula, and extends from Purehurehu Heyward Point, to Te Mata-au Clutha River, and inland, sharing an interest in the *lakes* and mountains to the western coast with kā Rūnaka to the north and south. The Otago harbour has a pivotal role in the well-being of Ōtākou people. The harbour is a source of identity, a bountiful provider of kaimoana, and it is the pathway to the fishing grounds beyond. Traditionally it was the mode for other hapū to visit, and in today's world it is the lifeline to the international trade that benefits the region. The ebb and flow of the

harbour tides is a valued certainty in a world of change, a taoka to be treasured and protected for the benefit of current and future generations.

http://www.otakourunaka.co.nz/

Ōtākou Marae, Otago Peninsula

Hokonui Rūnanga

The takiwā of Hokonui Rūnaka centres on the Hokonui region and includes a shared interest in the *lakes* and mountains between Whakatipu-Waitai and Tawhitarere with other Murihiku Rūnanga and those located from Waihemo southwards. Although Hokonui Rūnanga is based in Gore, their interests in the Otago area, especially South Otago, are significant. They hold this in common with other Otago Rūnaka through whakapapa, history and tradition.

https://www.hokonuirunanga.org.nz/

Hokonui Marae

Te Rūnanga o Awarua

The takiwa of Te Rūnanga o Awarua centres on Awarua and extends to the coasts and estuaries adjoining Waihopai sharing an interest in the *lakes* and mountains between Whakatipu-Waitai and Tawhititarere with other Murihiku Rūnanga and those located from Waihemo southwards.

Waihopai Rūnaka

The takiwa of Waihopai Rūnaka centres on Waihopai and extends northwards to Te Mata-au Clutha River, sharing an interest in the *lakes* and mountains to the western coast with other Murihiku Rūnaka and those located from Waihemo southwards.

Te Rūnanga o Ōraka Aparima

The takiwa of Te Rūnanga o Ōraka Aparima centres on Ōraka and extends from Waimatuku to Tawhititarere sharing an interest in the *lakes* and mountains from Whakatipu-Waitai to Tawhititarere with other Murihiku Rūnaka and those located from Waihemo southwards.

Environmental management perspectives and values of Kāi Tahu

He taura whiri kotahi mai anō te kōpunga tai nō ī te pū au

"From the source to the mouth of the sea, all things are joined together as one"

Te Tiriti o Waitangi establishes a partnership between Kāi Tahu and the Crown. The RMA requires that the relationship of Māori and their culture and traditions with their ancestral *lands*, *water*, sites, wāhi tapu, and other taoka, is recognised and provided for[9] and that the principles of the Treaty of Waitangi are taken into account.[10] In the spirit of this partnership and the Treaty principles, the ORPS seeks to facilitate Kāi Tahu engagement in resource management processes and decision-making in Otago.

This chapter acknowledges the principles of Te Tiriti o Waitangi and sets out general considerations for the incorporation of Kāi Tahu values and interests into resource management planning, consenting, and implementation processes. These are integrated throughout this document, and this chapter serves to tie the strands together. It reflects the philosophy embraced by Kāi Tahu of holistic resource management, ki uta ki tai – often described as "from the mountains to the sea".

Kāi Tahu values

The following description is a guide to assist in understanding Kāi Tahu values. It is not a complete list of all the values held by Kāi Tahu.

Kāi Tahu do not see their existence as separate from te ao tūroa, the natural world, but as an integral part of it through whakapapa (genealogy). Whakapapa is central to te ao Māori (a Māori world view), connecting the origins of everything, past and present. It is the foundation upon which all things are built, the web that connects all things together, the anchor which holds all things in place and the means by which all things link back to the beginning of time. It is through whakapapa that all things are intricately linked, as well as having their individual place in the world. Whakapapa binds Kāi Tahu to the mountains, forests and waters and the life supported by them, and this is reflected in attitudes towards the natural world and resource management.

Whakawhanaukataka, the process of maintaining relationships, embraces whakapapa through the relationship between people, and between people and the *environment*. The nature of these relationships defines people's rights and responsibilities in relation to the use and management of resources.

[9] Section 6 of the Resource Management Act (1991).
[10] Section 8 of the Resource Management Act (1991).

All things have the qualities of wairua (spiritual dimension) and mauri (life force) and have a genealogical relationship with each other. Mauri is found in all things organic and inorganic. The nurturing of all taoka and protection of their mauri is a prime concern and a significant obligation for Kāi Tahu whānui as *mana whenua* and mana moana, and as an expression of rakatirataka.

Each papatipu rūnaka has its own takiwā determined by whakapapa and its ahi-kā-roa (historical use and occupation). Takiwā are often defined by natural boundaries such as heads, mountain ranges and *rivers*. Political and operational authority over an area is undertaken by Kāi Tahu as an expression of rakatirataka, *mana whenua* and mana moana. The exercise of these powers in te taiao is through the action of *kaitiakitaka.* Recognition of the rakatirataka and mana of Kāi Tahu as kaitiaki whenua can in part, be achieved by enabling Kāi Tahu to identify and exercise their preferred means of managing and maintaining resources and the *environment* (te taiao). This system of rights and responsibilities (encompassing tikaka and kawa) is inherited from previous generations and has evolved over time.

The resources in any given area are a taoka; they are a source of prestige for *mana whenua* of that area and are a statement of their identity. Traditionally, the abundance or lack of resources directly determines the welfare of every hapū, and so affects their mana.

Ki uta ki tai

Ki uta ki tai is a philosophy that has become synonymous with the way Kāi Tahu think about natural resource management. Ki uta ki tai is the concept used to describe holistic natural resource management, recognising all environmental elements are interconnected and must be managed as a whole. It is a way of understanding the natural environment, including how it functions, how people relate to it and how it can be looked after appropriately.

Rakatirataka

Rakatirataka refers to the exercise of mana or authority to give effect to Kāi Tahu culture and traditions across all spheres in their takiwā, including the management of te taiao. Recognition of the relationship of Kāi Tahu and their culture and traditions with their ancestral lands, *water*, sites, wāhi tapu, and other taoka is embedded in the RMA and the Treaty of Waitangi.

Kaitiakitaka

Kaitiakitaka refers to the exercise of guardianship over *natural and physical resources.* It is an expression of rakatirataka and mana, and includes the ethic of stewardship. This statutory definition of *kaitiakitaka* is only a starting point for Kāi Tahu, as *kaitiakitaka* is a much wider cultural concept than guardianship.

Kaitiakitaka is fundamental to the relationship between Kāi Tahu and the *environment*. The objectives of *kaitiakitaka* are to protect the mauri and life supporting capacity of the *environment* and to pass the *environment* on to future generations in an enhanced state. For Kāi Tahu, *kaitiakitaka* is not passive custodianship, nor is it simply the exercise of customary property rights, but it entails an active exercise of responsibility and rakatirataka to ensure long-term sustainability of resources as taoka, and for the benefit to future generations – mō tātou, ā, mō kā uri a muri ake nei.

Hauora

Hauora is a holistic understanding of health and well-being. For Kāi Tahu, te hauora o te taiao (the health of the *environment*), te hauora o te wai (the health of the *waterbody*) and te hauora o te tangata (the health of the people) are all interconnected. Due to this connection, the state of the health and well-being of wai māori and te taiao is seen as a reflection on the mana, health, and wellbeing of Kāi Tahu as

mana whenua. Decline in te hauora o te wai and te hauora o te taiao is also understood by Kāi Tahu to adversely impact the health and well-being of the Otago community as a whole, tangata katoa.

Tikaka and kawa

Tikaka and kawa Māori encompass the beliefs, values, practices, protocols and procedures that guide appropriate codes of conduct, or ways of behaving. In the context of natural resource management, observing tikaka and kawa is part of the ethic and exercise of *kaitiakitaka*. Tikaka and kawa are underpinned by a body of mātauraka (traditional knowledge) and are based on a general understanding that people belong to the land and have a responsibility to care for and manage the land. These concepts and values incorporate forms of social control to manage the relationship of people and the *environment*, including concepts such as tapu, noa and rāhui.

Tikaka and kawa are based on traditional practices but are dynamic and continue to evolve in response to different situations.

Mātauraka

Mātauraka, within this region, is Kāi Tahu customary knowledge passed down from one generation to the next, used in the present, and will continue to be developed for the future. It involves observing, experiencing, participating, studying and understanding the world from an indigenous cultural perspective. It is a tool for thinking, organising information, considering the ethics of knowledge, and informing us on our world and our place in it. Incorporation of mātauraka in resource management decision-making is important to ensure that cultural interests are appropriately recognised and provided for.

Taoka

All natural resources - air, *land*, *water*, and indigenous *biological diversity* - are taoka. Taoka are treasured resources that are highly valued by Kāi Tahu, derived from the atua (gods), linked to the people through whakapapa, and left by tūpuna (ancestors) to provide for and sustain life. In the management of natural resources, it is important that the habitats and wider needs of taoka species are sustainably managed and enhanced.

Mahika kai

Mahika kai is one of the cornerstones of Kāi Tahu cultural identity. *Mahika kai* is a term that literally means "food workings" and refers to the customary gathering of food and natural materials and the places where those resources are gathered or produced. The term also embodies the traditions, customs and collection methods, and the gathering of natural resources for cultural use, including raraka (weaving) and rokoā (traditional medicines). Maintaining *mahika kai* sites, gathering resources, and continuing to practice the tikaka that governs each resource, is an important means of maintaining and honouring whakapapa connections to *land,* taoka and tūpuna, and passing on cultural values and mātauraka to the next generation.

Resources of significance to Kāi Tahu

Wai Māori

Like all things, *water* has a whakapapa. All *water* is seen to have originated from the separation of Rakinui and Papatūānuku and their continuing tears for one another. Rain is Rakinui's tears for his beloved Papatūānuku and mist is regarded as Papatūānuku's tears for Rakinui.

From Rakinui and Papatūānuku came the offspring who were responsible for creating the elements that constitute our total world today, both animate and inanimate - the mountains, *rivers*, forests and seas, and all fish, bird and animal life. The realm of atua such as Rakinui and his many wives and offspring overarches and informs the Kāi Tahu whānui world view, values and beliefs.

Water plays a significant role in Kāi Tahu spiritual beliefs and cultural traditions. Kāi Tahu have an obligation through whakapapa to protect wai and all the life it supports, as *ko te wai te ora o kā mea katoa (water is the life giver of all things)*. The condition of *water* is seen as a reflection of the condition of the people. *Toitū te Marae o Tane, toitū te Marae o Takaroa, toitū te Iwi (Protect and strengthen the realms of the land and sea, and they will protect and strengthen the people).* When the natural environment is strong and healthy, the people are strong and healthy and so too is their mana.

Taoka species and habitats

Taoka species and habitats are those that are treasured by Kāi Tahu, and Kāi Tahu regard all indigenous species as taoka. In many cases taoka species are also *mahika kai,* treasured for their use as a resource. The NTCSA recognises the relationship Kāi Tahu has with some of these species through the Statutory Acknowledgement for Taonga Species. However, Kāi Tahu do not consider this list to be comprehensive as important taoka species such as tuna are not included.

Wāhi tūpuna

The value Kāi Tahu attached to land is evident from the fact that every part of the landscape is known and named. *Wāhi tūpuna* (ancestral landscapes) are made up of interconnected sites and areas reflecting the history and traditions associated with the long settlement of Kāi Tahu in Otago. The landscape of Otago includes many *wāhi tūpuna* and areas of significance, reflecting the relationship of Kāi Tahu with the land across the region. These places should not be seen in isolation from one another but are part of a wider cultural setting. For example, an archaeological site adjacent to a *wetland* is likely to be associated with *mahika kai* resources in the *wetland*. The character of *wāhi tūpuna* in past times is retained in tribal memory, for example through songs, place names and proverbs. When these references to the character of the *wāhi tūpuna* become incorrect due to modification of the *environment*, it negatively affects the Kāi Tahu relationship with that landscape. For example, a waterway named Kaituna would be expected to contain many tuna. A waterway with this name used to exist in central Dunedin, but no longer exists because there is now a city where the waterway once was.

Air and atmosphere (kōhauhau)

In Kāi Tahu traditions, air and atmosphere emerged through the creation traditions and the movement from Te Kore through Te Pō to Te Ao Marama. Following the separation of Raki and Papatūānuku, one of their many children, Tāwhirimātea, fled with Raki into the sky. From there he controls the wind and weather. The air and atmosphere are integral parts of the *environment* that must be valued, used with respect, and passed on intact to the next generation. Pollution of the air and atmosphere adversely affects and degrades the mauri of this taoka, of te taiao, and of other taoka such as plants and animals. Poor air

quality damages and degrades ancestral lands, *mahika kai* sites, and other sites such as rock art, adversely affecting the mauri of the landscape and the mana of the people.

Coastal environment (taku tai moana me te wai māori)

Takaroa is the atua associated with the oceans and seas, and their ecosystems. The marine environment is a moving force, a reminder of the power of Takaroa. As one of the children of Rakinui and Papatūānuku, Kāi Tahu are connected to Takaroa by whakapapa, affording rights and responsibilities in relation to te takutai moana.

The tūpuna of Kāi Tahu were great ocean travellers, having navigated by waka across Te Moana – nui – a – Kiwa, the Pacific Ocean for generations before settling in Te Wai Ponamu. Knowledge and practices brought with the tūpuna were adapted to meet the challenges and opportunities of the new environment. Over time, Kāi Tahu whānui developed the tikaka and mātauraka of takutai moana and mahika kaimoana that is used today.

The coastal environment is particularly significant for Kāi Tahu in the southern South Island. Most of the permanent settlements were established on the coast due, in part, to the moderating influence of the sea on temperature, making the winters less bitter. The coast also had a bounty of kaimoana resources to support coastal settlements.

The *coastal waters* and processes were integral to the way of life tūpuna enjoyed, and the coastal environment continues to support significant *mahika kai* resources. The *coastal waters* are a *receiving environment* for fresh *water*, gravels and sediment from the terrestrial landscape, which are important to maintaining natural processes and the domain of Takaroa. Recognising the interconnection of the *land* and sea environments is consistent with the ki uta ki tai philosophy.

Pounamu

Kāi Tahu customs are intricately linked to this special taoka. The practice of gathering, using and trading pounamu bind Kāi Tahu identity to the landscape. Pounamu conveys mana and mauri from ages past, and is reflected in its exalted whakapapa lineage, an uri (descendant) of Takaroa.

As an interim measure, until a Regional Pounamu Management Plan is developed for Otago and Murihiku, a rāhui pounamu has been in place in the Otago region since the passing of the Ngāi Tahu (Pounamu Vesting) Act 1997. This is subject to review by the collective Kaitiaki Rūnaka who will determine appropriate protection, access and use policies applicable to their membership and Ngāi Tahu whānui.

Ngāi Tahu Claims Settlement Act 1998 (NTCSA)

The NTCSA was enacted to settle historical Ngāi Tahu claims against the Crown. The NTCSA provides redress for breaches of Te Tiriti o Waitangi and to signal a new age of co-operation of the Crown and its agencies with Kāi Tahu. The Crown apology recorded in section 4 of the NTCSA explicitly recognises the rakatirataka of Kāi Tahu within its takiwā, and the Act includes specific provisions that provide for exercise of rakatirataka and *kaitiakitaka* by *mana whenua* in respect to *mahika kai,* taoka species and other resource management matters. These include rights in relation to the management of specified significant areas (statutory acknowledgement areas, tōpuni and *nohoaka*) and customary fisheries.

Statutory acknowledgement areas

Statutory acknowledgements are recorded in the NTCSA for several *water bodies*, mountains and coastal features in the Otago Region. These acknowledgements are statements by Te Rūnanga o Ngāi Tahu of the particular cultural, spiritual, historic and traditional association of Kāi Tahu with these areas.

Part 12 of the NTCSA provides details of statutory acknowledgements, and the responsibilities relating to them. Section 208 of the NTCSA requires that *local authorities* have regard to these statutory acknowledgements in *resource consent* processing under Section 95 of the RMA in deciding whether Te Rūnanga o Ngāi Tahu may be adversely affected by the granting of a *resource consent* for activities within, adjacent to or impacting directly on the area.

Statutory acknowledgements were intended as a measure to improve opportunities for *mana whenua* engagement in resource management processes, pending broader provision for areas of significance to Kāi Tahu being incorporated into resource management plans in order to protect and restore associated rights, interests and values. The statutory acknowledgements are *wāhi tūpuna,* but *wāhi tūpuna* are not confined to these areas.

The following statutory acknowledgement areas in Otago are recognised in the NTCSA, and their values are described in Schedules to that Act:

- Ka Moana Haehae (Lake Roxburgh) - Schedule 22
- Kakaunui River - Schedule 23
- Kuramea (Lake Catlins) - Schedule 28
- Lake Hāwea - Schedule 30
- Lake Wānaka - Schedule 36
- Mata-Au (Clutha River) - Schedule 40
- Matakaea (Shag Point) - Schedule 41
- Pikirakatahi (Mount Earnslaw) - Schedule 51
- Pomahaka River - Schedule 52
- Te Tauraka Poti (Merton Tidal Arm) - Schedule 60
- Te Wairere (Lake Dunstan) - Schedule 61
- Tititea (Mount Aspiring) - Schedule 62
- Tokatā (The Nuggets) - Schedule 64
- Waihola/Waipōuri Wetland - Schedule 70
- Waitaki River – Schedule 72[11]
- Whakatipu Waimāori (Lake Wakatipu) - Schedule 75
- Te Tai O Arai Te Uru (Otago Coastal Marine Area) - Schedule 103.

Tōpuni

The concept of tōpuni derives from the traditional Kāi Tahu custom of persons of rakatira status extending their mana and protection over a person or area by placing their cloak over them or it. A number of areas

[11] The Waitaki River lies within both the Otago and Canterbury regions.

on public conservation land that have significant values to Kāi Tahu because of their cultural, spiritual, historic and traditional associations are recognised in the NTCSA as tōpuni.

Sections 240 to 246 of the NTCSA provide for Kāi Tahu consultation on management of these areas, to protect their values. Although the specific provisions in the NTCSA relate only to management of conservation land, the interests of Kāi Tahu should be recognised and provided for when considering activities in nearby areas that may impact on the values of tōpuni or *waters* flowing from them.

Tōpuni recognised in Otago are:

- Matakaea (Shag Point) – Schedule 83
- Maukaatua Scenic Reserve – Schedule 84
- Pikirakatahi (Mount Earnslaw) – Schedule 87
- Te Koroka (Dart/Slipstream) – Schedule 91
- Tititea (Mount Aspiring) – Schedule 92.

Nohoaka

Nohoanga (or *nohoaka*) entitlements provide a right of seasonal occupation and use for Kāi Tahu whānui on specified areas of Crown-owned land near *water bodies* for harvest of natural resources (sections 255 to 268 of the NTCSA). These rights are intended as partial redress for the loss of *mahika kai* through alienation of land.

Kāi Tahu interests in these areas should be recognised and provided for when considering management of associated *water bodies* or activities on nearby land. The ability of Kāi Tahu whānui to access and use *nohoaka* as intended is reliant upon protection and restoration of *mahika kai* values associated with them.

Nohoaka entitlements are listed in Schedule 95 of the NTCSA. In Otago, sites are identified adjacent to the following *water bodies*:

- Waitaki River (two sites)
- Waianakarua River
- Taiari River (three sites)
- Lake Hāwea (three sites)
- Hāwea River
- Lake Wānaka (two sites)
- Whakatipu Waimāori
- Shotover River (two sites)
- Mata-au Clutha River (four sites).

Customary fisheries

Sections 297 to 311 of the NTCSA include provisions recognising Kāi Tahu rights and interests in customary fisheries, and provide for involvement in management of these resources through the Conservation Act 1987 and the Fisheries Acts 1983 and 1996.

The interests of Kāi Tahu should be recognised and provided for when considering activities under the RMA that may impact on customary fisheries, to enable protection and restoration of fisheries habitat.

Mātaitai and taiāpure are mechanisms under the Fisheries Act that provide for management of customary fisheries areas and are applicable to both coastal and *freshwater* fisheries environments.

The East Otago Taiāpure is constituted by the Fisheries (East Otago Taiāpure) Order 1999. It includes the estuarine and inshore marine waters between Cornish Head and Potato Point.

There are also four mātaitai in Otago:

- Moeraki Mātaitai Reserve includes areas of *coastal waters* at Moeraki and Katiki (https://www.mpi.govt.nz/dmsdocument/15220-Moeraki-North-Otago-Mataitai-Reserve)
- Waikōuaiti Mātaitai Reserve includes *freshwater* and estuarine waters of the Waikōuaiti River (https://www.mpi.govt.nz/dmsdocument/12954-Waikouaiti-South-Canterbury-Mataitai- Reserve)
- Ōtākou Mātaitai Reserve includes most of the Otago Harbour north of a line from Harwood to Pulling Point

  (https://www.mpi.govt.nz/dmsdocument/14077-Otakou-mataitai-reserve)
- Puna-wai-Tōriki (Hays Gap) Mātaitai Reserve includes an area of *coastal waters* north of Nugget Point

  (https://www.mpi.govt.nz/dmsdocument/15223-Puna-wai-Toriki-Hays-Gap-South-Otago-Mataitai-Reserve)

Māori Commercial Aquaculture Claims Settlement Act 2004

The Māori Commercial Aquaculture Claims Settlement Act 2004 provides full and final settlement of Māori commercial aquaculture claims since 21 September 1992. Settlement is delivered via Regional Aquaculture Agreements which may describe areas to be provided to iwi for the purposes of commercial aquaculture. Any future settlement outcomes will need to be provided for in *regional plans* and *district plans.*

Native reserves

A native reserve is any property or site that is a:

- Native reserve excluded from the Ōtākou Land Purchases (1844)
- Native reserve excluded from the Kemps Land Purchases (1848)
- Reserve granted by the Native Land Court (1868)
- Half caste reserve (1881)
- Landless native reserve (1896)
- Other reserve (1890 and 1900)

A number of native reserves exist that were excluded from the land sales of the 1840s. These reserves are steeped in history and association and are places of belonging. Remaining reserves are located at Moeraki, Waikōuaiti, Ōtākou, Onumia, Taieri Mouth, and Te Karoro, Kaka Point. Other categories of native land exist at Kōpūtai, Port Chalmers, and Ōtepoti, Dunedin, where tauraka waka, landing sites, were recognised. In addition, land was held at Manuhaea, Lake Hāwea, Aramoana, Clarendon, Taieri Mouth, Tautuku-Waikawa and Glenomaru amongst others. Landing reserves were allocated at Matainaka, Waikōuaiti, and the former Lake Tatawai on the Taiari Plains.

The following table lists the reserves in Otago which are also mapped in MAP1 – Native reserves. Many of the sections within these native reserves now have the status of general land. While some of this general land is still in Māori ownership, many of the general titled sections have been sold to non-Māori or taken under various pieces of legislation such as the Public Works Act 1981. Although these sections are no longer in whānau ownership, descendants of the original owners retain an ancestral relationship with these lands.

Table 1: Native reserves located within the Otago region

Location	Comments	Reserve Type
Tautuku	Southern block of Tautuku sections	South Island Landless Natives Act
	Northern sections are Reserved lands	Native Reserve
Glenomaru	Located south of Kaka Point	South Island Landless Natives Act
Maranuku	Granted in 1844 as part of the Ōtakou Purchase. Originally called Te Karoro, split into two reserves	Native Reserve
Clarendon	Located inland from Taieri Mouth	Clarendon Half Caste Reserve
Taiari	Granted in 1844 as part of the Ōtakou Purchase Deed. Split into three reserves; A, B and C	Native Reserve
Lake Tatawai	Located on the Taiari Plain, south of Dunedin, includes lake that is now drained.	Native Reserve and Landing Reserve
Otago Heads Native Reserve	Granted in 1844 as part of the Ōtākou Purchase Deed. Split into four reserves	Native Reserve
Port Chalmers	Granted in 1848 as part of the Ōtākou Purchase Deed. A further grant adjacent to the Reserve was made in approximately 1888	Native Reserve
Aramoana	This reserve resulted from the Pūrākanui Half Caste grant	Half Caste Reserve
Pūrākanui	Granted in 1848 as part of Kemp's Purchase Deed. Further allocations were made in 1868 at Wharauwerawera	Native Reserve
Brinns Point	Granted in the latter part of the nineteenth century	Half Caste Reserve
Karitāne (Waikōuaiti Native Reserve)	Granted in 1848 as part of Kemp's Purchase Deed	Native Reserve
Matainaka and Hawksbury Fishing Easement	Two fishing easements fall under this reserve, Matainaka, located at Hawksbury Lagoon at Waikōuaiti and the Forks Reserve located inland from Karitāne. The legal description for the latter reserve is Section 1N Town of Hawksbury	Fishing Easement
Hawksbury	Located north of Waikōuaiti, in the vicinity of Goodwood	Hawksbury Half Caste Reserve
Moeraki	Granted in 1848 as part of Kemp's Purchase Deed. Further awards were made in 1868	Native Reserve

Location	Comments	Reserve Type
Kuri Bush	10 acre reserve of timber	Native Reserve
Korotuaheka	Located south of the Waitaki River mouth. Now Reserved as an urupā. It appears this originated as an occupational reserve and Fishing Easement	Native Reserve Fishing Easement
Punaomaru	376 acre reserve located approximately 14 miles from the Waitaki River mouth on the south bank of the river	Native Reserve
Lake Hāwea	Reserve of 100 acres situated in the western extremity of the middle arm of Lake Hāwea near a Lagoon. Part of the Reserve was taken for power development in 1962 and the balance of the land was alienated by the Māori Trustee in 1970	Fishing Easement
Hāwea-Wānaka block (Wānaka Plantation Reserve)	Known as Sticky Forest and being 50.7 hectares more or less to be vested in the Successors as defined in pursuant to Section 15 of the Deed of Settlement 1997 between Te Rūnanga o Ngāi Tahu and the Crown, and as enacted in Part 15 of the Ngāi Tahu Claims Settlement Act 1998.	South Island Landless Natives Act

Mana whenua – local authority relationships

Kāi Tahu relationships with local authorities

There are a number of relationship agreements between Kāi Tahu papatipu rūnaka and *local authorities* in Otago. These include:

- Memorandum of Understanding and Protocol between Otago Regional Council, Te Rūnanga Ngāi Tahu and Kāi Tahu ki Otago for Effective Consultation and Liaison (2003)
- Te Roopū Taiao Otago Charter and Hui (Otago Regional Council, Queenstown Lakes District Council, Waitaki District Council, Clutha District Council, Central Otago District Council)
- He Huarahi mō Ngā Uri Whakatupu – Charter of Understanding 2016 between Te Ao Marama Incorporated, representing Ngāi Tahu ki Murihiku, and councils.

Kāi Tahu and Otago Regional Council use the Mana to Mana forum as a means to build a strengthened relationship between the two entities.

He Huarahi mō Ngā Uri Whakatupu[12] is the Charter of Understanding between Ngāi Tahu ki Murihiku (Awarua Rūnanga, Waihopai Rūnanga, Ōraka-Aparima Rūnanga and Hokonui Rūnanga) and *local authorities*, including Otago Regional Council, Queenstown Lakes District Council and Clutha District Council.

Hapū and iwi planning documents

There are four iwi planning documents lodged with the *local authorities* in the Otago Region:

- Te Rūnanga o Ngāi Tahu Freshwater Policy 1999

[12] https://www.es.govt.nz/repository/libraries/id:26gi9ayo517q9stt81sd/hierarchy/about-us/plans-and-strategies/regional-plans/iwi-management-plan/documents/The%20Charter%20of%20Understanding.pdf (accessed 6 May 2026).

- Kāi Tahu ki Otago Natural Resources Management Plan 2005
- Te Tangi a Tauira: Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008
- Waitaki Iwi Management Plan 2019

How the iwi planning documents have been taken into account in this Regional Policy Statement

Objectives and policies of the iwi management plans are reflected in the Resource Management Issues of Significance to Kāi Tahu and have been taken into account in the development of provisions across the whole of this Regional Policy Statement.

How iwi planning documents are used in Otago

The iwi management plans are used to provide cultural context and guidance as to the natural resource values, concerns and issues of Kāi Tahu ki Otago and Ngāi Tahu ki Murihiku.

The iwi planning documents are to be used in the development of planning policy and assist decision-makers to make informed decisions, recognising the local knowledge of the *environment* held by papatipu rūnaka and the significance of the natural resource values to Kāi Tahu.

The iwi planning documents are also used to guide consultation with rūnaka and set out the expectations for consultation. The iwi management plans are not a substitute for direct communication with papatipu rūnaka.

Involvement and participation with *mana whenua*

ORC and the *local authorities* will establish and maintain effective resource management relationships with Kāi Tahu based on a mutual obligation to act reasonably and in good faith. The *local authorities* and Otago Regional Council will consult Kāi Tahu at an early stage in resource management processes and implementation, and facilitate efficient and effective processes for applicants to consult Kāi Tahu on *resource consent* applications and private plan change requests.

Local authorities are also expected to consult with owners of Māori freehold *land* on resource management processes and implementation where decisions may affect the ability of owners of Māori freehold *land* to use or develop their *land.*

Local authorities may also transfer and delegate any one or more of their functions, powers or duties to an iwi authority in accordance with section 33 (transfer) and 34A (delegation) of the RMA, and where this provides an effective service.

Mana whenua consultancy services

The papatipu rūnaka consultancy services, Aukaha, representing Kāi Tahu ki Otago, and Te Ao Marama Inc, representing Ngāi Tahu ki Murihiku, facilitate Kāi Tahu engagement in resource management processes and provide a first point of contact for the public seeking to engage with papatipu rūnaka.

Other iwi, hapū and mātāwaka

Otago is also home to Māori from other iwi, hapū, and mātāwaka. The Araiteuru marae in Dunedin and Te Whare Koa in Ōamaru are important pan-tribal cultural centres for mātāwaka and sit within the manaakitaka of *takata whenua*.

Provisions

Objectives

MW-O1 – Principles of Te Tiriti o Waitangi

The principles of Te Tiriti o Waitangi are given effect in resource management processes and decisions, utilising a partnership approach between councils and papatipu rūnaka to ensure that what is valued by *mana whenua* is actively protected in the region.

Policies

MW-P1 – Treaty obligations

Promote awareness and understanding of the obligations of *local authorities* in regard to the principles of Te Tiriti o Waitangi, tikaka Māori and kaupapa Māori.

MW-P2 – Treaty principles

Local authorities exercise their functions and powers in accordance with the principles of Te Tiriti o Waitangi, by:

(1) recognising the status of Kāi Tahu as *mana whenua* and facilitating Kāi Tahu involvement in decision-making as a partner under Te Tiriti o Waitangi,

(2) including Kāi Tahu in resource management processes, implementation and decision-making to the extent desired by *mana whenua*,

(3) recognising and providing for Kāi Tahu values and addressing resource management issues of significance to Kāi Tahu, as identified by *mana whenua*, in resource management decision-making processes and plan implementation,

(4) recognising and providing for the relationship of Kāi Tahu culture and traditions with their ancestral lands, and waters, encompassing wai māori and wai tai, significant sites, *wāhi tūpuna,* wāhi tapu and wāhi taoka, and other taoka by ensuring that Kāi Tahu have the ability to identify these relationships and determine how best to express them,

(5) ensuring that *regional plans* and *district plans* recognise and provide for Kāi Tahu relationships with Statutory Acknowledgement Areas, tōpuni, *nohoaka* and customary fisheries identified in the NTCSA, including by actively protecting the mauri of these areas,

(6) having particular regard to the responsibility of Kāi Tahu to exercise their role as kaitiaki, as an expression of mana and rakatirataka,

(7) actively pursuing opportunities for:

    (a) delegation or transfer of functions to Kāi Tahu, and

    (b) partnership or joint management arrangements,

    (c) taking into account iwi management plans when making resource management decisions,

(8) *regional plans* and *district plans* recognising and providing for aquaculture settlement outcomes identified under the Māori Commercial Aquaculture Claims Settlement Act 2004,

(9) recognising and providing for mātauraka and tikaka in environmental and resource management, and

(10) recognising and providing for rights and interests of owners of *Māori land.*

MW-P3 – Supporting Kāi Tahu hauora

The natural environment is managed to support Kāi Tahu hauora by:

(1) recognising that Kāi Tahu hold an ancestral and enduring relationship with all whenua, wai māori and *coastal waters* within their takiwā,

(2) protecting customary uses, Kāi Tahu values and relationships as identified by Kāi Tahu to resources and areas of significance, and restoring these uses and values where they have been degraded by human activities,

(3) safeguarding the mauri and life-supporting capacity of natural resources, recognising the whakapapa connections of Kāi Tahu with these resources as taoka, and the connections to practices such as *mahika kai,* and

(4) working with Kāi Tahu to incorporate mātauraka into resource management processes and decision-making.

MW-P4 –Use of native reserves and *Māori land*

Kāi Tahu are able to develop and use *land* and resources within native reserves and *Māori land* in accordance with mātauraka and tikaka, to provide for their economic, cultural and social aspirations, including for *papakāika* and marae related activities.

Methods

MW-M1 – Collaboration with Kāi Tahu

Local authorities must collaborate with Kāi Tahu to:

(1) manage, in accordance with tikaka, kawa, and mātauraka, those places, areas, landscapes, waters, taoka and other elements of cultural, spiritual or traditional significance to *mana whenua* by:

  (a) identifying, recording, and assessing these elements using methods determined by *mana whenua* (which may include mapping), and

  (b) protecting the values of, and *mana whenua* relationships to, these elements,

(2) identify *indigenous species* and ecosystems that are taoka in accordance with ECO-M3,

(3) determine appropriate naming for places of significance in Otago,

(4) share information relevant to Kāi Tahu interests, and

(5) ensure assessments under (1) and (2) above expertly employ Te Ao Kāi Tahu methodologies, paradigms and mātauraka in setting the context, considering and evaluating issues as they relate to Kāi Tahu values and paradigms, and the manner in which they guide decision-making.

MW-M2 – Mātauraka Māori

Local authorities must work in partnership with Kāi Tahu to:

(1) incorporate mātauraka into resource management processes,

(2) enable use of mātauraka in decision-making where appropriate, and

(3) develop research and monitoring programmes that incorporate mātauraka and are led by *mana whenua*.

MW-M3 – Kāi Tahu relationships

Local authorities must develop processes to:

(1) establish and maintain effective resource management relationships with Kāi Tahu based on a mutual obligation to act reasonably and in good faith,

(2) involve Kāi Tahu at an early stage and throughout resource management processes, decision-making, and implementation, and

(3) facilitate efficient and effective processes for applicants to consult Kāi Tahu on *resource consent* applications, private plan change requests, notices of requirement, and notices of requirement for heritage orders.

MW-M4 – Kāi Tahu rakatirataka

Local authorities must facilitate Kāi Tahu involvement in resource management (including decision making), to the extent *mana whenua* consider themselves able to accommodate, by:

(1) including an independent accredited commissioner approved or nominated by Kāi Tahu on hearing panels for *resource consent* applications, notices of requirement, plan changes or plans where Kāi Tahu values may be affected,

(2) implementing actions to foster the development of *mana whenua* capacity to participate in resource management decision making,

(3) joint management agreements and full or partial transfers of functions, duties or powers from *local authorities* to iwi authorities in accordance with section 33 of the RMA, and

(4) entering into a Mana Whakahono ā Rohe with one or more iwi authorities.

MW-M5 – *Regional plans* and *district plans*

Local authorities must amend their *regional plans* and *district plans* to:

(1) take into account iwi management plans and address resource management issues of significance to Kāi Tahu, and

(2) identify the location of native reserves and *Māori land* in *district plans*, and

(3) provide for the use and development of native reserves and *Māori land* in accordance with MW–P4 and recognise rakatirataka over this *land* by enabling *mana whenua,* and owners of Māori freehold *land* in relation to their *land*, to lead approaches to manage any adverse *effects* of such use on the *environment*,

(4) incorporate active protection of areas and resources recognised in the NTCSA,

(5) enable the purpose of the redress provided for in the NTCSA, including those arising from the Ancillary Claims and SILNA, and

(6) provide for the outcomes of settlements under the Māori Commercial Claims Aquaculture Settlement Act 2004.

MW-M6 – Incentives and education

Local authorities are encouraged to use other mechanisms or incentives to assist in achieving Policies MW-P1 to MW-P4, promoting awareness and improving knowledge of tikaka and the principles of Te Tiriti o Waitangi among staff and stakeholders, including through hiring practices, induction programmes, key performance indicators and training activities.

MW-M7 – Advocacy and facilitation

Local authorities may facilitate negotiations with landowners to provide Kāi Tahu access to sites of significance to Kāi Tahu that do not have suitable access.

Explanation

MW-E1 – Explanation

The policies in this section are designed to achieve MW-O1 by setting out the actions that must be undertaken by *local authorities* to ensure the principles of Te Tiriti o Waitangi are given effect in resource management processes and decisions, and *mana whenua* values and taoka are actively protected, supporting Kāi Tahu well-being. The policies also require the development and implementation of planning tools and other mechanisms that recognise the role of Kāi Tahu in resource management and ensure their engagement with and participation in resource management including through partnership with *local authorities.*

Principal reasons

MW-PR1 – Principal reasons

Te Tiriti o Waitangi creates a special relationship between *takata whenua* and the Crown, which the Crown expresses in part through the provisions of the RMA and national instruments created in accordance with the RMA. This, in turn, creates responsibilities for *local authorities.* Providing for cultural well-being is a feature of the sustainable management purpose of the RMA. Section 8 of the RMA requires *local authorities* to take the principles of Te Tiriti o Waitangi into account. These principles include kāwanataka, rakatirataka, partnership, participatory decision making and active protection of Kāi Tahu resources. Section 7(a) of the RMA requires decision makers to have particular regard to *kaitiakitaka*. Effective *kaitiakitaka* is dependent upon the extent to which Kāi Tahu can exercise rakatirataka, which requires the authority and ability to make decisions relating to management of resources.

Local authorities need to incorporate Treaty principles into their decision making and ensure they are properly applied, to account for the *effects* of resource management decisions on Kāi Tahu values, including those described in iwi resource management plans. Deliberate measures need to be taken to ensure the principles are clearly articulated and readily understood. The principles are broadly expressed, so a measure of flexibility is needed in applying them.

The provisions in this chapter assist in implementing sections 6(e), 7(a) and 8 of the RMA by requiring a partnership approach which involves Kāi Tahu and considers *mana whenua* rights, interests and values in decision making processes, and enables Treaty principles to be applied in an appropriate way.

Implementation of the provisions in this chapter will occur primarily, but not exclusively, through *regional plans* and *district plan* provisions. *Local authorities* may adopt a range of methods, utilising statutory mechanisms and non-regulatory methods to implement the policies and support achievement of the objective.

Anticipated environmental results

MW-AER1 Resource management processes and decisions reflect the principles of Te Tiriti o Waitangi.

MW-AER2 Strong relationships between Kāi Tahu and *local authorities* facilitate the exercise of rakatirataka and *kaitiakitaka* by *mana whenua* in relation to their taoka tuku iho.

PART 2 – RESOURCE MANAGEMENT OVERVIEW

SRMR – Significant resource management issues for the region

Introduction

Otago's people and communities rely on the *natural and physical resources* that Otago's *environment* provides to enable their social, economic, and cultural well-being. Natural resources include *freshwater* (i.e. surface and *groundwater*, *wetlands*, estuaries), *land* and soil, terrestrial and *freshwater* ecosystems, coastal and marine ecosystems, and air, landscapes, vegetation and natural landforms. Physical resources include *infrastructure, buildings* and facilities.

From an economic perspective *natural and physical resources* support, and are impacted by, agricultural industries (e.g. grazing, cropping, horticulture, viticulture), plantation forestry, urban development, industrial development, *infrastructure*, energy generation, transport, marine industries (fishing and aquaculture), tourism and mineral extraction. From a social, health, and cultural perspective *natural and physical resources* support and are impacted by food production, recreation, housing, and cultural activities.

This RPS identifies the twelve most significant issues impacting the Otago region. Issues firstly considered include *natural hazards*, *climate change*, pest species, *water* quantity and quality, and biodiversity loss, collectively the "natural asset-based issues". Two "place-based issues" of regional significance are then addressed – being Otago's coast and Otago's *lake* areas. The use and development of resources is also recognised as being essential to the well-being of the community, while acknowledging that this can lead to conflicts when managing the adverse effects of this use. Finally, issues of economic and domestic pressures, cumulative impacts and *resilience* are considered.

While the issues in this section are considered individually, this RPS considers and responds to them in a joined-up manner as part of a complex system with biophysical limits, inherent uncertainty, potentially irreversible and sometimes catastrophic impacts, and interdependent behaviours.

Each issue is considered in the following manner:

- an issue statement
- context
- impacts on the *environment*, economy, and society

SRMR-I1 – *Natural hazards* pose a risk to many Otago communities

Statement

Otago is prone to a range of *natural hazards* that pose a risk to Otago communities, property, *infrastructure*, and the wider *environment*. A major event could cause severe damage and may isolate Otago communities for an extended time. Major events of concern include flooding, an earthquake on the Alpine fault, tsunami, coastal erosion, wildfires, and extreme weather events.

Context

The Otago region is exposed to a wide variety of *natural hazards* that impact on people, property, *infrastructure*, *historic heritage* and the wider *environment*. When a *natural hazard* event occurs, it is sometimes difficult and costly for a community to recover. The *natural hazard* threats range from coastal erosion and flooding in lowland coastal areas to alluvial fan deposition, landslip, rock fall, seismic events (earthquake and tsunami), wind, snow, drought and riverbank breaches. The risk resulting from *natural hazards* is not just due to the hazards themselves, but also whether human activities are located and operated in ways which make them vulnerable to those hazards.

Frequent heavy rainstorms, the steep gradients of many *river* catchments and human occupation of floodplains combine to make flooding the most frequently occurring *natural hazard* event in the Otago region. For example, flooding can affect Otago's main urban centres causing damage to housing and business disruption, and primary production can be disrupted in Otago's floodplains (including lower Clutha, Lower Waitaki and Taiari).

Seismic risks are widespread in Otago as evidenced by the region's active faults, being the Cardrona, Dunstan, Rough Ridge, Hyde, Taieri Ridge, Waihemo and Akatore faults. The Alpine Fault in the Queenstown Lakes District has an estimated 75% probability of causing a major earthquake in the next 50 years with associated large-scale destruction.

Otago's coastline is exposed to tsunamis, from local offshore faults and nearby subduction zones, such as the Puysegur Trench (south of the South Island). The stretch of the Otago coastline north of the Otago Peninsula has a greater level of exposure to tsunamis generated from South America.

Natural hazards may be exacerbated by the *effects* of *climate change*, which include sea level rise, and greater frequency and intensity of extreme weather events. Elevated sea levels resulting in flooding can occur as a result of a combination of tides, storm surge, and waves. There are several low-lying areas in relatively close proximity to the coast that have been identified as being at risk, such as South Dunedin.

Parts of the Otago coastline (which is a soft coast formed by material such as sand or gravel) are also prone to significant coastal erosion. Coastal erosion is an issue in Waitaki District, Dunedin City and along the Clutha River Delta, affecting communities and *infrastructure* near the coast.

Impact snapshot

Environmental

Ecosystems (from the mountains to the coast), *water bodies* and *water* quality (*rivers, lakes, wetlands* and *ground water*) are variously at risk of increased frequency and intensity of flooding and landslides. Seismic events result in liquefaction of land and associated soil disturbance, elevated sea levels and associated flooding, potential permanent inundation and coastal erosion. While *effects* are localised, *natural hazard* impacts can be significant where threatened ecosystems or species are involved.

Economic

Otago's primary industries, *infrastructure*, energy and transport systems, and urban areas are exposed to the full range of hazards noted above, with potential for major-to-catastrophic economic consequences, including damage to production, *infrastructure* such as transport routes (highways, bridges), the built environment and communications, and often resulting in supply chain disruptions. *Natural hazards* could also impact on *renewable electricity generation* with the potential for significant national and regional consequences. New *infrastructure* should be encouraged to locate in areas where it is less vulnerable to *natural hazards*.

For individuals and households this can result in changes to employment, income, assets and consumption patterns, disruption to social protection, services, social safety net mechanisms and institutions.

For industry, hazards can damage production assets and *infrastructure* with associated costs, disrupt service delivery and limit availability and access to goods and services, and cause decline in sales and increased costs. Loss or changes in production flows can be either temporary or permanent depending on financial *resilience* of businesses, which is a function of their existing loan commitments, credit worthiness and insurance cover. Food security can also be affected.

Whilst the community and its businesses have substantial *resilience* to severe weather events and supply chain disruptions, there can be cumulative impacts from repeated events.

Social

Social impacts can be direct (e.g. physical destruction of housing or transport route, human physical harm) but equally important are indirect impacts of disasters, including the destruction of communities and the negative impacts on people. Physical impacts and community dislocation can also cause long term psychological stresses affecting people's coping mechanisms, recovery sources and capacity which can test the *resilience* of a community. There can also be cumulative impacts from events on physical and mental health.

Social impacts of events can result in immediate impacts on livelihoods for individuals and families, particularly for lower socio-economic groups. Health services disruptions can occur, including access to and changes in demand for services. Similarly, there can be disruptions to education service delivery. Housing impacts may require urgent provision for basic human needs including replacement shelter and housing, and food and *water* immediately following an event.

Damage to *infrastructure* and assets may have varying impacts on different groups, for example those with less resources may have less capacity to respond to hazard events and be more impacted as a result. The relationship between affected people and their cultural assets may also be affected, for example customs and traditions related to housing, health, livelihoods, and nutrition.

SRMR-I2 – *Climate change* will impact our economy and *environment*

Statement

Otago's climate is changing, and these changes will continue for the foreseeable future. Central Otago is likely to see more varied precipitation, leading to increased flooding and reduced *water* reliability. This will be compounded by stronger winds, increased temperatures and longer dry periods, which may affect the number and types of crops and animals that the *land* can sustain, food production systems and related food supply and food security needs, and the potential for *renewable electricity generation*. On the coast, low lying areas like South Dunedin are at risk of inundation from rising sea levels. This will also exacerbate coastal erosion, which could damage coastal *infrastructure* (including *roads*), damage historic heritage, particularly *wāhi tūpuna*, and expose old waste dumps (e.g. at Middle Beach). *Climate change* will also affect native animals and plants, compounding the impacts of existing pests and stresses and providing opportunities for new pests to establish themselves due to changed conditions. The impact of other *climate change* threats is unpredictable. Our responses to *climate change*, whether that be mitigation or adaptation, will also impact on our economy and *environment*. An example of this will be the need to protect and maximise existing *renewable electricity generation activities* in the region, as well as providing for the development of new *renewable electricity generation activities*.

Context

The rate of future *climate change* depends on how fast *greenhouse gas* concentrations increase. These changes are expected to result in higher temperatures, changes in precipitation, drought, fire weather, extreme weather events, inland and coastal flooding, landslides and soil erosion, salinity, sea level rise, erosion, reduced snow and ice, and marine heatwaves. Rainfall and temperature change may result in drier soils and changes to *river* flow (low flow and floods), as well as increased occurrence of slips/landslides. Sea level rise will have impacts on coastal communities, *infrastructure* and habitats, while the risk of wildfire will also increase. Changing climate also risks increased biosecurity issues of increased plant, fungal and animal pests and diseases.

It is expected temperatures will increase across Otago, and by 2090, Otago is projected to have from 4 to 25 extra days per year where maximum temperatures exceed 25˚C, with around 13 to 45 fewer frosts per year (and consequently less snow). Precipitation overall will increase slightly (by up to 10%), more so in the western part of the region, with less precipitation in central and eastern Otago. There will be an increase in average annual flows across the region, apart from the Taiari and North Otago, and flooding will be more severe – there will be an increase in the mean annual flood by 100% in some locations by the end of the century.

Impact snapshot

Climate change impacts arising from changes in temperature, rainfall, *river* flows and flooding have been assessed in the Otago Regional Council's commissioned report: Otago Climate Change Risk Assessment Phase 1 report.[13] The following discussion is based on potential *climate change* impacts at 2050.

Environmental

For terrestrial ecosystems and species, higher frequency of severe events (e.g. high/low temperatures, intense rainfall, drought, fire weather) could reduce *resilience* of terrestrial ecosystems and species over time with adverse impacts on biodiversity. Native species (including *threatened species*) and ecosystems are also likely to be affected by increased competition with invasive species/pests favoured by warmer temperatures, particularly with milder winters. This could be a contributory risk factor (but not sole cause) for native species that are threatened or close to extinction.

For marine and coastal ecosystems and species, potential climate impacts include lower ocean productivity and impacts on feeding grounds (e.g. decreasing the population of yellow-eyed penguins); ocean acidification; and changes in species diversity/distribution (e.g. reducing kelp forests). Increased intensity of flooding would result in an increase in sediment which will change the physical composition of *freshwater* and marine waters and, for example, may reduce light availability, smother fragile habitats, or impact on the foraging ability of some species, particular those that rely on vision (e.g. yellow-eyed penguins). New pests and disease threats may arise from marine heatwaves/warmer ocean temperatures. Warmer temperatures could also reduce oxygen and cause stratification in shallow bays (resulting in *water* quality impacts). Sea level rise will also affect coastal habitats and ecosystems (inter-tidal zones, sand dunes). *Groundwater* impacts will include coastal aquifers being affected by salinisation, and reduced rainfall in some areas will affect *groundwater* recharge, flow and surface *water discharges*, with potential adverse impacts on ecosystems and species dependent on *groundwater*.

By 2090, the time spent in drought ranges from minimal change through to more than double, depending on the climate model and emissions scenario considered. More frequent droughts are likely to lead to *water* shortages, increased demand for irrigation and increased risk of wildfires. Reduced snowfalls may

[13] Tonkin+Taylor (2020) Otago Climate Change Risk Assessment (commissioned by the Otago Regional Council).

affect *water* availability since snow acts as a storage mechanism until the *water* is required in summer. As a result, *river* ecosystems could be altered through reduced flows during drought periods with associated declining *water* quality, reduced food resources, and availability of habitats. This would affect ecosystems for key species, such as *river* nesting birds and endemic *freshwater* fish species.

Lakes could be subject to temperature increases. This can impact on the health of *lake* ecosystems, for example algal blooms. *Wetland* plant species and *wetland* habitats, and other species reliant on *wetlands* (including threatened bird species) are at risk of being negatively impacted. There are also likely to be cascading impacts on surrounding *environments* and ecosystems from hydrological changes (e.g. increased flood risk/changing *water* flows due to *wetland* loss). Coastal *wetlands* are particularly at risk due to salinisation from sea level rise and coastal flooding.

Human adaptation to climate change, such as building or expanding dams or flood protection schemes, will be necessary and may give rise to adverse impacts on ecosystems, in addition to those imposed by *climate change* itself.

Economy

Regional industry

Climate change impacts will result in both impacts and opportunities for regional industry in terms of jobs, business income and profitability. Key industries likely to be impacted include sheep, beef, dairy and deer farming, cropping and viticulture, forestry, fisheries and aquaculture, as well as tourism. For example, agriculture may benefit from warmer temperatures, longer growing seasons and elevated carbon dioxide concentrations leading to better pasture and crop growth. *Climate change* may also result in shifting land-use activities to adapt to altered climate conditions, which will incur costs, and potentially enable resources previously unviable to come into production.

However, these benefits may be limited by negative *effects* of *climate change* such as prolonged drought and increased flood risk. Some of these impacts can be mitigated by adaptation, for example, planting new crops that are better suited to new climatic conditions or through changes in crop intensification, or *water* harvesting practices. Pests and diseases could spread in range and severity, and pasture composition is likely to change with uncertain impacts on animal productivity and nutrient balances.

Some tourism activities may be affected. For example, the number of snow days experienced annually could decrease by as much as 30-40 days in some parts of the region. This reduction in natural snowfall will mean that ski fields will be more reliant on snowmaking. The duration of snow cover is also likely to decrease, particularly at lower elevations. This will also lead to reduced summer waterflows.

Built environment

For Otago, by 2050, the built environment will experience high to extreme impact risks to *wastewater* and *stormwater infrastructure*, *roads* and bridges, airports, stop banks and flood management schemes, and rural drainage. Medium to extreme impact risks are expected to affect urban and rural housing, *water* supply, *landfill* areas; and medium level risks are likely for commercial and public *buildings*, open space, rail, and ports.

The main threat to the *urban environment* comes from possible increases in heavy rainfall, which would put pressure on drainage and *stormwater* systems and increase the risk of flooding in some areas. Erosion could also increase *road* maintenance costs. There is greater risk of wastewater network overflows, and wastewater treatment plants being compromised.

Warmer conditions will substantially reduce home heating costs, leading to reduced electricity demand during the peak winter season, but possibly increase demand for air conditioning during summer. A

reduced winter demand for electricity, combined with an increased availability of *water* in hydroelectric storage *lakes* from projected rainfall increases over the Main Divide, would provide the opportunity for a more balanced annual cycle in electricity supply and demand.[14]

Areas of particular concern include inland areas of flooding risk including South Dunedin, Mosgiel, and Milton; coastal erosion risk areas including St Kilda, St Clair, Clutha Delta, Moeraki, and Oamaru; sea level rise and salinity risk areas including South Dunedin, Harbor Basin, Aramoana, and Kaka Point.

Social

Changes to the economy generally and in relation to local shift in economic activity because of *climate change* may impact on community cohesion and resilience, and mental well-being and health. Higher temperatures could reduce illness in winter but can increase heat stress in summer. Higher levels and duration of ultraviolet radiation could increase skin cancer risks. Insect pests could increase, adversely impacting outdoor recreation experiences. Additionally, the visual and recreational values of Otago's landscape may be impacted on by the effects of climate change.

Differentiation may occur between highly *resilient* (high social capital, high income and politically empowered) and non-*resilient* communities (especially those with low adaptive capacity, such as low-income and marginalised groups) which has the potential to increase socio-economic and intergeneration and intrageneration inequality.

SRMR-I3 – Pest species pose an ongoing threat to *indigenous biodiversity*, economic activities and landscapes

Statement

Pest species can be found throughout Otago, from alpine to marine environments. Rabbits are changing Central Otago's landscape, eroding soils and affecting agriculture. Wallabies are an increasing risk with incursion beyond their containment zone and illegal liberations resulting in an expanding range within Otago, particularly Waitaki, Central Otago and Queenstown Lakes. *Wilding conifers* threaten high country and tussock grassland, changing the landscape and impacting *primary production*, recreational, hydrological and conservation values. Aquatic pests and weeds such as didymo, lake snow and *lagarosiphon* affect our *lakes* and *rivers.* Invasive marine species affect our marine waters. Native aquatic plants are displaced, impacting ecosystem and *indigenous biodiversity* health and recreation activities. *Climate change* may compound the impacts of existing pest species and provide opportunities for new pest species to establish.

Context

Otago's landscape, *water* and climate support many plants and animals considered to be pests. This includes weeds, vertebrate pests (e.g. rabbits), invertebrate pests, and diseases (e.g. pathogenic pest diseases (e.g. foot and mouth disease, pine needle diseases)), and *freshwater* and marine pests which are all biosecurity threats in the Otago region.

There are 35 listed weed species in Otago, and 11 listed animal pests. Pest management approaches include exclusion and surveillance (e.g. African feather grass), attempted eradication (e.g. wallabies and rooks), containment (e.g. *bomarea*) and sustained control (e.g. rabbits, gorse and broom). The approach deployed depends on the degree to which species are entrenched.

[14] P Hodgson (2001) Climate change impacts on New Zealand. https://environment.govt.nz/publications/climate-change-impacts-on-new-zealand/ (accessed 6 May 2026).

The Otago Pest Management Plan 2019–2029[15] seeks to meet ORC's responsibilities under Part 2 of the Biosecurity Act 1992 to provide regional leadership through activities that prevent, reduce, or eliminate adverse *effects* resulting from harmful species that are present in the region. That plan details which approaches are to be used for which pest species, and the methods to be used for control.

In conjunction with that Plan, ORC has also established a Biosecurity Strategy (the Strategy) which sets out ORC's objectives for biosecurity management in the region using the full range of statutory and non-statutory tools available. Strategy priorities provide for protection of *indigenous biodiversity*, protection of landscape, recreation, cultural and *amenity values* and minimising the impact on agricultural production. The Strategy also supports pest management and seeks to integrate the regulatory and non-regulatory programmes. Collaborative partnership models of pest management are increasingly being developed and adopted in conjunction with community groups and land holders.

Impact snapshot

Environmental

Otago is one of the most biodiverse regions in New Zealand, with high levels of endemism. It is also one of the most modified regions in New Zealand. Both plant and animal species pests have significant impacts on biodiversity. Pests can also adversely impact waterways, natural features and landscapes.

Vertebrate browsing pests such as rabbits, wallabies and goats cause erosion and damage to land in both introduced pastures and native tussock communities, impacting significant lands and taoka species. Severe erosion can have adverse *effects* on *water* quality. Rats and stoats predate on native birds, while deer destroy native vegetation, and possums compete with native birds for hollows and have also been known to predate on chicks. Possums spread viruses and diseases such as bovine tuberculosis, which can have severe impacts on stock.

Weeds smother and compete with native vegetation, taking up available nutrients, *water*, space and sunlight. They reduce natural diversity and prevent native plants growing back after clearing, fire and other disturbance. Nationally, weeds will potentially affect 7% of the conservation estate within a decade, corresponding to a loss of native biodiversity equivalent to $1.3 billion.[16] For example, wilding *conifers* are a significant issue for the Otago region as well as nationally, where they threaten high country and tussock grassland, increase fire risk, and reduce *water* yield in *water* short catchments, impact soil nutrient cycling, change the landscape and negatively impact recreational, hydrological and conservation values.

Pest species destabilise aquatic habitats and negatively modify *water* flow with consequences for drainage, irrigation, power generation and recreational activities. The introduction of the *freshwater* diatom didymo (*Didymosphenia geminata*) in South Island streams is an example.[17]

Economic

Pests can cause economic losses because of reduction in production, quality, efficiency and or functionality. This can include lost crop or animal production, higher *water* requirements and reductions

[15] https://www.orc.govt.nz/your-council/plans-and-strategies/regional-pest-management-plan/ (accessed 6 May 2026).
[16] Royal Society Te Apārangi (2014) Pests costing economy and environment billions. https://www.royalsociety.org.nz/news/pests-costing-economy-and-environment-billions (accessed 6 May 2026).
[17] SL Goldson, GW Bourdôt, EG Brockerhoff, AE Byrom, MN Clout, MS McGlone, WA Nelson, AJ Popay, DM Suckling & MD Templeton (2015) New Zealand pest management: current and future challenges, Journal of the Royal Society of New Zealand, 45:1, 31–58.

in animal health. Weeds can affect wool quality, impact the quality of leather, taint meat and milk, damage the feet of stock and, in some instances, be toxic.

Costs to agriculture, business and government to control pests and mitigate impacts are considerable, as are biosecurity costs to prevent pest incursion which are reflected in biosecurity fees and taxes. Biosecurity failure can have serious economic impacts on existing industries e.g. through the importation of fruit infected with fruitfly in a traveller's bag. Pests also adversely affect tourism through loss of landscape values (e.g. *wilding conifers*) and *amenity values* (e.g. didymo compromising fishing) which lead to reduced visitor experiences. Human health problems caused by pests can have a related economic cost.

