Environment Canterbury
Regional Council
Kaunihera Taiao ki Waitaha

CANTERBURY REGIONAL POLICY STATEMENT 2013

Revised December 2013

Our vision

Waitaha

Te whenua mataora
Kia whakaora te taiao momona
Mā tātou hei whakawehi ai

Canterbury...

a living landscape
rich in natural resources
a flourishing environment
that we all respect and enjoy

The Proposed Canterbury Regional Policy Statement (RPS) was publicly notified on 18 June 2011, and made operative on 15 January 2013. Version 2 (V2) incorporates Chapter 6 - Recovery and Rebuilding of Greater Christchurch. This chapter was inserted into the RPS by the Minister for Canterbury Earthquake Recovery under the Land Use Recovery Plan, section 27 of the Canterbury Earthquake Recovery Act 2011 and clause 20A of Schedule 1 to the Resource Management Act 1991, on 6 December 2013.

FOREWORD

The past 10 years have seen remarkable economic, social and cultural growth across Canterbury. Both in urban and rural areas, new settlements, new industries, and new technologies including new farming methods have arisen, and all have brought prosperity to the region.

Growth has, of course, put pressure on the region's natural resources, particularly fresh water. More recently, the region has been challenged by natural hazards including major earthquakes.

These challenges and pressures require new ways of thinking about our natural resources and their sustainable management, both now and into the future.

The objectives, policies and methods of the Canterbury Regional Policy Statement, prepared in accordance with the Resource Management Act 1991, are central to resource planning in Canterbury. This is a key document for our local communities, stakeholders and businesses to own as a blueprint for promoting sustainable management of natural and physical resources in Canterbury. Through public input into the development and hearing process, a document has been created which we can all be proud of.

By fixing the Common Seal of the Canterbury Regional Council we hereby certify that this is a true and correct copy of the Canterbury Regional Policy Statement, prepared by Canterbury Regional Council on this day 13 December 2012.

Chapter 6 of the Canterbury Regional Policy Statement was inserted into the Canterbury Regional Policy Statement by the Minister for Canterbury Earthquake Recovery under the Land Use Recovery Plan, section 27 of the Canterbury Earthquake Recovery Act 2011 and clause 20A of Schedule 1 to the Resource Management Act 1991, on 6 December 2013.

Bill Bayfield
Chief Executive
Canterbury Regional Council

Dame Margaret Bazley ONZ, DNZM, Hon DLit.
Chair
Canterbury Regional Council

"This is a key document for our local communities, stakeholders and businesses to own as a blueprint for promoting sustainable management of natural and physical resources in Canterbury. Through public input into the development and hearing process, a document has been created which we can all be proud of."

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INTRODUCTION

Introduction

The Canterbury Regional Policy Statement (CRPS) gives an overview of the significant resource management issues facing the region, including issues of resource management significance to Ngāi Tahu. The purpose of the CRPS is to set out objectives, policies and methods to resolve those resource management issues and to achieve the integrated management of the natural and physical resources of Canterbury.

Significant resource management issues generally involve:

(1) Widespread problems – A problem which is relevant throughout the region, possibly crossing local authority boundaries.

(2) Scarce resources – The existence of a natural or physical resource that is scarce, rare or unique, and/or under threat. Scarce resources encompass internationally and nationally recognised resources (including resources that are nationally important in accordance with Section 6 of the Resource Management Act 1991 (RMA)). They also include natural resources, and physical resources that have particular locational requirements, or that form interlinked networks.

(3) Resource use conflict – The presence of, or potential for, significant conflicts in resource use.

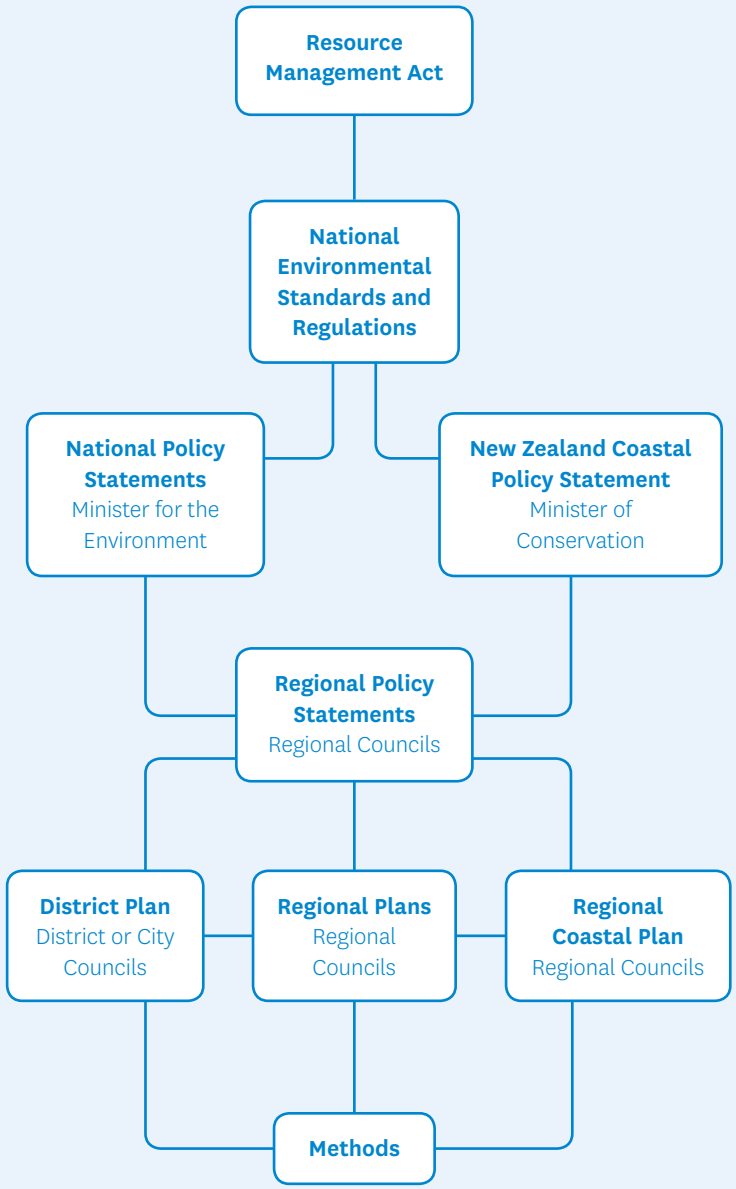
(4) Cumulative impacts – The presence of, or potential for, significant cumulative impacts arising from resource use.

The RMA promotes the sustainable management of natural and physical resources. This involves managing the resources of the Canterbury region in ways which provide for the needs of current and future generations. In achieving the objectives of the CRPS, the Canterbury Regional Council is looking to improve the quality of life for the residents of Canterbury, whilst ensuring the proper management of natural and physical resources.

The CRPS is the heart of resource management in Canterbury. The Canterbury Regional Council and territorial authorities must give effect to the CRPS through their regional and district plans. It is for this reason that, while the preparation of the CRPS was led by the Canterbury Regional Council, territorial authorities had significant consultative input into its development.

Figure 1.1

POLICY AND PLAN FRAMEWORK UNDER THE RMA



1.1

THE CANTERBURY REGION AND ITS RESOURCES

Canterbury has the largest land area of all the regions in New Zealand. It extends from the Kaikōura coast near Kēkerengu in the north to the Waitaki River catchment in the south, from the coast in the east to the Main Divide in the west. The Canterbury region also extends 12 nautical miles (approximately 19 km) seaward to the limit of the territorial waters.

The region has a variety of natural resources and a range of people and communities living in association with them. Physical resources associated with these communities include infrastructure for transport, energy and network utilities and settlement infrastructure. Settlements range from the major urban areas of Christchurch and Timaru, to numerous rural towns and small settlements, such as Arthur's Pass, Geraldine and Amberley. Each community has relationships with the natural and physical resources that surround it. These relationships form an integral part of the environment that we live in.