Weeds, for example, are conservatively estimated to cost the New Zealand economy $1.6 billion per annum[18] in terms of loss of economic production, management and control costs. They also affect landscape amenity value and tourism experiences relied upon by the tourism sector. Weeds, including didymo and lake snow, can also adversely impact *infrastructure*, for example, *water* systems including irrigation, dams, and levies; electricity generation infrastructure and transportation systems (e.g. *road* beds, *lake* and *river* transportation, airstrips).

Social

Recreation values can be impacted through loss of amenity, access or landscape values. Pests can also cause human health problems. For example, some weed pollens can induce asthma and cause allergies (e.g. hay fever).[19] Zoonoses (bacterium, viruses, parasites, prions) can result in diseases being transferred from animals to humans and include, for example, leptospirosis and campylobacter.

SRMR-I4 – Poorly managed urban and residential growth affects productive *land*, treasured natural assets, *rural industry, infrastructure* and community well-being

Statement

Natural resources used for urban development are permanently transformed – with the opportunity cost of removing urban activity being too high for *land* to revert to productive uses. Frequently, places that are attractive for urban growth also have landscape and productive values all of which must be balanced and where possible protected. The growth of Wānaka and Queenstown is changing the natural landscape. Mosgiel's and Cromwell's growth is occurring on some of Otago's most highly productive soil, which removes the option for agriculture. Towns like Arrowtown, Clyde and Milton experience poor air quality in winter, while experiencing pressure to grow.

Context

How urban areas function and grow now and in the future can directly impact on a significant proportion of the current and future urban population and correspondingly future environmental, economic, social

[18] JT Saunders, G Greer, G Bourdôt, C Saunders, T James, C Rolando, J Monge & MS Watt (2017) The economic costs of weeds on productive land in New Zealand, International Journal of Agricultural Sustainability, 15:4, 380–39. https://www.tandfonline.com/doi/abs/10.1080/14735903.2017.1334179?journalCode=tags20 (accessed 6 May 2026).

[19] Allergy New Zealand Annual Pollen Calendar (n.d.) https://stackset-allergynz-website-d95fbab4-800c-4-bucket-8ayg9lmdqvqj.s3.ap-southeast-2.amazonaws.com/public/J143988-Allergy-NZ-Pollen-Calendar-v2.pdf (accessed 6 May 2026).

and cultural outcomes and well-being. Most of Otago's population (87% or 225, 186[20] in 2018) live in urban areas, while non-urban areas comprise 99% of the region.[21] Otago's total population under a medium scenario is projected to increase by 20% between 2018 and 2048, with Queenstown Lakes population projected to grow by 60%, Central Otago by 42%, Dunedin and Waitaki by 8%, and Clutha by 4% over the same period.[22]

Otago's urban areas, like its people and landscapes, are also diverse. The attraction of urban areas results from the benefits of proximity and access to a variety of other people, experiences, goods, services (e.g. shopping, education, specialist service providers, recreation and leisure facilities and *infrastructure* (usually described as agglomeration effect)). These are generally considered to exceed the inconveniences such as congestion, pollution, and noise. Growth in some urban areas and demand for living in and visiting Otago can also be driven by proximity and access to highly valued natural features, such as the coast, mountains, *lakes,* and *rivers*. The open space and landscapes provided in rural areas also drives demand for rural residential living, particularly in areas with these qualities that are also in relative proximity to urban services.

Well-functioning urban places need to be dynamic and efficient, enable human social interactions and provide a wide variety of housing, employment, service and recreational opportunities that meet changing needs and preferences, in a way that maximises the well-being of all its present and future inhabitants, and respects its history and *historic heritage*, its setting and the *environment*. This requires well located development, supported by the necessary infrastructure.

Urban growth, especially if it exceeds *infrastructure* capacity (either through sheer pace and scale or by lack of planning) or if it occurs in a way or at a rate that mean that appropriate *infrastructure* is not provided, is lagging or is inefficient, can result in adverse impacts on the *environment*, existing residents, business and wider society.

In addition, the productive *land* in Otago contributes to the social and economic well-being of the community through production of food and other rural production-based products. In some parts of Otago, *land* and soil resources are particularly valuable for food production. However, where development occurs in a place or manner that removes or reduces the potential to use productive *land,* including through *reverse sensitivity effects,* the ability of *land* to support *primary production* is compromised.

Impact snapshot

Environmental

Urban areas and associated concentration of human activity result in adverse impacts on the natural *environment*, as a result of land consumption, landscape, waterway and vegetation modification for housing, industry, transport of goods and people and recreation areas, the diversion and use of *water*, and waste disposal and effluent and pollution *discharges* to air, *land* and *water*. Urban or rural lifestyle expansion can remove *land* and soil resources from productive uses, including for the production of food. All of these can also impact *mana whenua* values. These impacts can also result in loss or impediment of access to important resources including significant biodiversity or natural features and landscapes. Poorly

[20] 2018 Census place summaries: Stats NZ. (n.d.) https://www.stats.govt.nz/tools/2018-census-place-summaries/otago-region (accessed 26 May 2021).
[21] The rural/urban area definitions in this paragraph are taken from Statistics New Zealand Urban/Rural Classification at the SA2 geographic level using usually resident population data from the 2018 Census.
[22] Stats NZ Subnational Population Projections, 2018 base, published 31 March 2021 (accessed 26 May 2021).

managed urban growth can lead to additional carbon emissions, this can create tensions between the need to increase residential housing stock and the need to meet carbon reduction targets.

Urban growth within *rural areas* can also lead to reverse-sensitivity *effects* on existing *primary production* activities and related rural based activities, because urban activities can be sensitive to the *effects* generated by *primary production* activities and related rural based activities. Urban growth can also impact air quality, through increased vehicle use, but also particularly where *solid fuel* burners are used, noting they are the heating of choice in Otago. Urban areas such as Arrowtown, Cromwell, Alexandra, Clyde, Milton, and Mosgiel already do not meet National Environment Standards for Air Quality (NESAQ), for example. Emissions from existing domestic fuel burners account for more than 95% of winter PM_{10} emissions in all of these towns but Milton.[23] Air quality in urban areas in Otago therefore needs to be addressed from two perspectives, dealing with existing problems and, in areas where further development is planned, addressing the additional impact that development may have.

Economic

While potentially providing short term commercial returns, poorly managed urban growth and development may result in long term impacts including:

- the loss of *land* for *primary production* activities (either directly though building on it, or indirectly though *reverse sensitivity effects*);
- the consequences of previous decisions (low density development, including rural lifestyle, in the short term can preclude higher density development in the medium to longer term);
- increased capital and operational costs for *infrastructure* which can foreclose other more suitable investments or spending, increased costs from less efficient spatial arrangements (such as increased transportation and *infrastructure* costs to both users and operators), and loss of valued natural capital and future opportunities; and
- housing affordability challenges are present in the region and are negatively affected by urban growth where demand outpaces supply.
- conflict arising from the location of incompatible activities within proximity of each other, including the potential for *reverse sensitivity effects* on the continued operation and growth of the rural based activities.

The costs and negative impacts from 'over planning' for growth are much lower than the direct and wider costs and risks of under-planning, and largely relate to the provision of *infrastructure* ahead of demand. While this can cause financial and operational issues for *infrastructure* providers, undersized or delayed *infrastructure* also generates impacts for those providers, and the wider economy, through delayed, foregone, or less appropriate or efficient development, and contributes to rising housing and land costs.

Social

Adverse impacts from inefficient or poorly planned urban development affect the well-being of both individuals and communities. This shows up as health risks as a result of increased air pollution and *water* pollution, decreased social capital and mental health in fragmented, disconnected and dispersed communities and inequality impacts arising from less-competitive land and house markets and reduced housing choice and access to affordable housing.

Changes in the overall number of people and changes in preferences can alter the relative balance between supply and demand for housing and where supply is unable to respond in a timely way to

[23] E Wilton "Alexandra, Arrowtown, Mosgiel and Milton Air Emission Inventory – 2016" & "Wanaka, Cromwell and Clyde Air Emission Inventory – 2019", prepared for Otago Regional Council.

demand, this can impact on prices for housing, including rent. These impacts can disproportionately affect people on lower incomes who may already face affordability issues, and accordingly have less options. While Otago has traditionally been relatively affordable, house prices have risen rapidly across almost all districts, at a rate higher than the national average.

Transportation of goods and people between and within urban areas can also generate impacts on humans. For example, increased traffic congestion and lack of safe and attractive alternatives within urban areas impacts people and businesses living near to high volume traffic routes, resulting in lost time for family and other activities for those who use them, and deaths and serious injuries on the transport network.

Urban growth has the potential, through good development planning and provision of appropriate infrastructure, to improve well-being by providing an increased range of housing types in more locations, resulting in greater range of prices. Well planned subdivisions provide opportunities to increase public access to natural environments, including to the coast (e.g. via esplanades, *lakes*, *rivers* and their margins), to protect areas of cultural or historic significance and to provide means or other measures for their protection, such as through restrictive covenants. Poorly managed growth can compromise both access to and protection of natural and cultural environments, and as subdivision and development is effectively permanent and irreversible, it is important that it is done well with an eye to the longer term.

SRMR-I5 – *Freshwater* demand exceeds capacity in some places

Statement

In *water*-short catchments, *freshwater* availability may not be able to meet competing demands from the health and well-being needs of the *environment*, the health and well-being needs of people, and the ability of people and communities to provide for their social, economic and cultural well-being. Many of these catchments are also experiencing urban growth, changes in rural *land* uses, and increased demand for hydro-electric generation. Individually and cumulatively these can alter demand including further increases in demand on *freshwater* supply. Some catchments are complex, making it challenging to identify or mitigate these *effects*.

Context

Freshwater, including *rivers* and streams, *lakes, groundwater* systems, and *wetlands*, is a finite resource, critical to the environment, society and the economy. In Otago, access to, allocation, and *use* of *freshwater* reflects current demands and historical development associated with "deemed permits" (water permits under the RMA) and a permissive water resource management regime. The deemed permits originated from mining licences issued under historic mining legislation and which enable water to continue to be used for a range of uses until October 2021.

Population growth and land-use intensification in urban and rural environments can create increased demand for *freshwater* for human consumption, irrigation, renewable electricity generation and other uses. *Freshwater* resources in some places are reaching, or are beyond, their sustainable abstraction limits. However, there continues to be debate in the community about how historical *freshwater* allocations can be adjusted to prioritise protection of the health and well-being of *water bodies*, meet the health needs of people and provide for economic, social and cultural well-being.

On 3 September 2020, new National Environmental Standards for Freshwater (NESF) and a new National Policy Statement for Freshwater Management (NPSFM)[24] came into force. They have a goal of making immediate improvements so that *freshwater* quality is materially improving within five years, reversing past degradation and bringing New Zealand's *freshwater* resources, waterways and ecosystems to a healthy state within a generation. The NPSFM also clarified the need to provide first for the health and well-being of *water bodies* and *freshwater* ecosystems; then health and needs of people (such as *drinking water*); and finally the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

Impact snapshot

Environmental

Freshwater abstraction can reduce *water* level or flow and connections between different *water bodies*. This can negatively impact ecosystems by affecting *freshwater* habitat size and the shape and condition of the *water body*, including *bed*, banks, margin, riparian vegetation, connections to *groundwater*, *water* chemistry (for example by increasing concentrations of pollutants), and interaction between species and their habitat.[25] How much an ecosystem is affected by taking *freshwater* is determined by departure from natural flow regimes, taking into account magnitude, frequency, timing, duration and rate of change, and ecosystem capacity to recover.

Economic

Freshwater in the Otago region is a factor of production that directly contributes to human needs (*water* supply), *primary production*, industry and hydro-electric power supply. *Freshwater* also indirectly contributes to the tourism industry through maintenance of *freshwater* assets for aesthetic and commercial recreational purposes. Lack of *freshwater* can negatively impact economic output of those industries that rely on *water* in the production process. To varying degrees these impacts can be mitigated through *water* efficiency measures and innovation. At the same time other industries, such as tourism that rely on the aesthetic characteristic of *rivers* and *lakes,* do not have such opportunities available to them and instead rely on management regimes that sustain flows and *water* levels suitable for their activities.

Social

Ensuring appropriate *freshwater* supply for human use is essential, including as part of planned urban growth and to support rural communities. It is possible this may require consideration of additional *freshwater* storage in the future. For the wider community, water is a source of kai and for food harvesting and food production. The region's *freshwater* assets also support a range of recreation uses, for example camping, fishing, *water* sports, and swimming. These values are strongly linked to environmental, health, landscape and aesthetic values and as such, reduced environmental flows have a corresponding negative impact on social and cultural values, including people's well-being.

[24] https://www.mfe.govt.nz/fresh-water/freshwater-acts-and-regulations/national-policy-statement-freshwater-management (accessed 26 May 2021).
[25] J Clapcott, R Young, J Sinner, M Wilcox, R Storey, J Quinn, C Daughney & A Canning (2018) Freshwater biophysical ecosystem health framework. Cawthron Institute, Report no. 3194.

SRMR-I6 – Declining *water* quality has adverse *effects* on the *environment*, our communities, and the economy

Statement

While the pristine areas of Otago generally maintain very good *water* quality, some areas of Otago demonstrate poorer quality and declining trends in *water* quality which can often be attributed to *discharges* from *land* use intensification (both rural and urban) and *land* management practices. Erosion, run-off and soil loss can lead to sediment and nutrients being deposited into *freshwater* bodies resulting in declining *water* quality.

Context

The health of *water* is vital for the health of the *environment*, people and the economy. It is at the heart of culture and identity. Nationally, and in parts of Otago, *freshwater* is facing significant pressure. Population growth and land-use intensification in urban and rural environments has impacted the quality of *water*, increasing contamination from nutrients and sediment.

Water quality affects a wide range of environmental health factors, human health and survival needs, and cultural, social, recreational, and economic uses. Some of the biggest impacts on *water* quality in Otago are considered to come from agriculture and urbanisation, through diffuse *discharges* and point source *discharges*.

On 3 September 2020, new National Environmental Standards (NESF) and a new National Policy Statement (NPSFM)[26] came into force to make immediate improvements to *water* quality within five years; and reverse past degradation and bring New Zealand's *freshwater* resources, waterways and ecosystems to a healthy state within a generation.

Impact snapshot

Environmental

Despite the region's *lakes* and *rivers* being highly valued by Otago communities, reports indicate that in many areas there are reasons for concern about *water* quality and its trends with consequent potential impact on ecosystems and people.

Water quality across Otago is variable. *River water* quality is best at *river* and stream reaches located at high or mountainous elevations under predominantly native vegetation cover, and mostly good in the upper areas of large river catchment and outlets from large *lakes*. *Water* quality is generally poorer in smaller low-elevation streams and coastal shallow lakes where they receive water from upstream pastoral areas or urban catchments. For example, catchments such as the Waiareka Creek, Kaikorai/Kaikarae Stream, and sub-catchments within the Lower Clutha rohe, have some of the poorest *water* quality in the region; Otago's central lakes are impacted by increased population, urban development and tourism demand; other areas, such as urban streams in Dunedin, intensified catchments in North Otago and some tributaries, also have poor *water* quality.[27] Between 2006 and 2017, trends in a number of *water* quality parameters were worsening.[28]

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[26] https://www.mfe.govt.nz/fresh-water/freshwater-acts-and-regulations/national-policystatement-freshwater-management (accessed 26 May 2021).
[27] R Ozanne and A Uytendaal (2017) *State of the Environment Surface Water Quality in Otago 2006 to 2017*. Dunedin: Otago Regional Council.
[28] Ibid.

For *E. coli,* for example, 30% of sites had a probable or significant worsening trend compared to 7% of sites that had either stable or improving trends. In urban streams in Dunedin, intensified catchments in North Otago and some tributaries of the Poumāhaka, *E. coli* was the worst performing variable.[29] In many cases, the specific source of contamination is unknown.

There are many different types and sizes of *lakes* in Otago. ORC monitors *water* quality in *lakes*, of which eight have generally shown good *water* quality. There have been concerns within the community about the quality of *water* in Lakes Wānaka, Whakatipu Waimāori/Lake Wakatipu and Lake Hayes/Waiwhakaata.

Groundwater quality also varies across the region, with some areas having elevated *E. coli* and nitrate concentrations above the NZ Drinking Water Standards. The main areas with elevated nitrate concentrations are North Otago and the Lower Clutha. Some bores across the region have exceeded the NZ Drinking Water Standards for *E. coli*; highlighting localized problems, likely due to inadequate bore head security. In addition to human sources of poorer *groundwater* quality, low *groundwater* quality from natural or geologic sources may also affect the potability of bore water throughout Otago (e.g. naturally occurring arsenic or boron concentrations found in bores associated with particularly geologies).

Stock entering *water bodies* can lead to pugging and destruction of riparian soils and *beds* that play an important role in filtering *contaminants*, as well as excreting directly in waterways. The growing practice of wintering cattle in Otago can exacerbate leaching *effects*, which may not connect to surface *water* until spring, creating spikes in nutrient loads.

Sediment is a key issue for *freshwater* quality throughout Otago, including coastal estuaries where it can significantly impact the life supporting capacity of waterways. Urban development is a key generator of sediment input to *lakes* and *rivers* in Central Otago, from *building* platforms and from *stormwater* contamination. Activities such as agricultural *land* use, mining, and forestry also contribute.

Agricultural *land* use intensification also contributes to nutrients (nitrogen and phosphorus) leaching into underlying *groundwater* or running off into surface *water bodies*, and can also increase the risk of *E.coli* contamination from animal waste.

Urban environmental *contaminants* include hydrocarbons, and metals from *roads* and *structures*. They often wash into urban *stormwater* systems and pass unfiltered into *water bodies*, or the *coastal marine area*. *Stormwater effects,* particularly in urban areas, are poorly understood. *Wastewater* and *stormwater* systems may not be adequate in some places due to aging *infrastructure*, rapid growth pressure, or insufficient investment in replacement or upgrades. Overflows of *wastewater* (*sewage* and waste products) create significant risks for *water* quality. These can enter the *environment* either directly or through *stormwater* systems, particularly in flood events.

Economic

Water pollution (from nutrients, chemicals, pathogens, sediment and other contaminants) can have far-reaching *effects* potentially impacting tourism, property values, commercial fishing, recreational businesses, and many other sectors that depend on clean *water*.[30]

These impacts can be direct (varying the quality of primary production outputs such as fish); increasing costs of production through mitigation or remediation costs (*drinking water* treatment cost, riparian

[29] R Ozanne and A Uytendaal (2017) *State of the Environment Surface Water Quality in Otago 2006 to 2017*. Dunedin: Otago Regional Council.
[30] United States Environmental Protection Agency (n.d.) Nutrient Pollution – The Effects: Economy https://www.epa.gov/nutrientpollution/effects-economy (accessed 6 May 2026).

restoration); loss of enjoyment and benefit from tourism uses, and indirect such as cost to human health and associated medical costs, or reduction in brand value (e.g. Brand New Zealand).

Social

For the wider community, *water* is a source of kai for harvesting and food production. *Water* is also a source of recreation, including swimming, fishing and *water* sports. There are multiple dimensions to the way *water* quality impacts on peoples' interaction with *water bodies,* including environmental, health, landscape, and aesthetic factors. Otago's *rivers, lakes,* estuaries and bays are important destinations for recreational *use* including swimming, fishing and *water* sports. Eighty-two percent of Otago's *rivers* and *lakes* are swimmable.[31] Where *water* quality cannot support these activities, the lifestyle of those living in Otago is impacted.

Degraded *water* quality reduces the mauri of the *water* and the habitats and species it supports, therefore also negatively affecting *mahika kai* and taoka species and places. This constitutes a loss of Kāi Tahu culture, affecting the intergenerational transfer of knowledge handed down from tūpuna over hundreds of years; and it culminates in a diminishing of mana.

SRMR-I7 – Rich and varied *biodiversity* has been lost or degraded due to human activities and the presence of pests and predators

Statement

Fragmentation, loss and isolation of populations and communities of indigenous species has been ongoing across New Zealand, and Otago is no exception. *Biodiversity* mapping indicates Otago is one of the most modified regions in New Zealand.[32] This can be attributed to habitat loss, *land* use changes, vegetation clearance and the presence of pests and predators. Further, many of these *effects* are a result of the cumulative changes of past and current development. These cumulative *effects* have often not been identified, managed or measured. Leadership and coordination of the various initiatives to address *biodiversity* loss has also been lacking.

Context

Otago is notable for the diversity of its landscapes, ecosystems, and climatic conditions. With that comes a diverse range of important *biodiversity* values which are at risk. These include rare ecosystems such as inland saline habitats, nationally rare *lake* and *river* systems, endemic and threatened lizard and fish species and important and diverse marine and coastal habitats.

Ecosystems are an interacting system of living and non-living parts such as sunlight, air, *water*, *minerals* and nutrients. *Biological diversity* (hereafter called *biodiversity*) describes the variety of all living things, including the range of species living in our *environments*, their genetics, and the ecosystems where they live. New Zealand's high level of *indigenous biodiversity* makes a unique contribution to the world's *biodiversity*. Otago is a good example of the enormous diversity in New Zealand's natural environment from toroa (albatross) and hoiho (yellow-eyed penguins) on the Otago Peninsula to the endangered species (for example, skinks) of Central Otago, the kea of the Southern Alps, galaxias species as well as the internationally significant braided *rivers* and their ecosystems.

[31] This estimate applies to larger rivers and lakes, defined as "rivers that are fourth order in the River Environment Classification system and lakes with a perimeter of 1.5km or more" (ORC Policy Committee Report, 29 Nov 2018, PPRM1843).

[32] Wildlands (2020) Mapping of potential natural ecosystems and current ecosystems in Otago region. Unpublished Consultancy Report to Otago Regional Council R5015a.

The health of New Zealand's *biodiversity* has declined significantly since the arrival of humans. Environment Aotearoa 2019 found that our indigenous *biodiversity* is under significant pressure from introduced species, pollution, physical changes to our *environment* and harvesting of wild species.[33]

Almost 4,000 native species are currently threatened with, or at risk of, extinction. The information available indicates Otago's *biodiversity* faces the same challenges.

Impact snapshot

Environmental

Threats to *biodiversity* in Otago include invasive species (weeds and predators), vegetation clearing, *land* fragmentation and grassland "improvement", poor *water* quality (nutrients and sediments), dredging and overfishing.

There are 61 ecosystems in the Otago region.[34] Whilst the average ecosystem extent compared to pre-European settlement is 62%, over 17 communities have been reduced to less than 40% extent. Forest communities have declined substantially, for example kahikatea forests have been reduced to 3.9% of pre-European extent. Matai, totara, broadleaved forest (6.5%) and Kirk's scurvy grass herbfield/loamfield (7.1%) have also been significantly reduced.

Impacts of human activities are evident both in terms of species and ecosystems. Some 44% of Otago's bird species are threatened or at risk; 88% of lizard species; and 72% of indigenous fish species. Inland Otago has degraded native fish communities, due to anthropogenic alteration of waterways (such as damming, abstraction, bed manipulation, draining wetlands), the discharge of contaminants and trout predation on native galaxiids. This is illustrated by the low scores for Otago's *rivers* in the *freshwater* fish index of biotic integrity.

The extent of impacts on marine species and environments is not well understood. Sedimentation and nutrients entrapped in land run-off is known to have contributed to the loss of kelp forests.[35] In addition to sedimentation, other human impacts on kelp forests include rising sea surface temperatures associated with climate change, the introduction of invasive species and fishing. There has been a 70% decline in the abundance of hoiho (yellow-eyed penguin) on the Otago coast since 2008.[36] The effects of *climate change* will add significantly to risks of continuing *biodiversity* decline.

Economic

Biodiversity and ecosystem services underpin primary production (ecosystem services such as *water*, soil *biodiversity*, pest protection, pollination) and tourism (the "clean green" image of "pure New Zealand" is related to a public perception of Otago's healthy *environment* and biodiversity).

Short-term impacts of loss of productivity or increased costs of pest management occur and longer- term impacts of net loss of natural capital in the region over time are also of concern. The economic costs of lost productivity due to pests, erosion and damage to *land*, are likely to be significant and there is potential for loss of *biodiversity* to adversely impact on the economy.

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[33] Ministry for the Environment & Stats NZ (2019) Environmental Reporting Series: *Environment Aotearoa 2019*. https://environment.govt.nz/publications/environment-aotearoa- 2019/ (accessed 6 May 2026).

[34] Wildlands (2020) Mapping of potential natural ecosystems and current ecosystems in Otago region. Unpublished Consultancy Report to Otago Regional Council R5015a.

[35] DR Schiel, SA Wood, RA Dunmore & DI Tayloe (2006) Sediment on rocky intertidal reefs: Effects on early post-settlement stages of habitat-forming seaweeds, Journal of Experimental Marine Biology and Ecology 331:2, 158–172 (reference provided by Department of Conservation).

[36] Department of Conservation (2008) Unpublished data.

Social

Biodiversity is a significant contributor to the community's recreational experiences and intrinsic values. *Biodiversity* loss will adversely impact those values and experiences. Some introduced species such as trout, deer and pigs have social and recreation values but also have impacts on native ecosystems and species.

SRMR-I8 – Otago's coast is a rich natural, cultural and economic resource that is under threat from a range of terrestrial and marine activities

Statement

Otago's coast provides habitat for rare species (including toroa and hoiho), comprises some of the region's outstanding natural landscapes, is a rich food source, provides many recreation opportunities, is the location for some industries, and has potential for further economic use (aquaculture). Threats to it are not always well understood and not always well managed. From the sedimentation *effects* of inland development to waste disposal, human activity puts stress on the marine and coastal environment. Some of those activities, like port activities and tourism, are also vital to the region's economic well-being.

Context

Otago's coastal environment includes *land* adjoining the coast where coastal characteristics apply (as outlined in NZCPS Policy 1), and the *coastal marine area* out to the twelve nautical mile seaward limit. The coastal environment is a finite resource which is sensitive to change. Recent rapid expansion of some types of coastal development is a significant issue for the sustainable management of the coastal environment of Otago.

Activities occurring within or affecting the coastal environment include urban development, recreational activities, transport *infrastructure*, energy generation and transmission, *land* and marine based (e.g. aquaculture) food production industries and other rural industry activities, carbon forestry and *plantation forestry*, fishing, tourism, and *mineral* extraction. Such activities are important contributors to the health and well-being of communities, when they are located and managed appropriately. A number of these activities provide a significant contribution to the regional economy.

Dunedin is a major coastal city with increasing urban development. It also hosts *infrastructure* of national significance such as Port Otago and associated *road* transport networks servicing the Otago region and beyond which contribute to and facilitate regional economic and social development.

The community values the coast for its landscapes, natural character, recreational uses and associated habitat for *biodiversity*. Recreational activities such as boating, fishing, swimming and general beach access are interconnected with coastal values. Conserving coastal *biodiversity* and marine reserves are associated with coastal values.[37] A key challenge is the protection of the coast's natural and cultural assets while enabling economic and social development opportunities to be realised.

Impact snapshot

Impacts of hazards, *climate change*, *pests*, freshwater, and *biodiversity* loss, which have been discussed above, all impact the coast. Urban development and population pressure can amplify these effects.

[37] ORC Committee Report, *RPS Consultation Summary*, ORC Agenda 27 May 2020.

Environmental

These impacts can affect natural processes. For example, poor water quality can result in degradation of estuarine and ocean chemistry with adverse impacts on ecosystems, including coastal *wetlands* and marshes, benthic muds, subtidal and inter-tidal area muds/sands, reefs, and marine vegetation areas (e.g. sea grasses, kelp). Ecosystems and *indigenous biodiversity*, and their flora and fauna (from zooplankton to whales) can be impacted by urban and industrial development, pests, and climate change leading to *biodiversity* loss.

Natural features, landscapes, seascapes, and *surf breaks* of national significance can be affected by human activity, *climate change*, and *natural hazards*. Susceptibility to these impacts is determined by susceptibility, spatial scale, frequency, functional impact/consequence, recovery capacity/time, and likelihood of the impact's occurrence. Around Dunedin, for example, impacts include nutrients and contaminants from Dunedin stormwater which impact on *coastal waters* and estuaries; declining hoiho (yellow-eyed penguins) numbers due to introduced predators and domestic pets; whilst recovering seal and sealion numbers can create conflict with recreational uses on the coast; and beach erosion can impact social values and beach recreation use.

Economic

Deterioration of coastal assets and values causes loss of production and income, increases *infrastructure* costs and costs of production, and loss of property values. There are also costs associated with mitigation, for example in the case of coastal erosion. Other economic impacts include recreation and tourism industries being adversely impacted by degraded coastal environments; marine industry production suffering because of poor *water* quality; dredging of sedimentation; and costs of mitigating adverse impacts, e.g. combatting invasive *pests*.

Social

Impacts on the coastal environment and its associated unique values include those on its landscapes and landforms, those on it as a place to live and work and for recreation activities, those on access, and those which give rise to coastal deterioration and which compromise general enjoyment and amenity for communities.

SRMR-I9 – Otago lakes are subject to pressures from tourism and population growth

Statement

The beauty, recreational opportunities and regional climate of Lakes Wānaka, Whakatipu Waimāori/Lake Wakatipu, Lake Hāwea and Te Wairere/Dunstan and their environs attract visitors and residents from around the region, the country and the world. This influx supports human health and well-being and brings economic opportunity, but the activities and services created to take advantage of it can degrade the *environment* and undermine the experience that underpins their attractiveness.

Context

Healthy *lakes* are one of Otago's most valued natural resources and for the most part *water* quality is good. The values assigned to *lakes* include the natural features and landscapes, the quality and quantity of *water* accessible to the Otago communities, the accessibility of these resources for recreation, the health of native flora and fauna associated with Otago's *rivers* and *lakes*, and *renewable electricity generation*.

Urban growth is adversely affecting the natural features and landscapes around the *lakes*. The amount of growth is demonstrated in the Queenstown Lakes District, including Queenstown and Wānaka, where the population tripled in the last 20 years from 16,750 in 1999 to 47,400 in 2020.[38] Continued growth is projected over the 30 years from 2020 to 2050 (by 63%).[39]

This desire to enjoy the outstanding natural environments of the Otago lakes has placed significant pressures on the *environment*, transport, energy and other *infrastructure*, health services and social structures. At the same time the economy of the Otago lakes area is heavily dependent on tourism. For example, in 2020 tourism employment accounted for an estimated 56% (or 17,758) of the jobs in the Queenstown Lakes District; tourism GDP accounted for 43.7% (or NZ $1.7 billion) of the district's GDP and international tourism contributed 64% (or NZ $1.89 billion).[40] The Otago lakes area also supplies significant renewable electricity for use in Otago and beyond.

Impact snapshot

Environmental

Population pressures arising from urban development, and tourism population pressures are impacting on the *environment*. Lake Wānaka, Lake Hāwea, and Whakatipu Waimāori/Lake Wakatipu, as well as the Kawarau River and upper reaches of the Clutha Mata-au and Taiari Rivers all have good *water* quality which equates to the "A" band (being top/best level) for the *National Objectives Framework*.[41]

However, *water* quality is being adversely impacted by increased population, urban development and tourism demand which is straining existing waste management *infrastructure*. In addition, localised degradation of some areas is occurring due to overuse and unregulated use (e.g. freedom camping). The amenity of these areas is being compromised in some places by over-crowding.

Recreation *use* impacts on the *environment* can be a risk, for example the distribution of pest species can be accelerated as has occurred for lake snow and *Lagarosiphon* weeds being spread by recreation boating movements. Natural features and landscape values can be adversely impacted by tourism and urban growth, and electricity generation.

Economic

The economic benefits of urban development, tourism, *primary production, renewable electricity generation* and *water* supply can be positive for the Otago-Lakes' communities and visitors. It also impacts on the region's natural assets with a growing cost to the region that puts at risk the *environment* highly prized by residents and visitors. There are also impacts between industry sectors.

For example, the clean green image of New Zealand, of which the Otago Lakes area is symbolic, is at risk of being compromised if the quality of *lakes* becomes degraded or visitor numbers exceed the servicing capacity of the district. This has the potential to adversely affect the existing regional economy and future economic development; and the tourism industry's social licence to operate. At the same time tourism can negatively impact on how *primary production* can operate, potentially limiting its contribution to the regional economy.

[38] Infometrics online database (February 2021).
[39] Queenstown Lakes District Council demand projections by Utility.
[40] Infometrics online database (February 2021)
[41] Land, Air, Water, Aotearoa. Otago Region. https://www.lawa.org.nz/explore-data/otago-region/ (accessed 26 May 2021).

Urban development brings economic development and improved opportunities and standards of living to the Otago Lakes area but can adversely impact on both the *environment* and how *primary production* can operate.

Social

Over-crowding impacts can adversely affect urban amenity and recreation experiences of both tourists and residents, particularly outdoor recreation. *Infrastructure* capacity limits can, for example, result in an increased number of wastewater overflows to the environment when demand on the network exceeds capacity. These can have significant adverse impacts on human health as well as recreational amenity.

SRMR-I10 – The social, cultural and economic well-being of Otago's communities depends on the use and development of *natural and physical resources,* but that use and development can compromise or conflict with the achievement of *environmental outcomes*

Statement

The ability to access, use and develop *natural and physical resources,* including for *infrastructure, primary production, mineral* and aggregate extraction, tourism and *industrial activities,* is essential for the social, cultural and economic well-being of the region and, in some cases, the nation. Access to, and the ability to use and develop, *natural and physical resources* can be impacted by regulatory changes, incompatible *land* uses, *natural hazards* and *climate change.* Equally, the use and development of the region's *natural and physical resources* can have adverse *effects* on the *environment* that need to be appropriately managed.

Context

The well-being of Otago's communities relies on the ability to access, use and develop the region's *natural and physical resources.* The quality of these resources and the ability to access them, including during emergencies and natural hazard events, has a direct bearing on the health, safety and well-being of people and communities in the region.

Failing to plan and provide for activities that contribute to the regional economy can have adverse socio-economic consequences. Conversely, failure of activities to sustainably manage their impact on *natural and physical resources* can also lead to poor socioeconomic outcomes.

Appropriate access and use of *natural and physical resources* needs a planning framework that recognises and provides for the essential operational, locational and functional requirements of activities while managing the adverse *effects* of these activities. The ongoing *effects* of *climate change* (addressed elsewhere in the Issues section) will have an ongoing impact on the operation of activities.

Impact snapshot

Environmental

The use of *natural and physical resources* can have adverse *effects* on the *environment*, which need to be appropriately managed to avoid, remedy or mitigate the adverse *effects*. Loss or degradation of resources can diminish their intrinsic values. Some of Otago's *natural and physical resources* are nationally or regionally important for their natural values and economic potential and so warrant careful management.

However, it is recognised that the natural environment can benefit as activities change how they interact with, access, use and develop natural resources. Activities that use *natural and physical resources* can achieve positive *environmental outcomes*, for example enhancing public health, safety and well-being, riparian planting, habitat restoration and enhancement, public access, and *pest* control activities. This can be as mitigation or compensation for the *effects* of activities or as contributions from economically sustainable activities in the region. Some activities, for example *renewable electricity generation* and other *infrastructure*, will have a significant role to play in addressing *climate change*.

The functional needs and operational needs of some activities may impose locational and design constraints that can limit the extent to which some adverse *effects* on the *environment* can be avoided or mitigated.

The use and development of *natural and physical resources* in close proximity to existing activities may have direct, or *reverse sensitivity*, *effects* on the ability to undertake, operate, maintain, upgrade and develop those existing activities.

Economic

Activities that rely on *natural and physical resources* generate direct and indirect economic benefits; therefore, the ability for these activities to operate, maintain, upgrade and develop affects the economy of the region.

Inter-regional links such as transport, electricity and communication networks traversing or originating from the Otago Region also supports the economy of other regions and New Zealand generally.

The ability to access, use and develop *natural and physical resources* or a lack of integrated management and long-term strategic planning for activities may impact the ability of activities to optimise the use of investments and assets and realise their potential economic value.

Activities that rely on *natural and physical resources* also rely on clear regulatory settings to inform investment decision-making about the use and development of *natural and physical resources*.

Social

The ability for activities to access, use and develop *natural and physical resources* provides for the social and cultural well-being, and the health and safety, of people and communities including by supporting employment, liveability, recreation, resilience, food security and investment into communities. There is a community expectation that *infrastructure* is available to support our way of life.

Inappropriately located *subdivision*, use and development can increase the potential for harm to human health arising from incompatible activities locating in close proximity to each other.

SRMR-I11 – Economic and domestic activities in Otago use natural resources but do not always properly account for the environmental stresses or the future impacts they cause

Statement

Sediment from poorly managed development and *primary production* activities can flow into streams and may harm the coastal environment. *Water* abstraction and *wastewater* and *stormwater discharges* adversely affect the natural environment, cultural and amenity values, and recreation. Agriculture, and minerals extraction support employment and economic well-being but also change landscapes and habitats. Otago's port moves freight to and from Otago and Southland, but operates alongside sensitive

environments, including the Aramoana saltmarsh. Tourism and recreation, which relies on the *environment*, can also put pressure on natural environments.

Context

The Otago regional economy GDP totals $13.2 billion and supports a population of 236,200 residents (over half of which are in Dunedin). A significant part of the economy relies on the region's natural resources (air, vegetation, biodiversity, *water, land*, marine and *minerals*). This supports important regional industries, such as agriculture, forestry, fishing (6.9% of GDP), mining (4.5% of GDP), electricity, gas, *water* and waste services (4.4% of GDP), as well as conservation activities and hunting. Tourism (18.1% of GDP) also partially relies on the natural values of the region.[42]

However, economic activity needs to more effectively account for and manage its impacts on the region's natural resources.[43] Where business and social activity does not account for its impacts on natural resources in the long term, not only is the sustainability of the region's natural resources threatened, but equally the associated long term economic, social and cultural values are also threatened.

Impact snapshot

Environmental

Economic activities can lead to, for example, *biodiversity* loss, poor *water* quality, coastal and marine degradation, and loss of natural features and landscapes. These and other matters are considered in further detail elsewhere in this chapter.

Negative impacts on the *environment* can also compromise the ecosystems and the services economic activities depend on (ecosystem services), for example loss of *wetlands* which provide flood attenuation services, loss of *biodiversity* which provide pest control and pollination services, and loss of soil *biodiversity*. Economic activity also has the potential to compromise or destroy natural features and landscapes. Such impacts are both immediate and cumulative. Cumulative impacts that are not addressed have the potential to lead to tipping points beyond which systems can no longer properly function.

Economic

The costs of production can rise because of poor quality natural resources, for example, through higher input costs (e.g. fertiliser, weed and pest control); and remediation requirements (e.g. riverbank restoration, erosion control). Some *land* management practices can compromise the ability of land to support *primary production*, for example, loss of soil through erosion or soil structure through compaction. Marine industries (e.g. fishing and aquaculture) can also be adversely affected.

Business environmental performance is becoming increasingly important in terms of providing access to investment. Poor business environmental performance can also lead to increased regulatory requirements and associated higher costs of doing business.

Social

Damage to or loss of natural features and landscapes compromises *amenity values.* Failure of business to sustainably manage their impact on natural resources can also have social impacts. In extreme cases it can lead to reduced access to resources.

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[42] Infometrics online database (August 2020).
[43] ORC (2020) RPS Review 2020 – Community Consultation Summary Report. https://www.orc.govt.nz/media/8882/community-consultation-summary-report-draft.pdf (accessed 6 May 2026).

SRMR-I12 – Cumulative impacts and *resilience* – the environmental costs of our activities in Otago are adding up with tipping points potentially being reached

Statement

How and where we currently live is likely to change significantly in coming years. To respond to all the issues identified in this RPS, it is essential to consider changes to how we travel, the industries our economy relies on, the use we currently make of the *natural and physical resources* of the region, and how we provide for personal and community well-being, all while protecting our natural environment.

Context

The long term environmental, economic, and social well-being of the Otago region requires anticipating and minimising cumulative environmental impacts before they reach a tipping point, beyond which systems can no longer properly function. This requires *resilient* frameworks that take account of the dynamic relationship between the *environment*, economy and people while acknowledging that the future is always uncertain, and knowledge is imperfect. Should a tipping point be reached a *resilient* Otago society will have the ability to absorb, respond to, adapt to, and recover from disruptive events.[44]

Impact snapshot

Environmental

While many ecosystems have a degree of *resilience*, increasing pressures on the *environment*, typically as a result of human activities (for example economic development), can have an adverse cumulative *effect*. *Climate change* also has the potential to seriously challenge ecosystem adaptive capacity. Much work is being undertaken to address this challenge, including by reducing greenhouse gas emissions, but it is still possible that permanent changes may occur (tipping point).

The first and best response is to ensure sustainable management of our natural resources and avoid immediate and long-term cumulative *effects* that degrade the *environment*. At the same time a *resilience* approach is needed that identifies thresholds or sets limits on the use of natural resources to avoid permanent and potentially catastrophic changes occurring, as would occur if a tipping point is reached.

Indicators and tools for measuring *resilience* and tipping points remain in the early stages of understanding and development. Even though regulatory agencies and proponents for natural resource development and environmental rehabilitation projects have difficulties interpreting and verifying the potential for environmental recovery and *resilience* (particularly in relation to the regulatory context of impact assessment in order to provide consenting decisions for regulated activities)[45] that should not be taken as a reason to delay acting.

Social and economic

The well-being of Otago's people and communities in the long term will be sustained by the enduring ecological health and *resilience* of the *environment* and by human activity providing for the *environment* in equal or greater measure than is taken from it (in other words, net impact determines net well-being).

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[44] Ministry of Civil Defence & Emergency Management (2019) National Disaster Resilience Strategy. https://www.civildefence.govt.nz/cdem-sector/plans-and-strategies/national-disaster-resilience-strategy/national-disaster-resilience- strategy-summary-version/ (accessed 6 May 2026).

[45] RJ Wenning, SE Apitz, L Kapustka & T Seager (2017) The need for resilience in environmental impact assessment [editorial], Integrated Environmental Assessment and Management, 13:6, 969–970. https://par.nsf.gov/servlets/purl/10047476 (accessed 6 May 2026).

It will also be sustained through community *resilience* so that it can adapt and nimbly respond to future challenges.

RMIA – Resource management issues of significance to iwi authorities in the region

Introduction

The MW – *Mana Whenua* chapter describes the integral relationship between Kāi Tahu and the natural world, including the relationship with particular resources, and the values that influence the Kāi Tahu approach to resource management. The issues and concerns described in this chapter should be read and understood in the context of the explanations in the MW – *Mana Whenua* chapter.

RMIA-WAI – Wai Māori

Context

Water plays a significant role in Kāi Tahu spiritual beliefs and cultural traditions. Kāi Tahu have an obligation through whakapapa to protect wai and all the life it supports. Whānau have observed the health of *water* degrade through time and consider it is crucial that this degradation is reversed.

RMIA-WAI-I1 – The loss and degradation of *water* resources through drainage, abstraction, pollution, and damming has resulted in material and cultural deprivation for Kāi Tahu ki Otago

The drainage of *wetlands*, *water* abstraction, degraded *water* quality, barriers to fish passage and changes to flow regimes as a result of damming have had significant negative impacts on Kāi Tahu. These activities degrade the mauri of the *water* and the habitats and species it supports, therefore also degrading *mahika kai* and taoka species and places.

These changes to the *environment* have meant that Kāi Tahu have had to adapt and change their *use* of the *environment*. As traditional *mahika kai* places and species have declined, *mahika kai* must now be carried out in artificial habitats such as reservoirs, and whānau have had to switch to exotic species such as trout and salmon. The mātauraka associated with traditional *mahika kai* species and places cannot be passed on, and the intergenerational transfer of knowledge that has occurred for over 800 years is broken. Place names that carry tribal history are no longer reflective of their places – for example no one would now claim that the Waiareka is 'sweet water' to drink.

RMIA-WAI-I2 – Current water management does not adequately address Kāi Tahu cultural values and interests

Kāi Tahu values and interests are not properly considered in current *land* and *water* resource management. The well-being of *mahika kai* and taoka and protection of other cultural values is rarely given effect to in environmental policy or decision-making processes and these considerations are often compromised in favour of other values, including economic values. The mana of *mana whenua* and of the *water* is not recognised because *water* quality and quantity have been allowed to be degraded. Resource management in Otago has failed to meet its obligation to recognise Kāi Tahu values and provide for the relationship of Kāi Tahu with the *water bodies* within their rohe. The understanding of cultural values by many is still developing and, as a result, Kāi Tahu values and interests are often not well represented in plans and decision-making.

RMIA-WAI-I3 – The *effects* of *land* and *water* use activities on *freshwater* habitats have resulted in adverse *effects* on the diversity and abundance of *mahika kai* resources and harvesting activity

Mahika kai is the gathering of foods and other resources, the places where they are gathered, and the practices used in doing so. *Mahika kai* is an intrinsic part of Kāi Tahu identity and economic well-being. Kāi Tahu fishing rights were explicitly protected by the Treaty of Waitangi. Not only was the right to engage in *mahika kai* activity confirmed, so too was the expectation that such activity will continue to be successful as measured by reference to past practice. However, as described in evidence provided to the Waitangi Tribunal in the Ngāi Tahu claim, there has been a dramatic loss of *mahika kai* resources and places of procurement since the Treaty was signed. This loss is greater than the loss of kai. It is a loss of Kāi Tahu culture, as it affects the intergenerational transfer of mātauraka handed down from tūpuna over hundreds of years. It represents a significant loss for mana whenua and diminishing of mana. *Mahika kai* continues to be degraded through the *effects* of *land* and *water use* activities on *freshwater* habitats. Activities such as the construction of barriers to fish passage, drainage, altered flow regimes, reduced *water* quality and removal of riparian vegetation all impact on access to and use of resources. Inadequate regulation of commercial fishing of tuna (eels) and inaka (whitebait) has also exacerbated the impacts of degradation and loss of habitat from land and water use activities on remaining populations of these species.

RMIA-WAI-I4 – Effective participation of Kāi Tahu in *freshwater* management is hampered by poor recognition of mātauraka

The term 'mātauraka Māori' includes all branches of Māori knowledge, past, present, and still developing. It involves observing, experiencing, studying, and understanding the world from an indigenous cultural perspective. It is a tool for thinking, organising information, considering the ethics of knowledge, and informing us about our world and our place in it. Incorporation of mātauraka in resource management decision-making is important to ensure that cultural interests are appropriately recognised and provided for. Resource managers do not always appreciate the depth and value of mātauraka held by members of Kāi Tahu Whānui. Even where mātauraka is valued there may be difficulty in determining how best to apply the knowledge.

RMIA-WAI-I5 – Poor integration of *water* management, across agencies and across a catchment, hinders effective and holistic *freshwater* management

Kāi Tahu place emphasis on the holistic management of resources. Cultural values such as whakapapa and concepts such as ki uta ki tai recognise the interconnectedness of all things, and that *effects* on one part of the whole will be felt throughout the whole. Management of *water* in Otago is not holistic. Catchments are often managed by multiple councils, and the Waitaki (a most significant *river* to Kāi Tahu) is managed by two regional councils with policies and management approaches that include some significant differences. Regional councils are responsible for managing *land use effects* on *land* and at sea up to 12 nautical miles offshore, but beyond that the Environmental Protection Authority manages *effects* through a separate piece of legislation. District councils, although not specifically responsible for managing *freshwater*, are responsible for managing activities that affect *freshwater*.

In Otago there are separate plans for *freshwater* and the coastal area, and they are not consistent with each other. These divisions in the management of the *environment* fail to recognise that all *water*, in *rivers*, underground, in the air and in the ocean is connected, and what occurs in the headwaters and on

land will have an impact in the ocean. This lack of holistic *freshwater* management also makes it difficult to understand and address the cumulative *effects* of different activities and decisions on cultural values.

Specific concerns related to RMIA-WAI-I1 to RMIA-WAI-I5 are interrelated, and include:

- *Water* quality concerns:
    - Deterioration in *water* quality resulting from poor *land* management practices.
    - The cultural and *water* quality impacts of point and non-point source *discharge* of human waste and other *contaminants* to *water*. Whānau cannot gather kai from places where human waste (whether treated or not) has been *discharged*, or where herbicides and pesticides have been used. Reliance on dilution rates to mitigate the *effects* of *discharges* is culturally inappropriate.
    - The *water* quality impacts of *discharges* from mining activities.
- *Water* allocation concerns:
    - Kāi Tahu consider that many of the waterways in the region are over-allocated from a cultural perspective.
    - Abstractions of greater volumes of *water* than are required, lack of *water* harvesting and continuation of inefficient methods of *water* use.
    - The implications of increased *water* demand for domestic use which will put additional pressure on the already scarce *water* resource.
    - The *effects* of long durations for *water* take consents which lock in a pattern of resource *use* for a long time, limiting the ability of Kāi Tahu to exercise their role as kaitiaki as an expression of mana and rakatirataka.
    - The impact of cross mixing of *water* from different catchments on the distinctive mauri of the *water bodies*.
    - The lack of understanding of the interactions between *groundwater* and surface *water*.
- Concerns about channel modification and *river* works:
    - The *effects* of damming on disruption of natural flow patterns, loss of *freshwater* habitats and migration of indigenous fish species.
    - The *effects* on the mauri of the water body from diversion of watercourses upstream and downstream of mines.
    - Impacts of activities such as channel maintenance and channel cleaning on *water* quality and on disruption of species living in the channel and their habitat.
    - Impacts of channel reshaping, in particular straightening, on *river* flow and habitats, and the mauri of the *water body*.
    - The *effects* of *bed* disturbance, including suction dredging and gravel extraction, on stream morphology and habitats.
    - Impacts of willow removal on *water* quality, *water* temperature and *mahika kai* habitat.
    - Introduction of exotic weeds through poorly cleaned machinery, and the subsequent impact on bank habitat and *water* ecosystems.
    - The *effects* of changes in vegetation cover, including clearance of *indigenous vegetation* and exotic *afforestation,* on the *water* retention capacity of *land* and consequent flow patterns, which can negatively affect *mahika kai* and taoka species through a reduction in their habitat.

RMIA-MKB – *Mahika kai* and biodiversity

Context

The cold climate in southern Te Waipounamu, and the consequent difficulty of growing crops, made it difficult for tūpuna to establish permanent settlements and as a result Kāi Tahu in this area traditionally had a hunter-gatherer lifestyle, and went where the mahika *kai* was abundant and in season. This lifestyle was unique to southern Kāi Tahu and *mahika kai* retains a central place in Kāi Tahu cultural identity. All indigenous species and habitats are treasured by Kāi Tahu as taoka in their own right, as well as for the *mahika kai* values associated with some species.

RMIA-MKB-I1 – The diversity and abundance of terrestrial and aquatic *indigenous species* has been reduced due to adverse *effects* of resource *use* and development

Resource *use* and development in Otago has led to degradation of taoka and *mahika kai* places. This has occurred in a myriad of ways, contributing to a significant negative cumulative *effect* on many species and habitats. The decrease in diversity and abundance of *indigenous species* causes a negative impact on the mauri and health of the natural environment.

The Kāi Tahu perspective recognises that species within ecosystems are connected, and *effects* on one species will be felt throughout the rest of the system. *Effects* on *mahika kai* and taoka species diversity and abundance affect the relationship of Kāi Tahu with these species. Whānau are unable to access traditional *mahika kai* and taoka species and places because in many cases they no longer exist, or no longer provide resources that were once abundant there.

Specific concerns include:

- Degradation of *mahika kai* due to the impacts of *contaminants* from both point and non-point source *discharges*, including human waste disposal to *mahika kai* areas.
- The *effects* of soil contamination from poorly managed landfills, industrial sites and waste disposal sites.
- Continued urban spread encroaching on *mahika kai* sites.
- Genetic modification of indigenous flora and fauna, which represents deliberate alteration of whakapapa.
- The impact on *mahika kai* and *indigenous biodiversity* from weed and pest invasion.
- Loss of indigenous *freshwater* species, many of which are taoka and *mahika kai*, through displacement and predation.
- Loss of indigenous flora and fauna remnants and lack of co-ordinated management of habitat corridors.
- Impacts on *mahika kai* and aquatic ecosystems from a lack of effective catchment-wide riparian management.
- Loss of recruitment of indigenous flora in remnant bush areas due to continuous stock grazing.
- The impact of inappropriate forestry developments, conversion of tussock lands and other intensification of farming on indigenous flora and fauna values, including ecological disturbance and displacement of species.
- A persistent lack of recognition of Kāi Tahu perspectives, values and mātauraka in *indigenous species* and habitat management, planning, and decision-making.

- The loss of cultural knowledge, mātauraka, and tikaka that has accompanied the loss of *mahika kai,* and *indigenous biodiversity.*

RMIA-MKB-I2 – Regulatory and physical barriers have impeded the ability of Kāi Tahu to access *mahika kai* and to undertake customary harvest

The ability for Kāi Tahu to exercise customary rights to *mahika kai* has been impeded by obstacles to accessing *mahika kai* sites. Obstacles include lack of physical access and the sites no longer being safe to access due to the site becoming polluted, or a change in the flow velocity and/or depth.

RMIA-MKB-I3 – Impacts of *climate change* on both species/habitat viability and increasing pest (flora/fauna) encroachments

Climate change is now affecting and will continue to affect *habitat* availability and suitability for species in Otago. In some cases, this will mean that species will be able to increase their distribution, which will encourage spread of pest/weed species. *Climate change* will also reduce *habitat* and distributions for some species and affect *habitat* quality. These *effects* may also accumulate; for example, a native species may have worse and less *habitat* and its pest/predator's distribution and population may increase due to *climate change effects*. Where possible, environmental management should include planning for these *effects* and having regard for their impacts on Kāi Tahu and *mana whenua* values.

RMIA-MKB-I4 – Shortage of protected and secure areas for *biodiversity*

Currently there are not enough protected and secure areas for *biodiversity* in Otago. To ensure the long-term survival of our region's most *threatened species*, a series of protected areas must be established, ideally in a network connected by corridors so that each individual population is more *resilient* as well as the species' overall population.

RMIA-MKB-I5 – Inconsistent approaches to *biodiversity* protection amongst regulatory authorities

Biodiversity is managed by several entities who have different approaches and powers through their separate governing legislation. For example, regional and district councils have obligations under the Resource Management Act and the Department of Conservation has obligations under the Conservation Act 1987 and the Wildlife Act 1953. Different pieces of legislation are not always consistent with each other. There can also be confusion about who is responsible for different aspects of biodiversity management as it is not managed by one entity.

RMIA-MKB-I6 – Lack of information on species health and viability

In many instances there is a lack of information on species. This absence of information on matters such as life histories, current and previous distributions and habitat preferences makes it difficult to make decisions about how best to manage these species.

RMIA-WTU – *Wāhi tūpuna*

Context

Wāhi tūpuna (ancestral landscapes) across Otago are made up of interconnected sites and areas reflecting the history and traditions associated with the long settlement of Kāi Tahu in Otago. Areas of significance that form part of *wāhi tūpuna* include, but are not limited to:

- Wāhi tapu
- Kāika *nohoaka* (settlements)
- Wāhi kohātu and wāhi mahi kohātu (quarry sites)
- Wāhi ikoa (place names)
- Ara tawhito (traditional travel routes)
- Mauka (mountains), awa (rivers), roto (*lakes*), tai (coasts) and moana (seas)

It is important that resource management recognises the wider cultural setting by considering effects of activities on the broader *wāhi tūpuna* rather than just on discrete sites.

RMIA-WTU-I1 – The values of *wāhi tūpuna* are poorly recognised in resource management in Otago

Land, *freshwater,* and coastal management regimes have failed to adequately provide for Kāi Tahu interests in *wāhi tūpuna*. Attention has been too narrowly focused on the cultural redress components of the NTCSA (statutory acknowledgements, place names, tōpuni areas and *nohoaka* sites), whereas *wāhi tūpuna* are considerably broader than the areas described in the legislation. The values of *wāhi tūpuna* can be adversely affected by inappropriate use and development and by a range of activities that affect *land, freshwater* and coastal environments when those activities are poorly managed. Cumulative adverse *effects* on *wāhi tūpuna* values can result, impacting on the intergenerational relationship of Kāi Tahu with these areas.

Specific *land* management concerns include:

- Changes to the recognisable character of *wāhi tūpuna* resulting from intensified *land use*, spread of exotic wilding trees and other woody weeds, forestry, subdivision, development of *buildings* and *structures*.
- Impacts on the integrity of *wāhi tūpuna* from extension and maintenance of *infrastructure* such as transport, telecommunications and other utility networks.
- Modification of landforms by *earthworks*, particularly on ridgelines and upper slopes and near waterways.
- Impacts on wāhi tapu and archaeological sites from *earthworks*.
- Sedimentation of water bodies within *wāhi tūpuna* from earthworks.
- Poor land management and inappropriate *land use* degrades the whenua itself.
- Failure to recognise Kāi Tahu connections to the land through use of traditional names for landscape features and sites.

Freshwater, biodiversity, coastal management and air and atmosphere issues that affect Kāi Tahu relationship with *wāhi tūpuna* are outlined in the RMIA-WAI, RMIA-MKB, RMIA-CE and RMIA-AA sections.

RMIA-WTA – Wāhi tapu and wāhi taoka

Context

Ancestral land was not just the source of economic well-being. For Māori it was also the burial ground of the placenta and of the bones of ancestors, the abode of tribal atua and a storybook through place names and traditions. This is reflected in te reo Māori, as the word 'whenua' means both 'placenta' and 'land'. Ancestral lands were therefore regarded with deep veneration. For Kāi Tahu, wāhi tapu and wāhi taoka refers to the places with elevated mana and tapu due to their close association with atua and tūpuna. For example:

- Mauka (mountains)
- Urupā (burial places)
- Tuhituhi neherā (rock art)
- Umu (ovens)
- *Nohoaka* (seasonal camp sites)

RMIA-WTA-I1 – Activities have resulted in disturbance and degradation of wāhi tapu and wāhi taoka sites and the cultural and spiritual values associated with these areas

Wāhi tapu and wāhi taoka sites are vulnerable to disturbance or destruction from direct and indirect *effects* of resource *use* and development. Direct *effects* can include those resulting from activities that require *earthworks* in proximity. Natural or human-induced changes to biophysical processes can threaten these sites, for example, coastal erosion. Wāhi tapu and wāhi taoka values can also be adversely affected by the encroachment of culturally offensive activities e.g. it is inappropriate to have a wastewater treatment plant at or near a wāhi tapu or wāhi taoka. *Nohoaka,* as sites where *mahika kai* is gathered or was gathered in the past, are particularly at risk from the combination of direct and indirect *effects,* and from cumulative adverse *effects. Nohoaka* sites are degraded when *mahika kai* can no longer be gathered there.

Specific concerns include:

- Disturbance, modification or destruction of wāhi tapu or wāhi taoka by *earthworks*.
- Degradation of the cultural value and integrity of wāhi tapu or wāhi taoka through contamination by *discharges*, inappropriate development, and culturally inappropriate activities such as mining/quarrying, *landfills* or *wastewater* disposal.
- The resurfacing of kōiwi takata (human remains) through natural and human-induced processes, such as *climate change,* and ensuring that these are kept safe and returned to Kāi Tahu so that they can be reinterred in accordance with tikaka.
- Ineffective management of *effects* due to inappropriate and inaccurate recording of wāhi tapu and wāhi taoka, and misinterpretation of the status and importance of sites.

RMIA-WTA-I2 – Access to wāhi tapu and wāhi taoka and the ability to undertake customary activities on these sites has been impeded

Access to culturally important sites has been impeded in many ways, affecting the ability of *mana whenua* to carry out customary activities and maintain relationships with wāhi tapu and wāhi taoka. Many sites are privately owned and cannot be accessed. Some sites no longer exist, or the customary activities

associated with them cannot be undertaken. For example, *nohoaka* sites associated with *mahika kai* gathering cannot be used if there is no way to reach the site or no safe way to harvest when at the site because of physical constraints. A limited number of *nohoaka* sites were granted to Kāi Tahu through the NTCSA as redress for loss of traditional sites. Some of these were traditional sites, but others were in new locations. Some *nohoaka* have also become dissociated from their customary use due to *land* use, *freshwater* management practices, change and hazard management. For example, if the *river* channel has moved and the *nohoaka* has not, whānau visiting the *nohoaka* are not able to fish there.

RMIA-AA – Air and atmosphere

Context

As discussed in Part 1, the air and atmosphere are resources of significance to Kāi Tahu. In Kāi Tahu traditions, air and atmosphere emerged through the creation traditions and Te Ao Marama. The air is an integral part of the *environment* that must be valued, used with respect, and passed on intact to the next generation. Pollution of the atmosphere adversely affects the mauri of this taoka and other taoka such as plants and animals.

RMIA-AA-I1 –The cultural impacts of *discharges* to air are poorly recognised in resource management

The cultural impacts of air pollution and *discharges* to air are poorly understood and seldom recognised. *Discharges* to air can adversely affect health and can be culturally offensive. Clean air is important to the health of *mahika kai* and people, and odour and other emissions impact on the tapu of wāhi tapu sites. Air emissions can also reduce the visibility of *wāhi tūpūna* features and of the moon, stars and rainbows.

Specific concerns include:

- Potential impacts of *climate change* which could negatively affect taoka such as wai māori and wai tai, *mahika kai* and biodiversity, *wāhi tūpuna*, wāhi tapu, and wāhi taoka, the well-being of all people, and the *environment* as an integrated system.
- Insufficient data has been collected and distributed about the *effects* of *discharges* to air.
- The *effects* of *discharges* to air on the health of people and *mahika kai*, including *discharges* from industrial or trade premises, agrichemical spray drift, vehicle emissions and emissions from domestic fires in built up areas prone to inversion layers.
- Culturally offensive *discharges* from crematoriums, if located in close proximity to *mahika kai* and wāhi taoka.
- Adverse *effects* of vegetation burning on the integrity and the tapu of wāhi tapu sites.
- Impacts of odour on wāhi tapu, *mahika kai* sites and *nohoaka*.
- Impacts of urban settlement and *discharges* to air on the visibility of the sky and *wāhi tūpuna* features.
- The impact of dust on the integrity of rock art sites.

RMIA-CE – Coastal environment (te takutai moana me te wai tai)

Context

The coastal environment is particularly significant for Kāi Tahu in the southern South Island. The spiritual and cultural significance of taku tai moana me te wai māori (saltwater and *freshwater*) and the interconnection between *land* and sea environments are not always well recognised in management of the coastal environment.

RMIA-CE-I1 – *Mahika kai* and coastal systems are adversely affected by lack of integrated management across the land-water interface

Management of *mahika kai* species and their habitats varies and is not holistic. Many important indigenous *mahika kai* fish species are diadromous and move between *freshwater* and the ocean during different parts of their life cycle. The interconnection between *land* and marine environments needs to be carefully considered in order to manage *effects* that cross the *coastal marine area* boundary.

Specific concerns include:

- *Effects* on the coastal environment and natural systems resulting from modifications to waterways, such as damming and artificial openings of *river* mouths, estuary and lagoon systems.
- The *effects* of reductions in *river* flows on ingress of saltwater to *river* systems and conditions for inaka spawning.
- Barriers to species migration, and hence lifecycles, created by changes to *river* mouths from reductions in *river* flow.
- Impacts of changes in sediment transport on coastal ecosystems.
- The *effects* of *land reclamation* on *water* quality and flow in enclosed harbours and estuarine ecosystems.
- *Effects* of *land use* activities and poor management of coastal margins on *coastal water* quality.
- *Climate change effects* occur across the land-water interface and the *freshwater*-saltwater interface, and cause changes to *mahika kai* species distribution and the quality and locations of *mahika kai* habitat.

RMIA-CE-I2 – *Discharges* into *coastal waters* and marine dumping of waste degrade *mahika kai* and the mauri of the *waters*

The practice of using the marine environment as a sink for disposal of waste from activities that occur on *land* and in the marine *environment* is culturally offensive and has resulted in degradation of kaimoana resources. Leaching and overland runoff of *contaminants* from activities occurring near the coast have also contributed to the adverse *effects* on the marine area.

Specific concerns include:

- Point source industrial *discharges* to the coastal environment.
- Contamination of *coastal waters* by leachate from inappropriately sited *landfills* and other waste disposal sites and runoff from coastal subdivisions.
- *Discharges* of *sewage* from marine outfalls, poorly designed or inadequate coastal sewerage *infrastructure* and freedom camping.

- The *effects* of *contaminants* such as oil and carbon particles in *discharges* of *stormwater* from urban *roads*.
- *Discharges* of *sewage* and contaminated bilge and ballast *water* from *ships*.
- Proliferation of rubbish in the coastal environment and in *lakes* and *rivers*, including materials such as lengths of rope from boats and moorings, plastic packaging strips, discarded and lost fishing gear, glass and plastic bottles as well as other dumped material.
- *Discharge* or disposal of waste products from the processing of marine species.
- Oil and chemical spills negatively affecting the natural environment
- Inappropriate disposal of human *wastes,* including indiscriminate *discharge* of human ashes in sensitive areas such as kaimoana areas, or without the knowledge of *takata whenua*, and *discharge* of washdown *wastes* from mortuaries and funeral homes to *coastal waters* through *stormwater* drains.

RMIA-CE-I3 – The ability for Kāi Tahu ki Otago to access and harvest kaimoana has been impeded by the *effects* of activities in the coastal and marine environment

Parts of the coastal environment in Otago have been heavily modified since the arrival of settlers. Many parts of the coast around Dunedin have been reclaimed to establish the city, and the harbour has been dredged to enable the growth of the port. This has limited the ability for whānau to carry out customary harvest of kaimoana resources and to access sites of significance for customary fishing. Whānau are often unable to physically access the foreshore and seabed for the collection of kaimoana, or find that kai is no longer safe to eat due to pollution.

Specific concerns include:

- Impacts on kaimoana and associated habitats from the *effects* of waterway modifications on estuarine systems and the *freshwater*/saltwater interface.
- Modification or loss of marine habitats as a result of *reclamation*, dredging and dumping.
- Disturbance of intertidal habitats by vehicle access along beaches.
- Potential for modification and displacement of habitats by *aquaculture activities*.
- The negative *effects* of point and non-point source *discharges* on *water* quality.
- The introduction and spread of exotic species, such as the invasive seaweed *undaria*, through ballast, hull cleaning, and other shipping activities.
- Loss of access due to development of coastal *land*.

RMIA-CE-I4 – Habitat disturbance and modification has contributed to decline in populations of indigenous marine species, including marine mammals

Indigenous marine species, including marine mammals, are regarded as taoka by Kāi Tahu, and in many cases these are recognised through the NTCSA. The health and abundance of marine species populations are threatened by modification and loss of natural habitat as a result of the impacts identified in RMIA-CE-I2 and RMIA-CE-I3.

RMIA-CE-I5 – Wāhi tapu and *wāhi tūpuna* values in the coastal environment are poorly recognised and protected

The coastal environment is the domain of Takaroa and includes the *coastal waters* of Te Tai o Arai Te Uru as well as the adjoining land. Tauraka waka (waka landing places) occur up and down the coast in their hundreds and wherever a tauraka waka is located there is also likely to be a *nohoaka*, fishing ground, kaimoana resource, or rimurapa (seaweed) with the sea trail linked to a land trail or *mahika kai* resource. Burial sites and other wāhi tapu are also associated with these *wāhi tūpuna*. Seascapes such as reef systems also form part of *wāhi tūpuna*.

Wāhi tapu and the broader *wāhi tūpuna* can be adversely affected by inappropriate activities and developments on coastal land and in the *coastal marine areas*.

Specific concerns include:

- Damage to and disturbance of wāhi tapu resulting from coastal erosion and the impacts of *climate change*, earthworks associated with *subdivisions*, and development of coastal walkways.
- The *effects* of *land* fragmentation on access to sites of significance.
- Loss of the integrity of *wāhi tūpūna* by *reclamation* and the inappropriate location of *structures* and activities associated with aquaculture, tourism activities, *infrastructure,* and vessel moorings.
- Disturbance from mining of the seabed and foreshore.
- Restriction of access to tauraka waka and associated trails due to *land* development.
- The cumulative *effect* of incremental, uncoordinated *subdivisions, land use* change and building within the coastal environment.
- Failure to recognise and provide for the *effects* of *climate change* and of changing sea levels on coastal landscapes.

RMIA-PO – Pounamu

Context

Kāi Tahu customs are intricately linked to this special taoka. Many ara tāwhito, ancient trails, in Otago lead from coastal settlements to inland pounamu resources. Management of this taoka is currently dependent on the provisions of the Ngāi Tahu (Pounamu Vesting) Act which vests pounamu with Te Rūnanga o Ngāi Tahu. Papatipu rūnaka act as kaitiaki pounamu. There is currently no Regional Pounamu Plan for Otago. However, a rāhui pounamu is in place in the Otago region.

RMIA-PO-I1 – Pounamu resources need protection

Pounamu is a taoka for Kāi Tahu and pounamu management according to mātauraka, tikaka and kawa is a tribal priority. Lack of recognition and protection of pounamu resources may lead to these resources, the areas where they are found and Kāi Tahu relationship with them being degraded. Pounamu resources may be present on *land* or in waterways. Kāi Tahu relationship with these resources can be affected by extractive activities, for example by extraction of material for *road* aggregate, and by reduced *water* quality and poor *water body* management.

IM – Integrated management

Objectives

IM-O1 – Long term vision (mō tatou, ā, mō kā uri ā muri ake nei)

The management of *natural and physical resources*, by and for the people of Otago, in partnership with Kāi Tahu, achieves a healthy and resilient natural *environment,* including the ecosystem services it provides and supports the well-being of present and future generations.

IM-O2 – Ki uta ki tai

The management of *natural and physical resources* embraces ki uta ki tai, recognising that the *environment* is an interconnected system which depends on its connections to flourish and must be managed as an interdependent whole.

IM-O3 – Sustainable impact

Otago's communities provide for their social, economic, and cultural well-being by using, developing or protecting *natural and physical resources* in ways that support or restore the life-supporting capacities of air, *water*, soil, and ecosystems for future generations.

IM-O4 – *Climate change*

Otago's communities, including Kāi Tahu, understand what *climate change* means for their future, and responses to *climate change* in the region (including *climate change adaptation* and *climate change mitigation*):

(1) are aligned with national level *climate change* responses,

(2) assist with achieving the national emissions reduction targets and plans, including by having a highly renewable energy system, and

(3) are recognised as integral to achieving the outcomes sought by this RPS.

Policies

IM-P1 – Providing for *mana whenua* cultural values in achieving integrated management

Recognise and provide for the relationship of Kāi Tahu with natural resources by:

(1) enabling *mana whenua* to exercise rakatirataka and *kaitiakitaka*,

(2) facilitating active participation of *mana whenua* in resource management processes and decision making,

(3) incorporating mātauraka Māori in processes and decision-making, and

(4) ensuring resource management provides for the connections of Kāi Tahu to *wāhi tūpuna*, wai māori (including awa [*rivers*] and roto [*lakes*] and wai tai (including te takutai moana [*coastal marine area*]) and *mahika kai* and *habitats* of taoka species.

IM-P2 – Setting a strategic approach to ecosystem health

Healthy and *resilient* ecosystems and ecosystem services are achieved by developing *regional plans* and *district plans* that:

(1) have particular regard to the *intrinsic values* of ecosystems,

(2) take a long-term strategic approach that recognises ongoing environmental change, including the impacts of *climate change*,

(3) recognise and provide for ecosystem complexity and interconnections, and

(4) anticipate, or respond swiftly to, changes in activities, pressures, and trends.

IM-P3 – Managing environmental interconnections

Manage the use and development of interconnected *natural and physical resources* by recognising:

(1) situations where the value and function of a *natural or physical resource* extends beyond the immediate, or directly adjacent, area of interest,

(2) situations where *effects* of an activity extend to a different part of the *environment*, and

(3) the impacts of management of one *natural or physical resource* on the values of another, or on the *environment*.

IM-P4 – Managing uncertainties

In resource management decision-making, manage uncertainties by using the best information available at the time, including scientific data and mātauraka Māori, and:

(1) taking all practicable steps to reduce uncertainty, and

    (a) in the absence of complete and scientifically robust data, using information obtained from modelling, reliable partial data, and local knowledge, with preference for sources of information that provide the greatest level of certainty, and

    (b) avoiding unreasonable delays in making decisions because of uncertainty about the quality or quantity of the information available, and

(2) adopting a precautionary approach towards activities whose *effects* are uncertain, unknown, or a little understood, but potentially significantly adverse, which may include the use of adaptive management where appropriate.

IM-P5 – Cross boundary management

Coordinate the management of *natural and physical resources* and the *environment* across jurisdictional boundaries and, whenever possible, between overlapping or related agency responsibilities.

IM-P6 – Effects of *climate change*

Recognise and provide for the *effects* of *climate change* by:

(1) identifying the *effects* of *climate change* in Otago, including from the perspectives of Kāi Tahu as *mana whenua*,

(2) assessing how the *effects* are likely to change over time, and

(3) taking into account those changes in resource management processes and decisions.

IM-P7 – *Climate change adaptation* and *climate change mitigation*

Identify and implement *climate change adaptation* and *climate change mitigation* methods for Otago that:

(1) manage the *effects* of *climate change* on existing activities and the wider environment, and

(2) manage the establishment of new activities in areas subject to *natural hazard* risk from the *effects* of *climate change* in accordance with the HAZ-NH chapter, and

(3) provide Otago's communities, including Kāi Tahu, with the best chance to thrive, and

(4) enhance environmental, social, economic, and cultural *resilience* to the adverse *effects* of *climate change,* including by facilitating activities that reduce those effects, and

(5) protect Otago's existing renewable electricity facilities and provides for the development of new *renewable electricity generation* and *infrastructure*.

IM-P8 – Contravening *limits* for *climate change mitigation* and *climate change adaptation*

If a proposed activity demonstrates it provides or will provide enduring regionally or nationally significant *climate change mitigation* or *climate change adaptation* and commensurate benefits for the well-being of people and communities and the wider *environment*, decision makers may allow non-compliance with *limits* set in, or resulting from, any policy or method of this RPS unless those provisions give effect to national direction if they are satisfied that:

(1) the activity contributes to achieving the objectives or targets of the national emissions reduction plan or national adaptation plan prepared under the Climate Change Response Act 2002,

(2) adverse *effects* on the *environment* are avoided, remedied, or mitigated so that they are minimised to the extent reasonably practicable and, if applicable, any more than minor residual adverse *effects* are offset, or compensated for, and

(3) there is no reasonably practicable alternative location or site for the activity.

IM-P9 – Managing cumulative *effects*

In resource management decision-making, recognise and manage the impact of cumulative *effects* on the form, functioning and *resilience* of Otago's *environment* (including *resilience* to *climate change*) and the opportunities available for future generations.

IM-P10 – Sustaining resource potential and life-supporting capacity

When preparing *regional plans* and *district plans,* sustain the potential of *natural and physical resources* (excluding *minerals*) to meet the reasonably foreseeable needs of future generations and safeguard the life-supporting capacity of the natural environment by:

(1) considering whether it is necessary to set limits or thresholds, and

(2) encouraging activities to be established in places, and carried out in ways, that are compatible with the natural capabilities and capacities of the resources they rely on, and

(3) regularly assessing and adjusting the way activities are managed over time in light of the actual and potential environmental impacts, including those related to *climate change,* and

(4) providing for activities that reduce, mitigate, or avoid adverse *effects* on the *environment*.

IM-P11 – Management of *natural and physical resources*

When preparing *regional plans* and *district plans*, recognise and provide for the role and use of *natural and physical resources* in a way or at a rate that supports the social, cultural and economic well-being of Otago's communities now and in the future.

Methods

IM-M1 – *Regional plans* and *district plans*

Local authorities must prepare or amend and maintain their *regional plans* and *district plans* to:

(1) establish policy frameworks designed to achieve the objectives for Otago set out in IM-O1 to IM-O4,

(2) include provisions to manage the *effects,* resources, and communities identified in accordance with IM-M3,

(3) provide for activities that support *climate change adaptation* and *climate change mitigation* in accordance with IM-P7,

(4) ensure cumulative *effects* of activities on *natural and physical resources* are accounted for in resource management decisions by recognising and managing such *effects*, including:

  (a) the same *effect* occurring multiple times,

  (b) different *effects* occurring at the same time,

  (c) different *effects* occurring multiple times,

  (d) one *effect* leading to different *effects* occurring over time,

  (e) different *effects* occurring sequentially over time,

  (f) *effects* occurring in the same place,

  (g) *effects* occurring in different places,

  (h) *effects* that are spatially or temporally distant from their cause or causes, and

  (i) more than minor cumulative *effects* resulting from minor or transitory *effects*,

(5) adopt a ki uta ki tai approach to resource management by establishing policy and implementation frameworks that treat Otago's *environments* as an integrated system, including collaboration between *local authorities* to achieve consistent management of resources or *effects* that cross jurisdictional boundaries, and

(6) establish clear thresholds for, and limits on, activities that have the potential to adversely affect healthy ecosystem services and *intrinsic values*.

IM-M2 – Relationships

Local authorities must:

(1) partner with Kāi Tahu to ensure *mana whenua* involvement in resource management processes and decision-making,

(2) work together and with other agencies (including *local authorities* in neighbouring regions) to enable consistent implementation of the objectives, policies and methods of this RPS where appropriate, and

(3) consult with Otago's communities to ensure policy frameworks adequately respond to the diverse

facets of environmental, social, cultural, and economic well-being.

IM-M3 – Identification of *climate change* impacts and community guidance

Local authorities must:

(1) identify the specific types and locations of the *effects* of *climate change* in Otago by undertaking a *climate change* risk assessment, including an assessment that incorporates a Kāi Tahu approach to *climate change* risk identification and evaluation,

(2) identify natural and built resources vital to environmental (including *indigenous biodiversity* and ecosystems) and community *resilience* and well-being,

(3) identify vulnerable resources and communities and develop adaptation pathways for them where possible, and

(4) develop guidance to support communities to be prepared and *resilient*.

IM-M5 – Other methods

Local authorities should:

(1) align (to the extent practicable) all strategies and management plans prepared under other legislation to contribute to the attainment of the long-term vision for Otago, and

(2) facilitate community involvement in achieving IM-O1 through non-regulatory means,

(3) encourage changes to business practice that will enable businesses and communities to function in a net-zero carbon economy, and

(4) advocate for and incentivise activities that reduce, mitigate, or eliminate risk of environmental degradation.

Explanation

IM-E1 – Explanation

The policies in this chapter provide direction on integrated management across the region, to achieve the revitalisation, *resilience* and safeguarding of Otago's *environment* and ensure that it supports the cultural, social and economic well-being of people and the community. The policies seek to apply a ki uta ki tai approach and ensure that the *effects* of *climate change* are understood and responded to across the region. Further, they are designed to ensure that environmental integrity, form, function, and *resilience,* including *resilience* to *climate change,* are at the centre of all resource management decision making and that changes are made where necessary to ensure the *environment's* life-supporting capacity continues to support people's health and well-being both now and into the future.

The policies in this chapter include direction for resolving issues when multiple Regional Policy Statement provisions need to be applied simultaneously. This direction reinforces the primacy of national legislation and regulation, as some provisions of National Policy Statements and National Environmental Standards are prescriptive enough that they do not need a regional interpretation and are only referred to in the RPS when necessary. Further, some direction in the NZCPS, such as in Policy 3, is considered appropriate to apply to the management of resources throughout Otago, rather than solely within the coastal environment.

Principal reasons

IM-PR1 – Principal reasons

Integrated management is at the core of the RMA. The provisions in this chapter set out core facets of integration - the interconnections and interdependencies within the *environment*, involvement of *mana whenua* in resource management, the fundamental importance of environmental health to human well-being, and holistic assessment of human *effects* on the *environment*. They also address the *effects* of *climate change* as the key threat to environmental stability.

The provisions set an expectation of integrated resource management that flows through to all other provisions of the RPS, and informs the limits and thresholds we set on human activities for protecting environmental health. It sets explicit expectations that *local authorities* will work with each other and with other agencies to ensure management approaches are clear, coordinated, and able to support Otago's communities into the future. This applies to plan making and resource consenting processes.

Anticipated environmental results

IM-AER1	Monitoring shows the limits set for human activities are adhered to and are resulting in *resilience* in the natural *environment.*
IM-AER2	*Resilience* in the natural *environment* is resulting in sustainable social, cultural, and economic well-being for all communities including Kāi Tahu.
IM-AER3	Communities, including Kāi Tahu, are aware of the potential impacts of *climate change* and there are observable changes in community behaviour towards more sustainable lifestyles.
IM-AER4	Plan development and decision-making processes demonstrate improved awareness of the interdependencies and interconnectedness of *natural and physical resources* within the region, and across regional and jurisdictional boundaries.

PART 3 – DOMAINS AND TOPICS

DOMAINS

AIR – Air

Objectives

AIR-O1 – Ambient air quality

Ambient air quality provides for the health and well-being of the people of Otago, *amenity values* and *mana whenua values*, and the life-supporting capacity of ecosystems.

AIR-O2 – Discharges to air

The localised adverse *effects* of *discharges* to air do not compromise human health, *amenity values, mana whenua* values and the life-supporting capacity of ecosystems.

Policies

AIR-P1 – Maintain ambient air quality

Ambient air quality is, at a minimum, maintained across Otago by:

(1) ensuring *discharges* to air comply with ambient air quality *limits*, including *ambient air quality standards* and guidelines, where those have been set as *limits*, and

(2) where limits, including *ambient air quality standards* and guidelines, have not been set, only allowing *discharges* to air if the adverse *effects* on ambient air quality are avoided, remedied or mitigated.

AIR-P2 – Improve degraded ambient air quality

Degraded ambient air quality is improved across Otago by:

(1) establishing, maintaining and enforcing plan provisions that set *limits* and timeframes for improving ambient air quality, including by managing the spatial distribution of activities and transport, and

(2) prioritising actions to reduce PM_{10} and $PM_{2.5}$ concentrations in *polluted airsheds*, including:

  (a) phasing out existing domestic *solid fuel* burning appliances, and

  (b) preventing any *discharges* from new domestic *solid fuel* burning appliances

  that do not comply with the standards set in the NESAQ.

AIR-P3 – Providing for *discharges* to air

Provide for *discharges* to air that do not adversely affect human health, *amenity values, mana whenua* values and the life supporting capacity of ecosystems.

AIR-P4 – Managing certain discharges

Manage the adverse *effects* of *discharges* to air by:

(1) avoiding noxious or dangerous *effects,*

(2) managing *discharges* to air so they do not cause offensive or objectionable *effects,*

(3) avoiding, remedying or mitigating other adverse *effects* from *discharges* to air, including but not limited to *discharges* arising from:

  (a) outdoor burning of organic material,

  (b) agrichemical and fertiliser applications,

  (c) *primary production* activities,

  (d) activities that produce dust, and

  (e) industrial and trade activities.

(4) locating new sensitive activities to avoid potential *reverse sensitivity effects* from existing consented or permitted discharges to air, unless these can be appropriately managed.

AIR-P5 – Impacts on *mana whenua* values

Ensure that *discharges* to air do not adversely affect *mana whenua* values by having particular regard to values and areas of significance to *mana whenua*, including *wāhi tūpuna,* wāhi tapu and wāhi taoka.

Methods

AIR-M1 – Review *airshed* boundaries

Prior to implementing AIR-M2, and within 12 months of the AIR chapter being made operative, the Otago Regional Council must review existing *airshed* boundaries and apply to the Ministry for the Environment to gazette amended boundaries where *airsheds* do not account for:

(1) current or anticipated areas of development,

(2) weather patterns and geography, or

(3) existing areas of degraded air quality.

AIR-M2 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) set *limits* (including *ambient air quality standards* and *guidelines*) to maintain ambient air quality in accordance with AIR-P1, and improve ambient air quality in accordance with AIR-P2,

(2) manage the adverse *effects* of *discharges* to air by avoiding noxious or dangerous *effects* and managing *discharges* to air so that they do not cause offensive or objectionable effects,

(3) include provisions to avoid, remedy, or mitigate other adverse *effects* from *discharges* to air,

(4) prioritise the actions set out in AIR-P2 to reduce PM_{10} *and* $PM_{2.5}$ concentrations in *polluted airsheds,*

(5) mitigate the adverse *effects* of *discharges* to air in areas adjacent to *polluted airsheds* where the *discharge* will adversely affect air quality in the *polluted airshed*, and

(6) include measures to ensure that *discharges* to air do not adversely affect *mana whenua* values or the ability of owners of native reserves and *Māori land* to use, develop and protect that land in accordance with MW-P4.

AIR-M3 – Territorial authorities

Territorial authorities must prepare or amend and maintain their *district plans* to include provisions that direct an urban form that assists in achieving good air quality by:

(1) encouraging or facilitating a reduced reliance on private non-electric motor vehicles and enabling the adoption of *active transport*, shared transport and *public transport* options to assist in achieving good air quality,

(2) managing the spatial distribution of activities,

(3) managing new sensitive activities to avoid *reverse sensitivity effects* in relation to consented and permitted activities that *discharge* to air.

AIR-M4 – Monitoring and reporting

Otago Regional Council must monitor and report no less frequently than annually on:

(1) air quality in accordance with the NESAQ to identify changes in ambient air quality within *airsheds*, and

(2) progress towards attainment of the *ambient air quality standards*.

AIR-M5 – Incentives and other mechanisms

In partnership with Kāi Tahu ki Otago and in collaboration with *territorial authorities*, key stakeholders and industry, Otago Regional Council must, on an on-going basis, use other mechanisms or incentives to assist with achieving the air quality objectives, including:

(1) improving community awareness of air quality issues in Otago associated with home heating,

(2) educating communities and promoting the use of alternative methods for home heating including the use of new technology (including low emission or ultra-low emission home heating appliances) and cleaner fuels or energy sources,

(3) advocating, promoting and supporting upgrading Otago's housing stock and changes to the Building Act 2004 and Building Code to require houses to create and maintain warmth more efficiently and reduce reliance on non-compliant domestic *solid fuel* burning appliances as described in AIR-P2,

(4) advocating to energy providers to improve the *resilience* and reliability of electricity infrastructure so alternative sources of heating are available and reliable,

(5) measures to encourage the use of *active transport,* shared transport and *public transport* over the use of private motor vehicles, and

(6) providing financial incentives (such as funding schemes, subsidies or rates relief) and support to improve home heating efficiency and assist with the transition towards cleaner heating, improved energy efficiency and home insulation, including the replacement of *solid fuel* burners that do not comply with the NESAQ standards.

Explanation

AIR-E1 – Explanation

The policies in this chapter are designed to achieve and maintain good air quality for Otago by requiring improvements where air quality is poor, maintaining it where it is good. Managing air quality does not include emissions from ships which are managed under separate national regulation. The policies in this chapter focus on preventing further decline in air quality by preventing use of new domestic *solid fuel* burning appliances that do not comply with the NESAQ, and phasing out the use of existing domestic *solid fuel* burning appliances that are non-compliant. The policies also require the boundaries of *airsheds* be amended to accurately reflect current and anticipated areas of urban growth. This is required to ensure monitoring of ambient air quality is accurate and that all activities that contribute to poor ambient air quality within an *airshed* are subject to the same measures to improve ambient air quality. This policy framework also directs future reviews of the Air Plan to manage the adverse *effects* of *discharges* to air.

Principal reasons

AIR-PR1

Clean air is vital for supporting a healthy population and *environment*. Air quality monitoring shows that for most of the year air quality in the Otago Region is very good. During winter months however, temperatures drop and emissions from home heating increase. This, coupled with the topography of some areas and cold, calm conditions, leads to poor winter air quality in many towns and cities across the region. At times, parts of Otago have some of the poorest air quality in New Zealand. This is intensifying through urban growth.

The provisions in this chapter set out the framework for a review of the Air Plan and supports ORC's obligation to both observe and enforce the NESAQ. Implementation of the provisions in this chapter will occur primarily through regional *plans* and *district plan* provisions, however a collaborative approach with central government, other *local authorities*, stakeholders, communities and industry, and in partnership with Kāi Tahu as *mana whenua,* will support the achievement of the objectives over time.

Anticipated environmental results

AIR-AER1	Where air quality is degraded there is a decreasing trend in concentrations of PM_{10} and $PM_{2.5}$.
AIR-AER2	Otago has an urban form that takes into account the *effects* of activities, and any *discharges* to air they create, on Otago's air quality.
AIR-AER3	Homes have cleaner forms of heating and non-compliant burners are no longer in use.
AIR-AER4	There is a decrease in the number of complaints regarding offensive, objectionable, noxious or dangerous *discharges* into air.
AIR-AER5	Where air quality complies with ambient air quality *limits* it is maintained.
AIR-AER6	Otago is compliant with NESAQ requirements.

CE – Coastal environment

Objectives

CE-O1 – Te Mauri o te Moana

The health of Otago's *water* in the coastal environment is:

(1) protected from inappropriate activities so as to protect the health and well-being of the wider *environment* and the mauri of *coastal waters*, and

(2) restored where it is *degraded*, including through enhancing *coastal water* quality where it has deteriorated from its natural condition.

CE-O2 – Safeguarding the coastal environment (Te Hauora o Te Tai o Arai Te Uru)

The health, integrity, form, functioning and *resilience* of Otago's coastal environment is safeguarded so that:

(1) *coastal water* quality supports healthy ecosystems, natural habitats, water-based recreational activities, existing activities, and customary uses, including practices associated with *mahika kai* and kaimoana,

(2) the dynamic and interdependent natural biological and physical processes in the coastal environment are maintained or enhanced,

(3) the diversity of indigenous coastal flora and fauna is maintained, and areas of significant or representative indigenous *biodiversity* and sites of biological importance are protected,

(4) *surf breaks* of national significance are protected,

(5) the interconnectedness of wai Māori and wai tai is protected, and the *effects* of terrestrial and *fresh water* uses and activities on *coastal waters* and ecosystems, are recognised and understood, and

(6) the ongoing effects of *climate change* within the coastal environment are identified and planned for.

CE-O3 – Public access and recreation

Public walking access and recreation opportunities in the coastal environment are maintained and enhanced, and vehicle access is controlled.

CE-O4 – Natural character, features and landscapes

Areas of natural character are preserved and natural features and landscapes (including seascapes) within the coastal environment are protected from inappropriate activities, and restoration is encouraged where the values of these areas have been compromised.

CE-O5 – Mana moana

The enduring cultural relationship of Kāi Tahu with Otago's coastal environment is recognised and provided for, and Kāi Tahu are enabled to:

(1) exercise their rakatirataka role, manaakitaka and their kaitiaki duty of care within the coastal environment, and

(2) engage in customary fishing and other *mahika kai*.

CE-O6 – Activities in the coastal environment

Activities in the coastal environment:

(1) make efficient use of space occupied in the *coastal marine area*,

(2) are of a scale, density and design compatible with their location,

(3) are only provided for within appropriate locations and limits acknowledging that some activities have a *functional need* to be located in the coastal environment,

(4) maintain or enhance public access to and along the *coastal marine area,* including for customary uses, such as *mahika kai*, except where public access needs to be restricted for reasons of health and safety or ecological or cultural sensitivity,

(5) do not compromise the health and abundance of customary fisheries, including within mātaitai reserves and taiāpure, and

(6) do not compromise the ability of Kāi Tahu to develop, use and protect native reserves and *Māori land*.

Policies

CE-P1 – Integrated management/ki uta ki tai

Implement an integrated approach to managing Otago's coastal environment that:

(1) recognises the interactions, ki uta ki tai, between the terrestrial *environment*, *fresh water*, and the *coastal marine area*, including the migration of fish species between *fresh water* and *coastal water*,

(2) provides for the natural functioning of coastal processes at the physical interface between *land*, *fresh water*, and the *coastal water*,

(3) ensures the *effects* of the use and development of *land* and *fresh water* maintain or enhance the health and well-being of the coastal environment, and

(4) takes into account the ongoing *effects* of *climate change*.

CE-P2 – Links with other chapters

(1) the provisions of the ECO and EIT chapters apply within the coastal environment, except for the following provisions:

    (a) ECO-P4 to ECO-P7 and associated methods,

    (b) EIT-INF-P4 and associated methods, and

(2) the provisions within the following chapters of this RPS apply in addition to the provisions within this chapter:

(a) MW – Mana whenua,

(b) IM – Integrated management,

(c) AIR – Air,

(d) LF – Land and freshwater,

(e) HAZ – Hazards and risks,

(f) HCV – Heritage and historical values, and

(g) UFD – Urban form and development.

(3) the provisions of the NFL – Natural features and landscapes chapter do not apply in the coastal environment.

CE-P3 – Identification

Identify the following in the coastal environment:

(1) the landward extent of the coastal environment, recognising that the coastal environment includes:

(a) the *coastal marine area*,

(b) islands within the *coastal marine area*,

(c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal *wetlands*, and the margins of these,

(d) areas at risk from *coastal hazards* as identified in HAZ-NH-P1,

(e) coastal vegetation and the *habitat* of indigenous coastal species including migratory birds,

(f) elements and features that contribute to the natural character, landscape, visual qualities or *amenity values*,

(g) items of Kāi Tahu cultural association and *historic heritage* in the *coastal marine area* or on the coast,

(h) inter-related coastal marine and terrestrial systems, including the intertidal zone, and

(i) physical resources and built facilities, including *infrastructure*, that have modified the coastal environment,

(2) areas of *water* quality in the *coastal marine area* that are considered to have deteriorated so that:

(a) it is having a significant adverse *effect* on:

(i) the health of *coastal water*, or

(ii) ecosystems, and natural *habitats*, or

(iii) water-based recreational activities, or

(b) is restricting existing uses, such as:

(i) customary fisheries, including mātaitai reserves and taiāpure,

(ii) cultural activities such as *mahika kai*, including harvesting of kaimoana, or

(iii) aquaculture and shellfish gathering,

(3) areas of *coastal water* where *mana whenua* have a particular interest, including *wāhi tupuna*, mātaitai and taiapure, and any aquaculture settlement areas gazetted under the Māori Commercial Aquaculture Claims Settlement Act 2004, and

(4) the nationally significant *surf breaks* at Karitāne, Papatowai, The Spit, and Whareakeake.

CE-P4 – *Coastal water* quality

Manage *water* quality in the coastal environment by:

(1) restoring *coastal water* quality where it is considered to have deteriorated to the extent described within CE-P3(2),

(2) maintaining or enhancing healthy coastal ecosystems, indigenous habitats provided by the coastal environment, *indigenous vegetation* and fauna, and the migratory patterns of indigenous *coastal water* species,

(3) sustaining Kāi Tahu relationships with and customary uses of *coastal water*,

(4) maintaining or enhancing recreation opportunities and existing uses of *coastal water,*

(5) controlling activities outside the *coastal marine area* that have an effect on coastal *water* quality, including by managing the *effects* of *commercial forestry* activities on *coastal water* quality in accordance with the NES-CF, unless additional stringency is justified,

(6) maintaining or enhancing *water* quality within areas of *coastal water* identified in CE-P3(3) where *mana whenua* have a particular cultural interest, and

(7) setting appropriate limits and targets for *coastal water* quality, including for ecosystem health, habitats of taoka species, sediment, contact recreation and safe kaimoana gathering.

CE-P5 – Natural character

Identify, preserve and restore the natural character of the coastal environment by:

(1) identifying areas and values of high and outstanding natural character which may include matters such as:

    (a) natural elements, processes and patterns,

    (b) biophysical, ecological, geological and geomorphological aspects,

    (c) natural landforms such as headlands, peninsulas, cliffs, dunes, *wetlands*, estuaries, reefs, *freshwater* springs and *surf breaks*,

    (d) the natural movement of *water* and sediment,

    (e) the natural darkness of the night sky,

    (f) places or areas that are wild or scenic,

    (g) a range of natural character from pristine to modified,

    (h) experiential attributes, including the sounds and smell of the sea, and their context or setting,

(2) avoiding adverse *effects* on natural character in areas identified as having outstanding natural character,

(3) avoiding significant adverse *effects* and avoiding, remedying or mitigating other adverse *effects* on natural character outside the areas in (2) above, and

(4) promoting *activities* and projects that will restore or rehabilitate natural character in the coastal environment where it has been reduced or lost.

CE-P6 – Coastal *indigenous biodiversity*

Protect *indigenous biodiversity* in the coastal environment by:

(1) identifying and avoiding adverse *effects* on the following ecosystems, vegetation types and areas:

- (a) indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists,
- (b) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened,
- (c) indigenous ecosystems and vegetation types in the coastal environment that are threatened or are naturally rare,
- (d) *habitats* of indigenous species where the species are at the limit of their natural range, or are naturally rare,
- (e) areas containing nationally significant examples of indigenous community types, and
- (f) areas set aside for full or partial protection of *indigenous biodiversity* under other legislation, and

(2) identifying and avoiding significant adverse *effects* and avoiding, remedying or mitigating other adverse *effects* on the following ecosystems, vegetation types and areas:

- (a) areas of predominantly *indigenous vegetation* in the coastal environment,
- (b) *habitats* in the coastal environment that are important during the vulnerable life stages of indigenous species,
- (c) indigenous ecosystems and *habitats* that are only found in the coastal environment and are particularly vulnerable,
- (d) areas sensitive to modification, including estuaries, lagoons, coastal *wetlands*, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh,
- (e) *habitats* of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes,
- (f) *habitats*, including areas and routes, important to migratory species,
- (g) ecological corridors, and areas important for linking or maintaining biological values identified under this policy,
- (h) *significant natural areas* identified in accordance with APP2 that are not included in (1) above, and
- (i) indigenous species and ecosystems identified as taoka in accordance with ECO-M3 that are not included in (1) above.

CE-P7 – Natural features and landscapes (including seascapes)

Protect natural features and landscapes (including seascapes) in the coastal environment by:

(1) identifying their areas and values, at minimum by *land* typing, soil characterisation and landscape characterisation, in accordance with APP11,

(2) avoiding adverse *effects* of activities on outstanding natural features and landscapes (including seascapes),

(3) avoiding significant adverse *effects* and avoiding, remedying, or mitigating other adverse *effects* of activities on other natural features and natural landscapes (including seascapes), and

(4) promoting restoration or enhancement of natural features and landscapes (including seascapes) where the values of these areas have been reduced or lost.

CE-P8 – Surf breaks

Manage Otago's nationally significant *surf breaks* so that nationally significant *surf breaks* are protected by avoiding adverse *effects* on the *surf breaks*, including on access to and use and enjoyment of them.

CE-P9 – Public access

Manage public walking and vehicle access to, along and adjacent to the *coastal marine area* by:

(1) maintaining or enhancing public walking access,

(2) controlling vehicle access, and

(3) restricting public walking and vehicle access where necessary:

  (a) to protect public health and safety,

  (b) to protect *significant natural areas*,

  (c) to protect dunes, estuaries and other sensitive natural areas or *habitats*,

  (d) to protect places or areas of special or outstanding *historic heritage*,

  (e) to protect places or areas of significance to *mana whenua*, including wāhi tapu, *wāhi tupuna* and wāhi taoka,

  (f) for defence purposes in accordance with the Defence Act 1990,

  (g) for temporary activities or special events, or

  (h) to ensure a level of security consistent with the operational requirements of a lawfully established activity.

CE-P10 – Activities on *land* within the coastal environment

The strategic and co-ordinated use of *land* within the coastal environment is achieved by:

(1) encouraging the consolidation of existing coastal settlements and *urban areas* where this will contribute to the avoidance or mitigation of sprawling or sporadic patterns of settlement and urban growth,

(2) considering the rate at which built development should be enabled to provide for the reasonably foreseeable needs of population growth without compromising the values of the coastal environment,

(3) recognising the *functional needs* and *operational needs* of *infrastructure*,

(4) recognising the importance of the provision of *infrastructure,* and food production, and pastoral farming activities to the social, economic and cultural well-being of people and communities,

(5) requiring development to be set back from the *coastal marine area* and other *water bodies* in the coastal environment where practicable and reasonable, to protect the natural character, open space, public access and *amenity values* of the coastal environment,

(6) considering where activities that maintain the character of the existing built environment should be encouraged, and where activities resulting in a change in character would be acceptable,

(7) taking into account the ongoing *effects* of *climate change* and *coastal hazard* risk, and

(8) enabling the use of native reserves and *Māori land* by *mana whenua* and owners of Māori freehold land in accordance with MW-P4.

CE-P11 – Activities within the *coastal marine area*

Use and development in the *coastal marine area*:

(1) must enable multiple uses of the *coastal marine area* wherever reasonable and practicable, and

(2) must maintain or improve the health, integrity, form, function and *resilience* of the *coastal marine area*, or

(3) should generally have a *functional need* or *operational need* to be located in the *coastal marine area*, or

(4) must have a public benefit or opportunity for public recreation that cannot practicably be located outside the *coastal marine area*.

CE-P12 – Aquaculture

Provide for the development and operation of *aquaculture activities* taking into account policies CE-P4 to CE-P13, and:

(1) the need for high quality *water* required for an *aquaculture activity*,

(2) the need for *land*-based facilities and infrastructure required to support the operation of aquaculture activities,

(3) the potential social, economic and cultural benefits associated with the operation and development of *aquaculture activities*, and

(4) aquaculture settlement outcomes in accordance with MW-P2(8A) and MWM5(4).

CE-P13 – *Reclamation* and de-reclamation

Manage *reclamation* and de-reclamation by:

(1) avoiding *reclamation* in the *coastal marine area*, unless:

  (a) *land* outside the *coastal marine area* is not available for the proposed activity,

  (b) the activity to be established on the *reclamation* can only occur immediately adjacent to the *coastal marine area*,

  (c) there are no practicable alternative methods of providing for the activity, and

  (d) the *reclamation* will provide significant regional or national benefit, and

(2) encouraging de-reclamation of redundant reclaimed *land* where it would restore natural character, resources of the *coastal marine area*, and/or provide for more public open space.

CE-P14 – Rakatirataka and *kaitiakitaka*

Recognise and give practical effect to Kāi Tahu rakatirataka and the role of Kāi Tahu as kaitiaki of the coastal environment by:

(1) facilitating partnership with, and actively involving *mana whenua* in decision making and management processes in respect of the coast,

(2) identifying, protecting, and improving where degraded, sites, areas and values of importance to Kāi Tahu within the coastal environment, and managing these in accordance with tikaka,

(3) providing for customary uses, including *mahika kai* and the harvesting of kaimoana,

(4) incorporating the impact of activities on customary fisheries, mātaitai reserves and taiāpure in decision making,

(5) incorporating mātauraka Māori in the management and monitoring of activities in the coastal environment, and

(6) having regard to the principles of the Treaty of Waitangi, and the purpose of the redress provided for in the NTCSA, including redress arising from the Ancillary Claims and SILNA by:

    (a) enabling *mana whenua*, and owners of Māori freehold land in relation to their *land*, to lead approaches to the management of the effects of use and development of native reserves and *Māori land* in accordance with mātauraka and tikaka, and

    (b) acknowledging that *effects* of the use and development of native reserves and *Māori land*, including on the matters otherwise provided for in CE-P5, CE-P6, CE-P7 and CE-P10(5), may be appropriate on that *land*.

CE-P15 – *Discharges* of *wastewater, sewage, greywater*, animal effluent, and *industrial and trade waste* in the coastal environment

Minimise the adverse *effects* of *discharges* of *wastewater, sewage, greywater,* animal effluent, and *industrial and trade waste* in the coastal environment by:

(1) recognising and providing for Kāi Tahu values, and having particular regard to the *effects* of *discharges* of *wastewater* and *sewage* on those values, in resource-management decision-making,

(2) in relation to *discharges* to *coastal water* from activities on *land:*

    (a) not allowing the new direct *discharge* of untreated *wastewater, sewage,* animal effluent, and *industrial and trade waste* to *coastal water*,

    (b) phasing out existing direct *discharges* of treated and untreated *wastewater, sewage,* animal effluent, or *industrial and trade waste* to *coastal water* to the extent practicable,

    (c) requiring new *discharges* of treated *wastewater, sewage,* animal effluent, and *industrial and trade waste* to be to *land* and not to *coastal water*, unless,

        (i) there has been adequate consideration of alternative methods, sites and routes for undertaking the *discharge*, and either

        (ii) the adverse *effects* associated with a *discharge* to *land* are demonstrably greater than a *discharge* to *coastal water*, or

        (iii) the adverse *effects* associated with a *discharge* to *coastal water* are significantly less than, and replace, an existing *discharge(s)*,

(d) requiring that all *discharges* containing *sewage* or *industrial and trade waste* are *discharged* into a reticulated *wastewater* system, where one is made available by its operator, unless alternative treatment and disposal methods will result in improved outcomes for *coastal water*,

(e) requiring implementation of methods to progressively reduce the frequency and volume of wet weather overflows and minimise the likelihood of dry weather overflows occurring from reticulated *wastewater* systems, and

(f) promoting source control as a method for reducing *contaminants* in *discharges*,

(3) in relation to *discharges* to *fresh water* in the coastal environment, applying LF-FW-P17,

(4) in relation to *discharges* from ports and other relevant marine facilities:

(a) requiring operators of ports, marinas, and other relevant marine facilities to:

(i) provide for the collection of *wastewater* and *sewage* from vessels,

(ii) manage the safe containment and disposal of *waste* and other residues from vessel maintenance; and

(b) where appropriate, providing for the establishment of facilities for the collection of *sewage* and other wastes from recreational and commercial boating.

CE-P16 – *Discharges* of *stormwater* in the coastal environment

Minimise the adverse *effects* of *discharges* of *stormwater*, including from a reticulated system, in the coastal environment by:

(1) requiring integrated catchment management plans for management of *stormwater* in urban areas,

(2) requiring all *stormwater* to be *discharged* into a reticulated system, where one is made available by its operator, unless alternative treatment and disposal methods will result in the same or improved outcomes for *coastal water*,

(3) implementing methods to progressively reduce unintentional *stormwater* inflows to *wastewater* systems,

(4) promoting source control as a method for reducing *contaminants* in *stormwater discharges* and the use of good practice guidelines for managing *stormwater*, and

(5) in relation to *discharges* of *stormwater* to *freshwater* in the coastal environment, applying LF-FW-P16.

Methods

CE-M1 – *Mana whenua*/mana moana involvement

Otago Regional Council must partner with Kāi Tahu in coastal management by:

(1) actively identifying and pursuing opportunities for *mana whenua* to be involved in coastal governance, including through use of available mechanisms such as transfers of functions (under section 33 of the RMA) and supporting the establishment of mātaitai reserves and taiāpure,

(2) implementing actions to foster the development of *mana whenua* capacity to contribute to the Council's decision-making processes,

(3) supporting *mana whenua* initiatives that contribute to maintaining or improving the health and well-being of *coastal water* and ecosystems, and

(4) providing relevant information to *mana whenua* for the purposes of (1), (2), and (3).

CE-M2 – Identifying the coastal environment

Local authorities must work collaboratively, including with *local authorities* in neighbouring regions, to:

(1) identify the landward extent of the coastal environment, in accordance with CE-P3(1),

(2) map the landward extent of the coastal environment area in the relevant *regional plans* and *district plans*.

CE-M3 – Identifying other areas

Local authorities must work collaboratively, with Kāi Tahu and *local authorities* in neighbouring regions, together to:

(1) identify areas and values of high and outstanding natural character within their jurisdictions in accordance with CE-P5(1), map the areas and describe their values in the relevant *regional plans* and *district plans*, and identify their capacity to accommodate change through use or development while protecting the values that contribute to the natural character of the area being considered high or outstanding,

(2) identify, at an appropriate scale, areas and values of outstanding natural features and landscapes (including seascapes) in the coastal environment within their jurisdictions in accordance with CE-P7(1), map the areas and describe their values in the relevant *regional plans* and *district plans*, and identify their capacity to accommodate change through use or development while protecting the values that contribute to the natural features and landscapes (including seascapes) being considered outstanding,

(3) identify areas and values of *indigenous biodiversity* within their jurisdictions in accordance with CE-P6, map the areas and describe their values in the relevant *regional* and *district plans*, and

(4) prioritise identification under (1) – (3) in areas that are likely to face development or growth pressure over the life of this RPS.

CE-M4 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) map areas of deteriorated *water* quality in the coastal environment, in accordance with CE- P3(2)

(2) identify, manage, and improve where degraded, areas of *coastal water* where *mana whenua* have a particular interest, including *wāhi tūpuna*, statutory acknowledgement areas, tōpuni and *nohoaka* identified in the NTCSA, and customary fisheries,

(3) set water quality limits and targets for *coastal waters* in accordance with CE-P4,

(4) map the areas and characteristics of, and access to, *surf breaks* of national significance,

(5) require development to be set back from the *coastal marine area* and other *coastal water* where practicable to protect the natural character, open space, public access and *amenity values* of the coastal environment,

(6) manage the *discharge* of *contaminants* into *coastal water* to achieve limits or targets for water quality by:

(a) using the smallest *mixing zone* necessary to achieve the required *water* quality standards in the *receiving environment*; and minimise adverse *effects* on the life-supporting capacity of *water* within any mixing zone,

(b) managing *discharges* of *wastewater*, *sewage*, *greywater*, animal effluent, and *industrial and trade waste* in the coastal environment in accordance with CE-P15,

(c) managing *discharges* of *stormwater* in the coastal environment in accordance with CE-P16,

(d) reducing the *discharge* of sediment by:

(i) requiring that *subdivision*, use, or development will not increase sedimentation of the *coastal marine area* or other *coastal water*,

(ii) controlling the impacts of vegetation removal on sedimentation excluding the impacts of harvesting *commercial forestry*, and

(iii) reducing sediment loadings in runoff and in *stormwater* systems through controls on *land* use activities, and

(e) controlling the impacts of harvesting *commercial forestry,* in accordance with the NESCF, unless additional stringency is justified,

(f) having particular regard to:

(i) the sensitivity of the receiving environment,

(ii) the nature of the *contaminants* to be *discharged*, the *contaminant* concentration thresholds not to be exceeded to achieve the required *water* quality in the receiving environment, and the risks if that concentration of *contaminants* is exceeded,

(iii) the capacity of the receiving environment to assimilate the *contaminants*, and

(iv) avoiding significant adverse *effects* on ecosystems and habitats after reasonable mixing,

(7) control the use and development of the *coastal marine area*, in order to:

(a) manage *coastal water* quality; preserve and restore natural character; and protect natural features and landscapes (including seascapes), *wāhi tūpuna* and indigenous *biodiversity* of the *coastal marine area* in accordance with CE-P4, CE-P5, CE-P6, CE-P7 and HCV-WT-P2, and

(b) manage Otago's *surf breaks* of national significance in accordance with CE-P8,

(8) include provisions requiring the adoption of a precautionary approach to assessing the *effects* of activities in the coastal environment in accordance with IM- P4 where:

(a) there is scientific uncertainty or a lack of relevant knowledge, or

(b) there are potentially significant or irreversible adverse *effects*, or

(c) coastal resources are potentially vulnerable to effects from climate change,

(9) identify areas that may be appropriate for aquaculture,

(10) provide for walking access to, along, and adjacent to the *coastal marine area* in accordance with Policy 19 of the NZCPS,

(11) control vehicle access to, along, and adjacent to the *coastal marine area* in accordance with Policy 20 of the NZCPS,

(12) manage *reclamation* and de-reclamation activities in accordance with CE-P13, in addition to the other matters in CE-P1 to P12 and P14, and when *reclamation* is considered suitable in accordance with CE-P13, have particular regard to the matters listed in Policy 10(2) and (3) of the NZCPS,

(13) require stock to be excluded from the *coastal marine area,* adjoining intertidal areas and *coastal water* and riparian margins in the coastal environment, and

(14) provide for and encourage activities undertaken for the primary purpose of enhancing *coastal water* quality, coastal habitats and ecosystems, customary fisheries, *mahika kai* and kaimoana activities, and restoring natural character, features and landscapes (including seascapes) in accordance with CE-P4, CE-P5, CE-P6, CE-P7, and CE-P14, and

(15) identify any aquaculture settlement areas gazetted under the Māori Commercial Aquaculture Claims Settlement Act 2004.

CE-M5 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) control the location, density and form of *subdivision* in the coastal environment (outside the *coastal marine area*),

(2) control the location, scale and form of *buildings* and *structures* in the coastal environment (outside the *coastal marine area*),

(3) control the location and scale of *earthworks,* mining, and vegetation planting, modification and removal in the coastal environment (outside the *coastal marine area*), excluding *commercial forestry* activities,

(4) in relation to *commercial forestry* activities, manage the location and scale of *earthworks*, and vegetation planting, modification and removal in the coastal environment, in accordance with the NESCF, unless additional stringency is justified,

(5) achieve the integrated management of, and control over, land use activities which could cause direct or indirect *effects* on the *coastal marine area* in accordance with CE-P1,

(6) require *resource consent* for uses of *land* on reclamations that have occurred after the date this RPS becomes operative,

(7) provide for the establishment of *esplanade reserves* and *esplanade strips*,

(8) include provisions requiring the adoption of a precautionary approach to assessing the *effects* of activities in the coastal environment in accordance with IM-P4 where:

    (a) there is scientific uncertainty or a lack of relevant knowledge, or

    (b) there are potentially significant or irreversible adverse *effects*, or

    (c) coastal resources are potentially vulnerable to the effects of climate change,

(9) provide for walking access to, along, and adjacent to the *coastal marine area* in accordance with Policy 19 of the NZCPS,

(10) control vehicle access to, along, and adjacent to the *coastal marine area* in accordance with Policy 20 of the NZCPS,

(11) enable the use of native reserves and *Māori land* by *mana whenua* and owners of Māori freehold land in accordance with CE-P10(8), and recognise rakatirataka over this *land* by enabling *mana whenua*, and owners of Māori freehold land in relation to their *land*, to lead approaches to manage any adverse *effects* of such use on the *environment* in accordance with CE-P14(6),

(12) provide access to *surf breaks* of national significance, and

(13) provide for and encourage activities undertaken for the primary purpose of enhancing *coastal water* quality, coastal *habitats* and ecosystems, customary fisheries and other *mahika kai* activities restoring natural character, features, or landscapes in accordance with CE-P2, CE-P4, CE-P5, CE-P7 and CE-P14.

CE-M6 – Other incentives and mechanisms

Local authorities shall consider the use of other mechanisms or incentives to assist in achieving Policies CE-P3 to CE-P14, including:

(1) identifying areas and opportunities within the coastal environment for restoration or rehabilitation,

(2) identifying opportunities to enhance or restore public walking access in accordance with Policy 19(c) of the NZCPS,

(3) promoting the removal of abandoned or redundant *structures* that have no heritage, amenity or reuse value,

(4) funding assistance for restoration projects (for example, through Otago Regional Council's ECO Fund),

(5) development or design guidelines (for example, colour palettes for *structures* in the coastal environment),

(6) rating differentials for *land* that is protected due to its status as a high or outstanding natural character area,

(7) education and advice,

(8) research relevant to the *effects* of activities on:

    (a) coastal network *infrastructure*,

    (b) coastal values,

    (c) *coastal hazards*,

    (d) riparian vegetation cover or any *land* cover that contributes to supporting coastal values or mitigating coastal hazards, or

    (e) areas particularly sensitive to *land* use changes, or

    (f) *coastal water* quality, or

    (g) coastal *habitats* and ecosystems,

(9) facilitating the restoration, rehabilitation or creation of coastal *habitats*, particularly when it:

    (a) encourages the natural regeneration of indigenous species, or

    (b) buffers or links ecosystems, *habitats* and areas of significance that contribute to ecological corridors, or

    (c) maintains or enhances the provision of indigenous ecosystem services, or

(d) benefits *mahika kai* and kaimoana species or customary fisheries areas, or

(e) will lead to the improvement of areas of deteriorated *water* quality, and

(10) bylaws controlling vehicle access to and along the *coastal marine area* in accordance with Policy 20 of the NZCPS.

CE-M7 – Monitoring

Otago Regional Council shall:

(1) establish a long-term monitoring programme for *coastal waters* and coastal ecosystems that incorporates cultural health monitoring,

(2) record information (including monitoring data) about the state of *coastal waters* and coastal ecosystems and the challenges to their health and well-being,

(3) regularly prepare reports on the matters in (1) and (2) and publish those reports, and

(4) take action where the results of monitoring show that this is necessary to achieve the objectives of this policy statement.

Explanation

CE-E1 – Explanation

The provisions in this chapter recognise that the coastal environment is a finite resource with a range of values that need to be preserved. The policies within the chapter are designed to protect the coastal environment from inappropriate activities. The coastal environment is also recognised as dynamic and the policies, in association with others in this RPS, seek to prevent increasing risks to life, *infrastructure* and property.

The policies in this chapter require the identification and management of a range of values within the coastal environment. They also set out a number of environmental bottom lines that give effect to the requirements of the NZCPS. Provided these environmental bottom lines are achieved, the chapter also acknowledges that there are a range of activities including port activities, aquaculture, and appropriately designed and located *subdivision*, use and development that can be undertaken within the coastal environment. The policies also provide specific direction on how activities in the coastal environment are to be undertaken. The combination of protective and enabling policies within this chapter are designed to implement the objectives by requiring that activities in the coastal environment are undertaken in a manner that preserves or restores the values of the coastal environment.

Kāi Tahu tūpuna had an extensive knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whānau and hapū and is regarded as a taoka. The seasonal lifestyle of Kāi Tahu led to their dependence on the resources of the coast. This enduring relationship with the coastal environment, arising from long whakapapa associations and the use of tikaka to guide resource management practices, is manifested in the rakatirataka and *kaitiakitaka* responsibilities that Kāi Tahu hold as *mana whenua*.

Coastal waters can be influenced by activities which are undertaken beyond the coastal environment. This interconnectedness between coastal and *freshwater environments* means provisions contained within the LF – Land and freshwater chapter may also need to be considered to manage the coastal environment.

Some of the policies in the NZCPS are highly prescriptive and will be most effectively implemented through *regional plans* and *district plans.* In those cases, the policies in this RPS have included additional region-specific context where that is possible, but have not sought to restate the content of NZCPS policies with the expectation that those policies will be implemented by the *regional plans* and *district plans*.

In addition to the policies in this chapter, the values of the coastal environment are recognised and provided for in a number of other chapters of this RPS, as set out in CE-P2.