Natural resources are important to Canterbury's economy, and make a significant contribution to the national economy. Canterbury's water accounts for 65% of national volume of storage for hydroelectric power generation and underpins the regions agricultural sector. Also underpinning the agricultural sector in Canterbury is a significant soil resource which includes 21% of New Zealand's highest quality soils. Natural values associated with Canterbury's indigenous biodiversity, landscape and features are the basis of the regions tourism industry.

1.1.1 Diverse environments

The coast

Canterbury's long Pacific coastline is distinguished by sweeping sand or mixed sand and gravel beaches, rocky peninsulas, and lagoons and estuaries. Some of the coastal wetlands have been highly modified. The coast supports a range of bird and fish species, some of which are migratory. It has also attracted a significant number of human settlements, ranging in size from Timaru and Lyttelton to small bach settlements and hut communities established near the mouths of several major rivers.

Canterbury's coastal environment has important natural features including the beach dune vegetation of Kaitorete Spit and coastal river mouth wetlands. It is home to populations of Hector's dolphin, white-flippered penguin, yellow-eyed penguin, Hutton's shearwater and seals. Resident and migrating whales also spend time in regional waters.

The Canterbury Plains

The Canterbury Plains, with their mountain backdrop, slope gently from the foothills to the sea. The plains are crossed by braided rivers, some of which are of international importance, providing significant wildlife habitats. There are major wetlands in the lower plains areas which provide important habitats for both indigenous and introduced bird and fish species. These are valued for recreation, landscape, scientific, educational and water quality reasons. Lake Ellesmere/Te Waihora is recognised as being internationally significant, and is home to at least 167 species of bird and 43 species of fish, some of which are fished commercially.

Mixed livestock, dairying and cropping are the main types of farming on the Plains. The soils of the Canterbury Plains, when cultivated or devoid of vegetation, are vulnerable to wind erosion, particularly by the hot, dry north-westerly winds common in the region. Underlying the Plains is a major groundwater resource which is used for irrigation supplies, domestic and industrial water supplies. The major Canterbury rivers are also an important source of water for irrigation.

Christchurch is the major centre of population (350,000 persons approx.) followed by other larger centres such as Timaru, Ashburton, and Rangiora, and smaller towns such as Culverden, Darfield and Temuka.

Intermontane basins

Large basins have formed within the upper catchments of several braided rivers, including Mackenzie Basin in the Waitaki River catchment, Waimakariri River Basin, and Hanmer River Basin in the Waiau River catchment. Of these, the Mackenzie Basin is by far the largest. It is characterised by extreme temperatures in summer and winter and very low rainfall towards the east of the basin, which can be as low as 500 mm per year. The pre-European vegetation in these basins was fire-induced tussock grasslands but this has been modified since pastoral farming commenced. The drier areas are prone to rabbit infestations, and to erosion, if not managed appropriately.

The Mackenzie Basin has three glacial lakes (Tekapo, Pukaki and Ohau) that are managed for hydro-electricity production. There are two additional lakes (Lake Benmore/Otematata and Lake Ruataniwha) in this basin that have formed behind hydro-electricity dams. Altogether, there are eight hydro-electricity power stations on the Waitaki River system, some in the Mackenzie Basin and others closer to the coast, that produce a significant proportion of the nation's electricity.

Lakes and rivers within these intermontane basins provide important areas for recreation and make a significant contribution to the amenity and landscape values of the region. The contributions from indigenous flora and fauna to these values are now variable because of extensive modification, but there are still important remnant wetlands.

Hill country

Large parts of North and South Canterbury consist of steep to rolling hill country, and immediately west of the Plains is the 'foothills' area. Rainfall is generally higher than on the Plains but drought is still common, as are severe frosts and snow. Pastoral farming predominates, with most areas having been developed by oversowing and/or topdressing with fertiliser.

Hill country areas are important for recreation and have significant landscape values. Hill country areas include substantial areas of beech forest, significant areas of relatively unmodified tussock grassland, and remnant habitats of other indigenous flora and fauna.

High country

The high country is generally at a greater altitude than the hill country and lies eastward of the alpine zone, including the Main Divide. It has extremes of weather, particularly heavy snow, severe frosts and strong winds. Rainfall declines markedly eastward of the Main Divide, from 8,000-10,000 mm per year on the Main Divide itself, to 860 mm per year at Lake Coleridge Powerhouse, about 40 km to the east. High country lakes, glacial in origin, occur in most of the major river systems draining this area and generally have very high water quality.

The high country is valuable for tourism and recreation. The landscapes and remnant indigenous flora and fauna are important features of this area. There are remnant areas of beech forest and shrub and tussock grasslands, of which there are few extensive unmodified areas left.

Extensive pastoral farming, based on fine wool merino sheep, has been the predominant land-use in the high country for many years.

Southern Alps/Kā Tiritiri o te Moana

The Southern Alps/Kā Tiritiri o te Moana are a distinctive boundary and landscape backdrop. They provide a barrier to moist westerly airflows, resulting in the heavy precipitation along the Main Divide and high yields of water into the upper catchments of the major braided rivers.

The area has extensive screes interspersed with alpine vegetation, bare rock, permanent icefields and glaciers. These are largely unmodified, except for skifields and state highways.

This alpine zone has significant areas of public land administered by the Department of Conservation, including Aoraki National Park and Arthur's Pass National Park. It is highly valued for its indigenous flora and fauna, recreational values, landscape, and as a tourism resource.

Aoraki/Mount Cook, and other mountains in the Southern Alps/Kā Tiritiri o te Moana, are of great spiritual significance to Māori, and particularly Ngāi Tahu. Routes previously used by Māori to get to the West Coast, particularly for mahinga kai and pounamu gathering and trade, cross these areas.

Inland and Seaward Kaikōuras

Isolated from the Southern Alps/Kā Tiritiri o te Moana, the Kaikōura mountain ranges offer a diverse range of flora and fauna, including over 30 species of nationally threatened plants and a diverse range of insects and lizards and the only Hutton's Shearwater breeding sites. The area is recognised for recreational, geological and landscape values. The Seaward Kaikōura Range rises from the Pacific Ocean to Mt Manakau (2608m). The Inland Kaikōura Range includes the highest peak outside of the South Alps in Canterbury being Mt Tapuae-o-Uenuku (2885m).

The Kaikōura area

The Kaikōura area is characterised by a distinctive rocky sea coast in close proximity to high mountains, giving rise to many short, swift-flowing rivers. The spectacular rocky coastline and deep ocean trenches, not far offshore, provide habitats for many birds, fish and marine mammals. The area is particularly important for marine ecology, recreation, tourism and fishing.

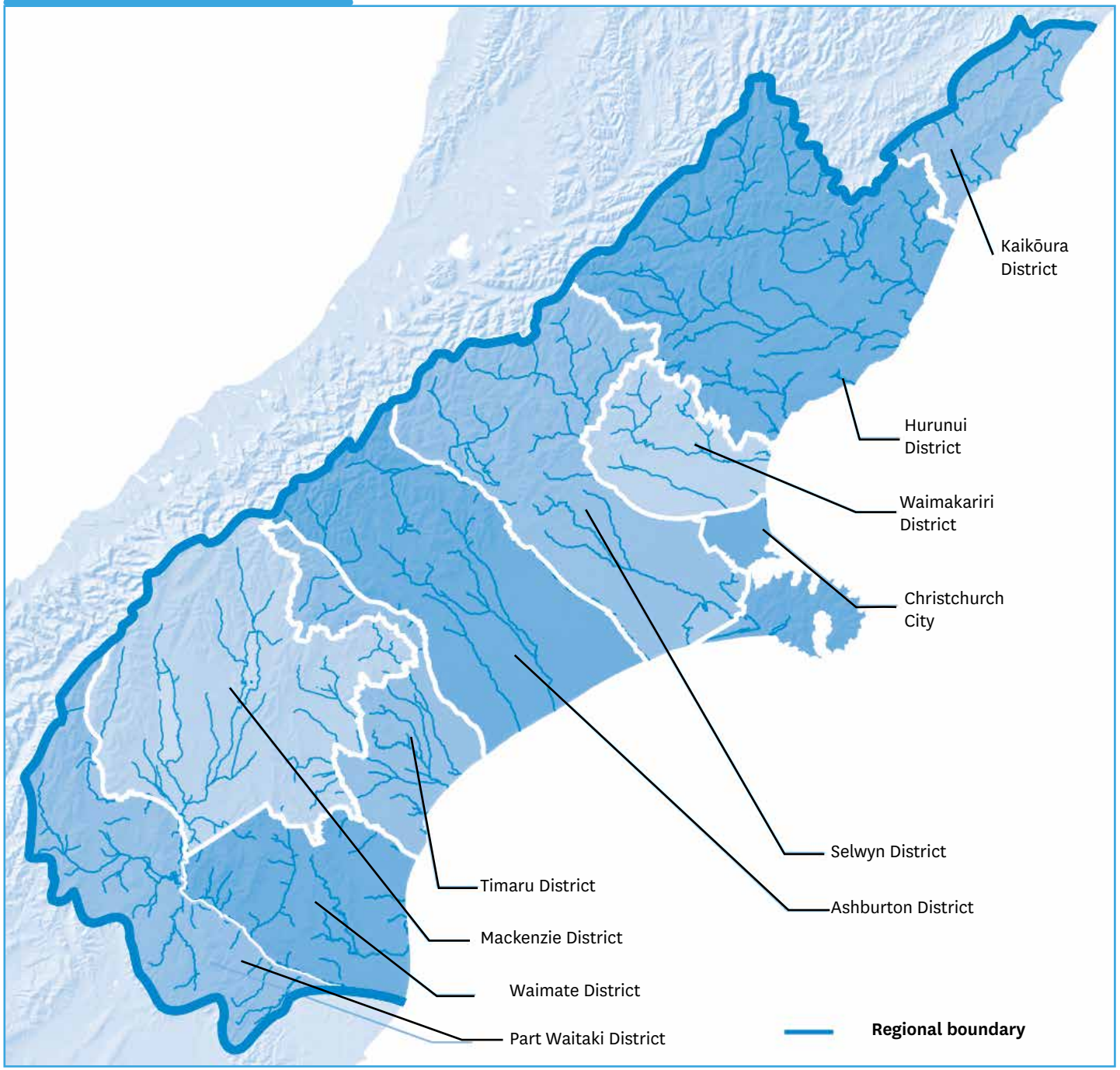
Banks Peninsula

Banks Peninsula's volcanic landforms, valleys and harbours have created an outstanding landscape with a range of microclimates that provide for the southernmost distribution of a variety of indigenous plant species. Remnants of the original vegetation remain, including beech forest, bush and tussock areas, and sub-alpine vegetation at higher altitudes. Like Kaikōura, its rocky coastline provides habitats for a wealth of bird and marine life.

The coast of Banks Peninsula is particularly significant for marine ecology. Around the peninsula, between Sumner Head and the Rakaia River mouth, is a marine mammal sanctuary that was created in 1988 to protect the rare Hector's dolphin from becoming caught in fishing nets. In addition, there is a marine reserve located in Flea Bay, east of the entrance to Akaroa Harbour. This reserve was established in 1999 to protect the natural character of the coast. Taiāpure have been established in Akaroa Harbour and Haylocks and Damons Bays to manage local fisheries and recognise rangatiratanga of local rūnanga.

Pastoral farming is the dominant land-use on the peninsula. The peninsula is an important area for recreation and tourism, including fishing, marine recreation, tramping and rock climbing. It has always attracted human settlement, with four papatipu rūnanga pre-dating European settlement, and many contemporary communities around its harbours and bays including the port town of Lyttelton and the major tourist centre of Akaroa.

Map of Canterbury region



1.2

RESOURCE INTER-RELATIONSHIPS

1.2.1 Natural resource relationships

Although environments and ecosystems within the region can be described independently, they are always connected. Integrated management of the region's natural and physical resources is based on understanding the inter-connected nature of these and recognition that the well-being of each resource is connected to the well-being of the other resources around it. For example, spring rain and summer melt from the snow and glaciers of the Southern Alps/Kā Tiritiri o te Moana provide a significant proportion of the water in large braided rivers. A mild, dry winter without significant snow or a spring without moist north-westerlies can mean that these rivers run low in the summer, affecting the activities that rely on this water, in particular the generation of hydro-electric power, recreational activities and agriculture.

Vegetation cover can also affect river flows and groundwater by influencing the amount of rainfall lost by evapotranspiration. Small catchments with extensive forest cover have significantly lower water yields than similar catchments with pasture. Wetland systems can store water in wet periods and continue releasing it in dry conditions, thereby benefiting low flows in these rivers and lowland streams. Drainage of large areas of wetland can therefore result in decreases in summer stream flow, particularly in smaller catchments. This has an effect both on natural habitats and human activity.

The quality of water in streams and groundwater is linked to what is happening on the land. Water running over the land, or seeping through the soil, can pick up contaminants and could carry these into groundwater or adjacent rivers and streams. The types of land-use, as well as land-use practices, can therefore have a major influence on the water quality of adjacent water bodies. Streams in agricultural catchments often contain nutrients and micro-organisms from animal effluent and nutrients from fertilisers, while those in urban areas are likely to contain harmful contaminants washed off road surfaces.

Many land and water processes are inseparable. For example, soil erosion becomes water siltation as dissolved and suspended substances washed from the land find their way into surface water, and this, in turn, can lead to change in ecosystems, including the human communities that form part of those ecosystems.

1.2.2 Relationships with people and communities

Integrated management provides for the links between people and communities that extend, through their activities, to the natural and physical world around them. Within the framework provided by the sustainable management of resources, people and communities are enabled to provide for their well-being, health and safety. The health and safety of people, and social, cultural and economic well-being are interrelated, and together represent human well-being.

The health of communities is linked to, and ultimately dependent on, the health of the environment, which is the basis of all aspects of well-being. Human well-being is dependent on the meeting of basic needs, such as potable water, food, clean air, energy, shelter and security.

Strong and resilient communities exist where social, cultural, economic and environmental well-being are addressed and enhanced for the benefit of all. This implies a measure of commercial and financial prosperity that needs to be achieved within a framework of sustainable resource management. The use of natural resources to provide for human well-being is clearly evident in the Canterbury landscape, which is characterised by farming and the physical infrastructures that provide for energy production, transport and communication.

The benefits that people derive from ecosystems and natural resources are termed "ecosystems services". These services will contribute to the social, cultural, environmental and economic well-being of people and communities.

'*Ecosystems services*'

Decisions on the use of resources should recognise the range of ecosystems services associated with natural resources and minimise the impact that such decisions will have on the future ability of resources to supply those services and contribute to regional well-being in the long term.

The environment is in a constant stage of change. Human factors such as land-use have significant impact on the way the natural environment functions, while geological and meteorological processes shape the activities that people undertake in an environment. Changes in social demographics also change the way that we interact with the environment. Climate change and an aging population are two issues that are anticipated to have significant impacts on the way we live in Canterbury, within the foreseeable future. The future well-being of the region is dependent on the community being able to adapt to these changes. Building resilience into development is crucial to ensuring the foreseeable needs of future generations are provided for.