Principal reasons

CE-PR1 – Principal reasons

The coastal environment includes the *coastal marine area*, islands within the *coastal marine area* and the area landward of the line of mean high-water springs. The landward extent of the coastal environment is determined by the natural and physical elements, features and processes set out in Policy 1(2) of the NZCPS. The importance of the coastal environment is reflected in the statutory resource management framework, particularly as identified in sections 6 and 7 of the RMA and as set out in the NZCPS.

A number of activities occur within or affect the coastal *environment* including urban development, recreational activities, transport *infrastructure*, port activities, *infrastructure,* energy generation and transmission, food production and other farming activities, *commercial forestry*, *rural industry* and *mineral* extraction. These activities can be important contributors to the existing and future health and well-being of communities. However, poorly located or managed activities can have adverse *effects* that compromise the values of the coastal environment such as natural character, biophysical processes, *water* quality, *surf breaks*, *indigenous biodiversity* and natural landscapes.

The coastal environment is highly valued by Kāi Tahu *mana whenua*, with a number of areas in the coastal environment recognised in statutory acknowledgments in the NTCSA. The marine environment is a moving force, a reminder of the power of Takaroa. The *coastal waters* and processes were integral to the way of life tūpuna enjoyed, and the coastal environment supports significant *mahika kai*/kaimoana resources and *wāhi tūpuna*. This environment was traditionally important for settlement and travel and continues to provide for settlement and *mahika kai* and fisheries resources. Kaimoana is essential to coastal iwi and hapū relationships with the *environment* and in particular as part of the tikaka of food gathering and as indicators of the health of coastal environments.

The *coastal waters* are a *receiving environment* for *freshwater*, gravels, sediment and *contaminants* from the terrestrial landscape - of particular concern are the significant *discharges* of sediments, transported by *rivers* and waterways, that have a smothering effect on the benthic systems of the coastal area, including the important kelp beds. The interconnection of the *land* and sea environments is central to the ki uta ki tai ('mountains to the sea') philosophy. This interconnection requires careful consideration in managing the *effects* of *land* use activities.

Other chapters of this RPS are also relevant for managing the coastal environment as land-based activities can have a significant *effect* on the health of the marine environment. Sediment, *contaminants* and litter that are carried by waterways or pipes into the sea affect *water* quality and the ecological health of the coastal environment.

Implementation of the provisions in this chapter will occur primarily through *regional plans* and *district plan* provisions, however *local authorities* may also choose to adopt additional non-regulatory methods to support the achievement of the objectives.

Anticipated environmental results

CE-AER1	The values of the coastal environment are not adversely affected or lost because of inappropriate uses of the *natural and physical resources* in the coastal environment.
CE-AER2	There is no reduction in the extent of identified areas of high and outstanding natural character in the coastal environment.
CE-AER3	Areas where natural character has been reduced or lost are restored.
CE-AER4	There is an improvement in the quality of *water* in areas identified as having deteriorated *water* quality.
CE-AER5	The quality of *coastal water* supports healthy coastal ecosystems and provides for contact recreation and customary uses.
CE-AER6	New building and development in the coastal environment is consistent with the character of the area and avoids increasing the risks from *natural hazards* to people and communities.
CE-AER7	The public have improved access to, along, and adjacent to the *coastal marine area.*
CE-AER8	The mauri of the coastal environment is protected, and restored where it has been degraded.
CE-AER9	Customary uses, including practices associated with *mahika kai* and kaimoana, are supported, and *mana whenua* exercise their kaitiaki role within the coastal environment.

LF – Land and freshwater

LF-WAI – Te Mana o te Wai

Objectives

LF-WAI-O1 – *Te Mana o te Wai*

Otago's *water bodies* and their health and well-being are protected, and restored or improved where they are *degraded*, so that the mauri of those *water bodies* is protected, and the management of *land* and *water* recognises and reflects that:

(1) *water* is the foundation and source of all life – nā te wai ko te hauora o kā mea katoa,

(2) there is an integral kinship relationship between *water* and Kāi Tahu whānui, and this relationship endures through time, connecting past, present and future,

(3) each *water body* has a unique whakapapa and characteristics,

(4) *fresh water, land,* and *coastal water* have a connectedness that supports and perpetuates life,

(5) protecting the health and well-being of *water* protects the wider *environment*,

(6) Kāi Tahu exercise rakatirataka, manaakitaka and their *kaitiakitaka* duty of care and attention over wai and all the life it supports, and

(7) all people and communities have a responsibility to exercise stewardship, care, and respect in the management of *fresh water*.

Policies

LF-WAI-P1 – Prioritisation

In all decision-making affecting *fresh water* in Otago, prioritise:

(1) first, the health and well-being of *water bodies* and *freshwater* ecosystems (te hauora o te wai) and the exercise of *mana whenua* to uphold this,[46]

(2) second, the health needs of people, (te hauora o te tangata) interacting with *water* through:

  (a) ingestion (such as drinking of *water* and consuming resources harvested from the *water body*),

  (b) immersive activities (such as harvesting resources and primary contact), and

  (c) personal hygiene activities (such as food preparation, utensil washing, oral hygiene, showering and flushing the toilet), and

(3) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

[46] In matters of mana, the associated spiritual and cultural responsibilities connect natural resources and *mana whenua* in a kinshiprelationship that is reciprocal and stems from the time of creation.

LF-WAI-P2 – Mana whakahaere

Recognise and give practical effect to Kāi Tahu rakatirataka in respect of *fresh water* by:

(1) facilitating partnership with, and the active involvement of, *mana whenua* in *freshwater* management and decision-making processes,

(2) sustaining the environmental, social, cultural and economic relationships of Kāi Tahu with *water bodies*,

(3) providing for a range of customary uses, including *mahika kai*, specific to each *water body*,

(4) incorporating mātauraka into decision making, management and monitoring processes, and

(5) managing wai and its connections with whenua in a holistic and interconnected way – ki uta ki tai.

LF-WAI-P3 – Integrated management/ki uta ki tai

Manage the use of *fresh water* and *land*, using an integrated approach that is consistent with tikaka and kawa, that:

(1) sustains and, to the greatest extent practicable, restores or improves:

  (a) the natural connections and interactions between *water bodies* (large and small, surface and ground, fresh and coastal, permanently flowing, intermittent and ephemeral),

  (b) the natural connections and interactions between *land* and *water,* from the mountains to the sea,

  (c) the habitats of *mahika kai* and indigenous species, including taoka species associated with the *water bodies,*

(2) manages the *effects* of the use and development of *land* to maintain or enhance the health and well-being of *freshwater*, *coastal water* and associated ecosystems,

(3) encourages the coordination and sequencing of regional or urban growth to ensure it is sustainable,

(4) has regard to foreseeable *climate change* risks, and the potential *effects* of *climate change* on *water bodies,* including on their natural functioning,

(5) has regard to cumulative *effects,* and

(6) applies a precautionary approach where there is limited available information or uncertainty about potential adverse *effects,* in accordance with IM-P4.

LF-WAI-P4 – Giving effect to *Te Mana o te Wai*

All persons exercising functions and powers under this RPS and all persons who use, develop or protect resources to which this RPS applies must recognise that LF-WAI-O1, LF-WAI-P1, LF-WAI-P2 and LF-WAI-P3 are fundamental to upholding *Te Mana o te Wai*, and must be given effect to when making decisions affecting *fresh water,* including when interpreting and applying the provisions of the LF chapter.

Methods

LF-WAI-M1 – Kāi Tahu rakatirataka

Otago Regional Council must partner with Kāi Tahu in *freshwater* management by:

(1) implementing the actions in MW-M3 and MW-M4,

(2) actively identifying and pursuing opportunities for *mana whenua* to be involved in *freshwater* governance, including through use of available mechanisms such as transfers of functions (under section 33 of the RMA) and supporting the establishment of *freshwater* mātaitai,

(3) implementing actions to foster the development of *mana whenua* capacity to contribute to the Council's decision-making processes, including resourcing,

(4) supporting *mana whenua* initiatives that contribute to maintaining or improving the health and well-being of *water bodies*,

(5) providing relevant information to *mana whenua* for the purposes of (1), (2), (3) and (4), and

(6) developing a Kaupapa Kāi Tahu monitoring programme and facilitating the use of mātauraka to inform *freshwater* management decision-making processes, methods and outcomes, in combination with environmental science.

LF-WAI-M2 – Other methods

In addition to method LF-WAI-M1, the methods in the LF-FW and LF-LS sections are also applicable.

Explanation

LF-WAI-E1 – Explanation

Water is a central element in Kāi Tahu creation traditions. It was present very early in the whakapapa of the world: in the beginning there was total darkness, followed by the emergence of light and a great void of nothingness. In time Maku mated with Mahoronuiatea which resulted in great expanses of *water*, then Papatūānuku and Takaroa met and had children after which Takaroa took a long absence. Papatūānuku met Rakinui and they had many children who conspired to force their parents' coupled bodies apart to let the light in. They were also responsible for creating many of the elements that constitute our world today – the mountains, *rivers*, forests and seas, and all fish, bird and animal life. To Kāi Tahu, the whakapapa and spiritual source of *water* and *land* are connected, and *water bodies* are the central unifying feature that connects our landscapes together. The spiritual essence of *water* derives from the atua and the life it exudes is a reflection of the atua.

To Kāi Tahu, the whakapapa of *mana whenua* and *water* are also integrally connected. There is a close kinship relationship, and *mana whenua* and the wai cannot be separated. The tūpuna relationship with *water*, and the different uses made of the *water*, provide a daily reminder of greater powers – of both the atua and tūpuna. This relationship continues into the present and future and is central to the identity of Kāi Tahu. The mana of wai is sourced from the time of creation and the work of kā Atua, invoking a reciprocal relationship with *mana whenua* based in kawa, tikaka and respect for *water's* life-giving powers and its sanctity.

The kinship connection engenders a range of rights and responsibilities for *mana whenua*, including rakatirataka rights and the responsibility of *kaitiakitaka*. *Kaitiakitaka* encompasses a high duty to uphold and maintain the mauri (life-force) of the wai. If the mauri is degraded it has an impact not only on the mana of the wai but also on the kinship relationship and on *mana whenua*. The mauri expresses mana

and connection, which can only be defined by *mana whenua*. Recognising rakatirataka enables *mana whenua* to enjoy their rights over *water bodies* and fulfil their responsibilities to care for the wai and the communities it sustains.

The condition of *water* is seen as a reflection of the condition of the people - when the wai is healthy, so are the people. Kawa and tikaka have been developed over the generations, based on customs and values associated with the Māori world view that span the generations. Giving effect to *Te Mana o te Wai* upholds the mauri of the wai and is consistent with this value base.

To Kāi Tahu, each *water body* is unique. This is a reflection of its unique whakapapa and characteristics, and it means that each *water body* has different needs. Management and use must recognise and reflect this.

The concept of *Te Mana o te Wai* aligns closely with the Kāi Tahu approach to *freshwater* management, but it is not confined to Kāi Tahu. *Water* is valued by the community. The life-giving qualities of *freshwater* support the health and well-being of the whole community and all people have a shared responsibility to respect and care for the health and well-being of *freshwater bodies.* Access to *water,* within *limits* (in relation to *water*), is an important contributor achieving social, cultural and economic well-being within Otago.

Principal reasons

LF-WAI-PR1 – Principal reasons

In accordance with the NPSFM, councils are required to implement a framework for managing *freshwater* that gives effect to *Te Mana o te Wai*. This places the mauri (life-force) of the *water* at the forefront of decision making, recognising that te hauora o te wai (the health of the *water*) is the first priority, and supports te hauora o te taiao (the health of the *environment*) and te hauora o te takata (the health of the people). It is only after the health of the *water* and the health of the people is sustained that *water* can be used for economic purposes. When *water* is available for use, different uses may be prioritised in different *FMUs* or rohe depending on the values identified by communities and the *environmental outcomes* seeking to be achieved. Giving effect to *Te Mana o te Wai* requires actively involving *mana whenua* in *freshwater* planning and management.

The NZCPS also recognises the interconnectedness of *land* and *water*. It notes inland activities can have a significant impact on *coastal water* quality which, in many areas around New Zealand, is in decline. This is a consequence of point and diffuse sources of contamination which can have environmental, social, cultural and economic implications. For example, poor *water* quality adversely affects aquatic life and opportunities for *mahika kai* gathering and recreational uses such as swimming and kayaking.

Anticipated environmental results

LF-WAI-AER1	The mauri of Otago's *water bodies* and the health and well-being of *water bodies* and *freshwater* ecosystems is protected, and restored where *degraded*.
LF-WAI-AER2	Kāi Tahu are actively involved in the management of *fresh water* and able to effectively exercise their rakatirataka*,* manaakitaka and *kaitiakitaka*.

LF-FW – Fresh water

Objectives

LF-FW-O2 – Visions set for each *FMU* and rohe

In each *FMU* and rohe in Otago and within the timeframes specified in the *freshwater* visions in LF-FW-O3 to LF-FW-O7:

(1) healthy *freshwater* and estuarine ecosystems support healthy populations of indigenous species (including non-diadromous galaxiids and Canterbury mudfish) and *mahika kai* that are safe for consumption,

(2) the interconnection of *land*, *freshwater* (including springs, *groundwater*, ephemeral *water bodies*, *wetlands*, *rivers*, and *lakes*) and *coastal water* is recognised,

(3) fish passage within and between catchments is provided for except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats,

(4) the form, function and character of *water bodies* reflects their natural characteristics and natural behaviours to the extent reasonably practicable,

(5) the ongoing relationship of Kāi Tahu with *wāhi tūpuna*, including access to and use of *water bodies*, is sustained,

(6) the health of the *water* supports the health of people and their connections with *water bodies*,

(7) sustainable *land* and *water* management practices:

    (a) support *food and fibre production* and the continued social, economic, and cultural well-being of Otago's people and communities, and

    (b) improve the resilience of communities to the *effects* of *climate change*, and

    (c) ensure communities are appropriately serviced by community water supplies, and other three waters infrastructure,

(8) direct *discharges* of *wastewater* to *water bodies* are phased out to the extent reasonably practicable, and

(9) *freshwater* is managed as part of New Zealand's integrated response to *climate change* and *renewable electricity generation activities* are provided for.

LF-FW-O3 – Clutha Mata-au *FMU* vision

In the Clutha Mata-au *FMU,* and in addition to the matters in LF-FW-O2:

(1) management of the *FMU* recognises that:

    (a) the Clutha Mata-au is a single connected system ki uta ki tai, and

    (b) the source of the wai is pure, coming directly from Tāwhirimātea to the top of the mauka and into the awa,

(2) sustainable abstraction occurs from *lakes, river* main stems or *groundwater* in preference to tributaries, to the extent reasonably practicable,

(3) the national significance of the ongoing operation, maintenance and upgrading of the Clutha hydro-electricity generation scheme, including its generation capacity, storage and operational flexibility and its contribution to *climate change mitigation*, is recognised, provided for and protected, and potential further development of the scheme in Lake Hāwea, on the Hāwea River, and on the Clutha River/Mata-au mainstem, upstream of Roxburgh (within existing consented upper operating levels as at the date this Regional Policy Statement is made operative) is provided for,

(4) *water bodies* support a range of outdoor recreation opportunities,

(5) in the Upper Lakes rohe, the high quality *waters* of the *lakes* and their tributaries are protected, and if *degraded* are improved recognising the significance of the purity of these *waters* to Kāi Tahu and to the wider community,

(6) in the Lower Clutha rohe, opportunities to restore the natural form and function of *water bodies* are promoted wherever practicable, and

(7) the outcomes sought are to be achieved within the following timeframes:

    (a) by 2030 in the Upper Lakes rohe,

    (b) by 2045 in the Dunstan and Roxburgh rohe, and

    (c) by 2050 in the Manuherekia and Lower Clutha rohe.

LF-FW-O4 – North Otago *FMU* vision

By 2050 in the North Otago *FMU,* and in addition to the matters in LF-FW-O2:

(1) the Waitaki River is managed holistically, ki uta ki tai, despite its catchments spanning the Canterbury and Otago regions,

(2) the national significance of the Waitaki hydroelectricity generation scheme is recognised, and

(3) healthy riparian margins, *wetlands*, estuaries and lagoons support the health of downstream coastal ecosystems.

LF-FW-O5 – Taiari *FMU* vision

By 2050 in the Taiari *FMU,* and in addition to the matters in LF-FW-O2:

(1) the upper and lower catchment *wetland* complexes, including the Waipōuri/Waihola *wetland* complex, Upper Taiari *wetland* complex, and connected tussock areas are protected, restored or enhanced where they have been *degraded* or lost,

(2) the gravel *bed* of the lower Taiari is restored and sedimentation of the Waipōuri/Waihola *wetland* complex is reduced,

(3) the national significance of the Waipōuri hydro-electricity generation scheme, and the regional significance of the Deep Stream and Paerau/Patearoa hydro-electricity generation schemes, is recognised and their operation, maintenance and upgrading is provided for, and potential future development of these schemes is provided for, in so far as is consistent with LF-FW-O2(1)–(6) and LF-FW-O5(1), and

(4) creative ecological approaches contribute to reduced occurrence of didymo.

LF-FW-O6 – Dunedin & Coast *FMU* vision

By 2040 in the Dunedin & Coast *FMU,* and in addition to the matters in LF-FW-O2:

(1) healthy riparian margins, *wetlands,* estuaries and lagoons support the health of downstream coastal ecosystems, and

(2) opportunities to restore the natural form and function of *water bodies* are promoted wherever practicable.

LF-FW-O7 – Catlins *FMU* vision

By 2035 in the Catlins *FMU,* and in addition to the matters in LF-FW-O2:

(1) the high degree of naturalness of the *water bodies* and ecosystem connections between the forests, *freshwater* and coastal environment are preserved, and

(2) healthy, clear and clean *water* supports opportunities for recreation.

LF-FW-O8 – *Fresh water*

In Otago's *water bodies* and their catchments, the significant and outstanding values of Otago's *outstanding water bodies* are identified and protected.

LF-FW-O9 – *Wetlands*

Otago's *wetlands* are protected from inappropriate *subdivision*, use and development and, where *degraded*, restoration is promoted so that:

(1) *mahika kai* and other *mana whenua* values are sustained and enhanced now and for future generations,

(2) in relation to the extent and diversity of indigenous ecosystem types and *habitats*:

    (a) for *wetlands* outside the *coastal marine area*, there is no net decrease, and preferably an increase, and

    (b) for *natural inland wetlands*, there is no decrease, and preferably an increase, other than as provided by the NPSFM, and

(3) there is no reduction and, where *degraded*, there is an improvement in *wetland* ecosystem health, hydrological functioning, *amenity values*, extent or *water* quality, and

(4) their flood attenuation and *water* storage capacity is maintained or improved.

LF-FW-O10 – Natural character

The natural character of *wetlands, lakes* and *rivers* and their margins is preserved and protected from inappropriate *subdivision*, use and development.

Policies

LF-FW-P5 – *Freshwater Management Units* (*FMU*s) and rohe

Otago's *freshwater* resources are managed through the following *freshwater management units* or rohe which:

(1) have coastal boundaries that follow either mean high water springs or, where this crosses a *water body,* the inner limit of the territorial sea, and

(2) are shown on MAP2:

Table 3 – Freshwater Management Units and rohe

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

LF-FW-P6 – Relationship between *FMUs* and rohe

Where rohe have been defined within *FMUs*:

(1) *environmental outcomes* must be developed for the *FMU* within which the rohe is located,

(2) any additional rohe-specific *environmental outcomes*:

  (a) must set target *attribute* states that are no less stringent than the parent *FMU environmental outcomes* if the same *attributes* are adopted in both the rohe and the *FMU*, and

  (b) may include additional *attributes* and target *attribute* states provided that any additional *environmental outcomes* give effect to the *environmental outcomes* for the *FMU*,

(3) *limits* and action plans to achieve *environmental outcomes,* including by achieving target *attribute* states, may be developed for the *FMU* or the rohe or a combination of both,

(4) any *limit* or action plan developed to apply within a rohe:

  (a) prevails over any *limit* or action plan developed for the *FMU* for the same *attribute*, unless explicitly stated to the contrary, and

  (b) must be no less stringent than any *limit* or action plan set for the parent *FMU* for the same *attribute*, and

  (c) must not conflict with any *limit* set or action plan developed for the parent *FMU* for *attributes* that are not the same, and

(5) the term "no less stringent" in this policy applies to *attribute states* (numeric and narrative) and any other metrics and timeframes (if applicable).

LF-FW-P7 – Transitions over time

Provide for ambitious and reasonable transitions in the use of *land* and *water* to achieve the long-term visions by:

(1) recognising that changes to practices and activities will need to occur over time; and

(2) managing the adverse impacts of implementing these changes on people and communities, including by phasing implementation of new requirements and building on actions undertaken by catchment and other community groups, and

(3) enabling innovation and the development of new practices.

LF-FW-P8 – *Fresh water*

Environmental outcomes, attribute states (including target *attribute* states), environmental flows and levels, and *limits* ensure that:

(1) the health and well-being of *water bodies* and *freshwater* ecosystems is maintained or, if *degraded,* improved,

(2) the *habitats* of indigenous species with life stages dependent on *water bodies* are protected and sustained,

(3) the *habitats* of trout and salmon are protected insofar as this is consistent with (2),

(4) fish passage is provided for, except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats,

(5) *specified rivers and lakes* are suitable for primary contact within the following timeframes:

    (a) by 2030, 90% of *rivers* and 98% of *lakes*, and

    (b) by 2040, 95% of *rivers* and 100% of *lakes*, and

(6) resources harvested from *water bodies* including *mahika kai* and *drinking water* are safe for human consumption.

LF-FW-P9 – Water allocation and use

Within *limits* and in accordance with any relevant environmental flows and levels, the benefits of using *fresh water* are recognised and *over-allocation* is either phased out or avoided by:

(1) managing *over-allocation* as set out in LF-FW-M5,

(2) allocating *fresh water* efficiently to support the social, economic, and cultural well-being of people and communities to the extent possible within *limits,* including for:

    (a) community *drinking water* supplies,

    (b) maintaining generation output and capacity from existing *renewable electricity generation schemes,*

    (c) *mana whenua* customary or cultural needs and activities, and

    (d) *primary production*,

(3) ensuring that no more *fresh water* is abstracted than is necessary for its intended use,

(4) ensuring that the efficiency of *freshwater* abstraction, storage and conveyancing *infrastructure* is improved,

(5) providing for the harvesting and storage of *fresh water* to meet increasing demand for *water*, to manage *water* scarcity conditions and to provide *resilience* to the *effects* of *climate change,* and

(6) providing for spatial and temporal sharing of allocated *fresh water* between uses and users where feasible.

LF-FW-P10 – Identifying *wetlands*

By 3 September 2030, identify and map:

(1) any *wetland* at risk of loss of extent or values,

(2) any *wetland* identified in a farm environment plan, or that may be affected by any application for, or a review of, a *resource consent*, and

(3) all other *natural inland wetlands* that are:

  (a) 0.05 hectares or greater in extent, or

  (b) of a type that is naturally less than 0.05 hectares in extent (such as an ephemeral *wetland*) and known to contain threatened species.

LF-FW-P11 – Managing *wetlands*

Otago's *wetlands* are managed:

(1) in the coastal environment, in accordance with CE – Coastal Environment, and

(2) by applying clause 3.22(1) to (3) of the NPSFM to *natural inland wetlands*, and

(3) to improve the ecosystem health, hydrological functioning and extent of *wetlands* that have been *degraded* or lost by promoting:

  (a) an increase in the extent and condition of *habitat* for indigenous species,

  (b) the restoration of hydrological processes,

  (c) control of *pest* species and vegetation clearance, and

  (d) the exclusion of stock, except where stock grazing is used to enhance *wetland* values, and

(4) to sustain and enhance Māori f*reshwater* values.

LF-FW-P12 – Otago's *outstanding water bodies*

Otago's *outstanding water bodies* are:

(1) the Kawarau River and tributaries described in the Water Conservation (Kawarau) Order 1997,

(2) Lake Wānaka and the outflow and tributaries described in the Lake Wanaka Preservation Act 1973, and

(3) any other *water bodies* identified in accordance with APP1.

LF-FW-P13 –Identifying and managing *outstanding water bodies*

Identify *outstanding water bodies* and their significant and outstanding values in the relevant *regional plans* and *district plans* and protect those values.

LF-FW-P14 – Preserving natural character and instream values

Preserve the natural character and instream values of *lakes* and *rivers* and the natural character of their *beds* and margins by:

(1) avoiding the *loss of values* or extent of a *river*, unless:

  (a) there is a *functional need* for the activity in that location, and

  (b) the *effects* of the activity are managed by applying the *effects management hierarchy (in relation to natural inland wetlands and rivers*),

(2) not granting *resource consent* for activities in (1) unless the consent authority is satisfied that:

  (a) the application demonstrates how each step of the *effects management hierarchy (in relation to natural inland wetlands and rivers)* will be applied to the *loss of values* or extent of the *river*, and

  (b) any consent is granted subject to conditions that apply the *effects management hierarchy (in relation to natural inland wetlands and rivers)* in respect of any *loss of values* or extent of the *river*,

  (c) if *aquatic offsetting* or *aquatic compensation* is applied, the applicant has complied with principles 1 to 6 in APP5 and APP6, and has had to regard to the remaining principles in APP5 and APP6, as appropriate, and

  (d) if *aquatic offsetting* or *aquatic compensation* is applied, any consent granted is subject to conditions that will ensure that the offsetting or compensation will be maintained and managed over time to achieve the conservation outcomes,

(3) establishing environmental flow and level regimes and *water* quality standards that support the health and well-being of the *water body,*

(4) to the extent practicable, sustaining the form and function of a *water body* that reflects its natural behaviours,

(5) recognising and implementing the restrictions in Water Conservation Orders,

(6) preventing the impounding or control of the level of Lake Wānaka,

(7) preventing modification that would permanently reduce the braided character of a *river*,

(8) controlling the use of *water* and *land* that would adversely affect the natural character of the *water body*, and

(9) maintaining or enhancing the values of riparian margins to support *habitat* and *biodiversity*, reduce *contaminant* loss to *water bodies* and support natural flow behaviour.

LF-FW-P15 – Restoring natural character and instream values

Where the natural character or instream values of *lakes* and *rivers* or the natural character of their margins has been reduced or lost, promote actions that:

(1) restore a form and function that reflect the natural behaviours of the *water body*,

(2) improve *water* quality or quantity where it is *degraded*,

(3) increase the presence, *resilience* and abundance of indigenous flora and fauna, including by providing for fish passage within *river* systems, and where necessary and appropriate, creating fish barriers to prevent incursions from undesirable species,

(4) improve *water body* margins by naturalising bank contours and establishing indigenous vegetation and habitat, and

(5) restore natural connectivity between and within *water* systems.

LF-FW-P16 – *Stormwater discharges*

Minimise the adverse *effects* of direct and indirect *discharges* of *stormwater* to *fresh water* by:

(1) requiring:

  (a) integrated catchment management plans for management of *stormwater* in *urban areas,*

  (b) all *stormwater* to be *discharged* into a reticulated system, where one is made available by the operator of the reticulated system, unless alternative treatment and disposal methods will result in the same or improved outcomes for *fresh water*,

  (c) implementation of methods to progressively reduce unintentional *stormwater* inflows to *wastewater* systems,

  (d) that any *stormwater discharges* do not prevent *water bodies* from meeting any applicable water quality standards set for *FMUs* and/or rohe, and

  (e) the use of *water* sensitive design techniques wherever practicable, and

(2) promoting the reticulation of *stormwater* in *urban areas* where appropriate, and

(3) promoting source control as a method for reducing *contaminants* in *discharges* and the use of good practice guidelines for managing *stormwater.*

LF-FW-P17 – *Discharges* of *wastewater,* animal effluent, *sewage, greywater* and *industrial and trade waste*

Minimise the adverse *effects* of direct and indirect *discharges* of wastewater*,* animal effluent, *sewage, greywater* and *industrial and trade waste* to *fresh water* by:

(1) phasing out existing *discharges* of *wastewater, sewage* or *industrial and trade waste* directly to *freshwater* to the extent practicable,

(2) requiring:

  (a) new *discharges* of *wastewater*, *sewage* or *industrial and trade waste* to be to *land*, unless:

    (i) the adverse *effects* associated with a *discharge* to *land* are demonstrably greater than a discharge to fresh *water,* or

    (ii) the adverse *effects* associated with a *discharge* to *water* are significantly less than, and replace, an existing *discharge(s)*, or

    (iii) the *discharge* is to a constructed *water body* from which there is no *discharge* of water or *contaminants,* and,

  (b) *discharges* of animal effluent from *land-based primary production* to be to *land*,

  (c) that all *discharges* containing *sewage* or *industrial and trade waste* are discharged into a reticulated *wastewater* system, where one is made available by its owner, unless alternative treatment and disposal methods will result in improved outcomes for *fresh water,*

(d) implementation of methods to progressively reduce the frequency and volume of wet weather overflows and minimise the likelihood of dry weather overflows occurring from reticulated *wastewater* systems,

(e) on-site *wastewater* systems and animal effluent systems to be designed and operated in accordance with best practice standards,

(f) that any *discharges* do not prevent *water bodies* from meeting any applicable water quality standards set for *FMUs* and/or rohe,

(3) to the greatest extent practicable, requiring the reticulation of *wastewater* in *urban areas,* and

(4) promoting source control as a method for reducing *contaminants* in *discharges*.

Methods

LF-FW-M3 – Community involvement

Otago Regional Council must work with Kāi Tahu and communities to achieve the objectives and policies in this chapter, including by:

(1) engaging with Kāi Tahu, communities and stakeholders to identify values and *environmental outcomes* for Otago's *FMUs* and rohe and the methods to achieve those outcomes,

(2) encouraging community stewardship of *water* resources and programmes to address *freshwater* issues at a local catchment level, including through catchment groups,

(3) supporting community initiatives, industry-led guidelines, codes of practice and environmental accords that contribute to maintaining or improving the health and well- being of *water bodies*, and

(4) education, advocacy and co-ordination to encourage efficient use of *freshwater*, including *water* harvesting, use of storage and consideration of alternative water supply.

LF-FW-M4 – *Outstanding water bodies*

Otago Regional Council must:

(1) undertake a review based on existing information and develop a list of *water bodies* likely to contain outstanding values, including those *water bodies* listed in LF-FW-P12,

(2) identify the outstanding values of those *water bodies* (if any) in accordance with APP1,

(3) consult with the public and relevant *local authorities* during the identification process,

(4) map *outstanding water bodies* and identify their outstanding and significant values in the relevant *regional plan(s),* and

(5) include provisions in *regional plans* that protect the significant and outstanding values of *outstanding water bodies*.

LF-FW-M5 – *Regional plans*

Otago Regional Council must publicly notify a Land and Water *Regional Plan* and, after it is made operative, maintain that *regional plan* to:

(1) implement the required steps in the NOF process in accordance with the NPSFM,

(2) identify *water bodies* that are *over-allocated* and the methods and timeframes for phasing out that *over-allocation* (including through environmental flows and levels and *limits)* within the timeframes required to achieve the relevant *freshwater* vision,

(3) provide for the allocation and use of *fresh water* in accordance with LF-FW-P9, including by providing for off-stream *water* storage,

(4) identify and manage *wetlands* in accordance with LF-FW-P8 and LF-FW-P11 while recognising that some activities in and around *wetlands* are managed under the NPSFM, NESF and the NESCF,

(5) manage the adverse *effects* of *stormwater* and *discharges* containing animal effluent, *sewage,* or *industrial and trade waste* in accordance with LF-FW-P16 and LF-FW-P17, and

(6) recognise and respond to Kāi Tahu cultural and spiritual concerns about mixing of *water* between different catchments.

LF-FW-M6 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) map *outstanding water bodies* and identify their outstanding and significant values using the information gathered by Otago Regional Council in LF-FW-M4, and

(2) include provisions to protect the significant and outstanding values of *outstanding water bodies*,

(3) include provisions to preserve the natural character of *lakes* and *rivers* and their margins from the adverse *effects* of *land* use and development and activities on the surface of *water*,

(4) require, wherever practicable, the adoption of water sensitive design techniques when managing the *subdivision,* use or development of *land*, and

(5) reduce the adverse *effects* of *stormwater discharges* by managing the *subdivision,* use and development of *land* to:

    (a) minimise the peak volume of *stormwater* needing off-site disposal and the load of *contaminants* carried by it,

    (b) minimise adverse *effects* on *fresh water* and *coastal water* as the ultimate receiving environments, and the capacity of the *stormwater* network,

    (c) encourage on-site storage of rainfall to detain peak *stormwater* flows, and

    (d) promote the use of permeable surfaces.

LF-FW-M7 – Action plans

Otago Regional Council:

(1) must prepare an action plan for achieving any target *attribute* states for *attributes* described in Appendix 2B of the NPSFM,

(2) may prepare an action plan for achieving any target *attribute* states for *attributes* described in Appendix 2A of the NPSFM, and

(3) may prepare an action plan for any other purpose set out in the NPSFM, and

(4) must prepare any action plan in accordance with clause 3.15 of the NPSFM.

LF-FW-M8 – Identifying and managing species interactions between trout and salmon and indigenous species

(1) When making decisions that might affect the interactions between trout and salmon and indigenous species, *local authorities* will have particular regard to the recommendations of the Department of Conservation, the Fish and Game Council for the relevant areas, Kāi Tahu, and the matters set out in LF-FW-M8(2)(a) to (c), and

(2) Otago Regional Council will work with the Department of Conservation, the relevant Fish and Game Council and Kāi Tahu to:

  (a) describe the *habitats* required to provide for the protection of indigenous species for the purposes of (2)(a), (b) and (c),

  (b) identify areas where the protection of the *habitat* of trout and salmon, including fish passage, will be consistent with the protection of the *habitat* of indigenous species and areas where it will not be consistent,

  (c) for areas identified in (b) develop provisions for any relevant action plan(s) prepared under the NPSFM, including for fish passage, that will at minimum:

    (i) determine information needs to manage the species,

    (ii) set short, medium and long term objectives for the species involved,

    (iii) identify appropriate management actions that will achieve the objectives determined in (ii), including measures to manage the adverse *effects* of trout and salmon on indigenous species where appropriate, and

    (iv) consider the use of a range of tools, including those in the Conservation Act 1987 and the Freshwater Fisheries Regulations 1983, as appropriate.

LF-FW-M9 – Integrated catchment management

Otago Regional Council may:

(1) develop and implement an integrated catchment management programme for the region,

(2) work in partnership with *mana whenua* and in collaboration with communities to develop catchment action plans that:

  (a) collate and build on existing work in the catchments,

  (b) incorporate science and mātauraka Māori, and

  (c) identify and target effective environmental management actions, and

(3) encourage and support community initiatives, at varying catchment levels, that help to deliver catchment action plans.

LF-FW-M10 – Monitoring

Otago Regional Council, for every *FMU*, must:

(1) establish a long-term monitoring programme that incorporates cultural health monitoring,

(2) record information (including monitoring data) about the state of *water bodies* and *freshwater* ecosystems and the challenges to their health and well-being

(3) regularly prepare reports on the matters in (1) and (2) and publish those reports in accordance with clause 3.30 of the NPSFM, and

(4) where the results of monitoring show the objectives of this regional policy statement are not being met, take the necessary action to achieve the objectives.

LF-FW-M11 – Other methods

In addition to methods LF-FW-M3 to LF-FW-M10, the methods in the LF-WAI and LF-LS sections are also applicable.

Explanation

LF-FW-E2 – Explanation

This section of the LF chapter outlines how the Council will manage *fresh water* within the region. To give effect to *Te Mana o te Wai*, the *freshwater* visions, and the policies set out the actions required in the development of *regional plan* provisions to implement the NPSFM.

Implementing the NPSFM requires Council to identify *FMUs* that include all *freshwater bodies* within the region. Policy LF-FW-P5 identifies Otago's five *FMUs*: Clutha Mata-au *FMU*, Taiari *FMU*, North Otago *FMU*, Dunedin & Coast *FMU* and Catlins *FMU*. The Clutha Mata-au *FMU* is divided into five sub-*FMUs* known as 'rohe'. Policy LF-FW-P6 sets out the relationship between *FMUs* and rohe which, broadly, requires rohe provisions to be no less stringent than the parent *FMU* provisions. This is to avoid any potential for rohe to set lower standards than others which would affect the ability of the *FMU* to achieve its stated outcomes.

The outcomes sought for *wetlands* are implemented by requiring identification, protection and restoration. The first two policies reflect the requirements of the NPSFM for identification and protection but apply that direction to all *wetlands*, rather than only *natural inland wetlands* (those outside the *coastal marine area*) as the NPSFM directs. This reflects the views of *mana whenua* and the community that *fresh* and *coastal water*, including *wetlands*, should be managed holistically and in a consistent way. While the NPSFM requires promotion of the restoration of *natural inland wetlands*, the policies in this section take a stronger stance, requiring improvement where *wetlands* have been *degraded* or lost. This is because of the importance of restoration to Kāi Tahu and in recognition of the historic loss of *wetlands* in Otago and the *indigenous biodiversity* and hydrological values of wetland systems.

The policies respond to the NPSFM by identifying a number of *outstanding water bodies* in Otago that have previously been identified for their significance through other processes. Additional *water bodies* can be identified they meet the criteria in APP1 which lists the types of values which may be considered outstanding: cultural and spiritual, ecology, landscape, natural character, recreation and physical. The significant values of *outstanding water bodies* are to be identified and protected from adverse *effects*.

Preserving the natural character of *lakes* and *rivers*, and their *beds* and margins, is a matter of national importance under section 6 of the RMA. The policies in this section set out how this is to occur in Otago, reflecting the relevant direction from the NPSFM but also a range of additional matters that are important in Otago, such as recognising existing Water Conservation Orders, the Lake Wanaka Act 1973 and the particular character of braided *rivers*. Natural character has been reduced or lost in some *lakes* or *rivers*, so the policies require promoting actions that will restore or otherwise improve natural character.

The impact of *discharges* of *stormwater* and *wastewater* on *freshwater bodies* is a significant issue for *mana whenua* and has contributed to *water* quality issues in some *water bodies*. The policies set out a

range of actions to be implemented in order to improve the quality of these *discharges* and reduce their adverse *effects* on receiving environments.

Principal reasons

LF-FW-PR2 – Principal reasons

To support the implementation of the NPSFM, the Council is required to develop long-term visions for *fresh water* across the Otago region. *Fresh water* visions for each *FMU* and rohe have been developed through engagement with Kāi Tahu and communities. They set out the long-term goals for the *water bodies* (including *groundwater*) and *freshwater* ecosystems in the region that reflect the history of, and environmental pressures on, the *FMU* or rohe. They also establish ambitious but reasonable timeframes for achieving these goals. The Council must assess whether each *FMU* or rohe can provide for its long-term vision, or whether improvement to the health and well-being of *water bodies* (including *groundwater*) and *freshwater* ecosystems is required to achieve the visions. The result of that assessment will then inform the development of *regional plan* provisions in the *FMU*, including *environmental outcomes, attribute* states, target *attribute* states and *limits (in relation to freshwater).*

Otago's *water bodies* are significant features of the region and play an important role in Kāi Tahu beliefs and traditions. They support people and communities to provide for their social, economic, and cultural well-being. A growing population combined with increased *land* use intensification has heightened demand for *water and* increasing nutrient and sediment contamination impacts *water* quality. The legacy of Otago's historical mining privileges, coupled with contemporary urban and rural *land* uses, contribute to ongoing *water* quality and quantity issues in some *water bodies*, with significant cultural effects.

This section of the LF chapter reflects key direction in the NPSFM for managing the health and well-being of *fresh water*, including *wetlands* and *rivers* in particular, and matters of national importance under section 6 of the RMA. The provisions in this section will underpin the development of the Council's *regional plans* and provide a foundation for implementing the requirements of the NPSFM, including the development of *environmental outcomes*, *attribute* states, target *attribute* states and limits.

Anticipated environmental results

LF-FW-AER3	The *fresh water* visions in this section implement *Te Mana o Te Wai* according to the particular characteristics of *FMUs* and rohe and the outcomes they seek are achieved within the timeframes specified.
LF-FW-AER4	*Fresh water* is allocated within *limits* that contribute to achieving specified *environmental outcomes* for *water bodies* within timeframes set out in *regional plans* that are no less stringent than the timeframes in the LF-FW section of this chapter.
LF-FW-AER5	*Specified rivers* and *lakes* are suitable for primary contact within the timeframes set out in LF-FW-P8.
LF-FW-AER6	*Degraded water* quality is improved so that it meets specified *environmental outcomes* within timeframes set out in *regional plans* that are no less stringent than the timeframes in the objectives in the LF-FW section of this chapter.

LF-FW-AER7	*Water* in Otago's aquifers is suitable for human consumption, unless that *water* is naturally unsuitable for consumption.
LF-FW-AER8	Where *water* is not *degraded*, there is no reduction in *water* quality.
LF-FW-AER9	Direct *discharges* of *wastewater* to *water* are phased out to the greatest extent practicable and the frequency of *wastewater* overflows is reduced.
LF-FW-AER10	The quality of *stormwater discharges* from existing *urban areas* is improved.
LF-FW-AER11	There is an improvement in the extent and condition or quality of Otago's *wetlands*.
LF-FW-AER12	The economic, social, and cultural well-being of communities is sustained.

LF-LS – *Land* and soil

Objectives

LF-LS-O11 – *Land* and soil

The availability and *productive capacity* of *highly productive land* for *primary production* is protected from inappropriate use and development now and for future generations.

LF-LS-O12 – Use, development, and protection

The use, development, and protection of *land* and soil:

(1) safeguards the life-supporting capacity of soil,

(2) sustains the potential of *land* and soil to meet the reasonably foreseeable needs of future generations while recognising the extractive nature of mining,

(3) contributes to achieving *environmental outcomes* for *fresh water*, and

(4) recognises the role of these resources in providing for the social, economic, and cultural well-being of Otago's people and communities.

LF-LS-O13 – Development in *rural areas*

Use and development in Otago's *rural areas* occurs in a way that:

(1) provides for the ongoing use of *rural areas* for *primary production* and *rural industry,*

(2) does not compromise the long term viability of *primary production* and rural communities, and

(3) enables the use and development of native reserves and *Māori land.*

Policies

LF-LS-P18 – Managing *pests*

Reduce the impact of *pests*, including *wilding conifers*, by:

(1) avoiding afforestation and replanting of plantation forests with *wilding conifer* species listed in APP7 within:

    (a) areas identified as outstanding natural features, outstanding natural landscapes, or *significant natural areas*, and

    (b) buffer zones adjacent to the areas listed in (a) where it is necessary to protect those areas,

(2) if the spread risk of the species to be replanted is greater than the species in the existing forest because either the spreading vigour is greater or the species is less palatable, avoiding *replanting* of *plantation forests* with *wilding conifer* species listed in APP7 within:

    (a) outstanding natural features and outstanding natural landscapes, and

    (b) buffer zones adjacent to the areas listed in (a) where it is necessary to protect those areas,

(3) other than the *afforestation* or *replanting* of *plantation forests*, avoiding the planting of *wilding conifer* species listed in APP7 and any other *pests* in a way that is consistent with the Otago Regional Pest Management Plan 2019-2029,

(4) enabling the control of *pests* on *land,* and

(5) supporting initiatives to control or eliminate *pests* and limit or prevent their further spread.

LF-LS-P19 – Maintaining soil quality

Maintain soil quality by managing both *land* and *freshwater* resources, including the interconnections between soil health, vegetative cover and *water* quality and quantity.

LF-LS-P20 – Soil values

Maintain the health and productive potential of soils, to the extent reasonably practicable, by managing the use and development of *land* in a way that is suited to the soil characteristics and that sustains mauri through healthy:

(1) soil biological activity and *biodiversity*,

(2) soil structure, and

(3) soil fertility.

LF-LS-P21 – Soil erosion

Minimise soil erosion, and the associated risk of sedimentation in *water bodies*, resulting from *land* use activities by:

(1) maintaining vegetative cover on erosion-prone *land,* to the extent practicable,

(2) implementing management practices to minimise the potential for soil to be *discharged* to *water bodies,* including by controlling the timing, duration, scale and location of soil exposure, and

(3) promoting activities that enhance soil retention.

LF-LS-P22 – *Land* use change

Promote changes in *land* use or *land* management practices that support and improve:

(1) the sustainability and efficiency of *water* use,

(2) resilience to the impacts of *climate change,*

(3) the health and quality of soil, or

(4) *water* quality.

LF-LS-P23 – *Land* use and *fresh water*

The health and well-being of *water bodies* and *freshwater* ecosystems is maintained or, if *degraded*, improved to meet *environmental outcomes* set for *FMUs* and/or rohe by:

(1) reducing or otherwise managing the adverse *effects* of direct and indirect *discharges* of *contaminants* to *water* from the use and development of *land*,

(2) managing *land* uses that may have adverse *effects* on the flow of *water* in surface *water bodies* or the recharge of *groundwater*,

(3) recognising the drylands nature of some of Otago and the resulting *low* water availability, and

(4) maintaining or, where degraded, enhancing the values of riparian margins.

LF-LS-P24 – Highly productive land

Maintain the availability and *productive capacity* of *highly productive land* by identifying and managing the use of *highly productive land* in accordance with the NPSHPL.

LF-LS-P25 –*Rural areas*

The management of use and development in *rural areas*:

(1) maintains *rural areas* as places where people live, work and recreate and where a range of activities and services are required to support these rural functions, and provide for social and economic well-being within rural communities and the wider region,

(2) prioritises land-based *primary production* on *highly productive land* in accordance with the NPSHPL, except as provided for in (4) below,

(3) provides for *primary production*, *rural industry,* and supporting activities, and recognises:

  (a) the importance of these activities to the social and economic well-being of Otago's communities, and

  (b) that mining and aggregate activities can only be located where those resources are present,

(4) enables the use by Kāi Tahu of native reserves and *Māori land* in accordance with MW-P4,

(5) restricts the establishment of non-rural activities which could adversely affect, including by way of *reverse sensitivity* or fragmentation, the *productive capacity* of *highly productive land*, or existing or anticipated *primary production* and *rural industry* activities, except as provided for in (4) or the NPSHPL, and

(6) recognises the national and regional importance of the Otago Corrections Facility to the health, safety and welfare of communities and enables its continued use, upgrading and development, including by:

  (a) avoiding the establishment of incompatible activities which could give rise to adverse *effects* on the security and operation of the Facility and/or the welfare of its occupants; and

  (b) managing the adverse *effects* of *primary production* and *rural industry* on the security and operation of the Facility and/or the welfare of its occupants.

LF-LS-P26 – Rural lifestyle development

The establishment, development or expansion of rural lifestyle development only occurs where:

(1) it avoids *land* identified for future urban development in a relevant plan or *land* reasonably likely to be required for its future urban development potential, where the rural lifestyle or rural residential development would foreclose or reduce efficient realisation of that urban development potential,

(2) it minimises impacts on existing or anticipated *primary production, rural industry* and other rural activities and the potential for *reverse sensitivity effects,*

(3) it avoids *highly productive land* except as provided for in the NPSHPL,

(4) the suitability of the area to accommodate the proposed development is demonstrated, including

(a) capacity for servicing by existing or planned *development infrastructure* (including self-servicing requirements),

(b) particular regard is given to the individual and cumulative impacts of *water* supply, *wastewater* disposal, and *stormwater* management including self-servicing, on the receiving or supplying environment and impacts on capacity of *development infrastructure*, if provided, to meet other planned urban area demand, and

(c) likely future demands or implications for publicly funded services including emergency services and *additional infrastructure*

LF-LS-P27 – Public access

Provide for public access to and along *lakes* and *rivers* by:

(1) maintaining existing public access,

(2) seeking opportunities to enhance public access, including access by *mana whenua* in their role as kaitiaki and for gathering of *mahika kai*, and

(3) encouraging landowners to avoid restricting access unless it is necessary to protect:

(a) health and safety,

(b) *significant natural areas*,

(c) areas of outstanding natural character,

(d) outstanding natural features and landscapes,

(e) places or areas with special or outstanding *historic heritage* values, or

(f) places or areas of significance to Kāi Tahu, including wāhi taoka, wāhi tapu and *wāhi tupuna*,

(g) establishing vegetation, or

(h) a level of security consistent with the operational requirements of a lawfully established activity.

Methods

LF-LS-M12 – Identification of *highly productive land*

(1) Otago Regional Council must identify *highly productive land* in Otago in accordance with LS-LS-P7:

(a) in collaboration with *territorial authorities*,

(b) in consultation with *mana whenua*, and

(c) in consultation with owners of Māori freehold land in relation to their land, and

(2) Otago Regional Council must include maps of the *highly productive land* identified in accordance with (1) in the Regional Policy Statement by the date specified in the NPSHPL.

LF-LS-M13 – *Regional plans*

Otago Regional Council must publicly notify a Land and Water *Regional Plan* and then, when it is made operative, maintain that *regional plan* to:

(1) manage *land* uses that may affect the ability of *environmental outcomes* for *water* quality to be achieved by requiring:

  (a) the development and implementation of *certified freshwater farm plans*

  (b) the adoption of practices that reduce the risk of sediment and nutrient loss to *water*, including by minimising the area and duration of exposed soil, using buffers, and actively managing critical source areas,

  (c) effective management of effluent storage and applications systems, and

  (d) *earthworks* activities to implement effective sediment and erosion control practices and setbacks from *water bodies* to reduce the risk of sediment loss to *water*, and

(2) provide for changes in *land* use that improve the sustainable and efficient use of *fresh water* and that reduce water demand where there is existing *over-allocation*, and

(3) enable the *discharge* of *contaminants* to *land* for *pest* control, and

(4) implement policies LF-LS-P19 to LF-LS-P27.

LF-LS-M14 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) manage activities that may affect the ability of *environmental outcomes* for *fresh water* to be achieved,

(2) manage *land* use change by:

  (a) managing the planting of *pest plants* in accordance with LF-LS-P18, and, when identifying any need for and size of a buffer zone for the purposes of LF-LS-P18, *territorial authorities* must justify in the circumstances of each district the use of a buffer zone in addition to the NESCF to prevent the spread of *wilding conifer* species listed in APP7 into the area to be protected,

  (b) avoiding, where practicable, and otherwise minimising the removal of montane tall tussock grasslands, to recognise their ability to capture and hold precipitation, and

(3) provide for and promote the creation and enhancement of vegetated riparian margins and constructed *wetlands*, and maintain these where they already exist,

(4) facilitate public access to and along *lakes* and *rivers* by:

  (a) requiring the establishment of *esplanade reserves* and *esplanade strips*, and

  (b) promoting the use of legal *roads*, including paper *roads*, and any other means of public access rights that connect with *esplanade reserves* and *esplanade strips*., and

(5) maintain the availability and *productive capacity* of *highly productive land* identified and mapped under LF-LS-M12 in accordance with LF-LS-P24, and

(6) manage development in *rural areas* in accordance with LF-LS-P25,

(7) manage rural lifestyle activities development in in accordance with LF-LS-P26.

LF-LS-M15 – Management of *beds* and riparian margins

Local authorities must prepare or amend and maintain their *regional plans* and *district plans* to manage the condition of the *bed* and banks of *water bodies*, riparian margins and associated *lands*, including vegetative cover, to:

(1) maintain or enhance existing *indigenous biodiversity* values,

(2) increase the presence, resilience and abundance of indigenous flora and fauna, particularly taoka species, including by providing for *wetlands* and *biodiversity* corridors within *river* systems, and requiring riparian buffers that are sufficient to maintain *indigenous biodiversity*,

(3) support improvement in the functioning of catchment processes where these have been adversely affected by changes in margins and connected *lands* over time, and

(4) reduce unnatural sedimentation of *water bodies*.

LF-LS-M16 – Other methods

In addition to methods LF-LS-M12, to LF-LS-M15, the methods in the LF-WAI and LF-FW sections are also applicable.

Explanation

LF-LS-E3 – Explanation

The policies in this section of the LF chapter seek to maintain the health of Otago's soils, reduce the impact of *pests* and manage *land* uses as part of an integrated approach to sustaining soil and *water* health and maintaining the *productive capacity* of rural land. The connections and interactions between these resources require a holistic approach to management.

The policies require managing the use and development of *land* and *fresh water* to maintain soil values, recognising that soil can be valued for more than its productive use and those values should be maintained. Soil erosion is problematic and has adverse impacts on both soil and *water* health. The policies provide direction for managing erosion resulting from *land* use activities to ensure soil is retained and to prevent its *discharge* to *water*.

In addition, this chapter seeks to manage development in Otago's *rural areas,* to support the viability of the rural sector. This includes direction on the different types of development within *rural areas,* including rural lifestyle development. These provisions work closely with those in the UFD chapter, which include direction on managing the impacts of urban growth on *rural areas.*

Highly productive land is *land* used for *land-based primary production* that provides economic and employment benefits. Providing for and managing such *land* types is essential to ensure its sustainability. The policies seek to identify and prioritise *land* used for productive purposes managing urban encroachment into rural environments where appropriate.

Responding to *climate change* and achieving *freshwater* visions is likely to require changes in *land* uses and land management practices in parts of Otago. This is recognised in the policies which seek to promote changes in *land* use or management that improve efficient and sustainable use of *water*, *resilience* to *climate change,* the health and quality of soil, and *water* quality. The policies also require reducing *discharges* to *water* from the use and development of *land* and managing *land* uses that are unsupportive of *environmental outcomes* for *fresh water* as identified by each *FMU*.

Maintaining public access to and along *lakes* and *rivers* is a matter of national importance under section 6 of the RMA. The policies in this section seek to maintain existing public access opportunities and where appropriate promote enhanced public access to and along *lakes* and *rivers*. Circumstances which restrict public access are set out where, for example, health and safety is at risk or valued parts of the *environment* may be compromised.

Principal reasons

LF-LS-PR3 – Principal reasons

Pests, including *wilding conifers,* pose a range of threats to Otago's environment. While the regional pest management plan is the primary tool for controlling *pests* under the Biosecurity Act 1993, it is important that the management of *land* works alongside that tool to reduce the impacts of *pests.*

Population growth and *land* use intensification in urban and rural environments has increased demand for *land* and soil resources. It has also impacted on the quality of our *water*, increasing contamination such as by nutrients and sediment and harming ecosystems. In Otago, historical and contemporary *land* uses have *degraded* some *water bodies*, both in terms of their quantity and quality, leading to adverse effects on the mauri of *water* and the diversity and abundance of *mahika kai* resources.

Soil health is vital to wider ecological health, human health, and economic *resilience*. Otago has a rich and long history of varied forms of *land-based primary production* on a wide range of soil types and in variable climatic conditions. Otago's highest quality soils (in terms of suitability for *land-based primary production*) are mainly on the Taiari Plain, North Otago downlands, South Otago lowlands, parts of Central Otago and the Strath Taieri, and along some *river* margins. Their extent is limited and use of these soils can be constrained by external factors such as economics, erosion, natural and human induced hazards, animal, and plant *pests*.

Managing *land* uses is a critical component of implementing the NPSFM due to the effects of *land* use on the health and well-being of *water*. This chapter assists the Council to recognise and provide for the connections and interactions between Otago's *land* and *fresh water*, while managing the use and development of this *land*, and its effects on *fresh water*.

Rural areas contain activities and resources critical for rural production. There is pressure from non-rural activities and rural lifestyle development to locate within the *rural area*, but these activities can be sensitive to *primary production* or *rural industry* and can adversely affect rural production. The provisions in this chapter focus on managing the potential *effects* of development on productive potential and the wide range of environmental values, features and resources that *rural areas* contain. The supply of rural lifestyle opportunities to meet demand should be directed to suitably located and zoned areas to minimise impacts on values in *rural areas*. In designing and planning for rural lifestyle development, *local authorities* will need to be aware of the potential future constraints on future urban expansion and development, including the cumulative impacts of *infrastructure* servicing irrespective of whether this is onsite, community or through connections to urban reticulated schemes.

Riparian areas, in particular, play a key role in supporting the *water* quality and ecosystem values of *water bodies,* and it is important that this role is maintained.

Anticipated environmental results

LF-LS-AER13	The area of *land* vegetated by *wilding conifers* is reduced.
LF-LS-AER14	The extent and distribution of *pests* does not increase.
LF-LS-AER15	The life-supporting capacity of soil is maintained or improved throughout Otago.
LF-LS-AER16	The availability and capability of Otago's *highly productive land* is maintained.
LF-LS-AER17	The use of *land* supports the achievement of *environmental outcomes* and objectives in Otago's *FMUs* and rohe.
LF-LS-AER18	New rural lifestyle development occurs within areas appropriate for this use.
LF-LS-AER19	The establishment of activities within *rural areas* does not result in adverse *effects* on activities functionally dependent on rural resources and rural surroundings.

TOPICS

ECO – Ecosystems and indigenous *biodiversity*

Objectives

ECO-O1 – *Indigenous biodiversity*

Otago's *indigenous biodiversity* is healthy and thriving and, at a minimum, any overall decline in condition, quantity and diversity is halted.

ECO-O2 – Restoring and enhancing

Restoration and enhancement activities result in an overall increase in the extent and *occupancy* of Otago's *indigenous biodiversity*.

ECO-O3 – *Kaitiakitaka* and stewardship

Kāi Tahu exercise their rakatirataka and role as kaitiaki of Otago's *indigenous biodiversity*, and Otago's communities are recognised as stewards, who are responsible for:

(1) te hauora o te koiora (the health of *indigenous biodiversity*), te hauora o te taoka (the health of species and ecosystems that are taoka), and te hauora o te taiao (the health of the wider *environment*), while

(2) providing for te hauora o te takata (the health of the people).

ECO-O4 – Social, economic and cultural well-being

While achieving ECO-O1, ECO-O2 and ECO-O3, the social, cultural and economic well-being of people and communities now and in the future is provided for.

Policies

ECO-P1 – Coastal and *freshwater indigenous biodiversity*

This chapter applies to all forms of *indigenous biodiversity* except that:

(1) ECO-P3 only applies to *land* covered by *water, water bodies*, or *freshwater* ecosystems that are not within a *natural inland wetland* if those areas are contained within a wider *significant natural area* identified in accordance with ECO-M2, and

(2) ECO-P4, ECO-P5, ECO-P6, ECO-P7, and ECO-P12 do not apply in the coastal environment or to *land* covered by *water, water bodies*, or *freshwater* ecosystems.

ECO-P2 – *Kaitiakitaka*

Enable Kāi Tahu to exercise their role as kaitiaki of Otago's *indigenous biodiversity* by:

(1) partnering with Kāi Tahu in the management of *indigenous biodiversity* to the extent desired by *mana whenua*,

(2) working with Kāi Tahu to identify *indigenous species* and ecosystems that are taoka,

(3) incorporating the use of mātauraka Māori in the management and monitoring of *indigenous biodiversity*, and

(4) facilitating access to and use of *indigenous biodiversity* by Kāi Tahu, including *mahika kai*, according to tikaka.

ECO-P3 – Identifying *significant natural areas* and taoka

Except as provided for by ECO-P1, identify and map:

(1) the areas of significant *indigenous vegetation* or significant *habitat* of indigenous fauna that qualify as *significant natural areas* using the assessment criteria in APP2 and in accordance with ECO-M2, and

(2) where appropriate, *indigenous species* and ecosystems that are taoka, including those identified by *mana whenua* as requiring protection, in accordance with ECO-M3.