As Canterbury's population increases, it can be expected that the demands on natural and physical resources will also increase, both from those who want to actively use resources, and those who want to protect the values of certain resources. More people will mean more demand on water for energy production, irrigation and domestic/industrial consumption, while there will also be more people who value rivers for ecological or recreation reasons. Some natural and physical resources that are locationally constrained or finite, such as mineral or wind resources or infrastructure, may need to be specifically recognised so that their use into the future can be protected. As demands on resources increase, it is important to understand how those resources function in the environment and what the consequences of their exploitation may be. Where there is insufficient information, a precautionary approach is needed.

Many aspects of social well-being depend on the use of natural and physical resources including recreation. The environment is also a source of inspiration for literature and the arts, and for learning about, and from, the natural world.

For many people and communities the environment is central to cultural well-being, providing a sense of belonging and 'place' that extends to both natural and physical resources. This relationship is expressed in the Māori concept of tūrangawaewae and through organisations such as historical societies and protection associations. Sense of place is sometimes expressed very strongly through literature. Some places have great spiritual or sacred value for different communities and cultures. The spiritual value of Aoraki/Mount Cook for Māori, and in particular Ngāi Tahu, is well known but there are other places, such as wāhi tapu and wāhi taonga, that are also valued. Spiritual value is attributed to water in many cultures and may be linked to the environment as a place for psychological refreshment, epitomised by the often heard phrases 'getting away from it all' or 'going bush'.

Many areas of cultural significance are managed by the crown such as national parks, scenic reserves and unalienated crown lands. There are other areas of significance along the coast and each community has its own valued sites and special places. Territorial authorities maintain areas of cultural significance, such as heritage trails and historical museums, while marae and urupā are often on Māori reserves.

The strong relationship between people and communities and the natural environment indicates that promoting the sustainable management of resources is an important first step in enabling people to provide for their social, economic and cultural well-being and for their health and safety.

Economic well-being depends on the inter-relationship between people and communities and the regions natural and physical resources. The Canterbury region has a strong farming economy based on well established dryland pastoral and mixed farming sectors, and increasingly important dairy farming. The intensification of pastoral farming, through increased dairy farming, is increasing demand for irrigation from ground and surface water. The forestry and logging sectors are relatively small, and fishing and aquaculture make a small contribution to the economy. Overlying these activities is a well established tourism and recreation industry and strong manufacturing, retail, construction and business service industries.

There is, of course, a relatively high, but variable, interdependence between the 'rural' and 'urban' sectors with farming making sales to, and purchasing from, a wide range of urban services. Urban development is also dependent on minerals sourced from rural areas. The dependence of the urban sector on the rural economy is evident in the way the economic impact of droughts or heavy snow storms work their way through the urban economy. The economic well-being of small towns in particular is closely related to agricultural prosperity. The tourism sector needs rural and urban accommodation, retail, transport, food and servicing facilities. Urban dwellers enjoy rural recreation opportunities.

1.3

THE CANTERBURY REGIONAL POLICY STATEMENT

1.3.1 Legislative context

The purpose of the Resource Management Act 1991 (RMA) is set out in Section 5(1) as 'to promote the sustainable management of natural and physical resources." 'Sustainable management' is defined in Section 5(2) of the RMA. It means managing the use, development and protection of natural and physical resources, (including water) in a way, or at a rate, which enables people and communities to provide for their economic, cultural and social well-being and their health and safety, while sustaining the potential of water resources to meet the reasonably foreseeable needs of future generations; safeguarding the life-supporting capacity of water and ecosystems; and any adverse effects of activities on the environment are avoided, remedied or mitigated. Under sections 6 to 8 of the RMA, there is an hierarchy of matters to address, within the overall purpose of promoting sustainable management. However interests which in isolation are in a lower order of significance than others, may in context depending on the evidence outweigh those of a higher order.

The CRPS was prepared pursuant to the provisions of the RMA. In particular, Sections 59 to 62 of the RMA set out, for regional policy statements: their purpose; requirements for their preparation and change; matters to be considered by the regional council during the preparation; and their contents.

The purpose of a regional policy statement is to achieve the purpose of the RMA by providing an overview of the resource management issues of the region and policies and methods to achieve integrated management of the natural and physical resources of the whole region.

Regional policy statements must give effect to National Policy Statements, including the New Zealand Coastal Policy Statement (NZCPS). Additionally, regional policy statements must not

be inconsistent with any water conservation order. In the preparation of a regional policy statement, the regional council must take into account iwi management plans, including management plans for foreshore and seabed reserves.

If there is a perceived conflict between competing policies within the Canterbury Regional Policy Statement, the provisions of all the applicable chapters will be evaluated and applied on a case-by-case basis.

1.3.2 The Treaty of Waitangi/Te Tiriti o Waitangi

The Treaty of Waitangi/Te Tiriti o Waitangi is recognised in resource management through Section 8 of the RMA, which states that in achieving the purpose of the RMA, the principles of the Treaty shall be taken into account. The principles of the Treaty can be summarised as:

1. The Crown has an obligation to protect actively Māori interests. Kawanatanga is less than absolute sovereignty and carries with it protective obligations.
2. The Crown and Māori have mutual obligations to act reasonably and in good faith. Good faith consultation between parties is necessary to sustain the Treaty relationship.
3. The Treaty provides a basis for a changing relationship and should always be progressively adapted.
4. There is a principle of mutual benefit that should be applied. Neither partner can demand its own benefits if there is not also an adherence to reasonable state objectives of common benefit.
5. The Treaty has the basic object of two peoples living together in one country, and this concept lays the foundation for the principle of partnership.
6. The Crown has guaranteed rangatiratanga to all iwi, which includes an implicit guarantee that the Crown would not allow one iwi an unfair advantage over another. There can be seen a principle of fair process incorporating the concept that the government should be accountable for its actions in relation to Māori.
7. The Crown has an obligation to recognise rangatiratanga. This may include a tribal right to manage resources in a manner compatible with Māori custom. The Waitangi Tribunal has suggested that it was an intrinsic principle of the Treaty that Māori would recognise and respect the Governor and the Governor's right to national governance, while the Governor would recognise and respect Māori and their rangatiratanga.

The Treaty is of particular relevance to resource management because it refers to the rights of kawanatanga (governorship) and rangatiratanga (chieftainship) and the relationship of Māori with natural and physical resources.

Kawanatanga is commonly understood to be the Crown's right to govern and make laws, such as the RMA, through which it devolves powers to agencies such as local government. Tino rangatiratanga is generally held to denote some form of authority over resources.

Ngāi Tahu, as tāngata whenua, are a Treaty partner with the Crown under the Treaty of Waitangi, a partnership that is particularly relevant to natural and physical resource management.

Within Canterbury, local government has a relationship with the iwi authority Te Rūnanga o Ngāi Tahu and with the papatipu rūnanga of the region. A consultative relationship between local government and Ngāi Tahu as tāngata whenua is important in providing for the relationship of Ngāi Tahu with resources and in upholding the principles of the Treaty of Waitangi.

The CRPS has been drafted in the spirit of the Treaty and its principles. The resource management issues of significance to Ngāi Tahu are outlined in Chapter 2 – Issues of Resource Management Significance to Ngāi Tahu, and have been incorporated within the relevant resource or topic chapters. Chapter 4 – Provision for Ngāi Tahu and their relationship with resources, provides the framework within which the Canterbury Regional Council will work, and encourage territorial authorities to work, in partnership with Ngāi Tahu. Specific methods for providing for this relationship are incorporated throughout the document.

1.3.3 Implementation

Regional and district councils are directed in their functions by numerous acts of Parliament, such as the Local Government Act 2002 (LGA 2002), the Building Act 2004, the Civil Defence Emergency Management Act 2002 and the Land Transport Management Act 2003. While the CRPS is developed in accordance with the RMA, its implementation is also reliant on work undertaken by local government under the provisions of the LGA 2002.