ECO-P4 – Protecting *significant natural areas* and taoka

Except as provided for by ECO-P1, ECO-P5, and ECO-P6:

(1) protect *significant natural areas* by first avoiding the following adverse *effects*:

  (a) loss of ecosystem representation and extent,

  (b) disruption to sequences, mosaics, or *ecosystem function*,

  (c) fragmentation of *significant natural areas* or the loss of buffers or connections within an *SNA*,

  (d) a reduction in the function of the *significant natural area* as a buffer or connection to other important *habitats* or ecosystems, or

  (e) a reduction in the population size or occupancy of *Threatened or At Risk (declining) species* that use a *significant natural area* for any part of their life cycle, and

(2) protect *indigenous species* and ecosystems that are taoka by first avoiding adverse *effects* that result in any loss of taoka values identified by *mana whenua* as requiring protection under ECO-P3(2), and

(3) after (1) and (2), applying the *effects management hierarchy (in relation to indigenous biodiversity)* to areas and values other than those covered by ECO-P4(1), and

(4) prior to *significant natural areas* and *indigenous species* and ecosystems that are taoka being identified and mapped in accordance with ECO-P3, adopt a precautionary approach towards activities in accordance with IM-P4(2).

ECO-P5 – Provision for specified new activities

Except as provided for by ECO-P1, maintain Otago's indigenous *biodiversity* by following the sequential steps in the *effects management hierarchy (in relation to indigenous biodiversity)* when making decisions on plans, applications for *resource consent* or notices of requirement for the following activities in *significant natural areas*, or where they may adversely affect *indigenous species* and ecosystems that are taoka (but are not specified *highly mobile fauna)* that have been identified by *mana whenua* as requiring protection:

(1) except as provided for in (2), new *subdivision*, use or development for the purpose of the construction or upgrade of *specified infrastructure* that provides significant national or regional

public benefit that has a *functional need* or *operational need* to locate within the relevant *significant natural area(s)* or where they may adversely affect *indigenous species* or ecosystems that are taoka, and there are no practicable alternative locations,

(2) the development, operation, maintenance or upgrade of *renewable electricity generation* that provides significant national or regional public benefit that has a *functional need* or *operational need* to locate within the relevant *significant natural area(s)* or where they may adversely affect *indigenous species* or ecosystems that are taoka, and alternative sites, methods and designs have been considered under EIT-EN-P17,

(3) new *subdivision,* use or development for the purpose of *mineral* extraction that provides a significant national public benefit that could not otherwise be achieved within New Zealand and that have a *functional need* or *operational need* to locate within the relevant *significant natural area(s)* or where they may adversely affect *indigenous species* or ecosystems that are taoka, and there are no practicable alternative locations,

(4) new *subdivision,* use or development for the purpose of aggregate extraction that provides a significant national or regional benefit that could not otherwise be achieved within New Zealand and that have a *functional need* or *operational need* to locate within the relevant *significant natural area(s)* or where they may adversely affect *indigenous species* or ecosystems that are taoka, and there are no practicable alternative locations, and

(5) the sustainable use of *mahika kai* and kaimoana (seafood) by *mana whenua*.

(6) activities that are for the purpose of protecting, maintaining, restoring or enhancing a *significant natural area* or *indigenous species* or ecosystems that are taoka,

(7) activities that are for the purpose of addressing a severe or immediate risk to public health or safety,

(8) activities that are for the purpose of developing a single residential dwelling on an allotment that was created before 4 August 2023, and can demonstrate there is no practicable location within the allotment where a single residential dwelling and essential associated on-site infrastructure can be constructed, or

(9) activities that are for the purpose of harvesting indigenous tree species from a *significant natural area* carried out in accordance with a forest management plan or permit under Part 3A of the Forests Act 1949.

ECO-P6 – Managing adverse *effects* of *established activities* on *significant natural areas*

Except as provided for by ECO-P7, enable *established activities* (excluding activities managed under ECO-P4 and ECO-P5) where the *effects* of the activity, including cumulative *effects*, on a *significant natural area*:

(1) are no greater in intensity, scale, or character over time than at 4 August 2023, and

(2) do not result in the loss of extent or degradation of *ecological integrity* of a *significant natural area,* subject to ECO-P11.

ECO-P7 – Maintaining *indigenous biodiversity*

Except as provided for by ECO-P1, and excluding areas protected under ECO-P4, manage Otago's *indigenous biodiversity* by all of the following:

(1) applying the *effects management hierarchy (in relation to indigenous biodiversity)* to manage significant adverse *effects* on *indigenous biodiversity* and recognising and providing for the protection of significant *indigenous biodiversity* values identified under ECO-M2(5),

(2) requiring the *maintenance of indigenous biodiversity* for all other adverse *effects* of any activity, and

(3) notwithstanding (1) and (2) above, for *regionally significant infrastructure* and *nationally significant infrastructure* that is either *renewable electricity generation* or the *National Grid* avoid, remedy or mitigate adverse *effects* to the extent practicable, and

(4) when significant *indigenous biodiversity* values are identified under ECO-M2(5), protecting those values in *district plans*.

ECO-P8 – *Restoration* and enhancement

The extent, *occupancy* and condition of Otago's *indigenous biodiversity* is increased by:

(1) restoring and enhancing *habitat* for *indigenous species*, including taoka and *mahika kai* species,

(2) improving the health and *resilience* of *indigenous biodiversity*, including ecosystems, species, *ecosystem function*, and *intrinsic values*,

(3) buffering or linking ecosystems, *habitats* and ecological corridors, ki uta ki tai, and

(4) prioritising all the following for *restoration*:

  (a) *significant natural areas* whose *ecological integrity* is *degraded*,

  (b) threatened and rare ecosystems representative of naturally occurring and formerly present ecosystems,

  (c) areas that provide important connectivity or buffering functions,

  (d) areas of *indigenous biodiversity* on native reserves and *Māori land* where *restoration* is advanced by the Māori landowners,

  (e) any other priorities specified in regional biodiversity strategies or any national priorities for *indigenous biodiversity restoration*.

ECO-P9 – Integrated approach

Manage *indigenous biodiversity* and the *effects* on it from *subdivision*, use and development in an integrated way, which means:

(1) ensuring any permitted or controlled activity in a *regional plan* or *district plan* rule does not compromise the achievement of ECO-O1,

(2) recognising the interactions ki uta ki tai (from the mountains to the sea) between the terrestrial *environment*, *fresh water*, and the *coastal marine area*, including:

  (a) the migration of fish species between *fresh* and *coastal waters*, and

  (b) the *effects* of *land* use activities on coastal biodiversity and ecosystems,

(3) acknowledging that *climate change* will affect *indigenous biodiversity* and managing activities which may exacerbate the *effects* of *climate change*,

(4) providing for the coordinated management and control of *subdivision*, use and development, as it affects *indigenous biodiversity* across administrative boundaries,

(5) working towards aligning strategies and other planning tools required or provided for in legislation that are relevant to *indigenous biodiversity*,

(6) recognising the critical role of people and communities in actively managing the remaining *indigenous biodiversity* occurring on private *land,* and

(7) adopting regulatory and non-regulatory regional *pest* management programmes (including, where necessary, in relation to *wilding conifers*).

ECO-P10 – Resilience to *climate change*

Promote the resilience of *indigenous biodiversity* to *climate change*, including at least by:

(1) allowing and supporting the natural adjustment of *habitats* and ecosystems to the changing climate, and

(2) considering the *effects* of *climate change* when making decisions on:

  (a) *restoration* proposals, and

  (b) managing and reducing new and existing biosecurity risks, and

(3) maintaining and promoting the enhancement of the connectivity between ecosystems, and between existing and potential *habitats*, to enable migrations so that species can continue to find viable niches as the climate changes, and

(4) recognising the role of *indigenous biodiversity* in mitigating and adapting to the *effects* of *climate change*.

ECO-P11 – Plantation forestry activities

Manage:

(1) the adverse *effects* of *plantation forestry* activities in any existing *plantation forest* on any *significant natural area* in a manner that:

  (a) maintains *indigenous biodiversity* in the *significant natural area* as far as practicable, while

  (b) provides for *plantation forestry* activities to continue, and

(2) over the course of consecutive rotations of production, any part of a *significant natural area* that is within an area of an existing *plantation forest* that is planted, or is intended to be, replanted in trees for harvest in the manner necessary to maintain the long-term populations of any *Threatened or At Risk (declining) species* present in the area, and

(3) the maintenance of *indigenous biodiversity* under ECO-P7 in a way that provides for *plantation forestry* activities to continue.

ECO-P12 – Managing *indigenous biodiversity* on native reserves and *Māori land*

In relation to native reserves and *Māori land* outside the coastal environment, recognise and give practical effect to Kāi Tahu rakatirataka and *kaitiakitaka* by:

(1) enabling *mana whenua*, and owners of Māori freehold *land* in relation to their *land*, to lead approaches to the management of the *effect*s of use and development of native reserves and *Māori land* on *indigenous biodiversity*, in accordance with mātauraka and tikaka,

(2) applying mātauraka and tikaka to protect identified taoka and SNAs, and maintain and restore *indigenous biodiversity*:

    (a) to the extent practicable,

    (b) in a manner appropriate to the particular native reserve or *Māori land*, and

    (c) having regard to the principles of the Treaty of Waitangi, and the purpose of the redress provided for in the NTCSA, including redress arising from the Ancillary Claims and SILNA, and

(3) recognising that there are circumstances where the use and development of native reserves and *Māori land*, as provided in MW-P4, will prevail over the *indigenous biodiversity* values of that *land*, and

(4) recognising that this policy applies instead of ECO-P4 to ECO-P7 in relation to native reserves and *Māori land*.

Methods

ECO-M1 – Statement of responsibilities

In accordance with section 62(1)(i)(iii) of the RMA, the *local authorities* responsible for the control of *land* use to maintain indigenous *biological diversity* are:

(1) the regional council and *territorial authorities* are responsible for specifying objectives, policies and methods in *regional plans* and *district plans* for managing the margins of *wetlands*, *rivers* and *lakes*,

(2) the regional council is responsible for specifying objectives, policies and methods in *regional plans*:

    (a) in the *coastal marine area*,

    (b) in *wetlands*, *lakes* and *rivers*, and

    (c) in, on or under the *beds* of *rivers* and *lakes*,

(3) in addition to (1), *territorial authorities* are responsible for specifying objectives, policies and methods in *district plans* outside of the areas listed in (2) above if they are not managed by the regional council under (4), and

(4) the regional council may be responsible for specifying objectives, policies and methods in *regional plans* outside of the areas listed (1) above if:

    (a) the regional council reaches agreement with the relevant *territorial authority* or *territorial authorities*, and

    (b) if applicable, a transfer of powers in accordance with section 33 of the RMA occurs from the relevant *territorial authority* or *territorial authorities* to the regional council.

ECO-M2 – Identification of *significant natural areas*

Local authorities must:

(1) in accordance with the statement of responsibilities in ECO-M1, identify the areas and *indigenous biodiversity* values of *significant natural areas* as required by ECO-P3, and

(2) map (including verification wherever practicable) the areas and include the *indigenous biodiversity* values identified under (1) in the relevant *regional plans* and *district plans*, and

(3) identify areas and values of *indigenous biodiversity* within their jurisdictions in accordance with CE-P6, map the areas and describe their values in the relevant *regional plans* and *district plans,* and

(4) recognise that *indigenous biodiversity* spans jurisdictional boundaries by:

    (a) working collaboratively to ensure the areas identified by different *local authorities* are not artificially fragmented when identifying *significant natural areas* that span jurisdictional boundaries, and

    (b) ensuring that *indigenous biodiversity* is managed in accordance with this RPS,

(5) until *significant natural areas* are identified and mapped in accordance with (1) and (2), require ecological assessments to be provided with applications for *resource consent*, plan changes and notices of requirement that identify whether affected areas are *significant natural areas* in accordance with APP2, and

(6) in the following areas, prioritise identification under (1):

    (a) intermontane basins that contain *indigenous vegetation* and *habitats*,

    (b) areas of dryland shrubs,

    (c) areas which include braided *river* systems, including the Makarore, Mātakitaki and Lower Waitaki Rivers,

    (d) areas of montane tall tussock grasslands, and

    (e) limestone habitats, and

(7) when identifying *significant natural areas,* ensuring that:

    (a) if the values or extent of a proposed *significant natural area* are disputed by the landowner, the *local authority*:

        (i) conducts a physical inspection of the area, or

        (ii) if a physical inspection is not practicable, uses the best information available to it at the time, and

    (b) if requested by a *territorial authority,* the regional council will assist the *territorial authority* in undertaking its district-wide assessment, and

    (c) where a *territorial authority* has identified a *significant natural area*, a suitably qualified ecologist is engaged by the *territorial authority* to confirm that the methodology originally used to identify the area as a *significant natural area*, and its application, is consistent with the assessment approach in APP2 in accordance with any timeframes specified in the NPSIB, and

    (d) if a *local authority* becomes aware (as a result of a *resource consent* application, notice of requirement or any other means) that an area may be an area of significant *indigenous*

vegetation or significant *habitat* of indigenous fauna that qualifies as a *significant natural area*, the *local authority*:

(i) conducts an assessment of the area in accordance with APP2 as soon as practicable, and

(ii) if a new *significant natural area* is identified as a result, includes it in the next appropriate plan or plan change notified by the *local authority*, and

(e) when a *territorial authority* does its 10-yearly plan review, it assesses its district in accordance with ECO-P3 and APP2 to determine whether changes are needed, and

(8) allow an area of Crown-owned land to qualify as a *significant natural area* without the need for the assessment required by ECO-P3, using APP2, if:

(a) the *land* is managed by the Department of Conservation under the Conservation Act 1987 or any other Act specified in Schedule 1 of that Act, and

(b) the *territorial authority* is reasonably satisfied, after consultation with the Department of Conservation, that all or most of the area would qualify as a *significant natural area* under APP2, and

(c) the area is:

(i) a large and more-or-less contiguous area managed under a single protection classification (such as a national park), or

(ii) a large, compact, and more-or-less contiguous area under more than one classification (such as adjoining reserves and a conservation park), or

(iii) a well-defined landscape or geographical feature (such as an island or mountain range), or

(iv) a scientific, scenic or nature reserve under the Reserves Act 1977, a sanctuary area, ecological area, or wildlife management area under the Conservation Act 1987, or an isolated part of a national park.

ECO-M3 – Identification of taoka

Local authorities must:

(1) work together with *mana whenua* to agree a process for:

(a) identifying *indigenous species* and ecosystems that are taoka, including those identified by *mana whenua* as requiring protection, and how they are values with reference to mātauraka Māori,

(b) describing the taoka identified in (1)(a),

(c) mapping or describing the location of the taoka identified in (1)(a), and

(d) describing the values of each taoka identified in (1)(a), and

(2) notwithstanding (1), recognise that *mana whenua* have the right to choose not to identify taoka and to choose the level of detail at which identified taoka, or their location or values, are described, and

(3) to the extent agreed by *mana whenua*, amend their *regional plans* and *district plans* to include matters (1)(b) to (1)(d) above, and

(4) recognise that the possible adverse *effects* on identified taoka include *effects* on:

(a) the mauri of the taoka,

(b) the values of the taoka as identified by *mana whenua,*

(c) the historical, cultural, and spiritual relationship of *takata whenua* with the taoka*,* as identified by *mana whenua,* and

(5) notify the relevant landowner of the presence of the taoka prior to identifying acknowledged taoka in a proposed *district plan.*

ECO-M4 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) provide for the use of *lakes* and *rivers,* and their *beds,* including:

(a) activities undertaken for the purposes of *pest* control or maintaining or enhancing the *habitats* of indigenous fauna, and

(b) the maintenance and use of existing *structures* that are lawfully established (including *infrastructure*), and

(c) *infrastructure* that has a *functional need* or *operational need* to be sited or operated in a particular location,

(2) manage the clearance or modification of *indigenous vegetation,* while allowing for *mahika kai* and kaimoana (seafood) activities (including through the development, in partnership with *mana whenua*, of provisions for *mahika kai* and kaimoana activities that may provide an alternative approach to *effects* management than the policies in this ECO chapter (in accordance with ECO-M8,

(3) provide for activities undertaken for the purpose of restoring or enhancing the *habitats* of indigenous fauna, and

(4) recognise that where access to and use of *indigenous biodiversity* by any person would require access to or through private *land*, such access is subject to the consent of the landowner.

ECO-M5 – Increasing indigenous vegetation cover

(1) Otago Regional Council must:

(a) assess the percentage of *indigenous vegetation* cover in

(i) each of its *urban environments*; and

(ii) its non-urban environments

(b)the assessment may be done by a desktop analysis, by ground truthing, or both, and must be done in collaboration with relevant *territorial authorities* and *mana whenua* (to the extent they wish to be involved),

(c) set a target of at least 10% *indigenous vegetation* cover for any urban or non-urban environment that has less than 10% cover of *indigenous vegetation*, and

(i) consider, in consultation with *mana whenua* and *territorial authorities*, setting higher targets for urban and non-urban environments that already have at least 10% coverage of *indigenous vegetation*, and

(ii) include any *indigenous vegetation* cover targets in their regional policy statements.

(2) *Local authorities* must promote the increase of *indigenous vegetation* cover in their regions and districts through objectives, policies, and methods in their policy statements and plans:

(a) having regard to any targets set under ECO-M5(1)(c); and

(b) giving priority to all the following:

(i) areas referred to in ECO-P8(4),

(ii) ensuring *indigenous species* richness appropriate to the ecosystem,

(iii) *restoration* at a landscape scale across the region, and

(iv) using species, and seed from species, that are local to the area.

ECO-M6 – *Specified highly mobile fauna*

Local authorities must:

(1) include objectives, policies, or methods in their policy statements and plans for managing the adverse *effects* of new *subdivision*, use, and development on highly mobile fauna areas, in order to maintain viable populations of *specified highly mobile fauna* across their natural range, and

(2) provide information to their communities about:

(a) highly mobile fauna and their *habitats;* and

(b) best practice techniques for managing adverse *effects* on any *specified highly mobile fauna* and their *habitats* in their regions and districts.

ECO-M7 – *Maintenance of improved pasture for farming*

Local authorities must allow the *maintenance of improved pasture* to continue if:

(1) there is adequate evidence to demonstrate that the *maintenance of improved pasture* is part of a regular cycle of periodic maintenance of that pasture; and

(2) any adverse *effects* of the *maintenance of improved pasture* on a *significant natural area* are no greater in intensity, scale, or character than the *effects* of activities previously undertaken as part of the regular cycle of periodic maintenance of that pasture; and

(3) the *improved pasture* has not itself become a *significant natural area*; and

(4) the *land* is not an uncultivated *depositional landform;* and

(5) the *maintenance of improved pasture* will not adversely affect a *Threatened or At Risk (declining)* species.

ECO-M8 – Native reserves and Māori land

Local authorities must:

(1) work in partnership (which includes acting in good faith) with *mana whenua* and owners of native reserves and *Māori land* to develop, and include in *district plans* and *regional plans* objectives, policies, and methods that may include providing an alternative approach to *effects* management for *indigenous biodiversity* than the policies in this ECO chapter (excluding ECO-P12), and

(2) ensure that objectives, policies, and methods developed under (1):

(a) enable new occupation, use, and development of native reserves and *Māori land* to support the social, cultural, and economic well-being of *mana whenua* and owners of Māori freehold *land,* and

(b) enable the provision of new *papakāika,* marae and ancillary community facilities, dwellings, and associated *infrastructure*, and

(c) enable alternative approaches to, or locations for, new occupation, use and development that avoid, minimise, or remedy adverse *effects* on *significant natural areas* and identified taoka on native reserves and *Māori land*, and enable options for offsetting and compensation, and

(d) recognise and be responsive to the fact there may be no or limited alternative location for *mana whenua* and owners of Māori freehold *land* to occupy, use, and develop their *lands*, and

(e) recognise that there are circumstances where development will prevail over *indigenous biodiversity,* and

(f) recognise and be responsive to any recognised historical barriers *mana whenua* and owners of Māori freehold *land* have faced in occupying, using, and developing their ancestral lands.

ECO-M9 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) provide for the use of *land* and the surface of *water bodies* including:

(a) activities undertaken for the purposes of *pest* control or maintaining or enhancing the *habitats* of indigenous fauna, and

(b) the maintenance and use of existing *structures* (including *infrastructure*), and

(c) *infrastructure* that has a *functional* or *operational need* to be sited or operated in a particular location,

(2) manage the clearance or modification of *indigenous vegetation*, while allowing for *mahika kai* activities (including through the development, in partnership with *mana whenua*, of provisions for *mahika kai* activities that may provide an alternative approach to *effects* management than the policies in this ECO chapter),

(3) promote the establishment of *esplanade reserves* and *esplanade strips*, particularly where they would support ecological corridors, buffering or connectivity between *significant natural areas*, or access to *mahika kai,*

(4) require:

(a) *resource consent* applications to include information that demonstrates that the sequential steps in the *effects management hierarchy* (*in relation to indigenous biodiversity)* have been followed, and

(b) that consents are not granted if the sequential steps in the *effects management hierarchy (in relation to indigenous biodiversity)* have not been followed, and

(5) provide for activities undertaken for the purpose of restoring or enhancing the *habitats* of indigenous fauna,

(6) require buffer zones adjacent to *significant natural areas* where it is necessary to protect the *significant natural area* (subject to LS-FS-P1), and

(7) recognise that where access to and use of *indigenous biodiversity* by any person would require access to or through private *land*, such access is subject to the consent of the landowner.

ECO-M10 – Engagement

Local authorities, when implementing the policies in this chapter, will:

(1) work collaboratively with other *local authorities* to adopt an integrated approach to managing Otago's *biodiversity* across administrative boundaries,

(2) engage with individuals (including landowners and *land* occupiers), community groups, government agencies and other organisations with a role or an interest in *biodiversity* management, and

(3) consult directly with landowners and *land* occupiers whose properties potentially contain or are part of *significant natural areas*.

ECO-M11 – Kāi Tahu *kaitiakitaka*

Local authorities must partner with Kāi Tahu in the management of *indigenous biodiversity* to the extent desired by *mana whenua,* including by:

(1) ensuring that engagement with *mana whenua* is early, meaningful, and in accordance with *tikaka* Māori,

(2) actively supporting the role of *mana whenua* as kaitiaki,

(3) facilitating opportunities for *mana whenua* to be involved in resource management (including decision-making),

(4) enabling the *mahika kai* practices of *mana whenua* in accordance with tikaka, including the customary use of identified taoka,

(5) supporting *mana whenua* initiatives that contribute to restoring or enhancing te hauora o te kaiora (the health of *indigenous biodiversity),*

(6) where appropriate, incorporating Kāi Tahu mātauraka and tikaka in *indigenous biodiversity* management and monitoring, and

(7) providing relevant information to *mana whenua* for the purposes of *indigenous biodiversity* management and monitoring.

ECO-M12 – Information requirements

Local authorities must:

(1) require that, in relation to an application for a *resource consent* for an activity that would have more than minor adverse *effects* on *indigenous biodiversity,* the application is not considered unless it includes a report that:

    (a) is prepared by a suitably qualified ecologist and, as required, any other person with suitable expertise, such as someone with expertise in mātauraka Māori; and

    (b) complies with subclause (2); and

    (c) is commensurate with the scale and significance (to *indigenous biodiversity)* of the proposal.

(2) ensure the report required within ECO-M12(1) above must:

(a) include a description of the existing ecological features and values of the site, including those in APP2 if applicable; and

(b) include a description of the adverse *effects* of the proposal on *indigenous biodiversity* and how those *effects* will be managed; and

(c) identify any *effects* on identified taoka; and

(d) identify the ecosystem services associated with *indigenous biodiversity* at the site; and

(e) include an assessment of the ecological integrity and connectivity within and beyond the site; and

(f) include mātauraka Māori and tikaka Māori assessment methodology, where relevant; and

(g) if *biodiversity offsetting* is proposed, set out:

(i) a detailed plan of what is proposed, including a quantified loss and gain calculation, the currency used in the calculation, and the data that informs the calculation and plan; and

(ii) a description of how the relevant principles in APP3 have been addressed; and

(iii) an assessment of the likely success of the plan in achieving a net gain in biodiversity values; and

(h) if *biodiversity compensation* is proposed, set out:

(i) a detailed plan of what is proposed; and

(ii) a description of how the relevant principles in APP4 have been addressed; and

(iii) an assessment of the likely success of the plan in achieving its outcomes; and

(3) after a report is prepared in accordance with (1) and (2), assess the area in accordance with APP2 as soon as practicable.

ECO-M13 – Monitoring

Local authorities will:

(1) establish long-term monitoring programmes for areas identified under ECO-P3 that measure the net loss and gain of *indigenous biodiversity*,

(2) record information (including data) over time about the state of species, vegetation types and ecosystems, including *mahika kai* species and ecosystems,

(3) to the extent possible, use mātauraka Māori and tikaka Māori monitoring methods, as well as scientific monitoring methods, and

(4) regularly report on matters in (1) and (2) and publish these reports.

ECO-M14 – Other incentives and mechanisms

Local authorities are encouraged to consider the use of other mechanisms or incentives to assist in achieving Policies ECO-P2 to ECO-P9, including:

(1) providing information and guidance on the maintenance, *restoration* and enhancement of indigenous ecosystems, *habitats,* taoka and *mahika kai* species and ecosystems,

(2) funding assistance for *restoration* projects (for example, through Otago Regional Council's ECO Fund),

(3) supporting the control of *pest* plants and animals, including through the provision of advice and education and implementing regulatory programmes such as the Regional Pest Management Plan,

(4) financial incentives,

(5) covenants to protect areas of *indigenous biodiversity*, including through the QEII National Trust,

(6) advocating for a collaborative approach between central and local government to fund *indigenous biodiversity* maintenance and enhancement, and

(7) gathering information on indigenous ecosystems, *habitats*, and taoka and *mahika kai* species and ecosystems, including outside *significant natural areas*.

ECO-M15 – Regional Biodiversity Strategy

The Regional Council must initiate preparation of a regional biodiversity strategy that complies with Appendix 5 of the National Policy Statement for Indigenous Biodiversity 2023.

Explanation

ECO-E1 – Explanation

The first policy in this chapter outlines how the kaitiaki role of Kāi Tahu will be recognised in Otago. The policies which follow then set out a management regime for identifying *significant natural areas* and *indigenous species* and ecosystems that are taoka and protecting them by avoiding particular adverse *effects* on them. The policies recognise that these restrictions may be unduly restrictive for some activities within *significant natural areas*, including existing activities already established. To maintain ecosystems and *indigenous biodiversity*, the policies set out mandatory and sequential steps in an *effects management hierarchy* to be implemented through decision making, including providing for *biodiversity offsetting* and *biodiversity compensation* if certain criteria are met.

Although the objectives of this chapter apply within the coastal environment, the specific management approach for *biodiversity* is contained in the CE – Coastal environment chapter. Given the *biodiversity* loss that has occurred in Otago historically, restoration or enhancement will play a part in achieving the objectives of this chapter and these activities are promoted.

The policies recognise that managing ecosystems and *indigenous biodiversity* requires co-ordination across different areas and types of resources, as well as across organisations, communities and individual landowners. This articulates the stewardship role of all people and communities in Otago in respect of *indigenous biodiversity*.

Principal reasons

ECO-PR1 – Principal reasons

The health of New Zealand's *indigenous biodiversity* has declined significantly since the arrival of humans and remains under significant pressure. *Mahika kai* and taoka species, including their abundance, have been damaged or lost through resource use, *land* use change and development in Otago. The provisions in this chapter seek to address this loss and pressure through providing direction on managing the *effects* of *land* use, development and *subdivision* activities on *indigenous biodiversity*.

The provisions in this chapter assist in maintaining, protecting and restoring *indigenous biodiversity* by:

- stating the outcomes sought for ecosystems and *indigenous biodiversity* in Otago,
- requiring identification and protection of *significant natural areas* and *indigenous species* and ecosystems that are taoka, and
- directing how *indigenous biodiversity* is to be maintained.

This chapter will assist with achieving the outcomes sought by *Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020.* Implementation of the provisions in this chapter will occur primarily through *regional plan* and *district plan* provisions, however *local authorities* may also choose to adopt additional non-regulatory methods to support the achievement of the objectives.

Anticipated environmental results

ECO-AER1	There is no further decline in the condition, quantity or diversity of Otago's *indigenous biodiversity*.
ECO-AER2	The condition, quantity and diversity of *indigenous biodiversity* within Otago improves over the life of this Regional Policy Statement.
ECO-AER3	Kāi Tahu are involved in the management of *indigenous biodiversity* and able to effectively exercise their *kaitiakitaka*.

EIT – Energy, infrastructure and transport

EIT-INF – Infrastructure

Objectives

EIT-INF-O1 – Provision of *infrastructure*

Effective, efficient, safe and resilient *infrastructure, nationally significant infrastructure* and *regionally significant infrastructure* enables people and communities to provide for their social and cultural well-being, their health and safety, and supports sustainable economic development and growth in the region, while adverse *effects* are managed.

EIT-INF-O2 – Integration

Development of *infrastructure* and *land* use change is coordinated, where appropriate.

EIT-INF-O3 – Protecting *infrastructure* with national or regional significance

Regionally significant infrastructure and *nationally significant infrastructure* are not compromised by subdivision, use and development.

EIT-INF-O4 – Electricity transmission

The national, regional and local benefits of electricity transmission are realised by the facilitation of the operation, maintenance, upgrade and development of the *National Grid*.

Policies

EIT-INF-P1 – Providing for electricity distribution

Recognise and provide for electricity distribution infrastructure, by all of the following:

(1) managing adverse *effects* in accordance with EIT-INF-P4 and EIT-INF-P5,

(2) recognising the *functional needs* of electricity distribution activities,

(3) restricting the establishment of activities that may result in *reverse sensitivity effects*,

(4) avoiding, remedying or mitigating adverse *effects* from other activities on the *functional needs* of that *infrastructure*,

(5) identifying *significant electricity distribution infrastructure* and managing *effects* of potentially incompatible activities through methods such as corridors, and

(6) ensuring that the ability to develop, use and protect native reserves and *Māori land* in accordance with MW-P4 is not compromised.

EIT-INF-P2 – Recognising resource requirements

Decision making on the allocation or use of *natural and physical resources* must take into account the *functional needs* and *operational needs* of *nationally significant infrastructure* and *regionally significant infrastructure*.

EIT-INF-P3 – Upgrades and development

Provide for upgrades to existing, and development of new, *nationally significant infrastructure* or *regionally significant infrastructure* while ensuring that:

(1) it is designed and located, as far as practicable, to maintain functionality during and after *natural hazard* events,

(2) it is*resilient*, to the extent reasonably practicable, to the current and future *effects* of sea level rise and *climate change*,

(3) it is, as far as practicable, co-ordinated with long-term *land* use planning, and

(4) its delivery, operation or use is efficient.

EIT-INF-P4 – Locating and managing *effects* of *infrastructure, nationally significant infrastructure* and *regionally significant infrastructure* outside the coastal environment

When providing for new *infrastructure*, *nationally significant infrastructure* and *regionally significant infrastructure* outside the coastal environment:

(1) avoid, as the first priority, locating *infrastructure* in all of the following:

  (a) *significant natural areas*,

  (b) outstanding natural features and landscapes,

  (c) *natural inland wetlands* and *rivers*,

  (d) *outstanding water bodies*,

  (f) areas or places of significant or outstanding *historic heritage*, and

  (g) *wāhi tupuna*, and

(2) if it is not reasonably practicable to avoid locating in the areas listed in (1) above because of the *functional needs* or *operational needs* of the *infrastructure, nationally significant infrastructure* and *regionally significant infrastructure* manage adverse *effects* as follows:

  (a) for *nationally significant infrastructure, regionally significant infrastructure,* or electricity *distribution networks*:

    (i) in *significant natural areas,* in accordance with ECO-P4, ECO-P5, and ECO-P6,

    (ii) in *natural inland wetlands* or *rivers,* in accordance with LF-FW-P11 and LF-FW-P14,

    (iii) in *outstanding water bodies,* in accordance with LF-FW-P13,

    (iv) in relation to *wāhi tūpuna*, in accordance with HCV-WT-P2,

    (v) in other areas listed in EIT-INF-P4(1) above, the adverse *effects* of the *infrastructure* on the values that contribute to the area's importance shall be:

      (I) remedied or mitigated to the extent practicable, and

      (II) where they cannot be practicably remedied or mitigated, regard shall be had to offsetting and/or compensation of more than minor residual adverse *effects*, and

  (b) for all *infrastructure* that is not *nationally significant infrastructure, regionally significant infrastructure* or electricity *distribution networks,* avoid adverse *effects* on the values that

contribute to the area's outstanding nature or significance except in relation to *historic heritage* which is not significant or outstanding, then HCV-HH-P6(3) will apply.

EIT-INF-P5 – Managing the effects of *infrastructure*, *nationally significant infrastructure* and *regionally significant infrastructure* within the coastal environment

When managing the *effects* of *infrastructure, nationally significant infrastructure* and *regionally significant infrastructure* within the coastal environment the provisions of the CE – Coastal environment chapter apply.

EIT-INF-P6 – Decision making considerations

When considering proposals to develop or upgrade *infrastructure*:

(1) require consideration of alternative sites, methods and designs if adverse *effects* are potentially significant or irreversible, and

(2) require consideration of the current and future effects of sea level rise and climate change, and

(3) recognise that upgrades of *infrastructure* may provide opportunities to reduce adverse *effects* of the existing *infrastructure*.

EIT-INF-P7 – Protecting *nationally significant infrastructure* and *regionally significant infrastructure*

Protect the efficient and effective operation, maintenance, upgrading and development of *nationally significant infrastructure* and *regionally significant infrastructure* by:

(1) to the extent reasonably possible, managing activities, to ensure that of the operation, maintenance, upgrading and development of *nationally significant infrastructure* or *regionally significant infrastructure*, is not compromised,

(2) to the extent reasonably possible, managing activities to avoid *reverse sensitivity effects* on *nationally significant infrastructure* or *regionally significant infrastructure*, and

(3) identifying areas where *sensitive activities* are to be avoided.

EIT-INF-P8 – Providing for the *National Grid*

Facilitate the operation, maintenance, upgrade and development of the *National Grid* by:

(1) enabling the reasonable operation, maintenance and minor upgrading requirements of established *National Grid* assets, and

(2) providing for more than minor upgrading, and development of *National Grid* assets.

EIT-INF-P9 – Managing the *effects* of the development of the *National Grid* within and outside the coastal environment

Manage the adverse *effects* of the operation, maintenance, upgrade and development of the *National Grid* by:

(1) enabling the operation, maintenance and minor upgrading of the *National Grid*,

(2) in urban environments, avoiding adverse *effects* on the values and characteristics of town centres, areas of high recreation value and existing *sensitive activities*,

(3) managing *effects* on the values or extent of *wetlands* in accordance with LF-FW-P11(1) and (2),

(4) managing *effects* on the values or extent of rivers and lakes in accordance with LF-FW-P14(1) and (2),

(5) in the coastal environment, recognising in terms of CE – Coastal Environment that there will be areas where avoidance of adverse *effects* on the values and characteristics of those areas is required,

(6) for *wāhi tupuna*:

(a) as a first priority, seek to avoid adverse *effects* on the values or characteristics of *wāhi tupuna*; and

(b) where it is demonstrated that adverse *effects* on the values or characteristics of *wāhi tupuna* cannot be avoided, then either remedying or mitigating adverse *effects* in a manner that maintains the values of the *wāhi tupuna,*

(7) ensuring that the ability to develop, use and protect native reserves and *Māori land* in accordance with MW-P4 is not compromised,

(8) where (1) to (7) do not apply (and including in the coastal environment), as a first priority, seeking to avoid adverse *effects* on the values or characteristics of the following:

(a) *outstanding water bodies*,

(b) areas of high or outstanding natural character,

(c) outstanding natural features, outstanding natural landscapes or outstanding natural seascapes,

(d) *significant natural areas*,

(e) areas or places of special or outstanding *historic heritage*,

(f) in rural environments, areas of high recreation value and amenity (including *highly valued natural features and landscapes*) and existing *sensitive activities*,

(9) where adverse *effects* on the values or characteristics of the areas or places listed in (8) cannot be avoided, then remedying or mitigating adverse *effects*, while having regard to:

(a) the *operational needs* and *functional needs* of the *National Grid* and the extent those requirements constrain measures to avoid, remedy or mitigate adverse *effects*,

(b) the extent to which significant adverse *effects* are avoided,

(c) the extent to which any adverse *effects* have been avoided, remedied or mitigated by route, site and construction method selection for new *infrastructure* or major upgrades,

(d) the extent to which existing adverse *effects* have been reduced as part of any substantial upgrade,

(e) the extent to which adverse *effects* on urban amenity have been minimised,

(f) the extent to which the upgrading or development of the *National Grid* is required to provide the benefits of electricity transmission for present and future generations,

(g) in circumstances where there are more than minor residual adverse *effects* on *indigenous biodiversity* values, the need to:

(i) first, provide *biodiversity offsetting* if that is reasonably possible; or

(ii) provide *biodiversity compensation*, if that is practicable;

(10) avoiding, remedying, or mitigating other adverse *effects* other than those addressed in (2) to (8), having regard to the matters in (9)(a) to (g); and

(11) the objectives and policies in this regional policy statement apply, except that in the event of any conflict between EIT-INF-P9 and other policies in this regional policy statement, EIT-INF-P9 prevails over those policies.

EIT-INF-P10 – Urban growth and *infrastructure*

Provide for *development infrastructure* and *additional infrastructure* required to service existing, planned and expected urban growth demands in the short, medium and long term, taking in account UFD-P1 to UFD-P7.

EIT-INF-P11 – Established *community-scale irrigation and stockwater infrastructure*

Encourage and provide for the upgrade of established *community-scale irrigation and stockwater infrastructure* in preference to the maintenance of existing *infrastructure* where this will contribute to achieving the long-term visions for freshwater.

Methods

EIT-INF-M1 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) manage the adverse *effects* of *infrastructure* activities, including, where appropriate, identifying activities that qualify as minor upgrades, that:

  (a) are in the *beds* of *lakes* and *rivers*, or

  (b) are in the *coastal marine area*, or

  (c) involve the taking, use, damming or diversion of *water* or,

  (d) involve the *discharge* of *water* or *contaminants*, and

(2) recognise and provide for the operation, maintenance, upgrade and development of the *National Grid.*

EIT-INF-M2 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) require a strategic approach to the integration of *land* use and infrastructure, *nationally significant infrastructure* or *regionally significant infrastructure*,

(2) manage the subdivision, *use* and development of *land* to ensure *infrastructure*, *nationally significant infrastructure* or *regionally significant infrastructure* can develop to meet increased demand,

(3) manage the adverse *effects* of developing, operating, maintaining, or upgrading *infrastructure, nationally significant infrastructure* or *regionally significant infrastructure,* including, where appropriate, identifying activities that qualify as minor upgrades, that are on:

  (a) the surface of *rivers* and *lakes* and on *land* outside the *coastal marine area*, and

  (b) the beds of *lakes* and *rivers*,

(4) ensure that development is adequately served with *infrastructure*

(5) In relation to the *National Grid:*

(a) enable planning for the *National Grid,*

(b) map the *National Grid*, and identify a buffer corridor within which *sensitive activities* shall generally not be allowed,

(c) where necessary, establish controls for *subdivision*, *buildings*, *structures* and other activities adjacent to the *National Grid*, to ensure the *National Grid* is not compromised.

EIT-INF-M3 – Advocacy

Local authorities should work proactively with *infrastructure* providers to co-ordinate the upgrading or development of *nationally significant infrastructure* or *regionally significant infrastructure* to support co-location or concurrent construction to reduce adverse *effects.*

Explanation

EIT-INF-E1 – Explanation

The policies in this section recognise the critical importance of *infrastructure* to communities and provide for the continued operation of existing *infrastructure* and the development of upgraded or new *infrastructure* where adverse *effects* are managed. As many assets rely on particular resource requirements or specific locations, decisions on allocating *natural and physical resources* shall make provision for the *functional needs* or *operational needs* of *nationally significant infrastructure* and *regionally significant infrastructure*. For *infrastructure* in the coastal environment, the provisions of the CE – Coastal environment chapter are also applicable to ensure the NZCPS is given effect.

Given the potential magnitude of adverse *effects* associated with this *infrastructure*, consideration is required of the ability to remedy or mitigate unavoidable adverse *effects*, alternative options and offsetting or compensation.

To ensure *infrastructure* is planned for, and used efficiently, the provisions require that the benefits of existing *nationally significant infrastructure* and *regionally significant infrastructure* are maximised, and *infrastructure* provision is undertaken in a co-ordinated manner. The policies also seek to manage the potential adverse *effects* of other activities on *nationally significant infrastructure* and *regionally significant infrastructure* to ensure the ability to operate these assets is not compromised.

Principal reasons

EIT-INF-PR1 – Principal reasons

Infrastructure is fundamental to the health and safety of communities, and their social and economic well-being and functioning. The nature of *infrastructure* means there are typically operational and functional constraints which dictate where and how these activities operate to properly serve local communities. These types of assets also tend to require significant investment, although some have at times been subject to under-investment.

The scale and type of activities involved in the development, operation, maintenance, and upgrading of *infrastructure* are such that adverse *effects* on the *environment* are likely and, at times, significant. Efforts are required to reduce impacts from *infrastructure*, by avoiding its location in areas that are important to

Otago, where this is practicable, particularly where alternatives are available. If it is necessary to locate in those areas, then it is necessary that the values that make those areas important are protected. There are instances however, when residual *effects* cannot be avoided, in which case *effects* should be remedied or mitigated and offsetting or compensation may be necessary if it meets any criteria set. Given the potential for adverse *effects*, it is important that *local authorities* monitor and enforce the standards set in plans and on *resource consents* and designations.

The policies in this chapter give effect to the NPSREG, NPSET, NPSFM and NPSUD and recognise *infrastructure* that has benefits for the wider Otago region and nationally. Implementation of the provisions will occur through the *regional* and *district plan* provisions.

Anticipated environmental results

EIT-INF-AER1	*Infrastructure* provides safe, effective and efficient services to the Otago community and beyond.
EIT-INF-AER2	The provision of *infrastructure* is co-ordinated and integrated to service growth efficiently.
EIT-INF-AER3	*Nationally significant infrastructure* and *regionally significant infrastructure* is protected from adverse *effects*, including *reverse sensitivity effects* caused by incompatible activities.
EIT-INF-AER4	The adverse *effects* associated with *infrastructure* are avoided to the extent practicable or are minimised.

EIT-EN – Energy

Objectives

EIT-EN-O5 – Energy and social and economic well-being

The health and well-being of Otago's communities and economy are supported by *renewable electricity generation* within the region that is safe, secure, and *resilient*.

EIT-EN-O6 – Energy use

Development is located and designed to facilitate the efficient use of energy and to reduce demand if possible, minimising the contribution that Otago makes to total *greenhouse gas* emissions.

EIT-EN-O7 – *Greenhouse gas* emissions and renewable energy targets

Otago's *renewable electricity generation* supports the overall reduction in New Zealand *greenhouse gas* emissions and achieving the national target for emissions reduction.

EIT-EN-O8 – *Renewable electricity generation*

The generation capacity of *renewable electricity generation* activities in Otago:

(1) is protected and maintained and, where appropriate, increased, and

(2) contributes to meeting New Zealand's national target for *renewable electricity generation*.

EIT-INF-O9 – Long-term planning for the *National Grid* and distribution infrastructure

Long-term investment in, and planning for, electricity transmission *infrastructure*, and its integration with *land* use, is sustained.

Policies

EIT-EN-P12 – Operation, maintenance and upgrade

The operation, maintenance, and upgrade of existing *renewable electricity generation activities* is provided for, including the maintenance of generation output and protection of operational capacity.

EIT-EN-P13 – Recognising renewable electricity generation activities in decision making

Decisions on the allocation and use of *natural and physical resources,* including the use of *fresh water* and development of *land*:

(1) recognise the national significance of *renewable electricity generation activities*, including the national, regional and local benefits of *renewable electricity generation activities*, and

(2) have particular regard to the need for, and benefits of, maintaining and increasing *renewable electricity generation* capacity.

EIT-EN-P14 – The security of *renewable electricity generation* supply

The security and installed capacity of renewable electricity supply is maintained or improved in Otago through appropriate provision for the development or upgrading of *renewable electricity generation activities* and diversification of the type or location of *renewable electricity generation activities*.

EIT-EN-P15 – Identifying new sites or resources

Provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for *renewable electricity generation.*

EIT-EN-P16 – Non-renewable electricity generation

In relation to non-renewable electricity generation:

(1) except as provided for in (2) below, restrict the development of non-renewable electricity generation activities in Otago, and facilitate the replacement of non-renewable energy sources, including the use of *fossil fuels*, in energy generation, and

(2) in relation to *new heat devices* for *industrial process heat*:

  (a) avoid *discharges* from *new heat devices* that burn coal and deliver heat at or above 300 degrees Celsius, unless there is no technically feasible and financially viable lower emissions alternative,

  (b) avoid *discharges* from *new heat devices* that burn coal and deliver heat below 300 degrees Celsius, and

  (c) avoid *discharges* from *new heat devices* that burn any *fossil fuel* other than coal, unless there are no technically feasible and financially viable lower emissions alternative, and

(3) in relation to *existing heat devices* for *industrial process heat*:

  (a) restrict *discharges* from *existing heat devices* that burn coal and deliver heat at or above 300 degrees Celsius,

  (b) restrict and phase out *discharges* from *existing heat devices* that burn coal and deliver heat below 300 degrees Celsius, and

  (c) restrict *discharges* from *existing heat devices* that burn any *fossil fuel* other than coal.

EIT-EN-P17 – Managing *effects*

Manage the adverse effects of *renewable electricity generation activities* by:

(1) applying EIT-INF-P4 and EIT-INF-P5, while

(2) having particular regard to:

  (a) the *functional need* to locate *renewable electricity generation activities* where resources are available,

  (b) the *operational need* to locate where it is possible to connect to the *National Grid* or *electricity sub-transmission infrastructure*, and

(3) having regard to the extent and magnitude of adverse *effects* on the *environment* and the degree to which unavoidable adverse *effects* can be remedied or mitigated, or more than minor residual adverse *effects* are offset or compensated for; and

(4) while also providing for the ability of Kāi Tahu to develop, use and protect native reserves and *Māori land* (excluding in relation to the allocation and prioritisation of *freshwater*) in accordance with MW-P4, and

(5) requiring consideration of alternative sites, methods and designs, and offsetting or compensation measures (in accordance with any specific requirements for their use in this RPS), where adverse *effects* are potentially significant or irreversible.

EIT-EN-P18 – *Small and community scale distributed electricity generation*

Provide for *small and community scale distributed electricity generation* activities that increase the local community's *resilience* and security of energy supply.

EIT-EN-P19 – Energy conservation and efficiency

Development supports energy conservation and efficiency by designing subdivisions to maximise solar access, and locating subdivision development to minimise, as far as practicable, transportation costs, car dependency and *greenhouse gas* emissions.

Methods

EIT-EN-M4 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for *renewable electricity generation*,

(2) manage the adverse *effects* of developing or upgrading *renewable electricity generation activities*, including identifying activities that quality as minor upgrades, that:

  (a) are within the beds of *lakes* and *rivers* and the *coastal marine area*, or

  (b) involve the taking, use, damming or diversion of *water* and *discharge* of *water* or *contaminants*,

(3) provide for the operation and maintenance of existing *renewable electricity generation activities*, including their *natural and physical resource* requirements, along with opportunities to increase the installed capacity of *renewable electricity generation* assets, and

(4) restrict the establishment of activities that may adversely affect the efficient functioning of *renewable electricity generation activities* (including impacts on generation capacity).

EIT-EN-M5 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for *renewable electricity generation*,

(2) manage the adverse *effects* of developing or upgrading *renewable electricity generation activities* that are on:

  (a) the surface of *rivers* and *lakes* and on *land* outside the *coastal marine area*, or

  (b) the beds of *lakes* and *rivers*,

(3) provide for the continued operation and maintenance of *renewable electricity generation activities* on the surface of *rivers* and *lakes* and on *land* outside the *coastal marine area* and the *beds* of *lakes* and *rivers*,

(4) restrict the establishment or occurrence of activities that may adversely affect the efficient functioning of *renewable electricity generation infrastructure,*

(5) map *significant electricity distribution infrastructure* and, where necessary, provide controls on activities to ensure that the *functional needs* of the *significant electricity distribution infrastructure* are not compromised,

(6) where necessary, establishing controls for *buildings*, *structures* and other activities adjacent to electricity *infrastructure*, to ensure the *functional needs* of that *infrastructure* are not compromised based on NZECP34:2001 Electrical Code of Practice for Electrical Safe Distances and the Electricity (Hazards from Trees) Regulations 2003 (prepared under the Electricity Act 1992), and

(7) require the design of *subdivision* development to optimise solar gain, including through roading, lot size, dimensions, layout and orientation.

EIT-EN-M6 – Education and information

(1) *Local authorities* must provide education and information to improve energy efficiency and provide for the adoption of renewable energy sources, including:

  (a) ways to increase energy efficiency and energy conservation, and

  (b) opportunities for *small and community scale distributed electricity generation*.

(2) *Territorial authorities* must provide information on design techniques to optimise solar gain, including through roading, lot size, dimensions, layout, and orientation.

Explanation

EIT-EN-E2 – Explanation

The policies in this section are designed to set a clear preference for *renewable electricity generation activities* contributing to meeting New Zealand's national target for *renewable electricity generation*. *Renewable electricity generation* is a matter of national importance and a key component in responding to *climate change* and energy demands. Increasing energy security will assist with ensuring that communities have options for clean heat and electricity for health and wellbeing services.

Renewable electricity generation activities are promoted by providing for the investigation, operation and maintenance of these sites and ensuring that decisions on allocating natural resources and the use of *land*, for example, recognise the benefits of *renewable electricity generation activities* arising from maintaining or increasing generation capacity. It is noted that *renewable electricity generation activities* will come within the definition of *infrastructure*, and that provisions relating to *infrastructure* also apply.

The potential magnitude of adverse *effects* and *functional needs* and *operational needs* associated with *renewable electricity generation activities* is recognised by requiring consideration of those needs, and the extent to which unavoidable *effects* can be remedied or mitigated. Where significant residual adverse *effects* remain, consideration is given to proposals to offset these, or compensate for them. Increasing energy security will assist with ensuring that communities have options for clean heat.

To ensure the on-going functionality of *renewable electricity generation* assets and to maximise their benefits, *reverse sensitivity effects* or activities that may compromise the operation or maintenance of *renewable electricity generation activities* are to be avoided or their impacts minimised.

The policies seek that energy use is efficient and energy waste is reduced, which will have consequential *effects* on minimising Otago's contribution to the nation's *greenhouse gas* emissions.

In addition, the policies also contain relevant considerations for the transmission of electricity, both in terms of the *National Grid, significant electricity distribution infrastructure* and other electricity transmission and distribution activities.

Principal reasons

EIT-EN-PR2 – Principal reasons

Energy is a basic requirement of life in Otago. It enables communities to provide for their well-being, and health and safety, and is essential to the regional economy. Everyday life is significantly affected when energy supply is disrupted. Therefore, ensuring the security of energy supplies that meet demand is crucial. The ability of existing energy generation activities to continue operating is dependent on access to resources such as *water* in hydro *lakes* and the operator's ability to maintain existing *infrastructure*.

Otago is fortunate to have several existing *renewable electricity generation* sites and potential to increase *renewable electricity generation*. The benefits of *renewable electricity generation* include reducing *greenhouse gas* emissions, dependence on imported energy and greater supply security. These benefits are afforded to Otago communities and nationally as exported energy is significant for other regions. Because of this, providing for new *renewable electricity generation* opportunities to meet increasing energy demand is necessary. Additionally, addressing inefficiencies in energy use can ensure that existing *infrastructure* is better utilised to reduce the need for new generation sites.

Renewable electricity generation facilities can cause significant adverse *effects* on the environment because of their *functional need* to locate in particular areas. These areas are where resources are available, for example *water* for hydro-electricity generation, but they may also contain other significant values such as outstanding natural features or landscapes, significant *indigenous vegetation* or sites of significance to *mana whenua* values. In some situations, it may not be possible to avoid adverse *effects* on these significant values after considering alternative sites or design options. In these circumstances the *effects* should be remedied or mitigated, and consideration should be given to whether those *effects* that cannot be avoided are offset or compensated. *Renewable electricity generation* facilities may not be appropriate in some locations.

In relation to the *National Grid* and *significant electricity distribution infrastructure* (which are both a subset of i*nfrastructure*), specific provision is made which recognises some of the operational and functional constraints for conveying electricity, as well as addressing matters that are required to be given effect to by the NPSET.

The provisions in this chapter assist in giving effect to the NPSREG, NPSET and NPSFM and implementing section 7(j) of the RMA 1991. Implementation of the provisions will occur primarily through *regional plans* and *district plan* provisions but regional, city and district councils also have a role in providing education and information to the community.

Anticipated environmental results

EIT-EN-AER5	The proportion of electricity generated by *renewable electricity generation activities* (including *small and community scale distributed electricity generation*) in Otago increases over time.
EIT-EN-AER6	Energy use in Otago becomes more efficient over time and security of supply is maintained.
EIT-EN-AER7	The adverse *effects* associated with *renewable electricity generation activities* are avoided, remedied or mitigated, or where appropriate, offset or compensated for.
EIT-EN-AER8	The proportion of *greenhouse gas* emissions per capita from energy generation reduces over time.

EIT-TRAN – Transport

Objectives

EIT-TRAN-O10 – Effective, efficient, and safe transport

Otago has an integrated air, *land* and water-based transport network that:

(1) is effective, efficient and safe,

(2) connects communities and their activities within Otago, with other regions, and internationally, and

(3) is *resilient* to *natural hazards* and the *effects* of *climate change*, and the changing needs of communities.

EIT-TRAN-O11 – Transport system

The transport system within Otago supports the movement of people, goods and services, is integrated with *land* use, provides a choice of transport modes and is adaptable to changes in demand.

EIT-TRAN-O12 – *Effects* of the transport system

The contribution of transport to Otago's *greenhouse gas* emissions is reduced and communities are less reliant on *fossil fuels* for transportation.

EIT-TRAN-O13 – *Commercial port activities*

Commercial port activities operate safely and efficiently.

Policies

EIT-TRAN-P20 – Integration of the transport system

The transport system contributes to the social, cultural and economic well-being of the people and communities of Otago through:

(1) integration with *land* use activities and across transport modes, and

(2) provision of transport *infrastructure* that enables safe and efficient service delivery in response to demand.

EIT-TRAN-P21 – Transport system design

Resilience and adaptability of the transport system supports efficient networks for the transport of people and goods that are sustained, improved, and responsive to growth by:

(1) promoting a consolidated urban form that integrates *land* use activities with the transport system,

(2) placing a high priority on *active transport* and *public transport* and their integration into the design of development and transport networks, and

(3) encouraging regional connectivity, including to key visitor destinations, and improved access to public spaces, including the *coastal marine area*, *lakes* and *rivers*.

EIT-TRAN-P22 – Public transport

Maintenance and development of the transport system enhances the uptake of *public transport* by:

(1) promoting safe and reliable alternatives to low occupancy private vehicle use,

(2) including measures to ensure pedestrian and cyclist safety and amenity, and

(3) taking into consideration the accessibility needs of the community.

EIT-TRAN-P23 – Operation of the transport system

The efficient and effective operation of the transport system is maintained by:

(1) avoiding or mitigating adverse *effects* of activities on the functioning of the transport system,

(2) avoiding the impacts of incompatible activities, to the extent reasonably practicable, including those that may result in *reverse sensitivity effects*,

(3) avoiding or minimising the *effects* of activities and development so that the opportunity to adapt, upgrade or develop the transport system to meet future transport demand, is not compromised,

(4) promoting the development and use of transport hubs that enable an efficient transfer of goods for transport and distribution across different freight and people transport modes,

(5) promoting methods that provide more efficient use of, or reduce reliance on, private motor vehicles, including ridesharing, park and ride facilities, bus hubs, bicycle facilities, demand management and alternative transport modes, and

(6) encouraging a shift to using renewable energy sources.

EIT-TRAN-P24 – Sustainable transportation

Enable the development of sustainable transport networks that enhance the uptake of new technologies and reduce reliance on *fossil fuels* throughout Otago.

EIT-TRAN-P25 – *Commercial port activities*

Recognise the national and regional significance of *commercial port activities* by:

(1) ensuring that other activities in the coastal environment do not adversely affect the efficient and safe operation of *commercial port activities*, or their connections with other transport modes,

(2) providing for the efficient and safe operation of *commercial port activities* and efficient connections with other transport modes, and for the development of the ports' capacity for national and international shipping in and adjacent to existing *commercial port activities*, while meeting the requirements of policies CE-P4 to CE-P13, CE-P14(4), CE-P15, CE-P16 and HAZ-NH-P5,

(3) if any of policies CE-P4 to CE-P13, CE-P14(4), CE-P15 and CE-P16, cannot be implemented while providing for the safe and efficient operation of *commercial port activities*, then apply the following effects management steps:

    (a) give preference to avoiding activities locating within areas or values referenced in CE-P4 to CE-P13, CE-P14(4), CE-P15 and CE-P16, then

    (b) where it is not practicable to meet (a) because of *functional need* or *operational need,* avoid, remedy or mitigate significant adverse *effects* to the extent practicable,

(4) provided the steps in (3) above have been undertaken and where *commercial port activities* may cause adverse *effects* on the values that contribute to the significant or outstanding matters addressed in policies CE-P4 to CE-P13, CE-P14(4), CE-P15, CE-P16, or in respect of natural hazards where HAZ-NH-P5 cannot be met, then resource consent for such activities may be sought where:

(a) the proposed work is required for the safe and efficient operation of *commercial port activities*, and

(b) the adverse effects from the operation or development are established to be the minimum necessary to achieve the safe and efficient operation of the *commercial port activities*.

Methods

EIT-TRAN-M7 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) provide for the development, operation, maintenance, or upgrade of the transport system that:

(a) is within the beds of *lakes* and *rivers* or the *coastal marine area*, or

(b) involves the taking, use, damming or diversion of *water* and *discharge* of *water* and *contaminants*,

(2) include policies and methods that provide for the *commercial port activities,* and

(3) facilitate the safe and efficient operation and development of *commercial port activities* including previously approved *resource consents* for the following activities in the coastal development area mapped in MAP3:

(a) dredging of Otago lower harbour (to 17.5m for entrance channel, and 14.5m through to Port Chalmers),

(b) dredging of Otago upper harbour to 10.5m,

(c) management of upper and lower harbour navigation beacons,

(d) *discharge* of dredging spoil to the disposal grounds at Heyward Point, Aramoana, Shelley Beach, and A0, and

(e) placement and use of scientific buoys.