The LGA 2002 requires accountability from local government, and part of that is a requirement to prepare a Long-Term Plan (LTP) that provides a long-term focus for the decisions and activities of the local authority. Activities implementing the CRPS must be planned for through LTP processes.

In addition to an LTP, local authorities must allocate funding to their activities through annual plans. Successful implementation of the CRPS will require resources to be allocated through these funding processes.

The Canterbury Regional Council will, from time to time, participate in decision-making processes to advance the implementation of the objectives, policies and methods of the CRPS. This may include submissions and appeals on resource consents, plan changes and plan reviews, as well as submissions on LTP and annual plan processes.

CHAPTER 2
ISSUES OF RESOURCE MANAGEMENT SIGNIFICANCE TO NGĀI TAHU

Introduction

This chapter is prepared in accordance with Section 62(1)(b)(i) of the Resource Management Act 1991 (RMA), and sets out the resource management issues of significance to Ngāi Tahu, the tāngata whenua of the Canterbury region. This acknowledges Ngāi Tahu as a Treaty of Waitangi/Te Tiriti o Waitangi partner.

The chapter has been developed in consultation with representatives of Te Rūnanga o Ngāi Tahu and papatipu rūnanga. The specific purpose of the chapter is to:

(1) Identify who are the relevant organisations representing tāngata whenua in the Canterbury region, and the geographical extent of the authority of those organisations.

(2) Set out natural resource issues of significance to Ngāi Tahu, and provide a cultural context for those issues.

(3) Set out the relevant matters recognised in Part 12 of the Ngāi Tahu Claims Settlement Act 1998 (NTCSA), including fulfilling the Canterbury Regional Council's obligations to note in the Canterbury Regional Policy Statement (CRPS) the existence of statutory acknowledgements of statutory areas.

While the focus of the chapter is issues of resource management significance to Ngāi Tahu, it is important that the chapter is not read in isolation from the other CRPS chapters. The approach adopted in the CRPS is to integrate issues of significance to Ngāi Tahu throughout the document, and ensure that policies resolve issues and achieve outcomes consistent with those desired by Ngāi Tahu.

2.1

TĀNGATA WHENUA

In Te Waipounamu (the South Island) one tribe, Ngāi Tahu[1], occupies all but the most northern part of the island. The entire Canterbury region lies within the rohe (area) of Ngāi Tahu.

2.1.1 Mana whenua

Ngāi Tahu is recognised as tāngata whenua within their rohe. The iwi is made up of whānau and hapū (family groups) who hold mana whenua (traditional authority) over particular areas. Mana whenua is determined by whakapapa (genealogical ties), and confers traditional customary authority over an area. Once acquired, mana whenua is secured and maintained by ahi kā (continued occupation and resource use). The Canterbury Regional Council recognises mana whenua through its relationship and engagement with papatipu rūnanga and Te Rūnanga o Ngāi Tahu.

2.1.2 Te Rūnanga o Ngāi Tahu

Te Rūnanga o Ngāi Tahu represents the tribal collective of Ngāi Tahu Whānui[2]. It was established by the Te Rūnanga o Ngāi Tahu Act 1996 to give a legal identity to the tribe. The Ngāi Tahu Claims Settlement Act 1998 (NTCSA) establishes Te Rūnanga o Ngāi Tahu as the 'iwi authority' for the purposes of the RMA[3].

In 1998, the NTCSA was passed to achieve settlement of historical Ngāi Tahu claims against the Crown. The NTCSA, amongst other things, identifies taonga species and establishes tōpuni, statutory acknowledgements and nohoanga sites (temporary campsites). These instruments recognise the special association of Ngāi Tahu with these areas and species as one mechanism for improving the effectiveness of Ngāi Tahu participation in the resource management process, specifically building on Part II of the RMA[4]. The location of these areas in the Canterbury region are shown on Figure 2.1 and information relating to these statutory areas is included in Appendix 1 of the CRPS.

The Treaty of Waitangi, and legislative responsibilities under the RMA, the Local Government Act 2002 (LGA 2002), the Te Rūnanga o Ngāi Tahu Act 1996, and the NTCSA, oblige local and territorial authorities to consult with papatipu rūnanga as well as Te Rūnanga o Ngāi Tahu.

2.1.3 Papatipu Rūnanga in the Canterbury region

Ngāi Tahu Whānui, represented by papatipu rūnanga and Te Rūnanga o Ngāi Tahu, is tāngata whenua in the Canterbury region.

The Canterbury Regional Council, in its liaison and consultation with Ngāi Tahu, deals with both Te Rūnanga o Ngāi Tahu and the ten papatipu rūnanga[5] within the region.

Papatipu rūnanga are representative bodies of the whānau and hapū of traditional marae-based communities. Through the papatipu rūnanga, the tāngata whenua who hold mana whenua over a particular area or resource will determine the characteristics of kaitiakitanga (see section 2.3.4 below) and how it should be given expression. Each papatipu rūnanga has its own area, determined by natural boundaries such as mountain ranges and rivers. These areas are called takiwā or rohe and are defined in Schedule 1 of the Te Rūnanga o Ngāi Tahu Act 1996.

Figure 2.2 shows the names and marae locations of the ten papatipu rūnanga whose rohe have common area with the Canterbury region. It also shows the administrative boundaries for each papatipu rūnanga used by the Canterbury Regional Council in the resource consent application process. Although they are not the traditional boundaries as recorded in the Te Rūnanga o Ngāi Tahu Act 1996, these boundaries provide a guide to the appropriate papatipu rūnanga to contact for consultation purposes[6]. It is noted that there are some areas of overlap and shared responsibility.

1 In the CRPS the term "Ngāi Tahu" and "Ngāi Tahu Whānui" have the same meaning.

2 Ngāi Tahu Whānui refers to the collective of the individuals who descend from the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha, namely, Ngāti Kuri, Ngāti Irakehu, Ngāti Huirapa, Ngāi Tūāhuriri, and Ngāi Te Ruahikihiki as described in Section 2 of the Te Rūnanga o Ngāi Tahu Act 1996.

3 Subsection 2 of Section 15 of the Ngāi Tahu Claims Settlement Act 1998 "Where any enactment requires consultation with any iwi or with any iwi authority, that consultation shall, with respect to matters affecting Ngāi Tahu Whānui, be held with Te Rūnanga o Ngāi Tahu."

4 It is important to recognise that there are other sites of significance to Ngāi Tahu in addition to those sites recognised by the NTCSA, including those held as silent files.