EIT-TRAN-M8 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) require a strategic approach to the integration of the transport system with *land* uses and between modes,

(2) require high trip generating activities to be integrated with public transport services where sufficient public transport services exist or are planned and provide for safe pedestrian and cycling access, where this is practicable,

(3) include *subdivision* and *infrastructure* design standards to facilitate the use of travel modes other than private vehicles, enable public transport networks to operate where this is practicable, provide access for emergency services, and recognise the accessibility needs of the community, including the mobility impaired, the elderly and children,

(4) require the design of transport *infrastructure* to provide for multi-modal transport options in urban areas, and in rural lifestyle locations where there is a practical opportunity to connect with an existing transport infrastructure network,

(5) restrict or prevent the establishment or expansion of activities adjacent to transport *infrastructure* that may compromise the operation or safety of the transport system,

(6) provide for the establishment of transport *infrastructure* that supports modes of transport that are not reliant on *fossil fuels*, and

(7) include policies and methods that provide for *commercial port activities* and avoid encroachment of activities which give rise to *reverse sensitivity effects*.

EIT-TRAN-M9 – Regional Land Transport Plan

Otago Regional Council will take into account the objectives, provisions and methods of this chapter in preparing its Regional Land Transport Plan and Regional Public Transport Plan.

Explanation

EIT-TRAN-E3 – Explanation

The policies in this section seek to ensure that transport *infrastructure* is well designed and functions effectively, including providing for accessibility for different modes and purposes. This includes managing potential *effects* of other activities on the transport system and ensuring strategic decision making in the provision of transport *infrastructure* to best provide for connectivity. The policies also recognise the contribution of the transport system to emissions and provide for networks that seek to adopt technologies which reduce the adverse *effects* on the *environment* arising from fuel usage. In relation to *commercial port activities* taking place within the coastal environment, the provisions of the CE – Coastal Environment chapter also apply.

Principal reasons

EIT-TRAN-PR3 – Principal reasons

The transport system is critical for connecting people and communities and transporting goods, the effective functioning of Otago's economy and the well-being of Otago's community. The transport network can, however, have adverse *effects* on the *environment* and impact on community well-being. If there is sufficient demand, integration and the necessary *infrastructure*, modal choices can be provided and by giving preference to modes with lower environmental *effects*, the adverse impacts of the transport system can be reduced. However, as large parts of the Otago region are rural, reliance on private vehicles will remain the preferred, or the only practical, transport option for many people. This should not exclude the potential for improvements in modal choice or accessibility for a range of abilities and sectors of the community. Planning for transport *infrastructure* should be co-ordinated with urban and commercial growth and development to enable the transport system to effectively serve local communities and avoid reducing the efficiency of existing *infrastructure*.

Anticipated environmental results

EIT-TRAN-AER9	Structure planning and *district plans* make explicit provision for all modes of transport.
EIT-TRAN-AER10	The number of people participating in active transport increases.
EIT-TRAN-AER11	The number of dwellings per hectare in areas accessible to *public transport* increases over the life of this RPS.
EIT-TRAN-AER12	*Public transport* patronage increases over the life of this RPS.
EIT-TRAN-AER13	*Greenhouse gas* emissions arising from the transport system reduce over time from increased active transport, shared travel and *public transport* patronage, increased use of rail for freight, and reduced reliance on fossil fuels.
EIT-TRAN-AER14	The transport of people, goods and services within Otago is achieved in a timely manner and at costs comparable to other regions.

HAZ – Hazards and risks

HAZ-NH – *Natural hazards*

Objectives

HAZ-NH-O1 – *Natural hazards*

Activities do not exacerbate *natural hazard* risks within Otago, and are managed to reduce significant *natural hazard* risk.

HAZ-NH-O2 – Adaptation

Otago's people, communities, property, and other aspects of the *environment* are prepared for and able to adapt to the *effects* of *natural hazards*, including *natural hazard* risks that are exacerbated by *climate change*.

Policies

HAZ-NH-P1 – Identifying areas subject to *coastal hazards*

Identify areas that are potentially affected by *coastal hazards*, giving priority to the identification of areas at high risk of being affected.

HAZ-NH-P2 – Identifying areas subject to *natural hazards*

For *hazards* not identified in accordance with HAZ-NH-P1, using the best available information, identify areas where *natural hazards* may adversely affect Otago's people, communities and property, by assessing:

(1) the hazard type and characteristics,

(2) multiple and *cascading hazard*s, where present,

(3) changes over time, including due to *climate change*,

(4) the likelihood of different hazard scenarios occurring, and

(5) any other exacerbating factors.

HAZ-NH-P3 – *Coastal hazard* risk assessments

Within areas identified under HAZ-P1 as being subject to *coastal hazards*, assess *coastal hazard* risk as significant, tolerable, or acceptable over at least the next 100 years by determining a range of *natural hazard* event scenarios and their potential consequences in accordance with APP8.

HAZ-NH-P4 – *Natural hazard* risk assessments

Within areas identified under HAZ-NH-P2 as being subject to *natural hazards,* assess the *natural hazard* risk as significant, tolerable, or acceptable by determining a range of *natural hazard* event scenarios and their potential consequences in accordance with APP8.

HAZ-NH-P5 – Managing new activities for *coastal hazard* risk and *natural hazard* risk

For *natural hazard* risk that has been determined in accordance with HAZ-NH-P4, HAZ-NH-P3 and APP8, manage new activities to achieve the following outcomes:

(1) significant *natural hazard* risks are avoided,

(2) when the *natural hazard* risk is tolerable, manage the level of risk so that it does not exceed tolerable and

(3) when the *natural hazard* risk is acceptable, maintain the level of risk.

HAZ-NH-P6 – Existing *natural hazard* risk

In areas identified under HAZ-NH-P2 as subject to *natural hazards*, reduce existing *natural hazard* risk to a tolerable or acceptable level by:

(1) encouraging activities that reduce risk, or reduce community vulnerability,

(2) managing existing activities within areas of significant risk to people, communities, and property,

(3) encouraging design that facilitates:

    (b) relocation to areas of acceptable risk, or

    (c) reduction of risk,

(4) relocating *lifeline utilities*, and facilities for essential and emergency services, away from areas of significant risk, where appropriate and practicable, and

(5) enabling development, upgrade, maintenance and operation of *lifeline utilities* and facilities for essential and emergency services.

HAZ-NH-P7 – Precautionary approach to *natural hazard* risk

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

HAZ-NH-P8 – Protecting features and systems that provide hazard mitigation

Protect the ability of natural or modified features and systems to mitigate the *effects* of *natural hazards* and *climate change.*

HAZ-NH-P9 – Mitigating *natural hazards*

Prioritise risk management approaches that reduce the need for *hard protection structures* or similar engineering interventions, and provide for *hard protection structures* only when:

(1) the following apply:

    (a) there are no reasonable alternatives that manage or reduce the risk exposure to a level the community is able to tolerate,

    (b) *hard protection structures* would not result in a more than minor increase in risk to people, communities, property, and other aspects of the *environment,* including displacement of risk off-site,

    (c) the adverse *effects* of the *hard protection structures* can be adequately managed, and

(d) the mitigation is viable in the reasonably foreseeable long term or provides time for future adaptation methods to be implemented, or

(2) the *hard protection structure* protects a *lifeline utility*, or a facility for essential or emergency services.

HAZ-NH-P10 – *Lifeline utilities* and facilities for essential or emergency services

Locate, and design *lifeline utilities* and facilities for essential or emergency services to:

(1) maintain their ability to function to the fullest extent possible, during and after *natural hazard* events, and

(2) take into account their operational co-dependence with other *lifeline utilities* and essential services to ensure their effective operation.

HAZ-NH-P11 – Protection of hazard mitigation measures, *lifeline utilities,* and essential or emergency services

Protect hazard mitigation measures, *lifeline utilities*, and essential or emergency services, including by:

(1) avoiding significant adverse *effects* on those measures, utilities or services,

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

(3) maintaining access to those measures, utilities or services for maintenance and operational purposes,

(4) restricting the establishment of other activities that may result in *reverse sensitivity effects* on those measures, utilities or services, and

(5) providing for necessary operation, maintenance and upgrades.

HAZ-NH-P12 – Kāi Tahu rakatirataka

Recognise and provide for the rakatirataka of Kāi Tahu by:

(1) enabling *mana whenua,* and owners of *Māori land* in relation to their *land*, to lead approaches on the management of *natural hazard* risks affecting native reserves and *Māori land,* to ensure that *land* is able to be used and developed in accordance with MW-P4, and

(2) including Kāi Tahu in decision-making on the management of *natural hazard* risks affecting the values of *wāhi tūpuna.*

Methods

HAZ-NH-M1 – Statement of responsibilities

In accordance with section 62(1)(i)(i) of the RMA, the responsibilities for the control of *land* use to avoid or mitigate *natural hazards* or any group of hazards are as follows:

(1) the Regional Council and *territorial authorities* are both responsible for specifying objectives, policies and methods in *regional plans* and *district plans* for managing *land* subject to *natural hazard* risk,

(2) the Regional Council is responsible for specifying objectives, policies and methods (including mapping) in *regional plans*:

(a) in the *coastal marine area*,

(b) in *wetlands*, *lakes* and *rivers*,

(c) in, on or under the *beds* of *rivers* and *lakes*, and

(d) on *land* in relation to the avoidance or mitigation of *natural hazards*,

(3) *territorial authorities* are responsible for specifying objectives, policies and methods (including mapping) in *district plans* for *land* outside of the areas listed in (2)(a), (b) and (c).

HAZ-NH-M2 – Identifying and monitoring *natural hazards*

(1) Otago Regional Council must:

(a) identify areas in the region subject to *natural hazards* and describe their characteristics as required by Policy HAZ-NH-P2, mapping the extent of those areas in any relevant *regional plan(s)* and on a *natural hazard* register or database,

(b) identify *coastal hazards* as required by HAZ-NH-P1 in accordance with Policy 24 of the NZCPS, mapping the extent of those areas in any relevant *regional plan(s)* and on a *natural hazard* register or database, and

(c) monitor *natural hazard* risk to understand how levels of *natural hazard* risk change over time, and where required, update the *natural hazard* mapping areas identified above.

(2) Territorial authorities must map or identify via the *natural hazard* register or database, areas identified in (1) above subject to *natural hazards* and describe the characteristics of those areas in the relevant *district plan(s)*.

(3) Territorial authorities may map and identify land subject to *natural hazards* in accordance with HAZ-NH-P1 and HAZ-NH-P2 for inclusion in the *natural hazard* register or database in addition to areas already identified by the Otago Regional Council.

HAZ-NH-M3 – *Local authorities*

Local authorities must work collaboratively to:

(1) assess the level of *natural hazard* risk in their region or district in accordance with HAZ-NH-P3, HAZ-NH-P4 and APP8, including by:

(a) consulting with communities, stakeholders and Kāi Tahu, including with *local authorities* in neighbouring regions regarding risk levels,

(b) developing a risk table in accordance with Step 3 of APP8 at a district or community scale, and

(c) identifying areas of significant risk,

(2) continue to undertake research on the identification of *natural hazard* risk and amend *natural hazard* registers, databases, *regional plans* and/or *district plans* as required,

(3) investigate options for reducing the level of *natural hazard* risk within areas of existing development to a tolerable or lower level, including by managing existing use rights under Sections 10 and 20A of the RMA,

(4) prepare or amend and maintain their *regional plans* or *district plans* to take into account the *effects* of *climate change* by:

(a) using the best relevant *climate change* data and projections to 2115,

(b) taking a precautionary approach when assessing and managing the *effects* of *climate change* where there is scientific uncertainty and potentially significant or irreversible *effects*,

(c) providing for activities that assist to reduce or mitigate the *effects* of *climate change*,

(d) encouraging system *resilience*, and

(5) agree how *natural hazard* management is undertaken to achieve a collaborative approach between the local authorities.

HAZ-NH-M4 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) manage activities in the *coastal marine area*, *beds* of *lakes* and *rivers*, and *wetlands* to achieve policies HAZ-NH-P5 to HAZ-NH-P8, and the outcomes of the risk table established within HAZ-NH-M3(1),

(2) include *natural hazard* risk reduction measures, such as removing or restricting existing *land* uses, where there is significant risk to people or property,

(3) protect natural or modified features and systems that provide mitigation from the adverse *effects* of *natural hazards* in accordance with HAZ-NH-P8,

(4) provide for *hard protection structures* in accordance with HAZ-NH-P9,

(5) provide for the *functional needs* of hazard mitigation measures, *lifeline utilities*, and essential or emergency services in accordance with HAZ-NH-P10 and HAZ-NH-P11, and

(6) include provisions that require decision makers to apply the precautionary approach set out in HAZ-NH-P7 when considering applications for *resource consent* for activities that will change the use of *land* and thereby increase the risk from *natural hazards* within areas subject to *natural hazard* risk that is uncertain or unknown, but potentially significant or irreversible.

HAZ-NH-M5 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) achieve policies HAZ-NH-P5 to HAZ-NH-P8, and incorporate the outcomes of the risk table established within HAZ-NH-M3(1), on *land* outside the *coastal marine area*, *beds* of *lakes* and *rivers*, and *wetlands* by managing the location, scale and density of activities that are subject to *natural hazard* risk,

(2) protect the role of natural or modified features and systems that provide mitigation from the adverse *effects* of *natural hazards* in accordance with HAZ-NH-P8,

(3) provide for *hard protection structures* in accordance with HAZ-NH-P9,

(4) provide for the *functional needs* of hazard mitigation measures, *lifeline utilities*, and essential or emergency services in accordance with HAZ-NH-P10 and HAZ-NH-P11,

(5) include provisions that require decision makers to apply the precautionary approach set out in HAZ-NH-P7 when considering applications for *resource consent* for activities that will change the use of

land and which may increase the risk from *natural hazards* within areas subject to *natural hazard* risk that is uncertain or unknown, but potentially significant or irreversible, and

(6) require a *natural hazard* risk assessment commensurate with the level of risk from the proposed activity be undertaken where an activity requires a plan change to change the use of *land* in areas subject to *natural hazards*, including:

(a) an assessment of the level of *natural hazard* risk associated with the proposal in accordance with APP8, and

(b) an assessment demonstrating how the proposal will achieve the outcomes set out in Policies HAZ-NH-P5 and HAZ-NH-P6.

HAZ-NH-M6 – *Natural hazard* assessment

(1) Prior to the *natural hazard* risk assessment required by HAZ-NH-M3(1) being completed, included in the relevant *regional plan* or *district plan*, and made operative, when a *natural hazard* risk assessment is required within a *regional plan* or *district plan* as part of a *resource consent*, *local authorities* are encouraged to consider whether that *natural hazard* risk assessment:

(a) includes an assessment of the level of *natural hazard* risk associated with the proposal, commensurate with the level of risk, and

(b) demonstrates how the proposal will achieve the outcomes set out in Policies HAZ-NH-P5 and HAZ-NH-P6,

(2) Once the *natural hazard* risk assessment required by HAZ-NH-M3(1) has been completed, included in the relevant *regional plan* or *district plan*, and made operative, unless otherwise expressly required by the relevant *regional plan* or *district plan*, not requiring a *natural hazard* risk assessment in accordance with APP8 for *resource consent* applications.

HAZ-NH-M7 – Other incentives and mechanisms

Local authorities are encouraged to consider the use of other mechanisms or incentives to assist in achieving Policies HAZ-NH-P1 to HAZ-NH-P12, including but not limited to:

(1) preparing *natural hazard* strategies or other similar documents to assist in the management and reduction of *natural hazard* risk and adaptation to, and mitigation of, the *effects* of *climate change*,

(2) developing community relevant responses to the impacts of *natural hazards* and *climate change*, in collaboration with key stakeholders and affected community,

(3) undertaking research in collaboration with other *local authorities* and other stakeholders as appropriate, into *natural hazards* and *climate change* in Otago, and

(4) providing information and guidance on:

(a) management approaches to the avoidance or mitigation of *natural hazards*,

(b) ways to adapt to and mitigate the *effects* of *climate change*, and

(c) the benefits of natural features and systems in mitigating *natural hazards*.

Explanation

HAZ-NH-E1 – Explanation

The policies in this chapter are designed to reduce the level of *natural hazard* risk within the region through sound preparation, investigation and planning. These provisions take a risk-based approach, taking into consideration the likelihood of the hazard and the vulnerability of people, communities, and the *environment*. The approach ensures consistent planning by applying the same framework irrespective of the type of *natural hazard* that may exist. It allows for the full range of risk mitigation measures (regulatory and non-regulatory) to be taken into account in determining the level of risk that exists at a particular locality.

Once the level of risk has been established, following consultation with communities, stakeholders and partners, the provisions direct that *district plans* and *regional plans* require activities to be undertaken in a manner that results in the *natural hazard* risk to people, the community and property being tolerable or lower. Where a *natural hazard* risk to people, the community and property cannot be reduced to a tolerable level, the activity must be avoided. The provisions require that the same risk-based approach is taken when considering the management of existing development, by ensuring that the risk associated with existing development is tolerable or lower.

The provisions also set direction on *natural hazard* management methods such as use of the precautionary approach, protecting natural features and systems that provide hazard mitigation, the use of *hard protection structures*, and the location and design of *lifeline utilities* and facilities for essential or emergency services. These provisions are designed to reduce the level of *natural hazard* risk within the region.

Principal reasons

HAZ-NH-PR1 – Principal reasons

The Otago region is exposed to a wide variety of *natural hazards* that impact on people, property, *infrastructure* and the wider *environment*. Given the wide variety of landscapes that make up the Otago region, the *natural hazards* threats range from coastal erosion and flooding in the lowland coastal areas of the region to alluvial fan deposition, landslip, fire, earthquakes, rock fall, and *river* breaches in the alpine areas of the region. The *effects* of *natural hazards* vary in terms of both their likelihood and consequence. Some *natural hazards,* such as flooding, may occur relatively frequently and may damage property and disrupt people's lives and economic, social and cultural activities, whereas *natural hazards* such as tsunami occur infrequently, but when they do occur, they pose serious risk to life.

The majority of the region is subject to some form of hazards risk, to a greater or lesser extent. While avoidance of *natural hazard* risk may be the preferred option in many cases, in other situations mitigating the *effects* of *natural hazards* to tolerable levels will be a feasible option to ensure the health, safety and well-being of the community. The changing nature of *natural hazards* risk due to *climate change* means that planning provisions need to be able to adapt to a future *natural hazards environment*.

Consultation with communities, stakeholders and partners is essential to an understanding of risk tolerance. Preparing natural hazard risk assessments requires consultation with these groups. Communities need consistent guidance on sea level rise, extreme weather events, and all other adverse *effects* of *climate change* if they are to appropriately manage those *effects*. *Climate change* is resulting in rising sea levels and is increasing the frequency and severity of climate related *natural hazards* including flooding, wind events, fires, landslips, erosion and drought. *Stormwater* systems may not be able to cope

with heavier rainfall. Other *effects* of *climate change* include changing distributions of plants and animals, and consequential *effects*, such as the risk of saltwater intrusion into *groundwater* as a result of sea level rise in combination with increased *groundwater* abstraction, and *groundwater* ponding. There may be other adverse *effects* from *climate change* that are not yet known. A precautionary approach is required where there is scientific uncertainty. The *effects* of *climate change* will result in social, environmental and economic costs. It is prudent that these changes are planned for now, so that the impacts can be reduced.

Anticipated environmental results

HAZ-NH-AER1	The location and design of new developments and natural resource use reduces community exposure to the adverse *effects* of *natural hazards* events and processes.
HAZ-NH-AER2	No developments proceed that have a significant level of risk.
HAZ-NH-AER3	The level of risk associated with new development does not exceed a tolerable level.
HAZ-NH-AER4	Where existing development is subject to risks from *natural hazards*, the level of risk is reduced to a tolerable level.
HAZ-NH-AER5	The impact on people, communities and property, *lifeline utilities,* and essential services from *natural hazards* and *climate change* is managed to a tolerable or acceptable level.

HAZ-CL – *Contaminated land*

Objectives

HAZ-CL-O3 – *Contaminated land*

Contaminated land and *waste* materials are managed to protect human health and do not harm Kāi Tahu values and the *environment* in Otago.

Policies

HAZ-CL-P13 – Identifying *contaminated land*

Identify sites of known or potentially *contaminated land* in Otago.

HAZ-CL-P14 – Managing *contaminated land*

Manage *contaminated land* or potentially *contaminated land* so that it does not pose an unacceptable risk to people and the *environment*, by:

(1) assessing and, if required, monitoring *contaminant* levels and environmental risks,

(2) protecting human health in accordance with regulatory requirements,

(3) avoiding further or continuing *effects*, as the first priority, and only where avoidance is not reasonably practicable, mitigating or remediating, adverse *effects* of the *contaminants* on the *environment,*

(4) requiring closed *landfills* to be managed in accordance with a closure plan that sets out monitoring requirements and, where necessary, any remedial actions required to address ongoing risks, and

(5) prioritising the identification and management of closed *landfills* and *contaminated land* at risk from the *effects* of *climate change*.

HAZ-CL-P15 – New *contaminated land*

Avoid the creation of new *contaminated land* or, where this is not practicable, minimise to the extent reasonably practicable adverse *effects* on the *environment* and Kāi Tahu values.

HAZ-CL-P16 – *Waste* minimisation responses

Apply the principles of the *waste* management hierarchy (reduce, reuse, recycle, recover, residual *waste* management) to the management of all *waste* streams.

HAZ-CL-P17 – Disposal of *waste* materials

Provide for the development and operation of facilities and services for the storage, recycling, recovery and treatment of *waste* materials but only for the disposal of *waste* materials if those materials cannot be recycled, recovered or treated for re-use.

HAZ-CL-P18 – *Waste* facilities and services

When providing for the development of facilities and services for the storage, recycling, recovery, treatment and disposal of *waste* materials:

(1) avoid adverse *effects* on the health and safety of people,

(2) to the extent reasonably practicable, minimise the potential for adverse *effects* on the *environment* to occur,

(3) minimise risk associated with *natural hazard* events,

(4) restrict the establishment of activities that may result in *reverse sensitivity effects* near *waste* management facilities and services, and

(5) have particular regard to adverse *effects* on the cultural values of identified *wāhi tūpuna* in accordance with HCV-WT-P2.

HAZ-CL-P19 – Operation and development of municipal *landfills*

(1) Recognise the regional importance of operation and development of *landfills* which are designated by, or are owned or operated by a *local authority* to the health, safety and welfare of communities, and the operational constraints on the location of these facilities,

(2) When providing for the operation and development of *landfills* which are designated by, or are owned or operated by a *local authority* in the following areas outside the coastal environment, avoid, as the first priority, locating in:

    (a) *significant natural areas*,

    (b) *natural inland wetlands*,

    (c) *wāhi tūpuna*, and

    (d) outstanding natural landscapes,

(3) If it is not reasonably practicable to avoid locating in the areas listed in (2) above because of the *functional needs* or *operational needs* of the *landfill*, manage adverse *effects* as follows:

    (a) in *significant natural areas*, in accordance with ECO-P4 and ECO-P6,

    (b) in *natural inland wetlands*, in accordance with LF-FW-P11,

    (c) in relation to *wāhi tūpuna*, in accordance with HCV-WT-P2,

    (d) in outstanding natural landscapes, adverse *effects* on the values that contribute to the area's importance shall be:

        (i) remedied or mitigated to the extent practicable,

        (ii) where they cannot be practicably remedied or mitigated, regard shall be had to offsetting and/or compensation of more than minor residual adverse *effects*, and

(4) Ensure that the ability to develop, use and protect *native reserves* and Māori *land* in accordance with MW-P4 is not compromised.

Methods

HAZ-CL-M8 – *Regional plans*

Otago Regional Council must:

(1) in accordance with HAZ-CL-P13, maintain a register or database of sites of known or potentially *contaminated land* in Otago,

(2) prepare or amend and maintain its *regional plans* to:

  (a) in accordance with HAZ-CL-P14 and HAZ-CL-P15, manage the *effects* of the use of *contaminated land* on:

    (i) the quality of air, *water* and *land*; and

    (ii) the *coastal marine area*, and the *beds* of *rivers*, *lakes* and other *water bodies*,

  (b) require *waste* disposal facilities to be designed, constructed and operated in accordance with best industry practice, and

  (c) require *waste* disposal facilities to monitor, record and report on the quantity and composition of *waste* being deposited to *landfill*.

HAZ-CL-M9 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to provide for the development of facilities and services for the storage, recycling, recovery, treatment and disposal of *waste* while achieving the outcomes listed in HAZ-CL-P14 to HAZ-CL-P16.

HAZ-CL-M10 – *Waste* management and minimisation plans

Local authorities must develop *waste* management and minimisation plans in accordance with the Waste Minimisation Act 2008.

HAZ-CL-M11 – Prioritisation and action plans

Otago Regional Council and *territorial authorities*, in consultation with Kāi Tahu and the community, must together:

(1) identify closed *landfills* and *contaminated land* at risk from the *effects* of *climate change,*

(2) assess the risk and the potential *effects* of release of *contaminants,*

(3) develop and implement action plans to avoid release of *contaminants* from identified closed *landfills* and *contaminated land,* prioritising sites at greatest risk, and

(4) review sites and their level of risk every five years.

HAZ-CL-M12 – Other incentives and mechanisms

Local authorities may:

(1) encourage the application of the *waste* management hierarchy by:

  (a) giving preference to reducing *waste* generated,

  (b) reusing *waste*,

  (c) recycling *waste*,

(d) recovering resources from *waste*, and

(e) only disposing residual *waste* to a disposal facility,

(2) provide information and guidance on *waste* minimisation and management, and

(3) advocate for:

(a) the implementation of the *waste* hierarchy throughout the region, and

(b) the development of *infrastructure* and services to provide for recycling and disposal services across the region.

Explanation

HAZ-CL-E2 – Explanation

The policies in this chapter are designed to ensure that *contaminated land* and *waste* materials do not harm human health or the *environment*. To achieve this, areas of known or potentially *contaminated land* are to be identified. Once sites are identified, the protection of human health is managed by the NESCS. It is the role of *regional plans* to minimise the adverse *effects* of the *contaminants* on the *environment* by avoiding the creation of new *contaminated land* and minimising the adverse *effects* of *waste* material on the *environment*. The provisions within this chapter also encourage the application of the *waste* management hierarchy.

Principal reasons

HAZ-CL-PR2 – Principal reasons

Resources need to be carefully used to minimise the material disposed of as *waste*. *Waste* materials and hazardous substances need to be carefully managed to avoid creating environmental problems or adversely affecting human health.

In order to protect people and the *environment* from the adverse *effects* of *contaminated land*, the first task is to identify *land* that could be contaminated. The Ministry for the Environment's Hazardous Activities and Industries List (HAIL) is a list of activities and industries that may have involved the use of hazardous substances. Such use of hazardous substances may have resulted in *land* becoming contaminated. Once known or potentially *contaminated land* has been identified, assessments can be made to determine the nature or existence of contamination.

NESCS sets out a nationally consistent set of planning controls and soil *contaminant* values. It applies to assessing and managing the actual or potential adverse *effects* of *contaminants* in soil on human health when undertaking *subdivision, land* use change, *earthworks*, soil sampling or removing the underground portions of any fuel storage or dispensing systems. The NESCS does not apply to assessing and managing the actual or potential adverse *effects* of *contaminants* on other receptors, including ecology, *water* quality or *amenity values*. Therefore, it is the role of the *regional plans* to manage these adverse *effects*.

The *waste* management hierarchy is an internationally recognised management model for the reduction of residual *waste*. The *waste* management hierarchy can be applied to all *waste* streams. When making decisions about a *land* use or activity, it is possible to include methods that will reduce *waste* over the lifetime of that *land* use or activity.

Anticipated environmental results

HAZ-CL-AER6	The *environment*, people and communities are not harmed by *waste* materials.
HAZ-CL-AER7	The waste hierarchy is implemented, resulting in less *waste* requiring disposal and a reduction of the environmental *effects* generated from *waste*.

HCV – Historical and cultural values

HCV-WT – *Wāhi tūpuna*

Objectives

HCV-WT-O1 – Kāi Tahu *wāhi tūpuna*

Wāhi tūpuna and their associated cultural values are identified and protected.

HCV-WT-O2 – Rakatirataka

The rakatirataka of *mana whenua* over *wāhi tūpuna* is recognised, and *mana whenua* are able to exercise their role as kaitiaki within these areas.

Policies

HCV-WT-P1 – Recognise and identify *wāhi tūpuna*

Sustain the enduring Kāi Tahu relationship with *wāhi tūpuna,* including by:

(1) enabling Kāi Tahu to identify as *wāhi tūpuna* any sites and areas of significance to *mana whenua*, along with the cultural values that contribute to each *wāhi tūpuna* being significant,

(2) recognising the rakatirataka of *mana whenua* over *wāhi tūpuna* and providing for their ability to exercise their role as kaitiaki within these areas,

(3) recognising and providing for connections and associations between different *wāhi tūpuna*, and

(4) recognising and using traditional place names.

HCV-WT-P2 – Management of *effects* on *wāhi tūpuna*

Wāhi tūpuna are protected by:

(1) avoiding significant adverse *effects* on the cultural values of identified *wāhi tūpuna*,

(2) avoiding, as the first priority, other adverse *effects* on the cultural values of identified *wāhi tupuna*,

(3) where other adverse *effects* demonstrably cannot be completely avoided, then either remedying or mitigating adverse *effects* in a manner that maintains the values of the *wāhi tūpuna*

HCV-WT-P3 – Management of *wāhi tūpuna*

Wāhi tūpuna are protected by:

(1) managing identified *wāhi tūpuna* in accordance with tikaka Māori, and

(2) encouraging the enhancement of access to *wāhi tūpuna* to the extent compatible with the particular *wāhi tūpuna*.

Methods

HCV-WT-M1 – Treaty Partnership with Kāi Tahu

Local authorities must:

(1) include Kāi Tahu in all decision-making concerning identification and protection of *wāhi tūpuna* sites and areas and the values that contribute to their significance, and

(2) collaborate with Kāi Tahu to share information relevant to Kāi Tahu interests.

HCV-WT-M2 – Identification

Local authorities must:

(1) enable Kāi Tahu to identify, in accordance with tikaka, *wāhi tūpuna* sites, areas and values, using the guide set out in APP9,

(2) recognise that *wāhi tūpuna* span jurisdictional boundaries and work together to ensure the identification process under (1) enables *wāhi tūpuna* sites, areas and values to be treated uniformly across district boundaries, and

(3) identify, record (using methods determined by *mana whenua* (which may include mapping)), and protect the sites, areas and values identified under (1) in the relevant *regional plans* and *district plans.*

HCV-WT-M3 – *Regional plans* and *district plans*

Local authorities must prepare or amend and maintain their *regional plans* and *district plans* to include methods that are in accordance with tikaka to:

(1) manage activities in, or affecting, *wāhi tūpuna* sites and areas,

(2) require cultural impact assessments where activities have the potential to adversely affect values of *wāhi tūpuna* and Kāi Tahu have identified the need for an assessment to protect particular values,

(3) require conditions on *resource consents* or designations to protect *wāhi tūpuna values* from incompatible activities,

(4) require accidental discovery protocols as an advice note on *resource consents* or designations for activities that may unearth archaeological sites, in accordance with APP13, and

(5) maintain existing access to identified *wāhi tūpuna* sites and areas and promote improved access where practicable.

Explanation

HCV-WT-E1 – Explanation

Providing for *wāhi tūpuna* plays a role in recognising the resource management principles in sections 6(e), 7(a) and 8 of the RMA. The policies in this chapter recognise the cultural and contemporary significance of *wāhi tūpuna* to Kāi Tahu and acknowledge that the identification of *wāhi tūpuna* and the associated values can only be undertaken by Kāi Tahu.

Wāhi tūpuna can be impacted by a range of activities, requiring a range of different management responses. The policies in this chapter are designed to achieve active protection of *wāhi tūpuna* to ensure

that activities do not have any significant adverse *effects* on the values of the identified *wāhi tūpuna*. The policies also direct that the management of activities within or affecting *wāhi tūpuna* must occur in accordance with tikaka.

Principal reasons

HCV-WT-PR1 – Principal reasons

Wāhi tūpuna are landscapes that embody the customary and contemporary relationship of Kāi Tahu and their culture and traditions with Otago. The sites and resources used by Kāi Tahu are spread throughout Otago, reflecting the relationship of Kāi Tahu with the *land, coastal waters* and wai Māori. *Wāhi tūpuna* have significant cultural value to Kāi Tahu.

The provisions in this chapter play a role in recognising the resource management principles in sections 6(e), 7(a) and 8 of the RMA and the NZCPS, as well as providing for the principles of te Tiriti o Waitangi, by requiring:

- the identification of *wāhi tūpuna* by Kāi Tahu in accordance with tikaka Māori,
- the protection of *wāhi tūpuna* from inappropriate *subdivision*, use and development, and
- specified actions on the part of Otago's *local authorities* in managing activities that may impact *wāhi tūpuna*.

Implementation of the provisions in this chapter will occur primarily through *regional plans* and *district plan* provisions, however *local authorities* may also choose to adopt additional non-regulatory methods to support the achievement of the objectives.

Anticipated environmental results

HCV-WT-AER1	*Wāhi tūpuna* areas and sites are identified in the relevant *regional plans* and *district plans* using tikaka for identification of wāhi tūpuna and their values and the manner of recording those being determined by Kāi Tahu.
HCV-WT-AER2	*Wāhi tūpuna* and their values are protected and improved where their values have been degraded by human activities.

HCV-HH – Historic heritage

Objective

HCV-HH-O3 – *Historic heritage* resources

Otago's unique *historic heritage* contributes to the region's character, sense of identity, and social, cultural and economic well-being, people's understanding and appreciation of it is enhanced, and it is protected for future generations against inappropriate *subdivision*, use and development.

Policies

HCV-HH-P4 – Recognising *historic heritage*

Recognise that Otago's *historic heritage* includes:

(1) Māori cultural and *historic heritage* values and sites, and places and areas,

(2) archaeological sites,

(3) residential and commercial *buildings*,

(4) pastoral sites,

(5) surveying equipment, communications and transport, including *roads*, bridges, railway *infrastructure* and routes,

(6) industrial *historic heritage,* including mills, quarries, limekilns, grain stores, water supply *infrastructure* and brickworks,

(7) gold, limestone and other mining systems and settlements,

(8) dredge and ship wrecks, and coastal structures and buildings, including breakwaters, jetties and lighthouses,

(9) ruins,

(10) coastal *historic heritage*, particularly Kāi Tahu occupation sites and those associated with early European activities such as whaling,

(11) memorials,

(12) trees and,

(13) military structures or remains, and

(14) historic places within the meaning under section 6 of the Heritage New Zealand Pouhere Taonga Act 2014.

HCV-HH-P5 – Identifying *historic heritage*

Identify the places and areas of *historic heritage* in Otago in accordance with APP10.

HCV-HH-P6 – Managing *historic heritage*

Except as provided for in EIT-INF-P4 and EIT-INF-P9, protect *historic heritage* from inappropriate subdivision, use and development by:

(1) requiring the use of accidental discovery protocols in accordance with APP13,

(2) avoiding adverse *effects* on areas or places which have been identified as having special or outstanding *historic heritage* or qualities, except that in circumstances (a) to (f) below, they are remedied or mitigated to the extent practicable:

  (a) where HCV-HH-P7 applies, or

  (b) a project has significant public benefit that outweighs the loss of *historic heritage*; or

  (c) the activity has functional or locational constraints:

    (i) and has a significant public benefit; or

    (ii) will enable access to, and enhance people's understanding and appreciation of, the *historic heritage* area or place, or

  (d) the area or place is already impacted by an existing, lawfully established activity; or

  (e) there is significant risk to safety or property; or

  (f) any adverse *effects* are minor and relate to work necessary to adapt a *historic heritage building* to modern use and;

(3) avoiding, remedying or mitigating adverse *effects* on other areas or places with *historic heritage* values or qualities.

HCV-HH-P7 – Maintenance and enhancement of *historic heritage*

Encourage the ongoing use and adaptive re-use of *historic heritage* in a way that, as far as practicable, maintains and enhances the identified heritage values.

Methods

HCV-HH-M4 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to:

(1) identify places and areas with *historic heritage* in accordance with HCV-HH-P5 that are located in the *beds* of *lakes* and *rivers*, *wetlands* and the *coastal marine area,*

(2) control the following where they may adversely affect *historic heritage*:

  (a) the character, location, scale and form of *structures* in the *beds* of *lakes* and *rivers, wetlands* and in the *coastal marine area*,

  (b) *indigenous vegetation* removal in the *beds* of *lakes* and *rivers*, *wetlands* and the *coastal marine area,*

  (c) *earthworks*, deposition and disturbance to and in the *beds* of *lakes* and *rivers* and in the *coastal marine area*,

  (d) *discharges* to air,

  (e) taking, use, damming and diversion of, and *discharges* to, *water*, and

(f) the disturbance, demolition or alteration of physical elements or *structures* of *historic heritage* in the *beds* of *lakes* and *rivers* and in the *coastal marine area*,

(3) enable Kāi Tahu to identify places and areas with *historic heritage* values for *mana whenua* in accordance with HCV-HH-P5 that are located on the *beds* of *lakes* and *rivers*, and in *wetlands* and the *coastal marine areas*,

(4) include implementation methods to protect *historic heritage* that are in accordance with HCV-HH-P6 and may also include:

(a) assessment criteria, development standards or thresholds to control the scale, intensity, form and location of activities (including for the purposes of controlling cumulative adverse *effects*), and

(b) conditions on *resource consents* to provide buffers or setbacks between *historic heritage* places or areas and other incompatible activity, and

(5) require the use of accidental discovery protocols as conditions on *resource consents* for *earthworks* or other activities that may encounter archaeological features.

HCV-HH-M5 – *District Plans*

Territorial authorities must prepare or amend and maintain their *district plans* to the extent necessary to:

(1) identify places and areas with *historic heritage* in accordance with HCV-HH-P5 that are located outside the *beds* of *lakes* and *rivers*, *wetlands* and the *coastal marine area,*

(2) control the following where they may adversely affect *historic heritage*:

(a) the location, intensity and form of *subdivision*,

(b) the character, location, scale and form of activities (including *structures*) outside the *beds* of *lakes* and *rivers* and the *coastal marine area*,

(c) the location and scale of *earthworks* and *indigenous vegetation* removal outside the *beds* of *lakes* and *rivers* and the *coastal marine area,*

(d) the disturbance, demolition or alteration of physical elements or *structures* with special or outstanding *historic heritage* value or qualities outside the *coastal marine area*, *beds* of *lakes* and *rivers*,

(3) enable Kāi Tahu to identify places and areas with *historic heritage* values for *mana whenua* in accordance with HCV-HH-P5 that are located on the beds of *lakes* and *rivers*, and in *wetlands* and the *coastal marine areas*,

(4) include implementation methods to protect *historic heritage* places and areas required by HCV-HH-P6, and may also include:

(a) assessment criteria, development standards or thresholds to control the scale, intensity, form and location of activities (including for the purposes of controlling cumulative adverse *effects*),

(b) conditions on *resource consents* and designations to provide buffers or setbacks between *historic heritage* places or areas and other incompatible activity,

(c) accidental discovery protocols as conditions on *resource consents* for *earthworks* or other activities that may unearth archaeological features,

(d) providing for activities seeking to retain *historic heritage* places, areas or landscapes, including adaptive reuse, maintenance and seismic strengthening,

(e) including heritage alert layers in plans to inform the public about areas where there is a high probability of the presence of heritage values, particularly archaeological values, and

(5) require the use of accidental discovery protocols as conditions on *resource consents* and designations for *earthworks* or other activities that may unearth archaeological features.

HCV-HH-M6 – Incentives and education

Local authorities are encouraged to use other mechanisms or incentives to assist in achieving HCV-HH-P4 to HCV-HH-P7, including:

(1) promoting public awareness of *historic heritage* values through providing information and education, and

(2) rates differentials and *resource consent* fee waivers for activities that involve the retention of historic places or areas.

(3) enabling Kāi Tahu to interpret places and areas with *historic heritage* values for *mana whenua*.

Explanation

HCV-HH-E2 – Explanation

The policies in this section are designed to ensure that Otago's unique *historic heritage* continues to contribute to the region's character, sense of identity, and social and economic well-being by requiring places and areas of significant *historic heritage* to be identified using regionally consistent methodology, then protecting or managing those sites or areas to ensure that activities do not detract from the region's special character and sense of identity. This also includes encouraging the ongoing use and adaptive re-use of historic heritage in certain circumstances.

Principal reasons

HCV-HH-PR2 – Principal reasons

Otago is a region rich in *historic heritage*, with a diversity of significant cultural and *historic heritage* places and areas that contribute to its special character and identity. *Historic heritage* encompasses historic sites, *structures*, places, and areas; archaeological sites; sites of significance to Māori (including wāhi tapu and wāhi taoka sites) and the broader surroundings and landscape in which they are situated. The heritage resources in Otago are reflective of the history that helped to shape the region, and is representative of the different cultures, industries and institutions that contributed to its development. Historic landscapes in the coastal *environment* are specifically recognised in Policy 17 of the NZCPS.

The provisions in this chapter assist in implementing section 6(f) of the RMA and the NZCPS by requiring:

- the identification of places and areas with *historic heritage* values and qualities using clear criteria that is regionally consistent and providing for the assessing of special or outstanding values and qualities with a regionally consistent criteria and methodology where this is required.
- the protection of *historic heritage* from inappropriate *subdivision*, use and development,

- the maintenance *and* enhancement of *historic heritage* through encouraging its ongoing use and adaptive reuse values into new activities and enabling the adaptive reuse or upgrade of *historic heritage* places and areas in certain circumstances, and
- specified actions on the part of Otago's *local authorities* in managing *historic heritage*.

Implementation of the provisions in this chapter will occur primarily through *regional plan* and *district plan* provisions, however *local authorities* may also choose to adopt additional non-regulatory methods to support the achievement of the objectives.

Anticipated environmental results

HCV-HH-AER3	Heritage resources that make a significant contribution towards Otago's *historic heritage* are identified and protected.
HCV-HH-AER4	The number, type, extent and distribution of *historic heritage* sites and places with special or outstanding values or qualities are maintained.
HCV-HH-AER5	Otago's existing built *historic heritage* is maintained and enhanced through efficient use, or adaptive reuse, where appropriate.

NFL – Natural features and landscapes

Advice note: *Pursuant to CE-P2 the provisions within this chapter do not apply in the coastal environment.*

Objectives

NFL-O1 – Outstanding natural features and landscapes

The areas and values of Otago's outstanding natural features and landscapes are identified, and the use and development of Otago's *natural and physical resources* results in the protection of them from inappropriate *subdivision*, use and development.

NFL-O2 – *Highly valued natural features and landscapes*

The identified values of any *highly valued natural features and landscapes* are maintained or enhanced.

Policies

NFL-P1 – Identification

Any identification of the areas and values of outstanding natural features and landscapes or *highly valued natural features and landscapes,* occurs in accordance with APP11 and MW-M1(5).

NFL-P2 – Protection of outstanding natural features and landscapes

Protect outstanding natural features and landscapes from inappropriate *subdivision*, use and development by:

(1) maintaining the values that contribute to the natural feature or landscape being considered outstanding, even if those values are not themselves outstanding,

(2) avoiding, remedying or mitigating other adverse *effects*; and

(3) managing the adverse *effects* of *infrastructure* on the values of outstanding natural features and landscapes in accordance with EIT-INF-P4 and EIT-INF-P9.

NFL-P3 – Management of activities within *highly valued natural features and landscapes*

Manage adverse *effects* of *subdivision*, use and development within any identified *highly valued natural features and landscapes* having particular regard to the maintenance or enhancement of the values of those areas.

NFL-P4 – Restoration

Promote restoration of the areas and values of outstanding natural features and landscapes and *highly valued natural features and landscapes* where those areas or values have been reduced or lost.

NFL-P5 – Managing landscape values on native reserves and *Māori land*

When managing the effects of *subdivision*, use and development of native reserves and *Māori land* on outstanding natural features and landscapes and *highly valued natural features and landscapes*, recognise and give practical effect to Kai Tahu rakatirataka by:

(1) having regard to the principles of the Treaty of Waitangi, and the purpose of the redress provided for in the NTCSA, including redress arising from the Ancillary Claims and SILNA,

(2) enabling *mana whenua*, and owners of Māori freehold *land* in relation to their *land*, to lead approaches to the management of those *effects*, and

(3) while achieving the outcomes provided for under NFL-P2 and NFL-P3, also achieving the outcomes provided for under MW-P4.

Methods

NFL-M1 – Identification

Territorial authorities:

(1) may identify *highly valued natural features and landscapes,* and

(2) must:

  (a) include in their *district plans* a map or maps and a statement of the values of the areas of outstanding natural features and landscapes in accordance with NFL-P1,

  (b) in areas likely to face development or growth pressure, include in their *district plans* a statement of the capacity of outstanding natural features and landscapes to accommodate use or development while protecting from inappropriate use and development the values that contribute to the natural feature and landscape being considered outstanding,

  (c) collaborate with Kāi Tahu to identify the areas, values, and capacity of natural features and landscapes of significance for Kāi Tahu in accordance with tikaka, and record and apply appropriate management responses as determined by Kāi Tahu,

  (d) recognise that natural features and landscapes and any identifying *highly valued natural features and landscapes* may span jurisdictional boundaries and work together, including with the Regional Council and adjoining Regional Councils, to identify areas under (1) and (2)(a), to ensure that the identification of outstanding natural features and landscapes are treated uniformly across district boundaries and, where appropriate, regional boundaries, and

  (e) prioritise identification under (2(a)) in areas that are likely to contain outstanding natural features or landscapes and are likely to face development or growth pressure over the life of this RPS, and

  (f) ensure the requirements of MW-M1(4) are met, and

  (g) if identifying *highly valued natural features and landscapes* under (1):

    (i) implement (2)(c) and (f) above, and

    (ii) include in their *district plans* a map or maps.

NFL-M2 – *Regional plans*

Otago Regional Council must prepare or amend and maintain its *regional plans* to control the use and development of *water bodies,* the *beds* of *rivers* and *lakes*, and *wetlands* in order to:

(1) protect outstanding natural features and landscapes in accordance with NFL-P2 and NFL-P5,

(2) manage adverse *effects* on *highly valued natural features and landscapes* in accordance with NFL-P3 and NFL-P5, and

(3) provide for and encourage activities undertaken for the purpose of restoring outstanding natural features and landscapes and *highly valued natural features and landscapes* in accordance with NFL-P4.

NFL-M3 – *District plans*

Territorial authorities must prepare or amend and maintain their *district plans* to:

(1) control the *subdivision*, use and development of *land* and the use of the surface of *water bodies* in order to:

  (a) protect outstanding natural features or landscapes in accordance with NFL-P2 and NFL-P5, and

  (b) manage adverse *effects* on *highly valued natural features and landscapes* in accordance with NFL-P3 and NFL-P5.

(2) manage *wilding conifer* spread in accordance with LF-LS-P18, and

(3) provide for and encourage activities undertaken for the purpose of restoring outstanding natural features and landscapes and *highly valued natural features and landscapes* in accordance with NFL-P4.

NFL-M4 – Other incentives and mechanisms

Local authorities are encouraged to consider the use of other mechanisms or incentives to assist in achieving the outcomes sought by the policies in this chapter, including:

(1) funding assistance for restoration projects (for example, through the Regional Council's ECO Fund),

(2) purchase of *land* that forms part of a natural feature or landscape,

(3) development or design guidelines (for example, colour palettes for *structures* in or on natural features or landscapes),

(4) rates relief for *land* that is protected due to its status as an outstanding natural feature or landscape, or use is constrained due to its status as a *highly values natural feature and landscape*,

(5) education and advice,

(6) waiver or reduction of processing fees for activities where the primary purpose is to enhance the values of outstanding natural features and landscapes or identified *highly valued natural features and landscapes*, and

(7) advocating for a collaborative approach between central and local government to fund and carry out *wilding conifer* control.

Explanation

NFL-E1 – Explanation

The policies in this chapter are designed to require outstanding natural features and landscapes to be identified using regionally consistent attributes, then managing activities to either protect outstanding natural features and landscapes in accordance with section 6(b) of the RMA. The chapter also allows for *highly valued natural features and landscapes* to be identified. Where *highly valued natural features and landscapes* are identified, policies require the management of adverse effects having particular regard to the maintenance or enhancement of these *highly valued natural features and landscapes* in accordance with section 7 of the RMA. This distinction recognises that these areas have values with differing degrees of significance and that, generally those classified as 'highly valued' will have a greater capacity to accommodate land use change and development without values being adversely affected. The policies seek to control the impact of *wilding conifers* which are a particular threat to Otago's natural features and landscapes, in a way that recognises the regulations in the NESCF.

Principal reasons

NFL-PR1 – Principal reasons

Natural features include resources that are the result of natural processes, particularly those reflecting a particular geology, topography, geomorphology, hydrology, ecology, or other physical attribute that creates a natural feature or combination of natural features. Landscapes include the natural and physical attributes of *land* together with air and *water*, which change over time and which is made known by people's evolving perceptions and associations. Natural features and landscapes also have significant cultural value to Kāi Tahu. There are many sites of significance across Otago, reflecting the relationship of Kāi Tahu with the *land, water* and sea.

The provisions in this chapter assist in protecting Otago's outstanding natural features and landscapes, and managing *effects* on *highly valued natural features and landscapes* by:

- requiring the identification of outstanding natural features and landscapes using regionally consistent criteria,
- requiring the protection of outstanding natural features and landscapes,
- requiring specified actions on the part of Otago's *local authorities* in managing natural features and landscapes,
- allowing for the identification of *highly valued natural features and landscapes* using regionally consistent criteria,
- requiring the management of adverse *effects* having particular regard to the maintenance or enhancement of any identified *highly valued natural features and landscapes*.

Implementation of the provisions in this chapter will occur primarily through *regional plan* and *district plan* provisions, however *local authorities* may also choose to adopt additional non-regulatory methods to support the achievement of the objectives.

Anticipated environmental results

NFL-AER1	The number, type, extent and distribution of identified outstanding natural features and landscapes are maintained over the life of this RPS.
NFL-AER2	The values of outstanding natural features and landscapes and *highly valued natural features and landscapes* are not reduced or lost.

UFD – Urban form and development

Objectives

UFD-O1 – Development of *urban areas*

The development and change of Otago's *urban areas* occurs in a strategic and coordinated way, which results in *well-functioning urban environments,* that:

(1) accommodate the diverse and changing needs and preferences of Otago's people and communities, now and in the future,

(2) integrate effectively with *infrastructure, development infrastructure* and *additional infrastructure,* and surrounding *urban areas* and *rural areas,* including by managing *reverse sensitivity effects* and direct *effects* on electricity networks,

(3) are consolidated, well-connected and have a well-designed urban form,

(4) have effective and efficient *infrastructure, development infrastructure* and *additional infrastructure*,

(5) support *climate change adaptation* and *climate change mitigation*, and

(6) takes into account the values and aspirations of iwi, hapū and whānau, including for urban development.

Policies

UFD-P1 – Strategic planning

Strategic planning processes, undertaken at an appropriate scale and detail, precede urban growth and development and:

(1) identify how housing choice, quality, and affordability will be improved,

(2) ensure the integration of *land* use, urban intensification, and urban expansion with *infrastructure*, including how, where and when necessary *development infrastructure* and *additional infrastructure* will be provided, and by whom,

(3) take into account whether urban expansion may contravene *limits (in relation to freshwater*),

(4) demonstrate at least sufficient *development capacity* supported by integrated *infrastructure* provision for Otago's housing and business needs in the short, medium and long term,

(5) maximise current and future opportunities for increasing *resilience* and reducing contributions of communities to *climate change*, and facilitate adaptation to changing demand, needs, preferences and *climate change*,

(6) indicate how connectivity will be improved and connections will be provided within *urban areas*,

(7) provide opportunities for iwi, hapū and whānau involvement in planning processes, including in decision making, to ensure provision is made for their needs and aspirations, and cultural practices and values,

(8) facilitate involvement of the current community and respond to the reasonably foreseeable needs of future communities, and

(9) identify areas of potential conflict between incompatible activities and sets out the methods by which these are to be resolved, including by consultation with *infrastructure* providers.

UFD-P2 – Sufficiency of *development capacity*

Ensure that at least sufficient housing and business *development capacity* is provided in *urban areas* in the short, medium and long term, including by:

(1) responding to any demonstrated insufficiency in housing or business *development capacity* by increasing *development capacity* or providing more *development infrastructure* as required, as soon as practicable,

(2) being responsive to plan changes that demonstrate compliance with UFD-P7, and

(3) requiring Tier 2 *urban environments* to meet, at least, the relevant housing bottom lines in APP12.

UFD-P3 – Urban intensification

Manage intensification in *urban areas*, so that as a minimum the intensification:

(1) contributes to establishing or maintaining the qualities of a *well-functioning urban environment*,

(2) is well-served by efficient and effective *infrastructure, development infrastructure* and *additional infrastructure*,

(3) enables heights and densities that meets the greater of demonstrated demand for housing and/or business use or the level of accessibility provided for by existing or planned *active transport* or *public transport*,

(4) addresses issues of concern to iwi and hapū, including those identified in any relevant iwi planning documents,

(5) protects the efficient and effective operation, maintenance, upgrading and development of *nationally significant infrastructure* and *regionally significant infrastructure* in accordance with EIT-INF-P7, and electricity distribution infrastructure in accordance with EIT-INF-P1, and

(6) except as provided for in (5), limits, to the extent reasonably possible, the effects on operation, maintenance, upgrading and development of *development infrastructure* and *additional infrastructure*.

UFD-P4 – Urban expansion

Expansion of existing *urban areas* should only occur where, at a minimum, the expansion:

(1) contributes to establishing or maintaining the qualities of a *well-functioning urban environment,*

(2) is identified by and undertaken consistent with strategic plans prepared in accordance with UFD-P1, or is required to address a shortfall identified in accordance with UFD-P2,

(3) achieves consolidated, well designed and sustainable development in and around existing *urban areas*,

(4) is logically and appropriately staged, and will not result in inefficient or sporadic patterns of settlement and residential growth,

(5) is integrated efficiently and effectively with *infrastructure, development infrastructure* and *additional infrastructure* in a strategic, timely and co-ordinated way,

(6) addresses issues of concern to iwi and hapū, including those identified in any relevant iwi planning documents,

(7) manages adverse *effects* on other values or resources identified by this RPS that require specific management or protection,

(8) avoids, *highly productive land* except as provided for in the NPSHPL, and considers adverse *effects*, particularly *reverse sensitivity* effects, on existing and anticipated *primary production* or *rural industry* activities when determining the location of the new urban/rural boundary,

(9) protects the efficient and effective operation, maintenance, upgrading and development of *nationally significant infrastructure* and *regionally significant infrastructure* in accordance with EIT-INF-P7, and electricity distribution infrastructure in accordance with EIT-INF-P1, and

(10) except as provided for in (9), limits, to the extent reasonably possible, the effects on operation, maintenance, upgrading and development of *development infrastructure* and *additional infrastructure*.

UFD-P5 – Commercial activities

Provide for *commercial activities* in *urban areas* by:

(1) enabling a wide variety and scale of *commercial activities*, social, recreational and cultural activities to concentrate in city, metropolitan, town centre and commercial zoned areas, where appropriate, especially if they are highly accessible by *public transport* or *active transport,* and

(2) enabling smaller local and neighbourhood centres, mixed use zones and rural settlements to accommodate a variety of *commercial activities*, social, recreational and cultural activities of a scale appropriate to service local community needs.

UFD-P6 – Industrial activities

Provide for *industrial activities* in *urban areas* by:

(1) identifying specific locations and applying zoning suitable for accommodating *industrial activities* and their reasonable needs and *effects* including supporting or *ancillary activities*,

(2) identifying a range of *land* sizes and locations suitable for different *industrial activities*, and their *operational needs* including land-extensive activities, and

(3) managing the establishment of non-industrial activities, in industrial zones, to avoid the likelihood of *reverse sensitivity effects* on existing or potential *industrial activities* arising, unless the potential for *reverse sensitivity* is insignificant.

UFD-P7 – Criteria for significant development capacity

A proposed plan change will only be considered as providing *significant development capacity* for the purpose of clause 3.8 of the NPSUD if it meets all of the following criteria:

(1) required *development infrastructure* can be provided effectively and efficiently for the proposal, without preventing or delaying other planned *development infrastructure*,

(2) the proposal makes a significant contribution to meeting a need identified in a *Housing and Business Development Capacity Assessment*, or a shortage identified in monitoring for:

    (a) housing of a particular price range or typology, particularly more affordable housing,

    (b) business space or *land* of a particular size or locational type, or

(c) community or educational facilities, and

(3) when considering the significance of the proposal's contribution to a matter in (2), this means that the proposal's contribution:

(a) is of high yield relative to either the forecast demand or the identified shortfall,

(b) will be realised in a timely (i.e. rapid) manner,

(c) is likely to be taken up, and

(d) will facilitate a net increase in district-wide up-take in the short to medium term.

UFD-P8 – Development on native reserves and *Māori land*

In *urban areas*, Kāi Tahu are able to use and develop native reserves and *Māori land* in accordance with MW-P4.

Methods

UFD-M1 – Strategic planning

Otago Regional Council and *territorial authorities*:

(1) must, where they are Tier 2 local authorities, jointly determine housing *development capacity* that is feasible and likely to be taken up in the medium and long terms through *Housing and Business Development Capacity Assessments*,

(2) should, for other districts, jointly determine demand and potential supply responses through similar, but appropriately scaled strategic planning approaches,

(3) must, where they are Tier 2 and Tier 3 *local authorities*, monitor and regularly assess and report on the supply of, and demand for, residential, commercial and industrial zoned *land development capacity* available at the regional, district and *urban environment* scales, and other *local authorities* are encouraged to do so,

(4) must coordinate the redevelopment and intensification of *urban areas* and the development of expansions to *urban areas* with *infrastructure* planning and development programmes, to:

(a) provide the required *development infrastructure* and *additional infrastructure* in an integrated, timely, efficient and effective way, and

(b) identify major existing and future activities, constraints and opportunities

and for Tier 2 *local authorities* to achieve this through jointly developed *Future Development Strategies* and/or strategic planning, and for all other *local authorities* through strategic planning in accordance with UFD-P1, and

considering, in relation to native reserves and *Māori land*, the range of servicing solutions that will enable the use and development of that *land* in accordance with MW-P4,

(5) must, where they are Tier 2 *local authorities*, develop housing bottom lines for *urban environments* and include those bottom lines in APP12 and in the relevant *district plans*,

(6) must individually or jointly develop further regulatory or non-regulatory methods and actions to implement strategic and spatial plans, including to guide the detail of how, when and where development occurs, including matters of urban design, requirements around the timing, provision,

and responsibilities for open space, connections and infrastructure, including by third parties, and the ongoing management of effects of urban development on matters of local importance,

(7) must involve *mana whenua,* and provide opportunities for iwi, hapū and whānau involvement in planning processes, including in decision making, and

(8) must ensure that owners of Māori freehold *land* are included in planning processes that may affect their *land*.