5 Sometimes referred to as Kaitiaki Rūnanga.

6 For papatipu rūnanga contact details, contact the Canterbury Regional Council.

Figure 2.1

Areas affected by the Ngāi Tahu Claims Settlement Act 1998

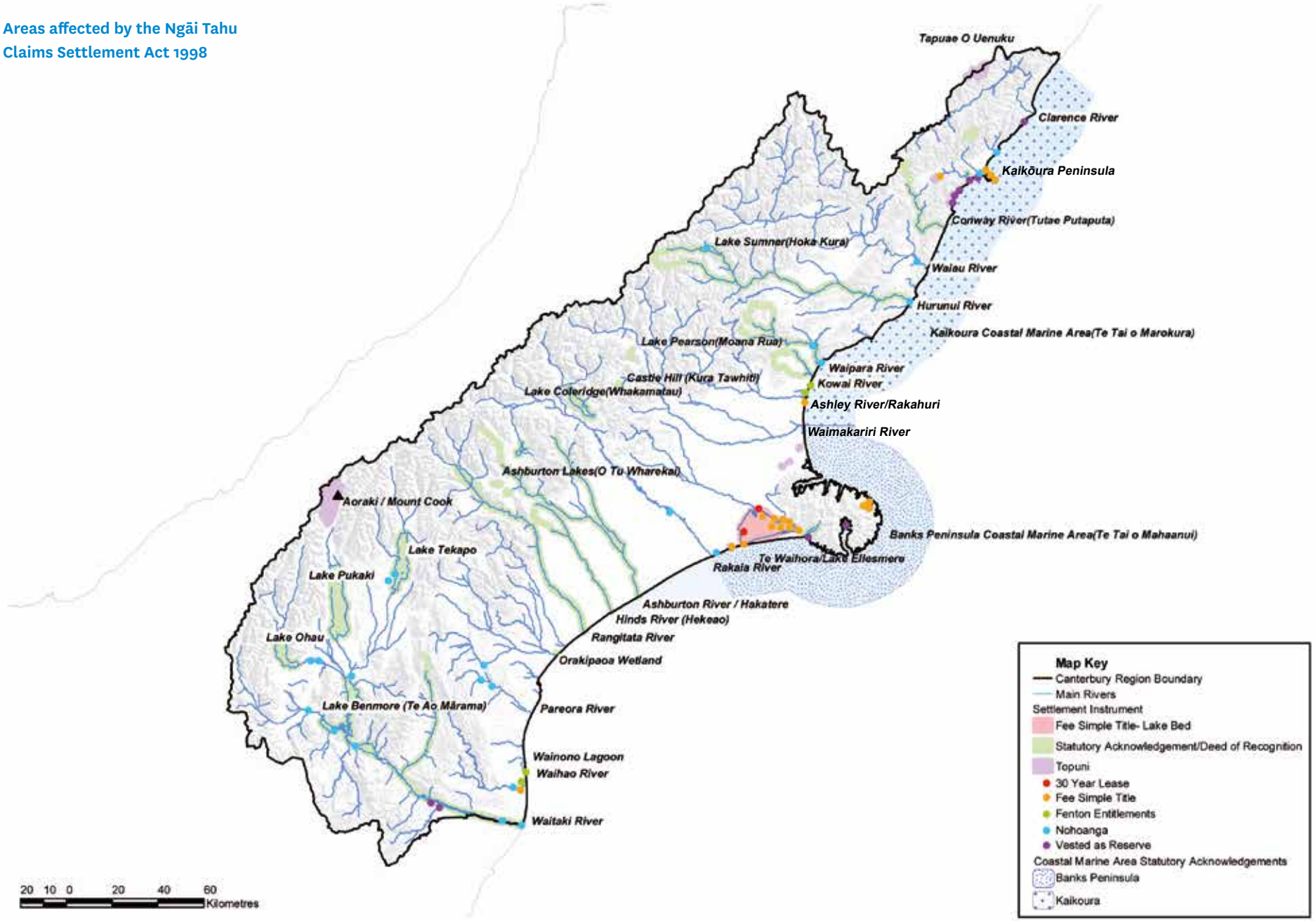
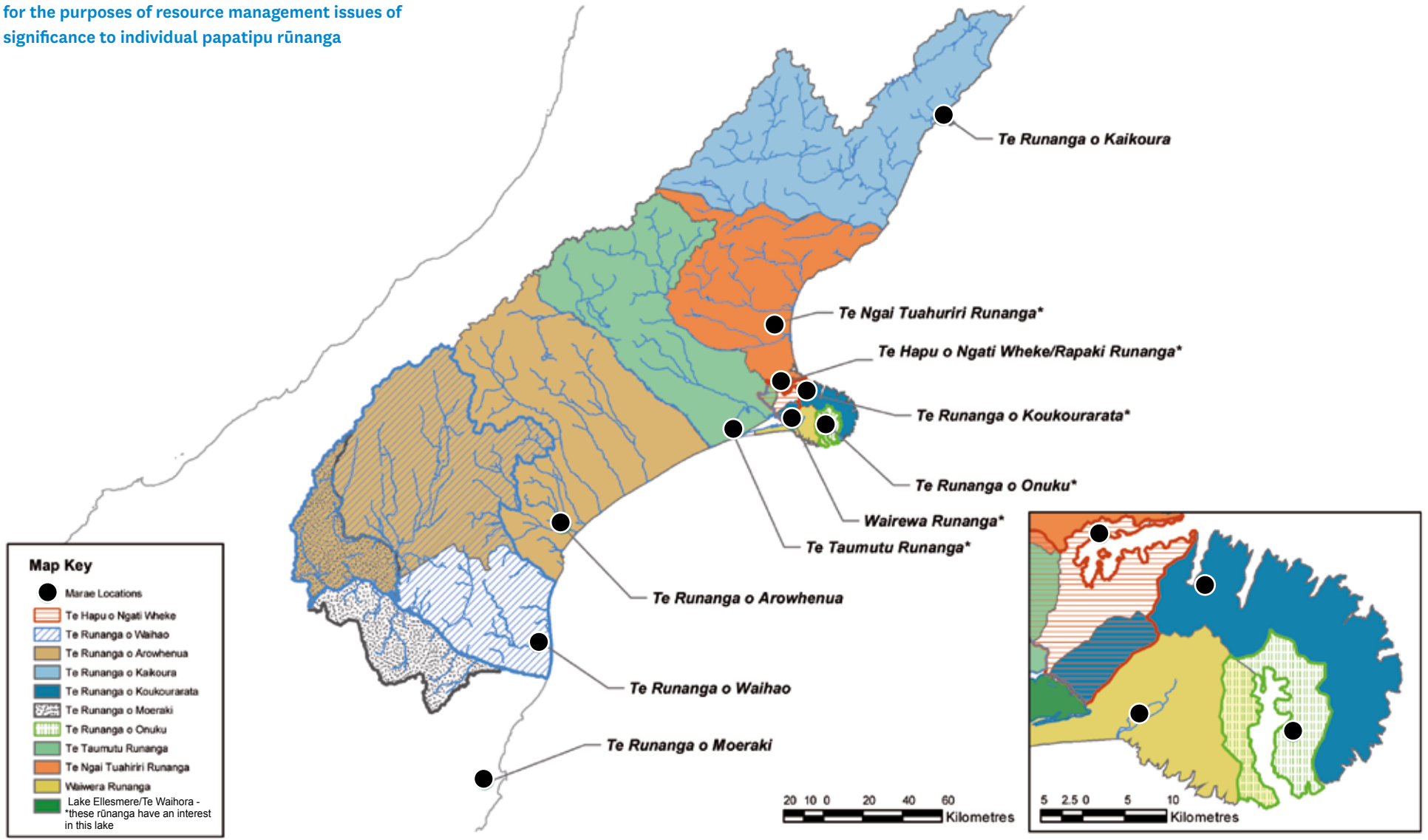


Figure 2.2

Marae locations and papatipu rūnanga boundaries for the purposes of resource management issues of significance to individual papatipu rūnanga



NGĀI TAHU AND THE MANAGEMENT OF NATURAL RESOURCES

Ngāi 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), all people and life forms descend from a common source. Whakapapa binds Ngāi Tahu to the mountains, forests and waters and the life supported by them, and this is reflected in traditional attitudes towards the natural world and resource management. Whanaungatanga embraces whakapapa, through the relationship between people, and between people and the environment. The nature of these relationships determines people's rights and responsibilities in relation to the use and management of taonga of the natural world.

All things have the qualities of wairua (spiritual dimension) and mauri (life force), are living, and have a genealogical relationship with each other. Mauri provides the common centre between the natural resources (taonga), the people or guardians who care for the taonga (the kaitiaki), and the management framework (tikanga) of how taonga are to be managed by the kaitiaki. It is through kawa (protocol) that the relationship between taonga, tikanga and kaitiakitanga is realised.

As noted above, each papatipu rūnanga has its own rohe, carefully determined by natural boundaries such as mountain ranges and rivers. This political and occupational authority over an area is mana whenua and encompasses kaitiakitanga and rangatiratanga.