UFD-M2 – *District plans*

Territorial authorities must prepare or amend their *district plans* as soon as practicable, and maintain thereafter, to:

(1) identify and provide for urban expansion and intensification to occur in accordance with:

  (a) any adopted *future development strategy* for the relevant district or region, which must be completed in time to inform the 2024 Long Term Plan, or

  (b) where there is no *future development strategy,* a *local authority* adopted strategic plan developed in accordance with UFD-P1, for the relevant area, district or region,

(2) in accordance with any required *Housing and Business Development Capacity Assessments* or monitoring, including any *competitiveness margin*, ensure there is always sufficient *development capacity* that is feasible and likely to be taken up and, for Tier 2 *urban environments*, at a minimum meets the bottom lines for housing in APP12, and meets the identified *land* size and locational needs of the commercial and industrial sectors,

(3) ensure that urban development is designed to:

  (a) achieve a built form that relates well to its surrounding *environment*,

  (b) provide for a diverse range of housing, *commercial activities*, industrial and service activities, social and cultural opportunities,

  (c) achieve an efficient use of *land*, energy, *water* and *infrastructure*,

  (d) minimise the potential for *reverse sensitivity effects* to arise, by managing the location of incompatible activities, within the *urban area*, and at the rural-urban interface, and

  (e) reduce the adverse *effects* of Otago's cooler winter climate through designing new *subdivision* and development to maximise passive winter solar gain and winter heat retention, including through roading, lot size, dimensions, layout and orientation,

(4) identify and provide for locations that are suitable for urban intensification in accordance with UFD-P3,

(5) identify and provide for locations that are suitable for urban expansion, if any, in accordance with UFD-P4,

(6) identify and provide for *commercial activities* in accordance with UFD-P5,

(7) identify and provide for *industrial activities* in accordance with UFD-P6,

(8) involve *mana whenua* and provide opportunities for iwi, hapū and whānau involvement in planning processes, including in decision making, and

(9) ensure that owners of Māori freehold *land* are included in planning processes that may affect their *land.*

UFD-M3 – Design of public spaces and surrounds

Territorial authorities must design and maintain public places and spaces, including streets, open spaces, public *buildings* and publicly accessible spaces so that they are safe, attractive, accessible and usable by everyone in the community.

Explanation

UFD-E1 – Explanation

The policies in this chapter are designed to facilitate the provision of sufficient housing and business capacity and ensure all of the region's *urban areas* demonstrate the features of *well-functioning urban environments* and meet the needs of current and future communities. Urban intensification and urban expansion decisions should be preceded and guided by strategic planning processes that consider how best this can be achieved and in consideration of local context, values and pressures. The strategic planning process will also consider and demonstrate where, when, how and by whom the necessary *development infrastructure* and *additional infrastructure* will be provided in order to both facilitate development and change and minimise environmental impacts from it

Otago's *urban areas* also contain significant natural, cultural and historic values and features as identified by other parts of this RPS. In all cases while facilitating urban development these values must also be identified, maintained and, wherever possible, enhanced. This approach includes direction on different types of development within *rural areas*, managing the expansion and location of *urban areas*, and rural lifestyle and rural residential development, and directing that growth be enabled in *urban areas* to minimise the need for development to occur within *rural areas*, other than what is needed to facilitate rural community and rural productive activities. The provisions in this chapter also include direction on managing the expansion and location of *urban areas* in terms of the *effects* on and interface with *rural areas*. These provisions work closely with those in the LF-LS chapter which apply to *rural areas*.

The policies in this chapter are primarily focused on directing where urban development is and is not appropriate and under what circumstances, but provides discretion for *local authorities* to determine the detail of how that development is managed, its ultimate density, height, bulk and location, timing and sequencing, the detail of any required *development infrastructure* and *additional infrastructure* that may be needed, and allows for the consideration of particular locally significant features values and needs that contribute to the attractiveness or uniqueness of the diverse communities, landscapes, and *environments* of the region.

This more detailed determination must, however, be informed by evidence and information collated through appropriately scaled *strategic planning* processes which will identify how constraints to urban development, such as hazards, landscapes, *highly productive land*, and limits are responded to, and opportunities for meeting demand, integration with lifeline utilities, *infrastructure* and other requirements may be provided for. They will be implemented by a range of regulatory and non-regulatory methods, including joint development of *Housing and Business Assessments* and *Future Development Strategies* for Tier 2 local authorities, and similar but appropriately scaled processes undertaken in and for other areas, including regular regional, district and *urban environment* scale monitoring, analysis and evaluation.

In delivering on the objectives and policies in this chapter, which relate largely to human activities and settlements, the natural, physical, and built values and features of importance to the region must be recognised and provided for. These values and features are largely identified within other chapters and

provision of the RPS. They also provide detail on how they should be identified and managed. Achieving the objectives of this chapter requires consideration of those other relevant parts of this RPS.

Principal reasons

UFD-PR1 – Principal reasons

The provisions in this chapter assist in fulfilling the functions of the regional council under section 30(ba) and *territorial authorities* under section 31(aa) of the RMA to ensure sufficient *development capacity* in relation to housing and *business land* to meet the expected demands of the region and districts respectively. They also assist in giving effect to the similar but more detailed requirements of the NPSUD.

Urban areas are important for community well-being and are a reflection the inherently social nature of humans. Well-functioning urban areas enable social interactions and provide a wide variety (across type, location and price) of housing, employment and recreational opportunities to meet the varied and variable needs and preferences of communities, in a way that maximises the well-being of its present and future inhabitants, and respects its history, its setting and the *environment*. The combination of population growth and demographic change will result in changes in the quantity and qualities demanded of housing, employment, business, *infrastructure*, social facilities emergency services and *lifeline utilities* and other and services across the region. Upgrade and replacement of the existing development and *infrastructure* will also continue to be required even where growth is limited, resulting in changes in the built environment. Some of these changes will also be driven by changes in the natural environment, including the impacts of *climate change*. *Urban areas* are highly dynamic by nature, so the provisions in this chapter seek to manage, rather than limit, the form, function, growth and development of *urban areas* in a way that best provides for the community's well- being both now and into the future.

The pace and scale of growth and change, and the scale and nature of *urban environments* and areas in the region is variable, meaning no single response at a regional level is appropriate in all cases. Accordingly, the process identified in this RPS remains flexible and responsive (outside of Tier 2 *urban environments*, which have specific requirements under the NPSUD). Key requirements of strategic planning include considering and providing for reasonably expected changes in overall quantum of demand and supply as well as changes in needs and preferences that may drive or add to these changes in demand, designing to maximise the efficient use of energy, *land* and *infrastructure* (including transport *infrastructure*). This can best be achieved by prioritising development in and around the region's existing urban areas as the primary focus of the region's growth and change, by enabling development within and adjacent to those *urban areas*, where it generally is most suitable and most efficient to do so.

These strategic planning processes provide the mechanism by which longer term issues can be considered, integration between *land* use and infrastructure can be achieved, and various constraints, opportunities and key trade-offs can be identified and appropriately resolved, while identifying and managing the values and resources identified in this RPS. These processes, and others should always involve *mana whenua,* and owners of Māori freehold land in relation to their *land,* at all levels of the process to ensure their views and values can be incorporated and celebrated, and their needs and aspirations appropriately provided for.

All development should seek to maximise efficient use of *water* consumption (through *water* efficient design) and disposal. Reduced consumption reduces sewerage loads, and *water* sensitive design reduces impacts on both supplying and receiving natural systems and can reduce flooding from *stormwater*, and maximise the winter capture and retention of the suns energy, which will also assist with reducing the energy needed to heat homes in winter and can also help reduce air pollution from *solid fuel* burning for

home heating. Development in more central parts of the region also need to be designed to be cognisant of minimising excess sun capture in the summer months.

Implementation of the provisions in this chapter will occur partially through *regional plans* but primarily *district plan* provisions, as well as through preparation of *future development strategies* and *structure plans* and the financial and *infrastructure* planning processes they inform. While the functions and duties of regional councils and *territorial authorities* are different, each brings different focus and responsibilities to the task of achieving *well-functioning urban environments.* Working together, and with others, in accordance with specified joint responsibilities under the NPSUD, will assist with achieving the purpose of the RMA and the outcomes sought by this RPS.

To appropriately and efficiently achieve the objectives and policies, other non-regulatory spatial planning exercises and associated action plans, agreements and *infrastructure* delivery programs will be needed to complement regulatory approaches, including setting aside the necessary funding for delivery, and partnering with Kāi Tahu*,* central government, communities and developers to deliver the quality and quantity of urban development needed to meet demand and provide for change, improve *land* and development market competitiveness, and achieve *resilient,* efficient and attractive urban places.

Anticipated environmental results

UFD-AER1	Appropriately scaled strategic planning occurs in advance of regulatory planning, and regulatory plans are changed in a timely manner to facilitate the outcomes identified in these processes.
UFD-AER2	Urban expansion only occurs when suitable and sufficient *development infrastructure* is in place or will be provided at the time of expansion and provision is made for the needs of *additional infrastructure*.
UFD-AER3	*Development infrastructure* is in place in time to facilitate reasonably expected urban intensification or planned expansion.
UFD-AER4	New developments including redevelopments are designed to maximise energy and transport efficiency and minimise impacts on *water* quality and quantity.
UFD-AER5	The majority of new urban development is located close to services, jobs, and other urban amenities and can access those amenities by a range of transport modes including *active transport* and, where available, *public transport*.
UFD-AER6	The mode share and use of *active transport* and where available, *public transport* increases.
UFD-AER7	There is an increased range of housing types and locations and an increased number of *dwellings*, particularly more affordable housing in existing and planned *urban areas*.
UFD-AER8	The current and future needs of business are met by the availability of a range of opportunities for *land* and space that meets their requirements.

UFD-AER9	New rural lifestyle development occurs within areas appropriate for this use.
UFD-AER10	Urban expansion and urban activities are appropriately planned so that they do not adversely affect the long-term viability of the rural sector and rural communities.
UFD-AER11	*Mana whenua,* and owners of Māori freehold land in relation to their *land,* are involved in strategic planning and other planning processes.

PART 4 – EVALUATION AND MONITORING

Monitoring the efficiency and effectiveness of the policy statement

ORC must monitor the efficiency and effectiveness of its RPS provisions and publish the results every five years. The RPS needs to include the procedures for monitoring its methods and policies.

Existing monitoring procedure

ORC has policies and procedures in place to gather information and to monitor and report on how well Otago's *natural and physical resources* are managed. These include State of the Environment reporting, *resource consent* monitoring, and annual reporting against objectives in the Council's Long-Term Plan. These policies and procedures will be reviewed and updated to reflect ORPS environmental goals (objectives) and ensure the right information is being gathered to monitor the environmental results anticipated.

The ORPS is relevant to all decision making under the RMA and must be given effect through *regional plans* and *district plans*. As the ORPS is given effect through *regional plans* and *district plans*, much of the data needed for monitoring will be gathered for the purpose of, or will be relevant to, the monitoring of *regional plans* and *district plans.* ORC will undertake a work programme to identify data the *territorial authorities* collect in the course of their normal monitoring regimes and make arrangements for collection and sharing of data, including information that the regional council collects that may be of benefit to *territorial authorities*.

Specific environmental indicators will be developed to monitor the impact that ORPS policies and methods are having on Otago's social, economic, cultural and environmental well-being, and whether they remain the most appropriate for achieving the RMA's purpose. These environmental indicators will be developed outside of the ORPS. This approach enables the frequency or type of indicators to be amended, in order to respond to emerging issues, improved technology and best practice, changes in the local *environment*, or societal expectations. It forms part of a continuous review and reporting cycle, resulting in policy changes and adjustments as necessary.

The ORPS needs to reflect the needs and aspirations of *mana whenua* and the wider community, so *mana whenua* and stakeholders will be encouraged to be involved with monitoring the provisions of the ORPS.

Regional Monitoring Strategy

To address the undertakings described above, ORC must develop a comprehensive integrated Regional Monitoring Strategy (RMS). This strategy will link ORC's various monitoring procedures together to reduce double handling, identify connections, and improve interrelationships, both between ORC functions and with other agencies. The strategy will help monitor the effectiveness and efficiency of the ORPS, using both quantitative and qualitative assessments, and sit alongside it as a non-statutory document.

The RMS will assist ORC with expanding its monitoring activities to respond to ORPS provisions and ensure the things measured accurately reflect policy success, including environmental, social, economic, cultural and *historic heritage* values. It will increase transparency by stating what is monitored and why.

This goes hand in hand with increasing the ORC's leadership and facilitation role in several areas, including *climate change*.

PART 5 – APPENDICES AND MAPS

APP1 – Criteria for identifying *outstanding water bodies*

Outstanding water bodies include any *water body* with one or more of the following outstanding values, noting that sub-values are not all-inclusive:

Table 4: Values of outstanding water bodies

Values	Description	Example sub-values
Ecology	A *water body* which has outstanding ecological value as a habitat for: • Native birds • Native fish • Other aquatic species	Native birds, native fish, native plants, aquatic macroinvertebrates
Landscape	A *water body* that: (1) is an essential component of a landscape or natural feature that is "conspicuous, eminent, remarkable or iconic" within the region, and (2) has landscape, wild and/or scenic values that contain distinctive qualities which are outstanding in the context of the region.	Scenic, association, natural characteristics (includes hydrological, ecological and geological features)
Natural character	A *water body* with naturalness that: (1) exhibits a combination of natural processes, natural patterns and natural elements that is exceptional in the context of the region, and (2) has little to no human modification to its form, ecosystems, and the surrounding landscape.	Natural characteristics (includes hydrological, ecological and geological features)
Recreation	A *water body* which is recognised as providing an outstanding recreational experience for an activity which is directly related to the *water*.	Angling, fishing, kayaking, rafting, jetboating
Physical	A *water body* which has an outstanding geomorphological, geological or hydrological feature which is dependent on the *water body's* condition and functioning.	Science

APP2 – Criteria for identifying areas that qualify as *significant natural areas* (SNAs)

This appendix sets out the criteria for identifying significant *indigenous vegetation* or significant *habitats* of indigenous fauna in a specific area, so that the area qualifies as an *SNA.*

The assessment must be done using the assessment criteria in this Appendix and in accordance with the following principles:

(a) partnership: *territorial authorities* engage early with *mana whenua* and landowners and share information about *indigenous biodiversity,* potential management options, and any support and incentives that may be available:

(b) transparency: *territorial authorities* clearly inform *mana whenua* and landowners about how any information gathered will be used and make existing information, draft assessments and other relevant information available to *mana whenua* and relevant landowners for review:

(c) quality: wherever practicable, the values and extent of natural areas are verified by physical inspection; but if a physical inspection is not practicable (because, for instance, the area is inaccessible, or a landowner does not give access) the *local authority* uses the best information available to it at the time:

(d) access: if a physical inspection is required, permission of the landowner is first sought and the powers of entry under section 333 of the Act are used only as a last resort:

(e) consistency: the criteria in this Appendix are applied consistently, regardless of who owns the *land*:

(f) boundaries: the boundaries of areas of significant *indigenous vegetation* or significant *habitat* of indigenous fauna are determined without regard to artificial margins (such as property boundaries) that would affect the extent or ecological integrity of the area identified.

1 What qualifies as an *SNA*

(1) An area qualifies as an *SNA* if it meets any one of the attributes of the following four criteria:

(a) representativeness:

(b) diversity and pattern:

(c) rarity and distinctiveness:

(d) ecological context.

(2) If an area would qualify as an *SNA* solely on the grounds that it provides *habitat* for a single indigenous fauna species that is At Risk (declining), and that the species is widespread in at least three other regions, the area does not qualify as an *SNA* unless:

(a) the species is rare within the region or *ecological district* where the area is located; or

(b) the protection of the species at that location is important for the persistence of the species as a whole.

(3) If an area would qualify as an *SNA* solely on the grounds that it contains one or more indigenous flora species that are *Threatened or At Risk (declining)*, and those species are widespread in at least three other regions, the area does not qualify as an *SNA* unless:

(a) the species is rare within the region or *ecological district* where the area is located; or

(b) the protection of the species at that location is important for the persistence of the species as a whole.

2 Context for assessment

(1) The context for an assessment of an area is:

(a) its *ecological district;* and

(b) for the rarity assessment only, its *ecological district,* its region and the national context.

3 Manner and form of assessment

(1) Every assessment must include at least:

(a) a map of the area; and

(b) a general description of its significant attributes, with reference to relevant criteria (as specified below); and

(c) a general description of the *indigenous vegetation*, indigenous fauna, *habitat,* and ecosystems present; and

(d) additional information, such as the key threats, pressures, and management requirements; and

(e) for *SNAs* in areas of Crown-owned land referred to in clause 3.8(8) of the NPSIB, the conservation management strategy or plan or national park management plan that applies to the area.

(2) An assessment under this appendix must be conducted by a suitably qualified ecologist (which, in the case of an assessment of a geothermal ecosystem, requires an ecologist with geothermal expertise).

A Representativeness criterion

(1) Representativeness is the extent to which the *indigenous vegetation* or *habitat* of indigenous fauna in an area is typical or characteristic of the *indigenous biodiversity* of the relevant *ecological district.*

(2) Significant *indigenous vegetation* has *ecological integrity* typical of the *indigenous vegetation* of the *ecological district* in the present-day *environment*. It includes seral (regenerating) *indigenous vegetation* that is recovering following natural or induced disturbance, provided species composition is typical of that type of *indigenous vegetation*.

(3) Significant indigenous fauna *habitat* is that which supports the typical suite of indigenous animals that would occur in the present-day environment. *Habitat* of indigenous fauna may be indigenous or exotic.

(4) Representativeness may include commonplace *indigenous vegetation* and the *habitats* of indigenous fauna, which is where most *indigenous biodiversity* is present. It may also include degraded *indigenous vegetation*, ecosystems and *habitats* that are typical of what remains in depleted *ecological districts.* It is not restricted to the best or most representative examples, and it

is not a measure of how well that *indigenous vegetation* or *habitat* is protected elsewhere in the *ecological district.*

(5) When considering the typical character of an *ecological district,* any highly developed *land* or built-up areas should be excluded.

(6) The application of this criterion should result in identification of *indigenous vegetation* and *habitats* that are representative of the full range and extent of ecological diversity across all environmental gradients in an *ecological district,* such as climate, altitude, landform, and soil sequences. The ecological character and pattern of the *indigenous vegetation* in the *ecological district* should be described by reference to the types of *indigenous vegetation* and the landforms on which it occurs,

Attributes of representativeness

(7) An area that qualifies as an *SNA* under this criterion has at least one of the following attributes:

(a) *Indigenous vegetation* that has *ecological integrity* that is typical of the character of the *ecological district:*

(b) *habitat* that supports a typical suite of indigenous fauna that is characteristic of the *habitat* type in the *ecological district* and retains at least a moderate range of species expected for that *habitat* type in the *ecological district.*

B Diversity and pattern criterion

(1) Diversity and pattern is the extent to which the expected range of diversity and pattern of biological and physical components within the relevant *ecological district* is present in an area.

Key assessment principles

(2) **Diversity of biological components** is expressed in the variation of species, communities, and ecosystems. *Biological diversity* is associated with variation in physical components, such as geology, soils/substrate, aspect/exposure, altitude/depth, temperature, and salinity.

(3) **Pattern** includes changes along environmental and landform gradients, such as ecotones and sequences.

(4) **Natural areas** that have a wider range of species, *habitats* or communities or wider environmental variation due to ecotones, gradients, and sequences in the context of the *ecological district,* rate more highly under this criterion.

Attributes of diversity and pattern

(5) An area that qualifies as a *significant natural area* under this criterion has at least one of the following attributes:

(a) at least a moderate diversity of *indigenous species*, vegetation, *habitats* of indigenous fauna or communities in the context of the *ecological district:*

(b) presence of indigenous ecotones, complete or partial gradients or sequences.

C Rarity and distinctiveness criterion

(1) Rarity and distinctiveness is the presence of rare or distinctive indigenous taxa, *habitats* of indigenous fauna, *indigenous vegetation* or ecosystems.

Key assessment principles

(2) **Rarity** is the scarcity (natural or induced) of indigenous elements: species, *habitats,* vegetation, or ecosystems. Rarity includes elements that are uncommon or threatened.

(3) **The list of Threatened and At Risk species** is regularly updated by the Department of Conservation. Rarity at a regional or *ecological district* scale is defined by regional or district lists or determined by expert ecological advice. The significance of nationally listed Threatened and At Risk species should not be downgraded just because they are common within a region or *ecological district.*

(4) **Depletion of *indigenous vegetation* or ecosystems** is assessed using *ecological districts* and *land environments*.

(5) **Distinctiveness** includes distribution limits, type localities, local endemism, relict distributions and special ecological or scientific features.

Attributes of rarity and distinctiveness

(6) An area that qualifies as an *SNA* under this criterion has at least one of the following attributes:

(a) provides *habitat* for an indigenous species that is listed as *Threatened or At Risk (declining)* in the New Zealand Threat Classification System lists:

(b) an *indigenous vegetation* type or an *indigenous species* that is uncommon within the region or *ecological district:*

(c) an *indigenous species* or plant community at or near its natural distributional limit:

(d) *indigenous vegetation* that has been reduced to less than 20 per cent of its prehuman extent in the *ecological district,* region, or *land* environment:

(e) *indigenous vegetation* or *habitat* of indigenous fauna occurring on naturally uncommon ecosystems:

(f) the type locality of an *indigenous species*:

(g) the presence of a distinctive assemblage or community of *indigenous species*:

(h) the presence of a special ecological or scientific feature.

D Ecological context criterion

(1) Ecological context is the extent to which the size, shape, and configuration of an area within the wider surrounding landscape contributes to its ability to maintain *indigenous biodiversity* or affects the ability of the surrounding landscape to maintain its *indigenous biodiversity.*

Key assessment principles

(2) Ecological context has two main assessment principles:

(a) the characteristics that help maintain *indigenous biodiversity* (such as size, shape, and configuration) in the area; and

(b) the contribution the area makes to protecting *indigenous biodiversity* in the wider landscape (such as by linking, connecting to or buffering other natural areas, providing 'stepping stones' of *habitat* or maintaining *ecological integrity*).

Attributes of ecological context

(3) An area that qualifies as an *SNA* under this criterion has at least one of the following attributes:

(a) at least moderate size and compact shape, in the context of the relevant *ecological district:*

(b) well-buffered relative to remaining *habitats* in the relevant *ecological district:*

(c) provides an important full or partial buffer to, or link between, one or more important *habitats* of indigenous fauna or *significant natural areas:*

(d) important for the natural functioning of an ecosystem relative to remaining *habitats* in the *ecological district;* and

(e) an area that is important for maintaining a population of indigenous fauna during a critical part of their lifecycle (either seasonally or permanently).

APP3 – Principles for *biodiversity offsetting*

These principles apply to the use of *biodiversity offsets* for adverse *effects* on *indigenous biodiversity.* An applicant is to comply with principles 1 to 6 and have regard to the remaining principles as appropriate.

(1) **Adherence to *effects management hierarchy*:** A *biodiversity offset* is a commitment to redress more than minor residual adverse *effects* and should be contemplated only after steps to avoid, minimise, and remedy adverse *effects* are demonstrated to have been sequentially exhausted.

(2) **When *biodiversity offsetting* is not appropriate:** *Biodiversity offsets* are not appropriate in situations where *indigenous biodiversity* values cannot be offset to achieve a net gain. Examples of an offset not being appropriate include where:

(a) residual adverse *effects* cannot be offset because of the irreplaceability or vulnerability of the *indigenous biodiversity* affected:

(b) *effects* on *indigenous biodiversity* are uncertain, unknown, or little understood, but potential *effects* are significantly adverse or irreversible:

(c) there are no technically feasible options by which to secure gains within an acceptable timeframe.

(d) the loss from an *ecological district* of Threatened *taxa,* other than kānuka (*Kunzea robusta* and *Kunzea serotina*), under the New Zealand Threat Classification System (Rolfe et al, 2022); or

(e) the likely worsening of the conservation status of any *Threatened or At Risk indigenous biodiversity* as listed under the New Zealand Threat Classification System (Rolfe et al, 2022); or

(f) the removal or loss of *ecological integrity* and *resilience* of a naturally uncommon ecosystem type that contains *indigenous vegetation* or *habitat* for indigenous fauna.

(3) **Net gain:** This principle reflects a standard of acceptability for demonstrating, and then achieving, a net gain in *indigenous biodiversity* values. Net gain is demonstrated by a like-for-like quantitative loss/gain calculation of the following, and is achieved when the *indigenous biodiversity* values at the offset site are equivalent to or exceed those being lost at the impact site:

(a) types of *indigenous biodiversity,* including when *indigenous species* depend on introduced species for their persistence; and

(b) amount; and

(c) condition (structure and quality).

(4) **Additionality:** A *biodiversity offset* achieves gains in *indigenous biodiversity* above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse *effects* of the activity.

(5) **Leakage:** *Biodiversity offset* design and implementation avoids displacing harm to other *indigenous biodiversity* in the same or any other location.

(6) **Long-term outcomes:** A *biodiversity offset* is managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management and monitoring.

(7) **Landscape context:** *Biodiversity offsetting* is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same *ecological district.* The action considers the landscape context of both the impact site and the offset site, taking into account interactions between species, *habitats* and ecosystems, special connections, and *ecosystem function.*

(8) **Time lags:** The delay between loss of, or *effects* on, *indigenous biodiversity* values at the impact site and the gain or maturity of *indigenous biodiversity* at the offset site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).

(9) **Science and mātauraka Māori:** The design and implementation of a *biodiversity offset* is a documented process informed by science and mātauraka Māori.

(10) ***Mana whenua* and stakeholder participation:** Opportunity for the effective and early participation of *mana whenua* and stakeholders is demonstrated when planning *biodiversity offsets*, including their evaluation, selection, design, implementation, and monitoring.

(11) **Transparency:** The design and implementation of a *biodiversity offset*, and communication of its results to the public, is undertaken in a transparent and timely manner.

APP4 – Principles for *biodiversity compensation*

These principles apply to the use of *biodiversity compensation* for adverse *effects* on *indigenous biodiversity.* An applicant is to comply with principles 1 to 6 and have regard to the remaining principles as appropriate.

(1) **Adherence to *effects management hierarchy*:** *Biodiversity compensation* is a commitment to redress more than minor residual adverse *effects*, and should be contemplated only after steps to avoid, minimise, remedy, and offset adverse *effects* are demonstrated to have been sequentially exhausted.

(2) **When *biodiversity compensation* is not appropriate:** *Biodiversity compensation* is not appropriate where *indigenous biodiversity* values are not able to be compensated for. Examples of *biodiversity compensation* not being appropriate include where:

(a) the *indigenous biodiversity* affected is irreplaceable or vulnerable;

(b) *effects* on *indigenous biodiversity* are uncertain, unknown, or little understood, but potential *effects* are significantly adverse or irreversible;

(c) there are no technically feasible options by which to secure a proposed net gain within acceptable timeframes;

(d) the loss from an ecological district of Threatened taxa, other than kānuka (*Kunzea robusta* and *Kunzea serotina*), under the New Zealand Threat Classification System (Rolfe et al, 2022);

(e) removal or loss of viability of the *habitat* of a Threatened *indigenous species* of fauna or flora under the New Zealand Threat Classification System (Rolfe et al, 2022);

(f) the removal or loss of *ecological integrity* and *resilience* of a naturally uncommon ecosystem type that contains *indigenous vegetation* or *habitat* for indigenous fauna;

(g) the likely worsening of the conservation status of any *Threatened or At Risk indigenous biodiversity* listed under the New Zealand Threat Classification System (Rolfe et al, 2022).

(3) **Scale of *biodiversity compensation*:** The *indigenous biodiversity* values lost through the activity to which the *biodiversity compensation* applies are addressed by positive *effects* to *indigenous biodiversity* (including when *indigenous species* depend on introduced species for their persistence), that outweigh the adverse *effects*.

(4) **Additionality:** *Biodiversity compensation* achieves gains in *indigenous biodiversity* above and beyond gains that would have occurred in the absence of the compensation, such as gains that are additional to any minimisation and remediation or offsetting undertaken in relation to the adverse *effects* of the activity.

(5) **Leakage:** *Biodiversity compensation* design and implementation avoids displacing harm to other *indigenous biodiversity* in the same or any other location.

(6) **Long-term outcomes:** *Biodiversity compensation* is managed to secure outcomes of the activity that last as least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management, and monitoring.

(7) **Landscape context:** *Biodiversity compensation* is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same *ecological district.* The action considers the landscape context of both the impact site and the compensation site taking

into account interactions between species, *habitats* and ecosystems, spatial connections, and *ecosystem function.*

(8) **Time lags:** The delay between loss of, or *effects* on, *indigenous biodiversity* values at the impact site and the gain or maturity of *indigenous biodiversity* at the compensation site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).

(9) **Trading up:** When trading up forms part of *biodiversity compensation*, the proposal demonstrates that the *indigenous biodiversity* gains are demonstrably greater or higher than those lost. The proposal also shows the values are not to *Threatened or At Risk (declining) species* or to species considered vulnerable or irreplaceable.

(10) **Financial contributions:** A financial contribution is only considered if:

(a) there is no effective option available for delivering biodiversity gains on the ground; and

(b) it directly funds an intended biodiversity gain or benefit that complies with the rest of these principles.

(11) **Science and mātauraka Māori:** The design and implementation of *biodiversity compensation* is a documented process informed by science, and mātauraka Māori.

(12) ***Mana whenua* and stakeholder participation:** Opportunity for the effective and early participation of *mana whenua* and stakeholders is demonstrated when planning for *biodiversity compensation*, including its evaluation, selection, design, implementation, and monitoring.

(13) **Transparency:** The design and implementation of *biodiversity compensation*, and communication of its results to the public, is undertaken in a transparent and timely manner.

(14) **Achievability:** Demonstrate the *biodiversity compensation* outcome is achievable.

APP5 – Principles for *aquatic offsetting*

These principles apply to the use of *aquatic offsets* for the loss of extent or values of *natural inland wetlands* and *rivers* ("extent or values" below).

(1) **Adherence to *effects management hierarchy*:** An *aquatic offset* is a commitment to redress more than minor residual adverse *effects*, and should be contemplated only after steps to avoid, minimise, and remedy adverse *effects* are demonstrated to have been sequentially exhausted.

(2) **When *aquatic offsetting* is not appropriate:** *Aquatic offsets* are not appropriate in situations where, in terms of conservation outcomes, the extent or values cannot be offset to achieve no net loss, and preferably a net gain, in the extent and values. Examples of an offset not being appropriate would include where:

(a) residual adverse *effects* cannot be offset because of the irreplaceability or vulnerability of the extent or values affected:

(b) *effects* on the extent or values are uncertain, unknown, or little understood, but potential *effects* are significantly adverse:

(c) there are no technically feasible options by which to secure proposed no net loss and preferably a net gain outcome within an acceptable timeframe.

(3) **No net loss and preferably a net gain:** This is demonstrated by a like-for-like quantitative loss/gain calculation, and is achieved when the extent or values gained at the offset site (measured by type, amount and condition) are equivalent to or exceed those being lost at the impact site.

(4) **Additionality:** An *aquatic offset* achieves gains in extent or values above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse *effects* of the activity.

(5) **Leakage:** *Aquatic offset* design and implementation avoids displacing harm to other locations (including harm to existing *biodiversity* at the offset site).

(6) **Long-term outcomes:** An *aquatic offset* is managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management and monitoring.

(7) **Landscape context:** An *aquatic offset* action is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same *ecological district*. The action considers the landscape context of both the impact site and the offset site, taking into account interactions between species, *habitats* and ecosystems, spatial and hydrological connections, and *ecosystem function*.

(8) **Time lags:** The delay between loss of extent or values at the impact site and the gain or maturity of extent or values at the offset site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).

(9) **Science and mātauraka Māori:** The design and implementation of an *aquatic offset* is a documented process informed by science where available, and mātauraka Māori at place.

(10) ***Takata whenua* or stakeholder participation:** Opportunity for the effective and early participation of *takata whenua* or stakeholders is demonstrated when planning *aquatic offsets*, including their evaluation, selection, design, implementation, and monitoring.

(11) **Transparency:** The design and implementation of an *aquatic offset*, and communication of its results to the public, is undertaken in a transparent and timely manner.

APP6 – Principles for *aquatic compensation*

These principles apply to the use of *aquatic compensation* for the loss of extent or values of *natural inland wetlands* and *rivers* ("extent or values" below).

(1) **Adherence to *effects management hierarchy*:** *Aquatic compensation* is a commitment to redress more than minor residual adverse *effects*, and should be contemplated only after steps to avoid, minimise, remedy, and offset adverse *effects* are demonstrated to have been sequentially exhausted.

(2) **When *aquatic compensation* is not appropriate:** *Aquatic compensation* is not appropriate where, in terms of conservation outcomes, the extent or values are not able to be compensated for. Examples of *aquatic compensation* not being appropriate would include where:

(a) the affected part of the *natural inland* wetland or *river bed*, or its values, including species, are irreplaceable or vulnerable:

(b) *effects* on the extent or values are uncertain, unknown, or little understood, but potential *effects* are significantly adverse:

(c) there are no technically feasible options by which to secure gains within an acceptable timeframe.

(3) **Scale of *aquatic compensation*:** The extent or values to be lost through the activity to which the *aquatic compensation* applies are addressed by positive *effects* that outweigh the adverse *effects*.

(4) **Additionality:** *Aquatic compensation* achieves gains in extent or values above and beyond gains that would have occurred in the absence of the compensation, such as gains that are additional to any minimisation and remediation or offsetting undertaken in relation to the adverse *effects* of the activity.

(5) **Leakage:** *Aquatic compensation* design and implementation avoids displacing harm to other locations (including harm to existing *biodiversity* at the compensation site).

(6) **Long-term outcomes:** *Aquatic compensation* is managed to secure outcomes of the activity that last as least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management, and monitoring.

(7) **Landscape context:** An *aquatic compensation* action is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same *ecological district*. The action considers the landscape context of both the impact site and the compensation site, taking into account interactions between species, *habitats* and ecosystems, spatial and hydrological connections, and *ecosystem function*.

(8) **Time lags:** The delay between loss of extent or values at the impact site and the gain or maturity of extent or values at the compensation site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).

(9) **Trading up:** When trading up forms part of *aquatic compensation*, the proposal demonstrates that the aquatic extent or values gained are demonstrably of greater or higher value than those lost. The proposal also shows the values lost are not to *Threatened or At Risk (declining)* species or to species considered vulnerable or irreplaceable.

(10) **Financial contribution:** A financial contribution is only considered if it directly funds an intended aquatic gain or benefit that complies with the rest of these principles.

(11) **Science and mātauraka Māori:** The design and implementation of *aquatic compensation* is a documented process informed by science where available, and mātauraka Māori at place.

(12) ***Takata whenua* or stakeholder participation:** Opportunity for the effective and early participation of *takata whenua* or stakeholders is demonstrated when planning *aquatic compensation*, including its evaluation, selection, design, implementation, and monitoring.

(13) **Transparency:** The design and implementation of *aquatic compensation*, and communication of its results to the public, is undertaken in a transparent and timely manner.

APP7 – Conifer species with spread risk

For the avoidance of doubt, biologically sterile (including as a result of genetic modification) variants of the species listed below are considered to be excluded from this appendix because they do not pose a risk of wilding spread.

Table 5: Conifer species with spread risk

Common name	Botanical name
Big cone pine	*Pinus coulteri*
Bishops pine	*Pinus muricata*
Contorta (lodgepole) pine	*Pinus contorta*
Corsican pine, Black pine	*Pinus nigra*
Douglas fir	*Pseudotsuga menziesii*
Dwarf mountain pine	*Pinus uncinata*
Japanese cedar	*Cryptomeria japonica*
Japanese larch	*Larix kaempferi*
Larch	*Larix decidua*
Lawson's cypress	*Chamaecyparis lawsoniana*
Maritime pine	*Pinus pinaster*
Mountain pine	*Pinus mugo*
Norfolk Island pine	*Araucaria heterophylla*
Norway spruce	*Picea abies*
Patula pine	*Pinus patula*
Ponderosa pine	*Pinus ponderosa*
Radiata pine	*Pinus radiata*
Scots pine	*Pinus sylvestris*
Sitka spruce	*Picea sylvestris*
Slash pine	*Pinus elliottii*
Spruce	*Picea sp.*
Strobus pine	*Pinus strobus*
Western red cedar	*Thuja plicata*
Western white pine	*Pinus monticola*

APP8 – Methodology for *natural hazard* risk assessment

Undertake the following four step process to determine the *natural hazard* risk.

Step 1 – Determine the likelihood

(1) Assess the likelihood of three *natural hazard* scenarios occurring, representing a high likelihood, median likelihood, and the maximum credible event, using the best available information.

(2) Use Table 6 to assign a likelihood descriptor to the three *natural hazard* scenarios.

(3) The likelihood assessment shall include consideration of the *effect* of *climate change* and should use the Shared Socio-Economic Pathway (SSP) scenarios or Representative Concentration Pathways (RCP) scenarios provided in the National Adaptation Plan.

Table 6: Likelihood scale

Likelihood	Indicative frequency
Almost certain	Up to once every 50 years (2% AEP)
Likely	Once every 51 – 100 years (2 – 1% AEP)
Possible	Once every 101 – 1,000 years (1 – 0.11% AEP)
Unlikely	Once every 1,001 – 2,500 years (0.1 – 0.04% AEP)
Rare	2,501 years plus (<0.04% AEP)

Step 2 – *Natural hazard* consequence

The matters listed in (1) to (12) below, are used to inform the consequence (catastrophic, major, moderate, minor, or insignificant) of the *natural hazard* scenarios identified in Step 1 for Table 7 considering:

(1) the nature and scale of existing activities in the area,

(2) the natural and scale of the activity proposed or provided for and any hazard mitigation measures,

(3) individual and community vulnerability and *resilience*,

(4) impacts on individual and community health and safety,

(5) impacts on social, cultural and economic well-being,

(6) impacts on *infrastructure* and property, including access and services,

(7) available and viable risk reduction and hazard mitigation measures,

(8) *lifeline utilities*, essential and emergency services, and their co-dependence,

(9) implications for civil defence agencies and emergency services,

(10) the changing *natural hazard* environment,

(11) cumulative *effects* including multiple and *cascading hazards,* where present, and

(12) factors that may exacerbate a *natural hazard* event including the *effects* of *climate change*.

Table 7: Consequence table

Severity of Impact	Built				Health & Safety
	Social/Cultural	*Buildings*	Critical *Buildings*	Lifelines	
Catastrophic (V)	≥25% of *buildings* of social/cultural significance within hazard impact area have functionality compromised	≥50% of *buildings* within hazard impact area have functionality compromised	≥25% of critical facilities within hazard impact area have functionality compromised	Out of service for > 1 month (affecting ≥20% of the town/city population) OR suburbs out of service for > 6 months (affecting < 20% of the town/city population)	> 10 dead and/or > 1001 injured
Major (IV)	11-24% of *buildings* of social/cultural significance within hazard impact area have functionality compromised	21-49% of *buildings* within hazard impact area have functionality compromised	11-24% of *buildings* within hazard impact area have functionality compromised	Out of service for 1 week – 1 month (affecting ≥20% of the town/city population) OR suburbs out of service for 6 weeks to 6 months (affecting < 20% of the town/city population)	1 – 10 dead and/or 101 – 1000 injured
Moderate (III)	6-10% of *buildings* of social/cultural significance within hazard impact area have functionality compromised	11-20% of *buildings* within hazard impact area have functionality compromised	6-10% of *buildings* within hazard impact area have functionality compromised	Out of service for 1 day to 1 week (affecting ≥20% of the town/city population) OR suburbs out of service for 1 week to 6 weeks (affecting < 20% of the town/city population)	11 – 100 injured
Minor (II)	1-5% of *buildings* of social/cultural significance within hazard impact area have functionality compromised	2-10% of *buildings* within hazard impact area have functionality compromised	1-5% of *buildings* within hazard impact area have functionality compromised	Out of service for 2 hours to 1 day (affecting ≥20% of the town/city population) OR suburbs out of service for 1 day to 1 week (affecting < 20% of the town/city population	10 injured
Insignificant (I)	No *buildings* of social/cultural significance within hazard impact area have functionality compromised	< 1% of *buildings* within hazard impact area have functionality compromised	No damage within hazard impact area, fully functional	Out of service for up to 2 hours (affecting ≥20% of the town/city population) OR suburbs out of service for up to 1 day (affecting < 20% of the town/city population	No dead No injured

When assessing consequences within this matrix, the final level of impact is assessed on the 'first past the post' principle, in that the consequence with the highest severity of impact applies. For example, if a *natural hazard* event resulted in moderate severity of impact across all of the categories, with the exception of critical *buildings* which had a 'major' severity of impact, the major impact is what the proposal would be assessed on. If a *natural hazard* event resulted in all of the consequences being at the same level (for example, all of the consequences are rated moderate), then the level of consequence is considered to be moderate.

Step 3 – Assessing natural hazard risk

Using the information within Steps 1 and 2 above, complete Table 8 for each of the hazard scenarios considered, and identify if the risk from each of the scenarios is acceptable, tolerable, or significant.

Table 8: Risk table

Likelihood	**Consequences**				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain					
Likely					
Possible					
Unlikely					
Rare					
Green: Acceptable Risk Yellow: Tolerable Risk Red: Significant Risk Hatching: *Quantitative assessment required*					

Notes:

Table 8 above has been included as a region-wide baseline. As set out in HAZ-NH-M3(1) *local authorities* are required to undertake a consultation process with communities, stakeholders and partners regarding risk levels and develop a risk table at a district or community scale. This region-wide baseline is to be used in the absence of a district or community scale risk table being developed.

Step 4 – Undertake a quantitative risk assessment

While Steps 1–3 will qualitatively categorise *natural hazard* risk based on a community's understanding and acceptance level of risk, it will not provide quantitative understanding of the risk a *natural hazard* presents to the built environment, or health and safety.

If the assessment undertaken in Steps 1-3 determines that one of the three *natural hazard* scenarios generate risk with major consequences with an almost certain or likely likelihood, or catastrophic consequence with an almost certain, likely, or possible likelihood, then a quantitative risk assessment is required. If appropriate, there is discretion for local authorities to also require a quantitative risk assessment for risk that does not come within these categories. A quantitative risk assessment will be undertaken using the following methodology:[47]

(1) Based on the likelihood of a *natural hazard* event within the hazard zone (see Step 1), and including the potential impacts of *climate change* and sea level rise, select a representative range of at least three hazard scenarios with varying likelihoods to model,[48] including the maximum credible event.

[47] This methodology has been developed in general accordance with the Australian Geomechanics Society, 2007 methodology, which may usefully provide additional guidance.
[48] The model should include an analysis of uncertainty.

(2) Model the Annual Individual Fatality Risk (AIFR)[49] and Annual Property Risk (APR)[50] for the range of hazard scenarios across the hazard zone, and create loss exceedance distributions.

(3) Analyse loss exceedance distributions and determine losses.

(4) Assign the risk level:

(a) for areas of new development where the greatest AIFR or APR is:

(i) less than 1×10^{-6} per year, the risk is re-categorised as acceptable,

(ii) between 1×10^{-6} and 1×10^{-5} per year, the risk is re-categorised as tolerable, or

(iii) greater than 1×10^{-5} per year, the risk is re-categorised as significant.

(b) for areas with existing development, where the greatest AIFR or APR is:

(i) less than 1×10^{-5} per year, the risk is re-categorised as acceptable;

(ii) between 1×10^{-5} and 1×10^{-4} per year, the risk is re-categorised as tolerable; or

(iii) greater than 1×10^{-4} per year, the risk is re-categorised as significant.

AIFR and APR are the selected risk metrics as they represent the likely consequences of a wide range of *natural hazards*. For example, some *natural hazards*, generally, do not have the capacity to cause fatalities, but may result in widespread damage to property, while other *natural hazards* have a high capacity to cause fatalities. A first-past-the-post principle to the re-categorisation of risk is applied to ensure that decisions are based on the greatest risk present between the two metrics.

If the level of knowledge or uncertainty regarding the likelihood or consequences of a *natural hazard* event precludes the use of Step 4, then a precautionary approach to assessing and managing the risk should be applied, as set out in HAZ-NH-P7.

[49] Annual probability that an individual most at risk is killed in any one year as a result of the hazards occurring.
[50] Annual probability of total property loss (relating to permanent structures) as a result of the hazards occurring.

APP9 – Identifying *wāhi tūpuna*

This appendix is a guide to assist in identifying *wāhi tūpuna*. It is not a complete list of all *wāhi tūpuna* in Otago.

Kāi Tahu use the term *'wāhi tūpuna'* to describe landscapes and places that embody the relationship of *mana whenua* and their culture and traditions with their ancestral lands, *water,* sites, wāhi tapu and other taoka. It is important to understand this concept in the context of the distinctive seasonal lifestyle that Kāi Tahu evolved in the south. The sites and resources used by Kāi Tahu are spread throughout Otago. These places did not function in isolation from one another but were part of a wider cultural setting and pattern of seasonal resource use. The different elements of these areas of significance include:

Table 9: Areas of significance to Kāi Tahu

Area of significance	Explanation
Ara Tawhito	Ancient trails. A network of trails crossed the region linking the permanent villages with seasonal inland campsites and along the coast, providing access to a range of *mahika kai* resources and inland stone resources, including pounamu and silcrete.
Kāika	Permanent settlements or occupation sites. These occurred throughout Otago, particularly in coastal areas.
Nohoaka	These were a network of seasonal settlements. Kāi Tahu were based largely on the coast in permanent settlements and ranged inland on a seasonal basis. Iwi history shows, through place names and whakapapa, continuous occupation of a network of seasonal settlements, which were distributed along the main river systems from the source lakes to the sea.
Wāhi *mahika kai*	The places where the customary gathering of food or natural materials occurs. *Mahika kai* is one of the cornerstones of Kāi Tahu culture.
Mauka	Important mountains. Mountains are of great cultural importance to Kāi Tahu. Many are places of spiritual presence, and prominent peaks in the district are linked to Kāi Tahu creation stories, identity and mana.
Marae	The marae atea and the buildings around it, including the wharenui, wharekai, church and urupā. The sheltering havens of Kāi Tahu cultural expression, a place to gather, kōrero and to welcome visitors. Marae are expressions of Kāi Tahu past and present.
Repo raupō	Wetlands or swamps. These provide valued habitat for taoka species and *mahika kai* resources.
Taumanu	Fishing sites. These are traditional fishing easements which have been gazetted by the South Island Māori Land Court.
Tauraka waka	Canoe mooring sites. These were important for transport and gathering kai.
Tūāhu	Places of importance to Māori identity. These are generally sacred ground and marked by an object, or a place used for purposes of divination.
Tuhituhi neherā	Rock art sites.
Umu, Umu-tī	Earth ovens. Used for cooking tī-kōuka (cabbage tree), are found in a diversity of areas, including old stream banks and ancient river terraces, on low spurs or ridges, and in association with other features, such as kāika nohoaka.
Urupā	Human burial sites. These include historic burial sites associated with kāika, and contemporary

Area of significance	Explanation
	sites, such as the urupā at Ōtākou and Puketeraki marae.
Wāhi kōhatu	Rock outcrops. Rocky outcrops provided excellent shelters and were intensively occupied by Māori from the moa-hunter period into early European settlement during seasonal hikoi. Tuhituhi neherā (rock art) may be present due to the occupation of such places by the tūpuna.
Wāhi pakaka	Battle sites. Historic battle sites occur throughout Otago, such as that at Ohinepouwera (Waikōuaiti sandspit) where Taoka's warriors camped for six months while they laid siege on Te Wera on the Huriawa Peninsula.
Wāhi paripari	Cliff areas.
Wāhi taoka	Resources, places and sites treasured by *mana whenua*. These valued places reflect the long history and association of Kāi Tahu with Otago.
Wāhi tapu	Places sacred to Kāi Tahu. These occur throughout Otago and include urupā (human burial sites).
Wāhi tohu	Features used as location markers within the landscape. Prominent landforms formed part of the network of trails along the coast and inland.
Wai Māori	Freshwater areas important to Māori, including wai puna (springs), roto (lakes) and awa (rivers).

APP10 – Identification criteria for places and areas of *historic heritage*

1. Identifying Areas and Places with *Historic Heritage*

A place or area is considered to have *historic heritage* if it meets any one or more of criteria below: [51]

Archaeological	The place provides, or is demonstrably likely to provide, physical evidence of human activity that could be investigated using archaeological methods. Evidence obtained from an archaeological investigation could be expected to be of significance in answering research questions, or as a new or important source of information about an aspect of New Zealand history.
Architectural	The place reflects identifiable methods of construction or architectural styles or movements. When compared with other similar examples, or in the view of experts or relevant practitioners, it has characteristics reflecting a significant development in this country's architecture. Alternatively, or in conjunction with this, the place is an important or representative example of architecture associated with a particular region or the wider New Zealand landscape.
Cultural	The place reflects significant aspects of an identifiable culture and it can be demonstrated that the place is valued by the associated cultural group as an important or representative expression of that culture.
Historic	The place contributes to the understanding of a significant aspect of New Zealand history and has characteristics making it particularly useful for enhancing understanding of this aspect of history, especially when compared to other similar places.
Scientific	The place includes, or is demonstrably likely to include, fabric expected to be of significance in answering research questions or a new or important source of information about an aspect of New Zealand's cultural or historical past through the use of specified scientific methods of enquiry.
Social	The place has a clearly associated community that developed because of the place, and its special characteristics. The community has demonstrated that it values the place to a significant degree because it brings its members together, and they might be expected to feel a collective sense of loss if they were no longer able to use, see, experience or interact with the place.
Spiritual	The place is associated with a community or group who value the place for its religious, mystical or sacred meaning, association or symbolism. The community or group regard the place with reverence, veneration and respect, and they might be expected to feel a collective sense of loss if they were no longer able to use, see, experience or interact with the place.
Technological	The place includes physical evidence of a technological advance or method that was widely adopted, particularly innovative, or which made a significant contribution to New Zealand history OR

[51] The identification criteria in APP10 follows R O'Brian & J Barnes-Wylie (2019) Guidelines for Assessing Historic Places and Historic Areas for the New Zealand Heritage List/Rārangi Kōrero, which has been adopted by Heritage New Zealand Pouhere Taonga as its Significance Assessment Guidelines, with the exception that the 'Aesthetic' criterion has been removed.

	The place reflects significant technical accomplishment in comparison with other similar examples or, in the view of experts or practitioners in the field, has characteristics making the place particularly able to contribute towards our understanding of this technology.
Traditional	The place reflects a tradition that has been passed down by a community or culture for a long period, usually generations and especially since before living memory, and has characteristics reflecting important or representative aspects of this tradition to a significant extent.

2.Identification of Special or Outstanding Heritage Values or Qualities

Where, for example, in a *resource consent* or notice of requirement process, a place or an area that has been identified as having *historic heritage* values or qualities, and is required to be assessed to determine whether those values or qualities are special or outstanding, that assessment must:

(1) utilise the following criteria:

(a) the extent to which the place reflects important or representative aspects of Otago or New Zealand history,

(b) the association of the place with events, persons, or ideas of importance in Otago or New Zealand history,

(c) the potential of the place to provide knowledge of Otago or New Zealand history,

(d) the importance of the place to *mana whenua,*

(e) the community association with, or public esteem for, the place,

(f) the potential of the place for public education,

(g) the technical accomplishment, value, or design of the place,

(h) the symbolic or commemorative value of the place,

(i) the importance of identifying historic places known to date from an early period of Otago's or New Zealand's settlement,

(j) the importance of identifying rare types of historic places, and

(k) the extent to which the place forms part of a wider historical and cultural area, and

(2) apply the method set out in "Part Two: Applying the section 66(3) criteria" of Assessing Historic Places and Historic Areas for the New Zealand Heritage List/Rārangi Kōrero (2019).

APP11 – Identification criteria for outstanding natural features and landscapes and *highly valued natural features and landscapes* (including seascapes)

The areas and the values of outstanding natural features and landscapes and *highly valued natural features and landscapes* (including seascapes) are identified using the following factors:

Physical (natural and human)	(a)	Geology and geomorphology,
	(b)	Topography and hydrology (including drainage patterns),
	(c)	Climate and weather patterns,
	(d)	Soil patterns,
	(e)	Vegetation patterns,
	(f)	Ecological (flora and fauna) and dynamic components,
	(g)	Settlements and occupation,
	(h)	Roads and circulation,
	(i)	Land use – cadastral pattern,
	(j)	*Buildings*,
	(k)	Archaeology and heritage features,
	(l)	*Mana whenua* features.
Associative	(m)	*Mana whenua* creation and origin traditions manifest in landscape features,
	(n)	*Mana whenua* associations and experience – (historic, contemporary, and future) including pūrākau, whakapapa, tikaka, and mātauraka,
	(o)	*Mana whenua* metaphysical aspects such as wairua and mauri,
	(p)	Legal personification of landscape features,
	(q)	Shared and recognised values of a landscape derived from community life including the community's livelihood, its history and reason for being in that place, places of social life and gathering, places associated with metaphysical meanings such as retreat, contemplation, and commemoration,
	(r)	Landscape values associated with identity such as attributes that are emblematic for an area, places that are central to a community (main street, wharf, park), features that are anthropomorphised. Landscapes that are engaged through activities such traditional food and resource gathering, recreational use, food and wine that reflect a locale, tourism based on landscape experience or appreciation of a landscape's qualities.
Perceptual	(s)	Geomorphic legibility (how obviously a landscape expresses the geomorphic processes),
	(t)	Wayfinding and mental maps (legibility or visual clarity of landmarks, routes, nodes, edges, and areas of different character),
	(u)	Memorability,
	(v)	Coherence (the extent to which patterns reinforce each other, coherence between human patterns and underlying natural landscape),

(w) Aesthetic qualities,

(x) Naturalness,

(y) Views.

Note that physical, associative, and perceptual factors are sometimes transient: they may be present occasionally or seasonally or in different weather conditions. An assessor should be aware of such transient attributes that may not be immediately apparent.

APP12 – Housing bottom lines

Table 10: Bottom lines for development capacity

Tier 2 Urban Environment	Short- Medium Term (0-10 years)	Long Term (11-30 years)
Queenstown		
Dunedin		

Note: This schedule will be amended or reamended in accordance with the National Policy Statement for Urban Development 2020, without using RMA Schedule 1, as soon as practicable following the publication of any relevant *Housing and Business Development Capacity Assessment,* the first of which is due to be completed by 31 July 2021.

APP13 – Accidental discovery protocol

If an unidentified *archaeological site* is located during works, the following applies:

(1) Work must cease immediately at that place and within 20m around the site.

(2) The contractor must shut down all machinery, secure the area, and advise the Site Manager.

(3) The Site Manager must secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.

(4) If the site is of Māori origin, the Site Manager must notify the Heritage New Zealand Regional Archaeologist and the appropriate papatipu rūnaka of the discovery and ensure site access to enable appropriate cultural procedures and tikaka to be undertaken, as long as all statutory requirements under legislation are met (Heritage New Zealand Pouhere Taonga Act, Protected Objects Act).

(5) If human remains (kōiwi) are uncovered the Site Manager must advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate papatipu rūnaka and the above process under 4 must apply. Papatipu rūnaka will lead the management of any kōiwi tangata (human remains of a Māori person) that have been uncovered, in line with the Te Rūnanga o Ngāi Tahu Kōiwi Tangata policy 2019. Remains are not to be moved until such time as papatipu rūnaka and Heritage New Zealand have responded.

(6) Works affecting the *archaeological site* and any human remains (kōiwi) must not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Works affecting a site of Māori origin or containing kōiwi tangata must not resume until papatipu rūnaka give written approval for work to continue. Further assessment by an archaeologist may be required.

(7) Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.

(8) Heritage New Zealand Pouhere Taonga will advise if an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required for works to continue.

It is an offence under Section 87 of the Heritage New Zealand Pouhere Taonga Act 2014 to modify or destroy an *archaeological site* without an authority from Heritage New Zealand irrespective of whether the works are permitted or consent has been issued under the Resource Management Act.