An integral element of the concepts of kaitiakitanga and rangatiratanga is the recognition that Ngāi Tahu have their own traditional means of managing and maintaining resources and the environment. This system of rights and responsibilities is inherited from previous generations and has evolved over time. The resources in any given area are representative of the people who reside there and are a statement of identity. Traditionally, the abundance or lack of resources directly determines the welfare of every tribal group, and so affects their mana.

2.2.1 Tikanga

Tikanga Māori encompasses the beliefs, values, practices and procedures that guide appropriate codes of conduct, or ways of behaving. It seeks to unify the three planes of reality in an holistic way: te taha tinana (the physical plane), te taha hinengaro (the intellectual plane), and te taha wairua (the spiritual plane).

In the context of natural resource management, observing tikanga is part of the ethic and exercise of kaitiakitanga. It is underpinned by a body of Mātauranga Māori (Māori knowledge), and based on a general understanding that people belong to the land and have a responsibility to care for and manage the land. It incorporates forms of social control to manage the relationship of people and the environment, including concepts such as tapu, noa and rāhui.

Tikanga is based on traditional practices, but is dynamic and continues to evolve in response to different situations. One example of tikanga is the concept of kanohi ki te kanohi, or meeting face-to-face. For consultation on some natural resource management issues, kanohi ki te kanohi may be the appropriate tikanga. Tikanga may also limit public access to wāhi tapu sites or require that certain protocols are observed before entering a site.

2.2.2 Ki Uta Ki Tai

Ki Uta Ki Tai is a term that has become synonymous with the way Ngāi Tahu think about natural resource management. Ki Uta Ki Tai is the concept used to describe the overall approach to natural resource management by Ngāi Tahu – from the mountains to the sea.

Ki Uta Ki Tai is a Ngāi Tahu paradigm and ethic – it is the Ngāi Tahu way of understanding the natural environment, including how it functions, how people relate to it and how it can be looked after appropriately. It involves not only a planning and policy framework, but also the development of monitoring, reporting, geographical information system analysis, information databases, area management and succession tools for natural resource management.

2.2.3 Mauri

The overall purpose of resource management for Ngāi Tahu is the maintenance of the mauri of natural and physical resources, and to enhance mauri where it has been degraded by the actions of humans.

For Ngāi Tahu, mauri is the life force that comes from wairua – the spirit, or source of existence and all life. Mauri is the life force in the physical world.

As a life principle, mauri implies health and spirit. In the environment, mauri can be used to describe the intrinsic values of all resources and of the total ecosystem. In the community, mauri is of paramount importance to the well-being of the people. Mauri can be harmed by the actions of humans but is unaffected by natural processes such as natural disasters.

The preservation of the mauri of natural resources is paramount to Ngāi Tahu to ensure that resources may be used sustainably by present and future generations. Traditionally, rules were established to govern the use of natural and physical resources, and to ensure that the mauri was protected from human actions. These rules form part of kawa and tikanga (Māori protocol) and have been passed on through the generations. For example, a rāhui may be used to safeguard the mauri of a particular resource, by enforcing a temporary restriction on use of the resource to protect the overall health and availability of the resource both for present and future generations. Section 5(1) of the RMA seeks these same outcomes; to promote the sustainable management of natural and physical resources.

There are indicators within the environment, both physical and spiritual, that Ngāi Tahu use to reflect the status of mauri. Physical indicators of the health of mauri include, but are not limited to, the presence of healthy mahinga kai and other indigenous flora and fauna, the presence of resources fit for cultural use, and the aesthetic qualities of resources such as the visibility of important landmarks. Spiritual indicators are those from the atua (gods), which can take many forms and are recalled in the kōrero pūrākau (stories) of whānau and hapū.

2.2.4 Kaitiakitanga

Kaitiakitanga entails the active protection and responsibility for natural and physical resources by tāngata whenua.

To give effect to kaitiakitanga it is important to engage meaningfully with the appropriate papatipu rūnanga.

Section 2 of the RMA states that Kaitiakitanga means "the exercise of guardianship by the tāngata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship".

The definition of kaitiakitanga given in the RMA, however, is a starting point only for Ngāi Tahu, as kaitiakitanga is a much wider cultural concept than pure guardianship.

Kaitiakitanga is fundamental to the relationship between Ngāi Tahu and the environment. The responsibility of kaitiakitanga is twofold: first, there is the ultimate aim of protecting mauri and, secondly, there is the duty to pass the environment to future generations in a state which is as good as, or better than, the current state. To Ngāi Tahu, kaitiakitanga is not a passive custodianship, nor is it simply the exercise of traditional property rights, but entails an active exercise of responsibility in a manner beneficial to the resource.

All persons exercising powers and functions under the RMA, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to Kaitiakitanga (Section 7(a) of the RMA).

2.2.5 Rangatiratanga

Rangatiratanga is about having the mana or authority to exercise the relationship of Ngāi Tahu and their culture and traditions with the natural world. Article II of the Treaty of Waitangi, and Sections 6(e) and 8 of the RMA are concerned with this same relationship.

Traditionally, rangatiratanga incorporates the right to make, alter and enforce decisions pertaining to how a resource is to be used and managed, and by whom (in accordance with kawa and tikanga). It is similar to the functions of the Canterbury Regional Council and is expressed through the relationship between papatipu rūnanga, Te Rūnanga o Ngāi Tahu and the Canterbury Regional Council. Iwi management plans are an expression of rangatiratanga. A practical expression of rangatiratanga is the active involvement of tāngata whenua in resource management decision-making processes.

2.2.6 Taonga

In the management of natural resources, it is important that the habitats and wider needs of taonga are protected and sustainably managed and enhanced.

All natural resources – air, land, water, and indigenous biodiversity – are taonga. Taonga are treasures, things highly prized and important to Ngāi Tahu, derived from the atua (gods) and left by the tipuna (ancestors) to provide and sustain life. Taonga include sites and resources such as wāhi tapu, tauranga waka and mahinga mātaitai, other sites for gathering food and cultural resources, tribally significant landforms, features and cultural landscapes. Taonga may also be intangible, such as tikanga and te reo (Māori language). All taonga are part of the cultural and tribal identity of an iwi.

The protection of the relationship of tāngata whenua with their taonga is included in Article II of the Treaty of Waitangi, Section 6(e) of the RMA, and more recently the NTCSA.

To ensure taonga are available for future generations, resource management decision-making processes need to recognise tikanga (Māori protocol and customs) and have the conservation and sustainability of resources as its focus.

"Mō tātou, a, mō kā uri a muri ake nei - For us and our children after us." [7]

2.2.7 Mahinga kai

The maintenance of the diversity, quality and quantity of resources, especially those valued for mahinga kai, is important to Ngāi Tahu.

Mahinga kai is the customary gathering of food and natural materials and the places where those resources are gathered (Section 167 of the NTCSA). Mahinga kai was, and is, central to the Ngāi Tahu way of life.

The term mahinga kai refers to the whole resource chain, from mountain top to the ocean floor. It encompasses social and educational elements (e.g. intergenerational transfer of knowledge) as well as the process of food gathering. It includes the way it is gathered, the place where it is gathered, and the actual resource itself. There are a number of mahinga kai-related elements in the NTCSA; these include nohoanga (temporary campsites)[8], taonga species and customary fisheries management. There are many other traditional mahinga kai sites not included in the legislation, which also need to be considered through consultation with papatipu rūnanga.

Food has a strong social and cultural meaning. Manākitanga is the custom of being aware of and caring for the needs of your guests. In turn, the mana of the tāngata whenua is both upheld and enhanced. Food is a fundamental way of expressing this ethos and the exchange of local food and resources, and manaakitanga are also a statement of identity. The loss of the ability of tāngata whenua to provide for guests in this way can also be seen as a loss of mana.