APP14 – Specified highly mobile fauna

Scientific Name	Common name	Ecosystem	Threat category	Found in Otago?	Listed in ORC's Schedule?
Anarhynchus frontalis	ngutu parore/wrybill	Coastal/riverine	Threatened (Nationally Increasing)	Yes	Yes
Anas chlorotis	pāteke/brown teal	wetland/riverine	Threatened (Nationally increasing)		Yes
Anas superciliosa superciliosa	pārera/grey duck	wetland/riverine	Threatened (Nationally Vulnerable)		Yes
Anthus novaeseelandiae novaeseelandiae	pīhoihoi/NZ pipit	forest/open	At Risk (Declining)	Yes	
Apteryx australis 'northern Fiordland'	northern Fiordland tokoeka	forest/open	Threatened (Nationally Vulnerable)		
Apteryx australis australis	southern Fiordland tokoeka	forest/open	Threatened (Nationally Endangered)		
Apteryx haastii	roa/great spotted kiwi	forest/open	Threatened (Nationally Vulnerable)		
Ardea modesta	kotuku/white heron	wetland/riverine	Threatened (Nationally Critical)		Yes
Botaurus poiciloptilus	matuku/bittern	wetland/riverine	Threatened (Nationally Critical)	Yes	Yes
Bowdleria punctate stewartiana	mātātā/Stewart Island fernbird	wetland/riverine	Threatened (Nationally Vulnerable)		
Bowdleria punctata punctata	koroātito/South Island fernbird	wetland/riverine	At Risk (Declining)	Yes	
Bowdleria punctata vealeae	mātātā/North Island fernbird	wetland/riverine	At Risk (Declining)		
Calidris canutus rogersi	huahou/lesser knot	coastal/riverine	At Risk (Declining)	Maybe?	
Chalinolobus tuberculatus	pekapeka/long-tailed bat	forest/open	Threatened (Nationally Critical)	Yes	yes
Charadrius bicinctus bicinctus	pohowera/banded dotterel	coastal/riverine	At Risk (Declining)	Yes	

Scientific Name	Common name	Ecosystem	Threat category	Found in Otago?	Listed in ORC's Schedule?
Charadrius obscurus aquilonius	tūtiriwhatu/northern NZ dotterel	coastal/riverine	Threatened (Nationally Increasing)		
Charadrius obscurus obscurus	tūtiriwhatu/southern NZ dotterel	coastal/riverine	Threatened (Nationally Critical)		
Chlidonias albostriatus	tara pirohe/blackfronted tern	coastal/riverine	Threatened (Nationally Endangered)	Yes	Yes
Egretta sacra sacra	matuku moana/reef heron	coastal/riverine	Threatened (Nationally Endangered)	Yes	Yes
Falco novaeseelandiae ferox	kārearea/bush falcon	forest/open	Threatened (Nationally Increasing)		
Falco novaeseelandiae novaeseelandiae	kārearea/eastern falcon	forest/open	Threatened (Nationally Vulnerable)		
Falco novaeseelandiae 'southern'	kārearea/southern falcon	forest/open	Threatened (Nationally Endangered)		
Gallirallus australis greyi	North Island weka	forest/open	At Risk (Relict)		
Gallirallus philippensis assimilis	moho pererū/banded rail	wetland/riverine	At Risk (Declining)		
Haematopus finschi	tōrea/South Island pied oystercatcher	coastal/riverine	At Risk (Declining)	Yes	
Haematopus unicolor	tōrea tai/variable oystercatcher	coastal/riverine	At Risk (Recovering)	Yes	
Himantopus novaezelandiae	kakī/black stilt	wetland/riverine	Threatened (Nationally Critical)	Yes	Yes
Hydroprogne caspia	taranui/Caspian tern	coastal/riverine	Threatened (Nationally Vulnerable)	Yes	Yes
Hymenolaimus malacorhynchos	whio/blue duck	riverine	Threatened (Nationally Vulnerable)	Yes	Yes
Larus bulleri	tarāpukā/black-billed gull	coastal/riverine	At Risk (Declining)	Yes	
Larus novaehollandiae scopulinus	tarāpunga/red-billed gull	coastal/riverine	At Risk (Declining)	Yes	

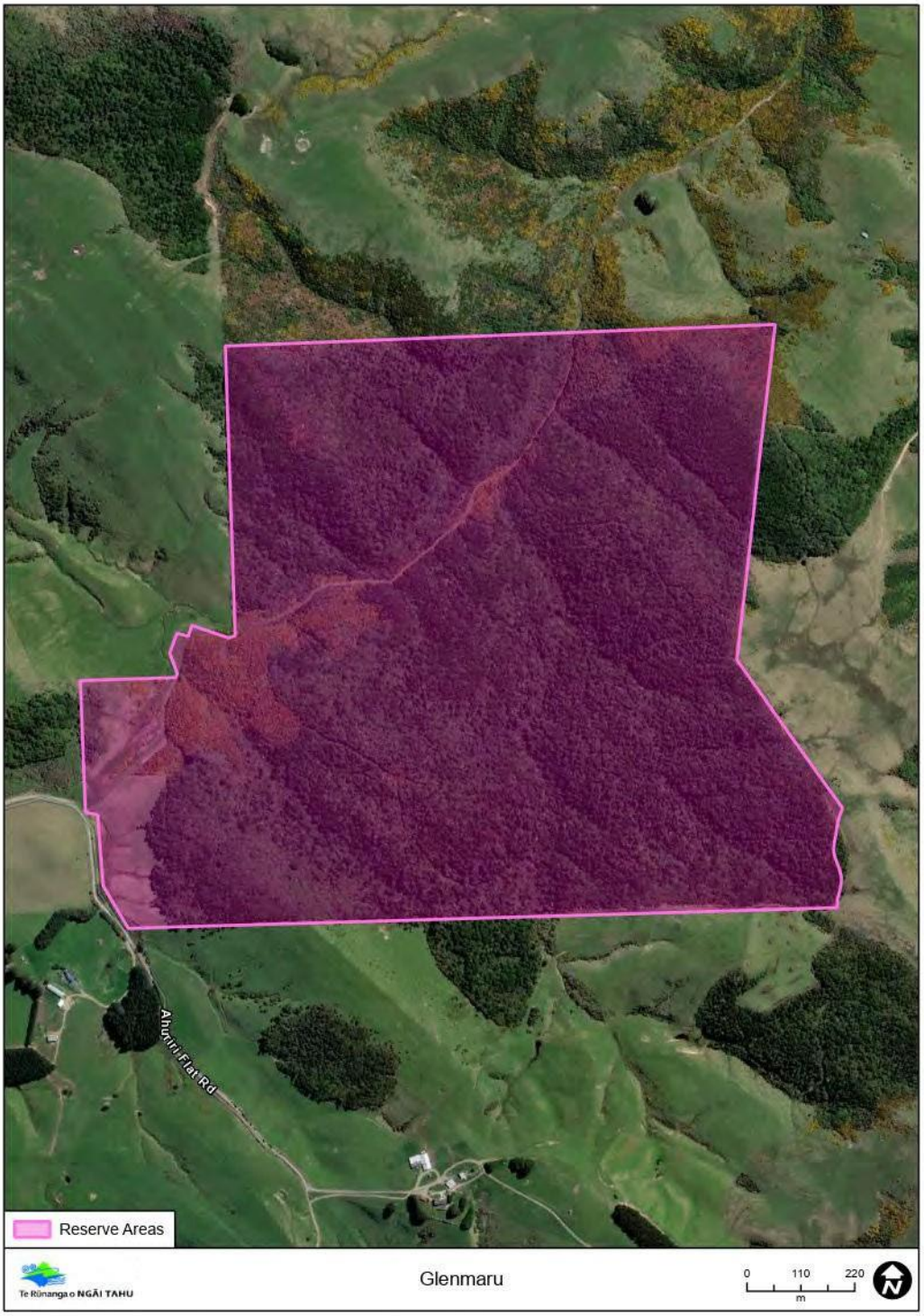
Scientific Name	Common name	Ecosystem	Threat category	Found in Otago?	Listed in ORC's Schedule?
Limosa lapponica baueri	kuaka/eastern bartailed godwit	coastal/riverine	At Risk (Declining)	Yes	
Mystacina tuberculata aupourica	pekapeka/northern short-tailed bat	forest/open	Threatened (Nationally Endangered)		
Mystacina tuberculata rhyacobia	pekapeka/central shorttailed bat	forest/open	At Risk (Declining)		
Mystacina tuberculata tuberculata	pekapeka/southern short-tailed bat	forest/open	At Risk (Recovering)	Yes / maybe?	
Nestor meridionalis meridionalis	kākā/South Island kākā	forest/open	Threatened (Nationally Vulnerable)	Yes	
Nestor meridionalis septentrionalis	kākā/North Island kākā	forest/open	At Risk (Recovering)		
Nestor notabilis	kea	forest/open	Threatened (Nationally Endangered)	Yes	
Petroica australis australis	kakariwai/South Island robin	forest/open	At Risk (Declining)	Yes	
Phalacrocorax varius varius	kāruhiruhi/pied shag	coastal/riverine	At Risk (Recovering)	Yes	
Podiceps cristatus australis	kāmana/southern crested grebe	wetland/riverine	Threatened (Nationally Vulnerable)	Yes	Yes
Poliocephalus rufopectus	weweia/NZ dabchick	wetland/riverine	Threatened (Nationally Increasing)		
Porzana pusilla affinis	koitareke/marsh crake	wetland/riverine	At Risk (Declining)	Yes	
Porzana tabuensis	pūweto/spotless crake	wetland/riverine	At Risk (Declining)		
Sterna striata striata	tara/white-fronted tern	coastal/riverine	At Risk (Declining)	Yes	
Sternula nereis davisae	tara iti/NZ fairy tern	coastal/riverine	Threatened (Nationally Critical)		
Thinornis novaeseelandiae	tuturuatu/NZ shore plover	coastal/riverine	Threatened (Nationally Critical)		

Scientific Name	Common name	Ecosystem	Threat category	Found in Otago?	Listed in ORC's Schedule?
Xenicus gilviventris 'northern'	pīwauwau/northern rock wren	forest/open	Threatened (Nationally Critical)		
Xenicus gilviventris 'southern	pīwauwau/southern rock wren	forest/open	Threatened (Nationally Endangered)	Yes	

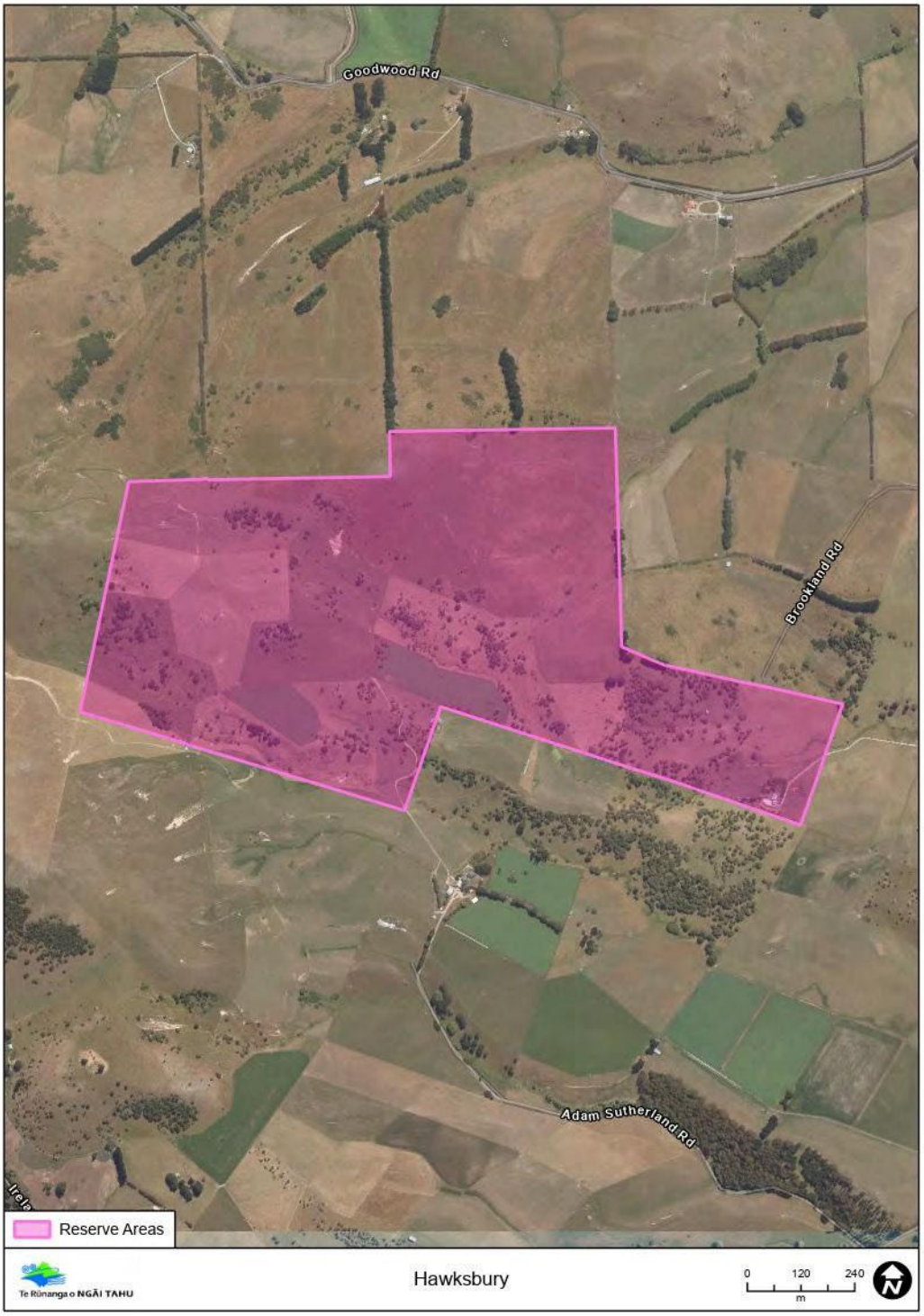
MAP1 – Native Reserves

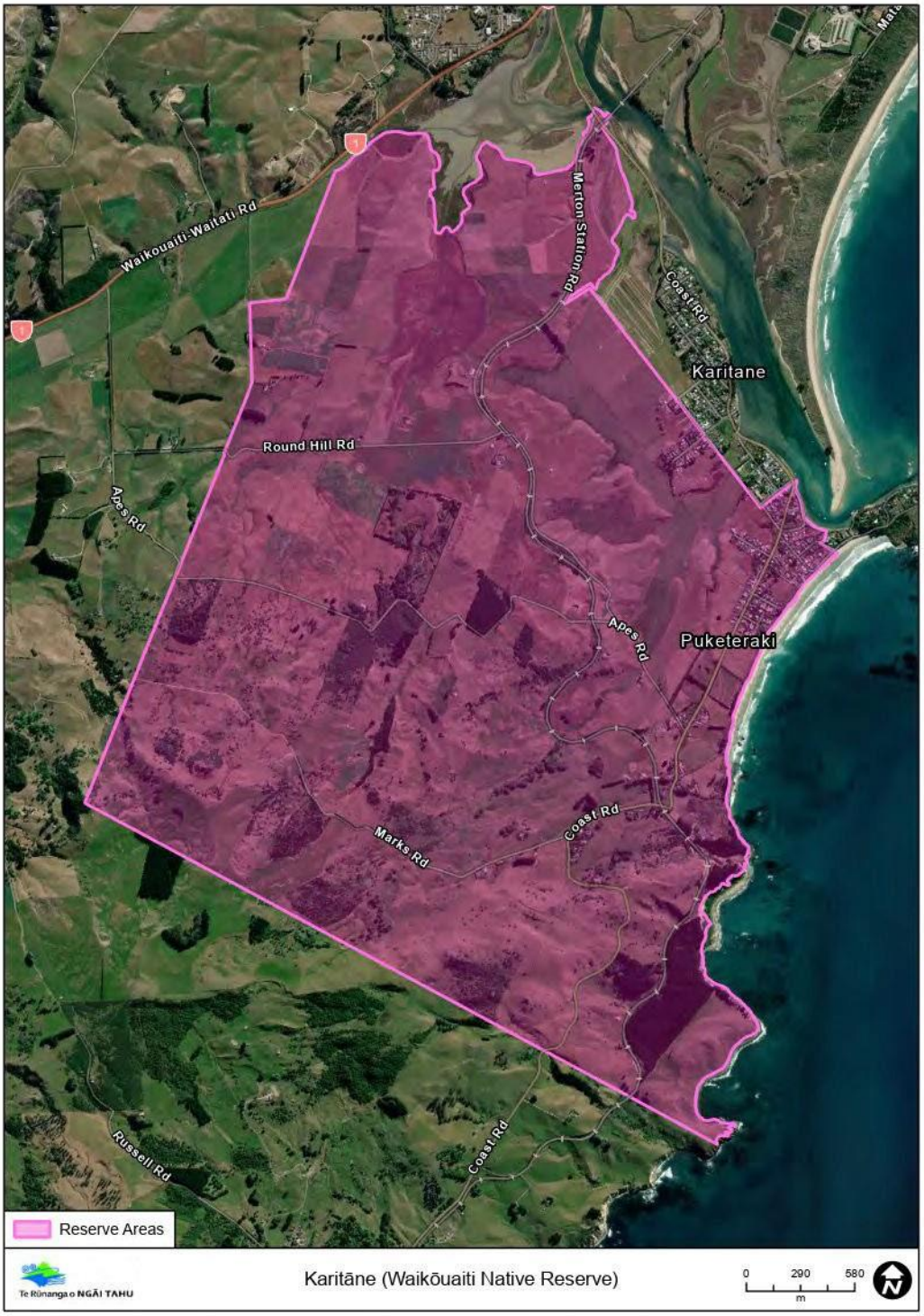
Coast Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Brinns Point
0
70
140
m

Finlayson Rd
Finlayson Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Clarendon
0
62.5
125
m

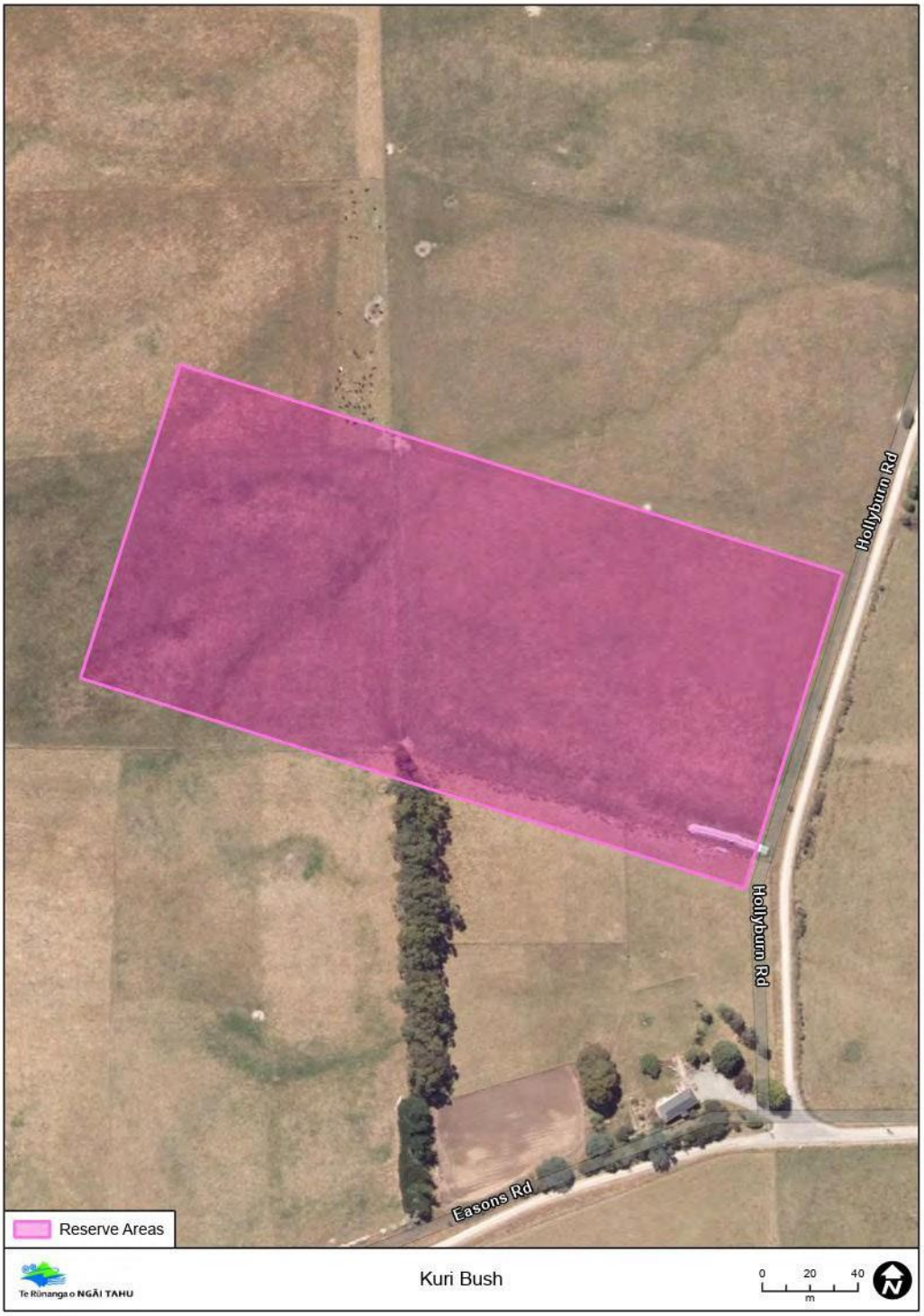

Ahuriri Flat Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Glenmaru
0
110
220
m

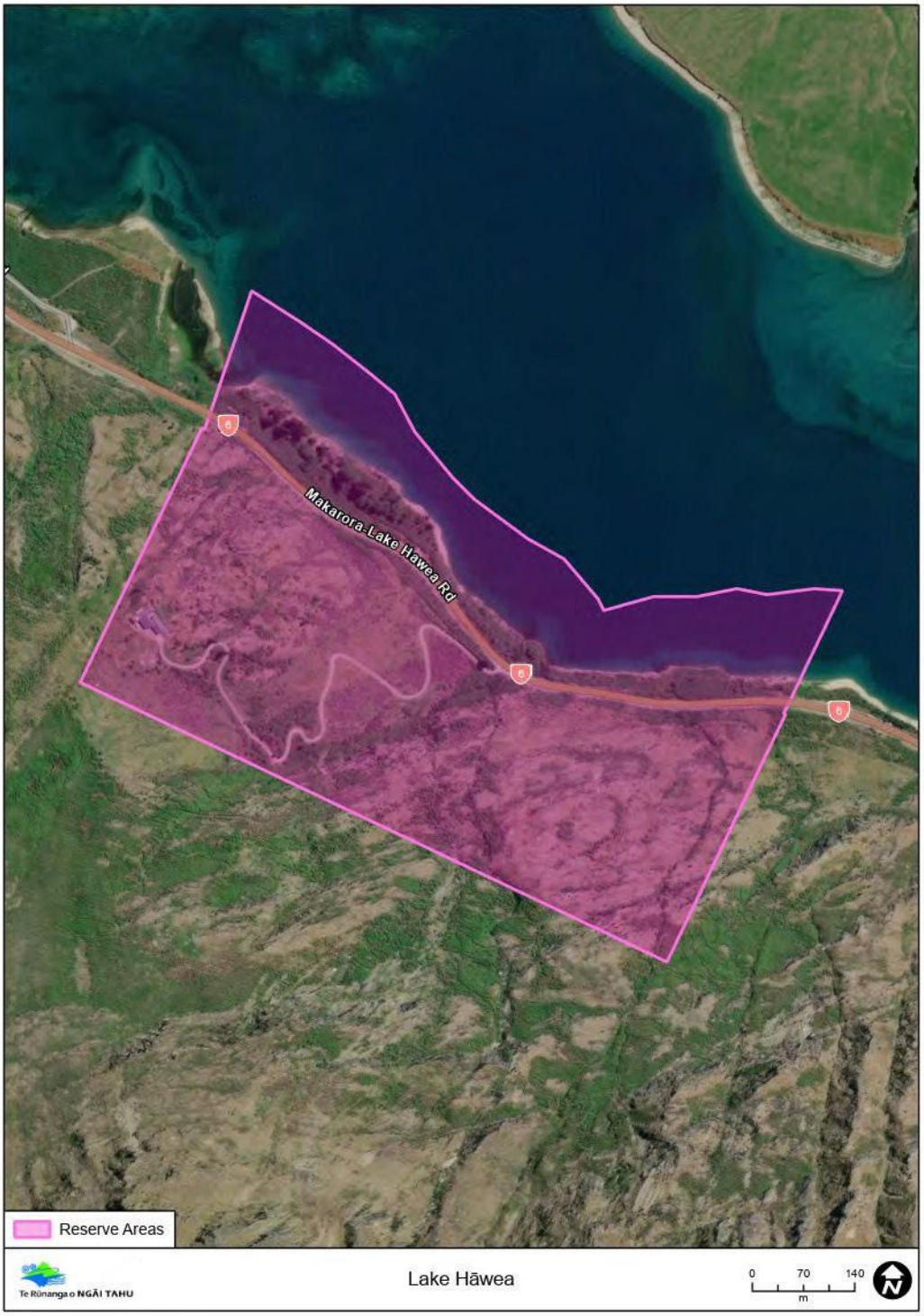
Centre Cres
Urquhart Pl
Forest Hts
Reserve Areas
Te Rūnanga o NGĀI TAHU
Hāwea-Wānaka Block (Wānaka Plantation
0
60
120
m


Goodwood Rd
Brookland Rd
Adam Sutherland Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Hawksbury
0
120
240
m


Waikouaiti-Waitati Rd
Merton Station Rd
Coast Rd
Karitane
Round Hill Rd
Apes Rd
Apes Rd
Puketeraki
Marks Rd
Coast Rd
Russell Rd
Coast Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Karitāne (Waikōuaiti Native Reserve)
0
290
580
m

Kaik Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Korotuaheka
0
130
260
m

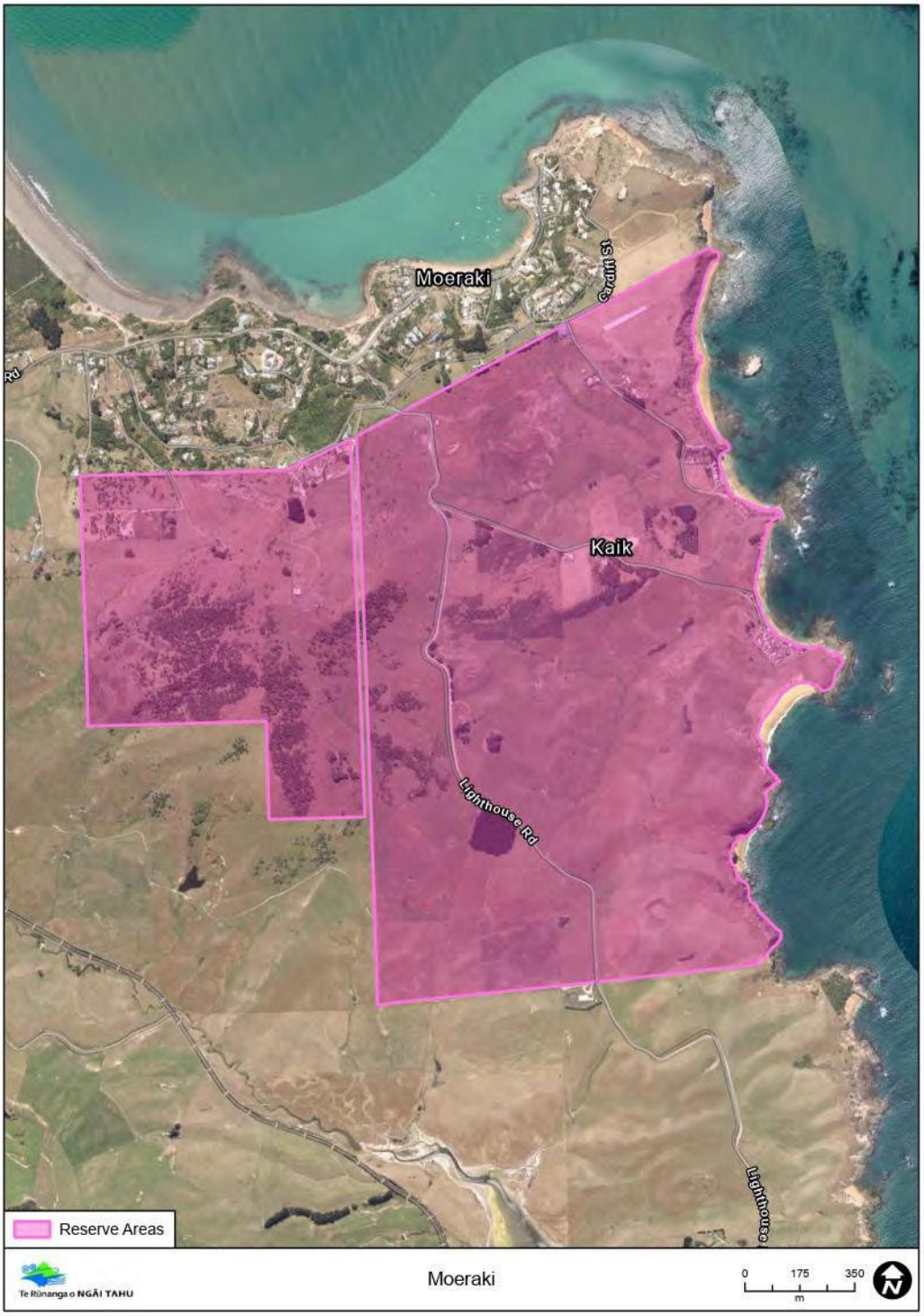

Hollyburn Rd
Hollyburn Rd
Easons Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Kuri Bush
0
20
40
m

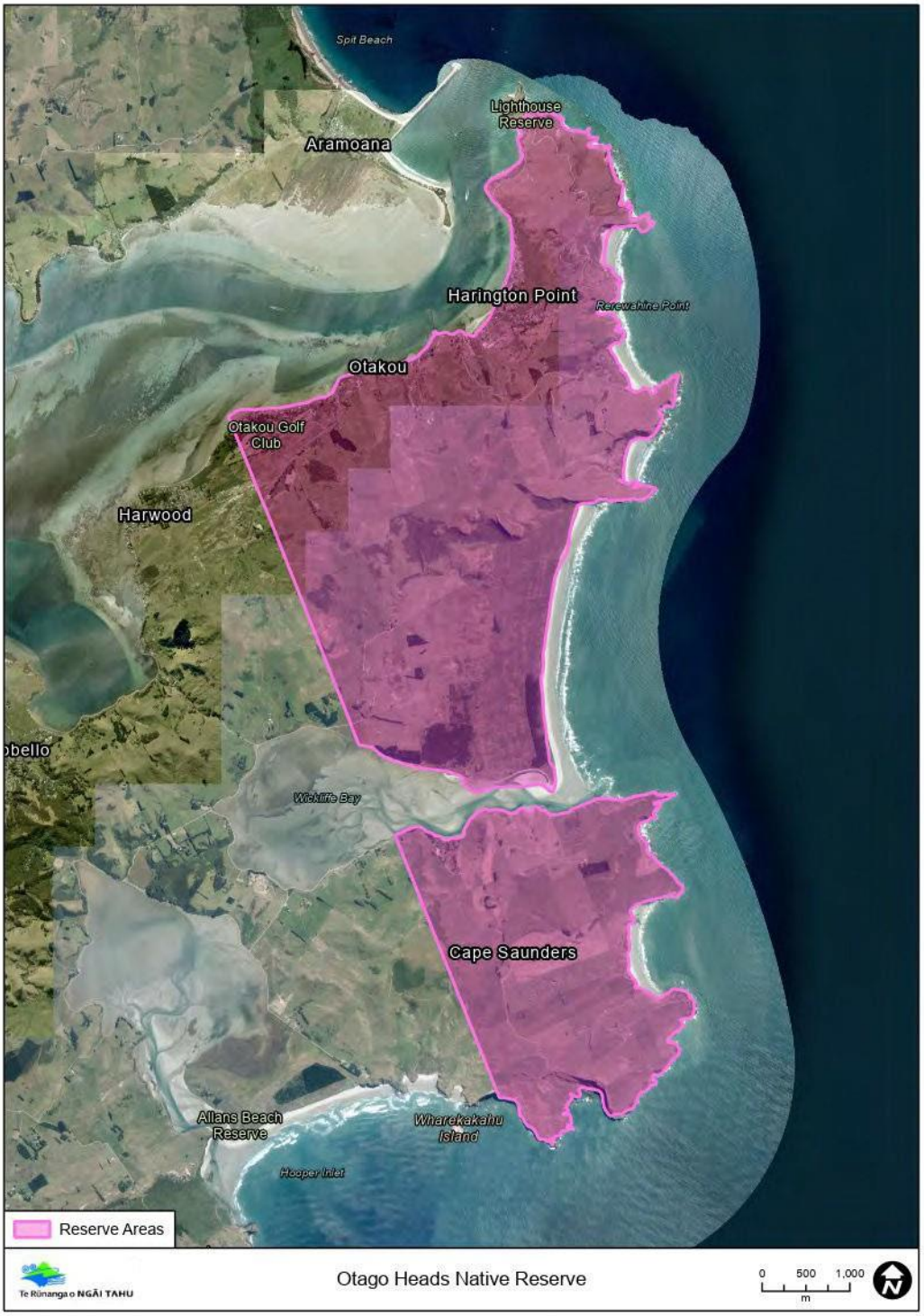

Makarora-Lake Hawea Rd
Reserve Areas
Te Rūnanga o NGĀI TAHU
Lake Hāwea
0
70
140
m

Reserve Areas
Te Rūnanga o NGĀI TAHU
Lake Tatawai
0
12.5
25
m

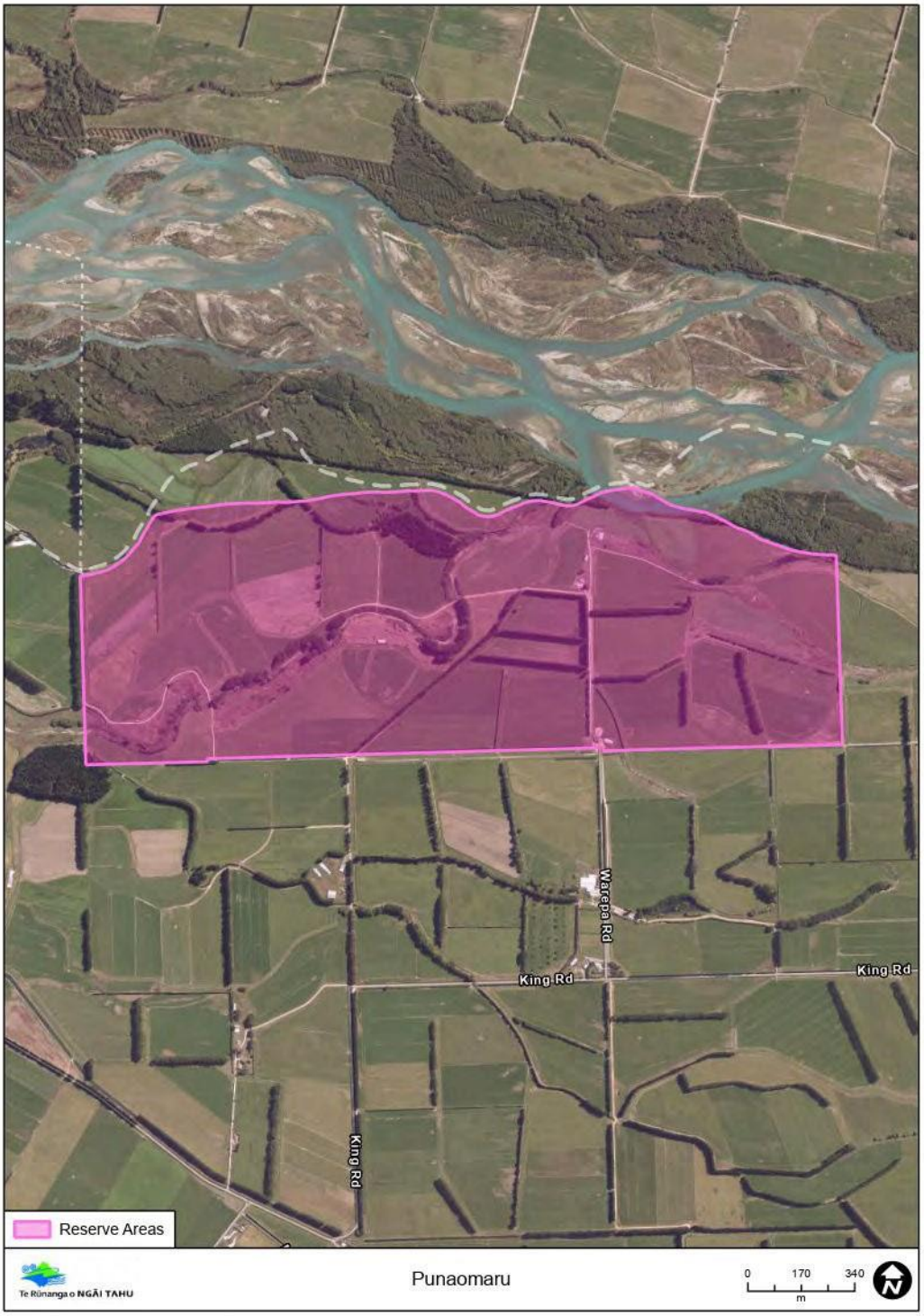
Rata St
Totara St
Tarata St
Kaka Point
Reserve Areas
Te Rūnanga o NGĀI TAHU
Maranuku
0
137.5
275
m

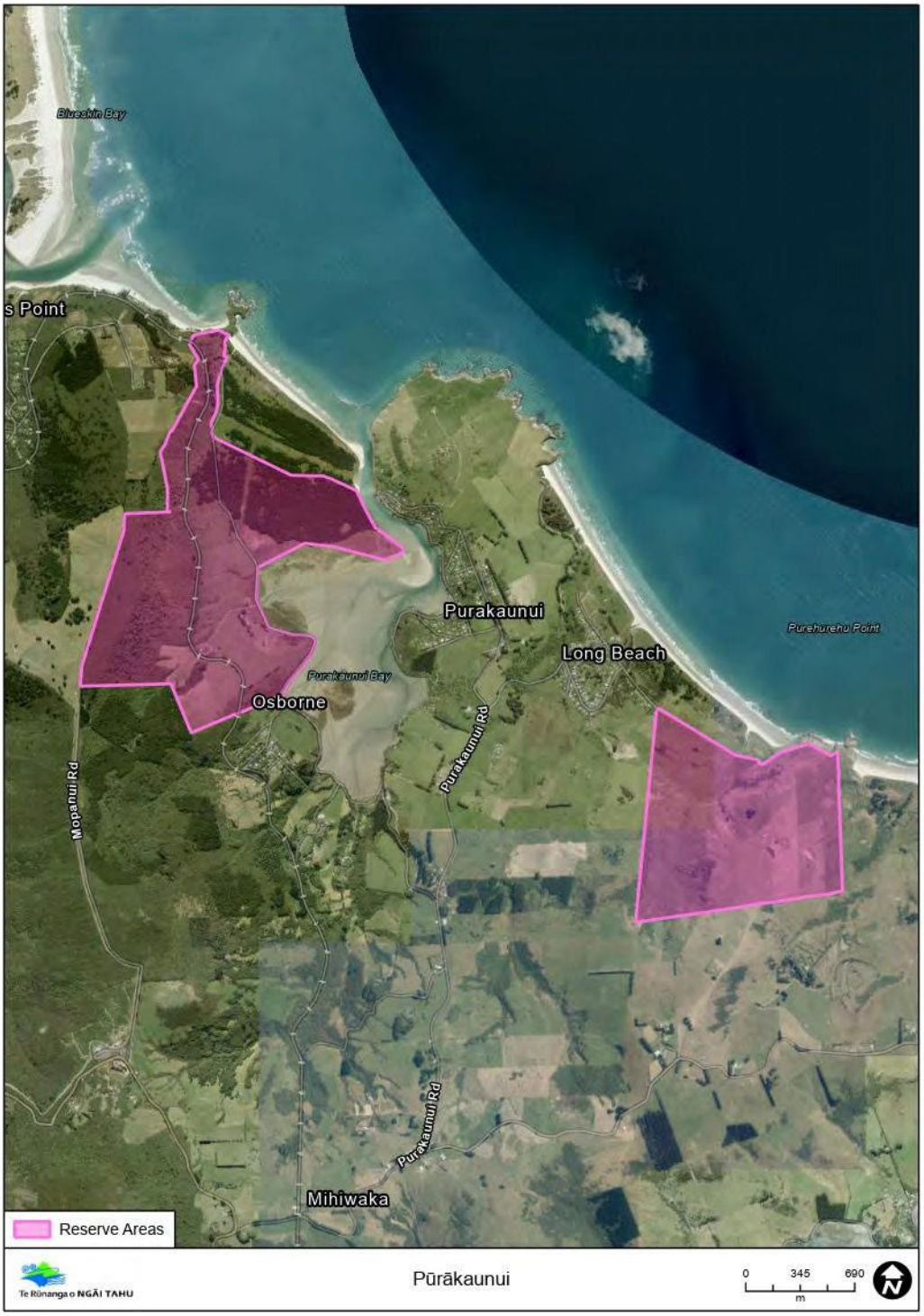
Reserve Areas
Te Rūnanga o NGĀI TAHU
Matainaka and Hawksbury Fishing Easement
0 15 30
m

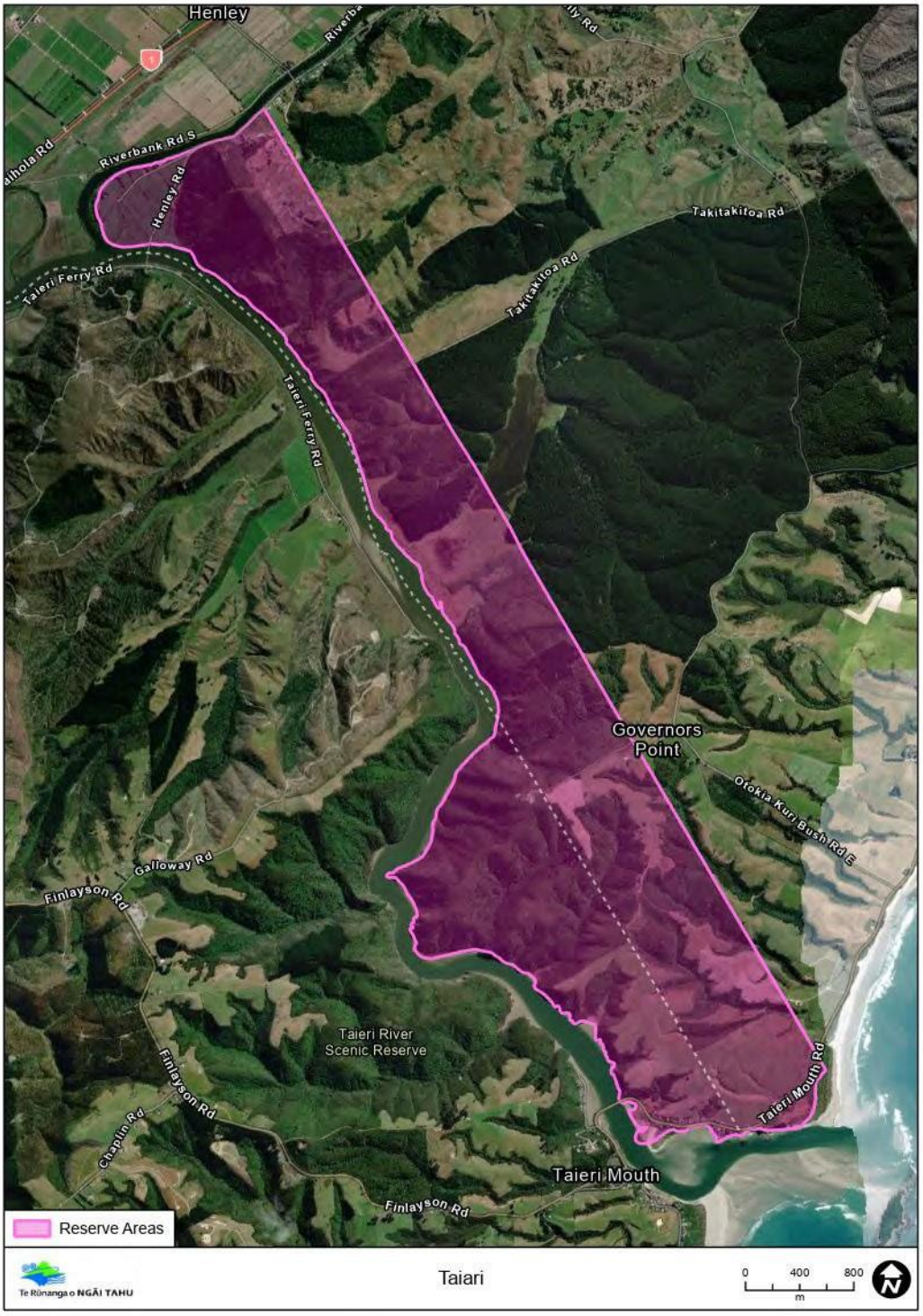

Moeraki
Garden St
Kaik
Lighthouse Rd
Lighthouse
Reserve Areas
Te Rūnanga o NGĀI TAHU
Moeraki
0
175
350
m

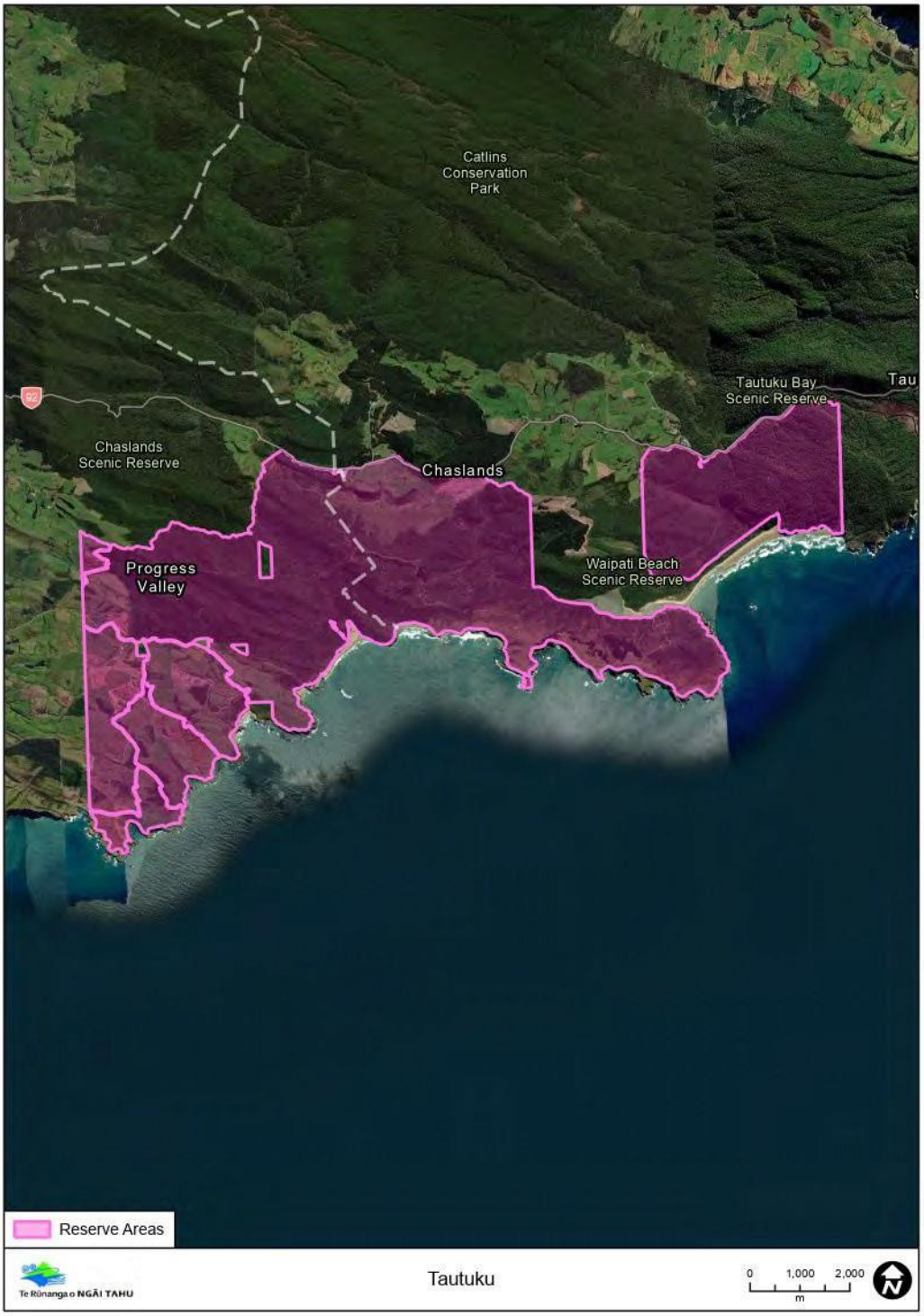

Spit Beach
Lighthouse Reserve
Aramoana
Harington Point
Rerewahine Point
Otakou
Otakou Golf Club
Harwood
Wickliffe Bay
Cape Saunders
Allans Beach Reserve
Wharekakahu Island
Hooper Inlet
Reserve Areas
Te Rūnanga o NGĀI TAHU
Otago Heads Native Reserve
0 500 1,000
m

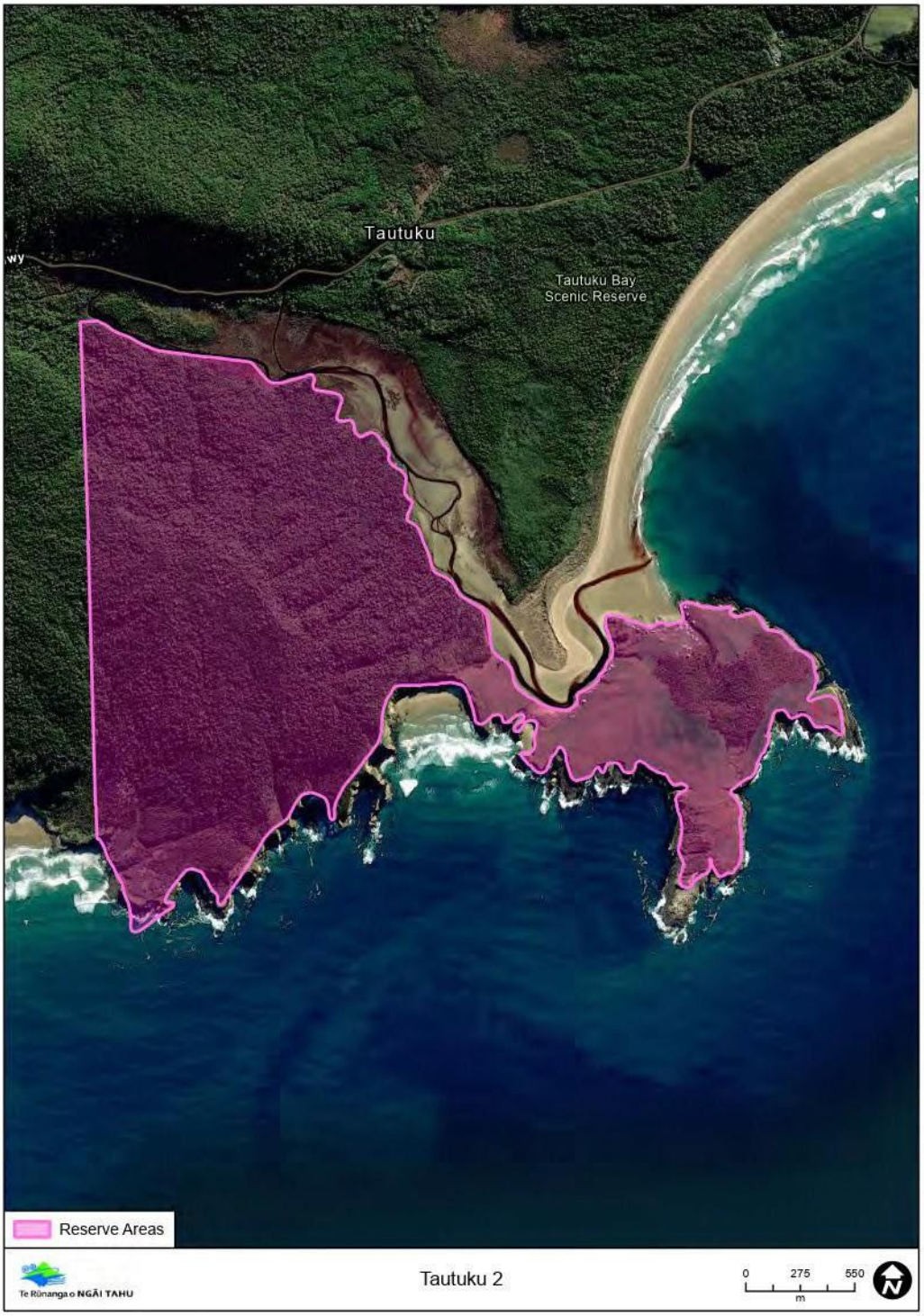
Reserve Areas
Te Rūnanga o NGĀI TAHU
Port Chalmers
0 5 10
m


Reserve Areas
Te Rūnanga o NGĀI TAHU
Punaomaru
0
170
340
m
King Rd
King Rd
King Rd
Warepa Rd

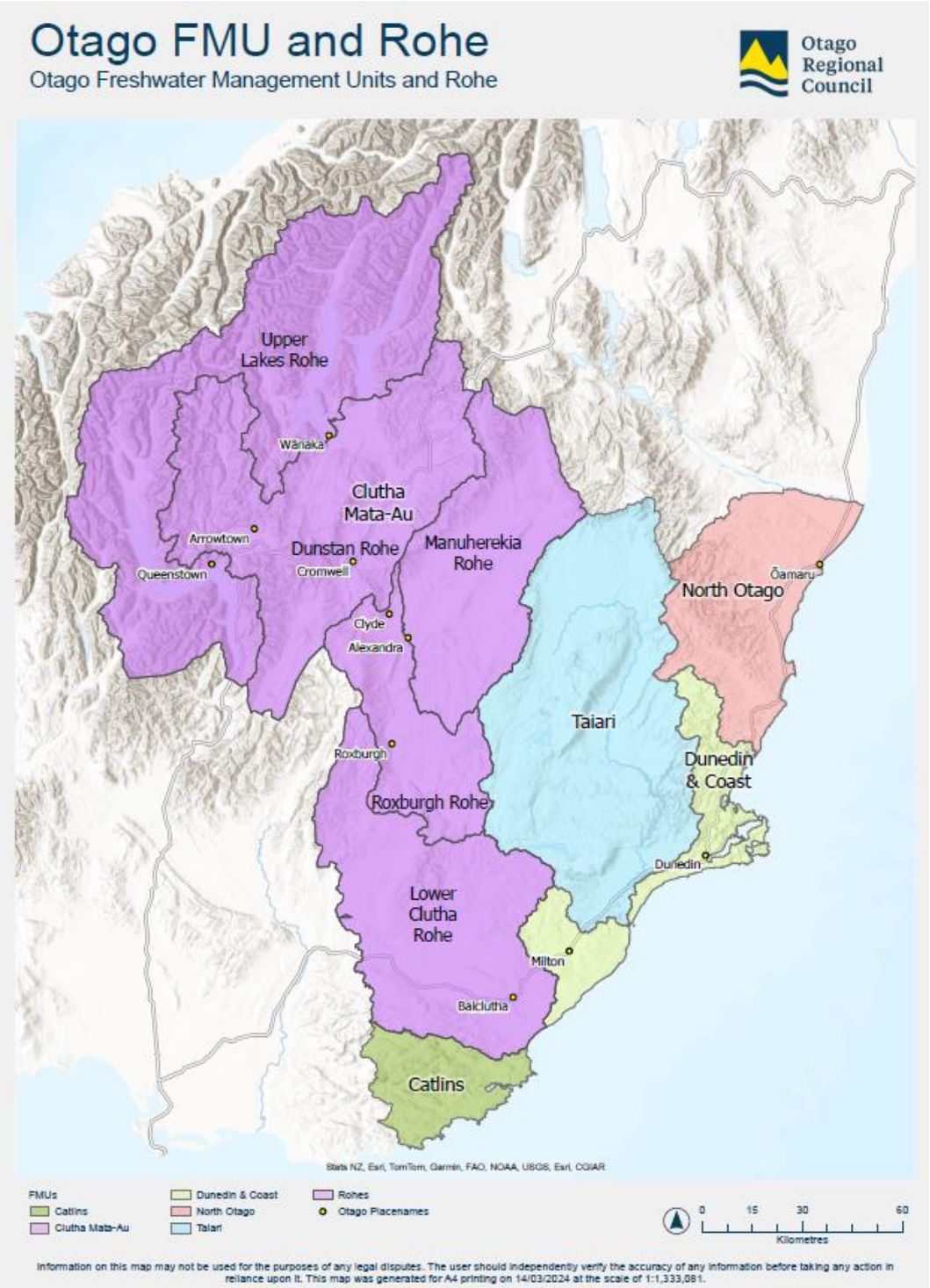
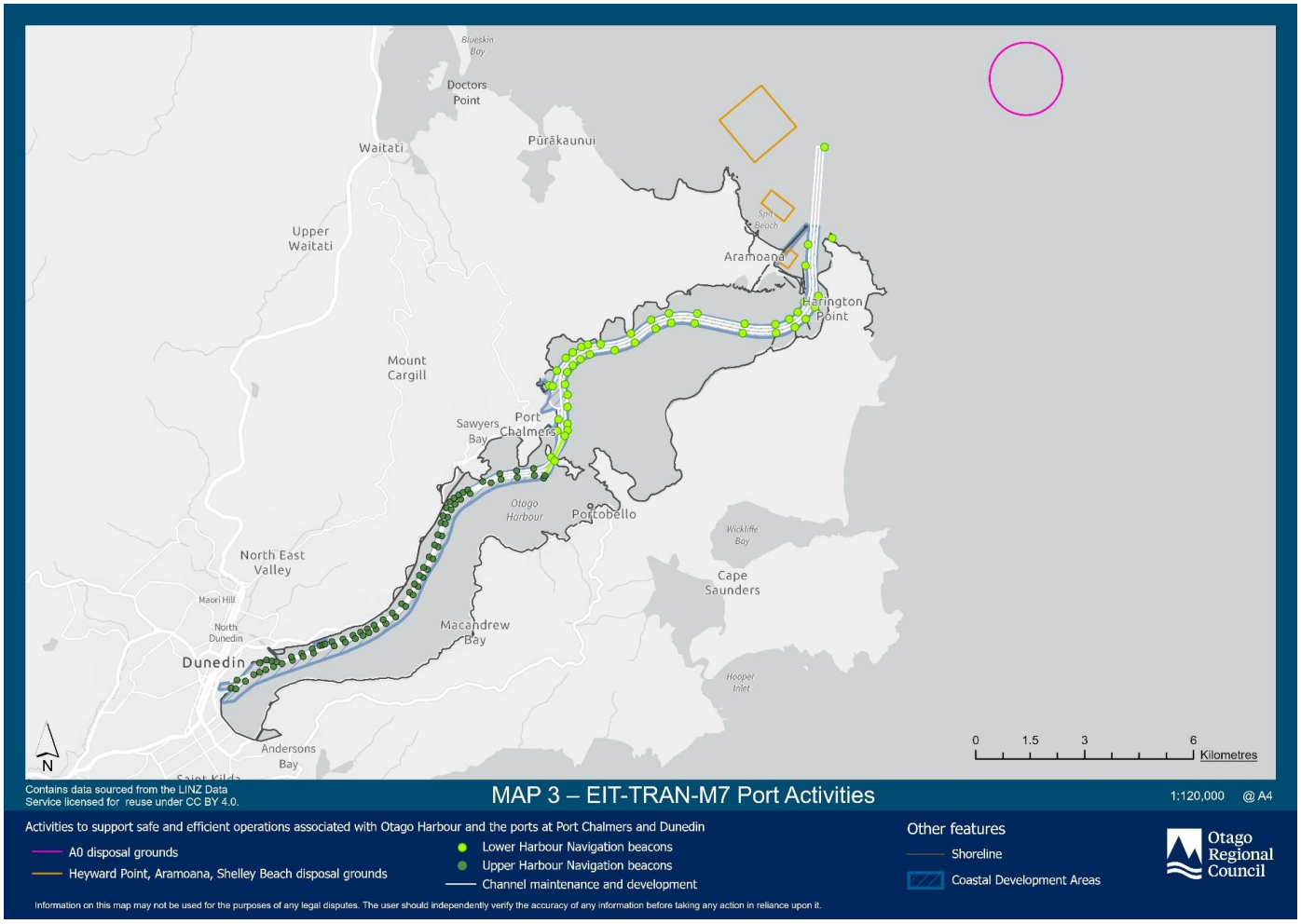

Bivocklin Bay
s Point
Purakaunui
Long Beach
Purehurehu Point
Purakaunui Bay
Osborne
Purakaunui Rd
Mopanui Rd
Purakaunui Rd
Mihiwaka
Reserve Areas
Te Rūnanga o NGĀI TAHU
Pūrākaunui
0
345
690
m


Henley
Riverbank Rd S
Henley Rd
Taieri Ferry Rd
Takitakitoa Rd
Governors Point
Otokia Kuri Bush Rd E
Galloway Rd
Finlayson Rd
Taieri River Scenic Reserve
Chaplin Rd
Taieri Mouth Rd
Taieri Mouth
Reserve Areas
Te Rūnanga o NGĀI TAHU
Taiari
0 400 800
m


Catlins
Conservation
Park
Tautuku Bay
Scenic Reserve
Tau
Chaslands
Scenic Reserve
Chaslands
Progress
Valley
Waipati Beach
Scenic Reserve
Reserve Areas
Te Rūnanga o NGĀI TAHU
Tautuku
0
1,000
2,000
m


Tautuku
Tautuku Bay
Scenic Reserve
Reserve Areas
Te Rūnanga o NGĀI TAHU
Tautuku 2
0
275
550
m

MAP2 – Freshwater Management Units



MAP3 – EIT-TRAN-M7 Port Activities