2.2.8 Wāhi tapu

It is important that wāhi tapu sites are protected from inappropriate activity and that there is continued access to such sites for Ngāi Tahu.

The protection of the relationship of tāngata whenua with their wāhi tapu is included in Article II of the Treaty of Waitangi and Section 6(e) of the RMA. The term wāhi tapu is used for sacred sites or areas held in reverence according to local tribal custom and history. Some wāhi tapu sites are important to the whole of Ngāi Tahu, while others are important to individual whānau or hapū. Of all wāhi tapu, urupā (burial sites) are the most significant.

Wāhi tapu may be associated with creation stories of tāngata whenua, particular events, such as battles or ceremonies; sacred locations, such as where whenua or placenta is buried; or other valued sites, such as where a particular valued resource is found.

Wāhi tapu include kōiwi tāngata (human remains), urupā (burial sites), waiwhakaheke tūpāpaku (water burial sites), historic pā, buried whakairo (carvings) tuhituhi o neherā (archaeological and rock art sites), tohu ("markers" such as landmarks, mountains, mountain ranges and some trees), ana (caves), and tauranga waka (canoe landing sites).

There are requirements under the RMA and the New Zealand Historic Places Act 1993 relating to the protection of archaeological sites and historic heritage. Sites do not have to be registered or listed to warrant this protection. Usually if there is one site, there is a high probability of others in the vicinity. Tikanga Māori provides the framework to ensure appropriate respect for, and treatment, of wāhi tapu.

Where sites are of special significance, Ngāi Tahu may wish to protect them by restricting certain activities, access and information about their location, through the use of silent files[9]. As the knowledge of specific sites may not be known to Ngāi Tahu as a whole, it is important to always consult with papatipu rūnanga to ensure that wāhi tapu sites are protected.

2.3 ISSUES OF SIGNIFICANCE TO NGĀI TAHU RELEVANT TO THE CANTERBURY REGIONAL POLICY STATEMENT

Toitū he whenua, whatungaorngaro he tāngata "The land is permanent, man disappears"

The following natural resource and environmental management issues and desired outcomes have been identified by tāngata whenua of the Canterbury region, and included in this chapter in accordance with Section 62(1)(b)(i) of the RMA.

The issues identified below are not intended as an exhaustive list of issues of significance for Ngāi Tahu in the region, but are intended to provide an overview of the key issues relevant to specific chapters of the CRPS. This approach is consistent with the general approach of the CRPS to issues of significance to Ngāi Tahu, which is to integrate such issues throughout the CRPS.

In order to resolve issues of resource management significance to Ngāi Tahu, desired outcomes are also identified in Table 2.4. A key method for achieving these outcomes is the integration of policy throughout the CRPS that resolves issues of significance to Ngāi Tahu. In addition, a range of tools, processes and methods are outlined in Chapter 5 – Land-use and Infrastructure, which enable the Canterbury Regional Council to provide for the relationship of Ngāi Tahu with natural resources in Canterbury.

7 Ngāi Tahu whakataukī (proverb).

8 Other customary reserves also exist e.g. Fenton reserves and fishing easements.

9 Te Whakatau Kaupapa (Tau et al., 1990) defines silent files as indentifying the general nature and location of wāhi tapu or other special sites without disclosing their precise location.

Table 2.1 Summary of issues of significance to Ngāi Tahu relevant to the CRPS

*NOTE: Issues and desired outcomes relating to Kaitiakitanga apply to all other Issues of Significance in Table 2.1

	Issues	Outcomes desired by Ngāi Tahu
Kaitiakitanga	Limited recognition of kaitiakitanga in resource management processes and decision making.	Recognise role of Ngāi Tahu as kaitiaki and engage with Ngāi Tahu in the spirit and intent of the Treaty and the RMA. This includes, but is not limited to: · Establishment of robust processes to facilitate engagement with Ngāi Tahu, at operational and political levels · Implementation of iwi management plans · Use of Cultural Impact Assessments as part of assessing effects on the environment · Appointment of Ngāi Tahu commissioners on hearings panels and planning committees · Establishment of collaborative and constructive relationships with other stakeholders
Land-use and Infrastructure	Discharge activities associated with land-use and development, and effects on the mauri of water and soil resources. The impact of urban and rural development on indigenous biodiversity, and culturally significant landforms, features and landscapes. The impact of urban and rural development on sites of significance (e.g. wāhi tapu, archaeological sites), both known and unknown. Lack of policy and planning provisions for papakāinga zoning and housing.	Protect Ngāi Tahu cultural values and associations from inappropriate subdivision, use and development. Restore and enhance indigenous biodiversity as part of subdivision, use and development. Avoid discharges to water and those discharges to land where, such discharges will have adverse effects on the mauri of the land. Appropriate identification of papakāinga zoning and housing issues in plans, and robust guidance to territorial authorities about papakāinga provisions.
Fresh water	The impact on mahinga kai, taonga and other indigenous species as a result of poor water quality and insufficient water quantity. Widespread loss of values in riparian areas. Abstractive use prioritised over customary use and instream values. Over-abstraction from waterways for irrigation purposes. Discharges to water (point and non-point source pollution) and effects on water quality and other values of importance to tāngata whenua. Inefficient use of water. Diversion and damming of waterways (e.g. energy production) and effects on values of importance to tāngata whenua Effects of land-use on water resources, including rivers, streams, wetlands, groundwater, waipuna and riparian areas.	Water resources are managed according to the philosophy and principle of Ki Uta Ki Tai, including the unimpeded passage of water from mountain to sea. Prioritise efficiency of use of water and restoration of riparian areas to improve water resource management. Establish sustainable environmental flow regimes that prioritise waterway health. Customary use and instream values are prioritised over abstractions. Avoid discharges (point and non-point source) to water and those discharges to land, where such discharges will have adverse effects on the mauri of the land. Water quality is maintained, and where required, enhanced. Water quantity is managed in such a way to maintain, and where required enhance, water quality. Protect, restore and enhance native riparian vegetation, to provide habitat for taonga species and a buffer against intensive land-use. Cultural monitoring tools are used to monitor the health of waterways.

	Issues	Outcomes desired by Ngāi Tahu
Coastal environment	Adverse effects of inappropriate land-use and subdivision on values of importance to Ngāi Tahu, including natural character, wāhi tapu, mahinga kai and cultural landscapes. Discharges to coastal waters and impacts on coastal water quality. Loss of access to coastal marine area for mahinga kai and significant sites.	Avoid adverse effects on values of importance to Ngāi Tahu as a result of inappropriate coastal land-use, subdivision and development. Avoid discharge of contaminants to coastal waters. Maintain and enhance Ngāi Tahu access to and along the coastal marine area for mahinga kai and sites of significance.
Ecosystems and indigenous biodiversity	Loss of indigenous biodiversity and habitat as a result of inappropriate land-use, development and water resources management, and the impact on Ngāi Tahu culture, heritage and identity, particularly with regards to mahinga kai. Widespread loss of wetlands and riparian areas, and their life-supporting capacity and ecosystem services. Importance of ecological corridors.	Indigenous flora and fauna are protected and enhanced. Existing wetlands are protected and degraded wetlands are enhanced. Maintain vital, healthy mahinga kai populations and habitats capable of supporting customary use. Protection of native fish habitat and spawning areas from adverse effects associated with damming, diversion, water abstractions and discharges to water. Green corridors for bird and other animal passage are restored and maintained.
Beds of lakes and rivers, and their riparian zones	Activities in the beds of lakes and rivers and their riparian zones can adversely affect cultural use associations and other values of importance to Ngāi Tahu. Widespread loss of values in riparian areas, their function and associated cultural values. Loss of access to sites associated with mahinga kai, wāhi tapu and wāhi taonga (both Ngāi Tahu access requirements, and the need to limit public access in some places).	Avoid adverse effects on values of importance to Ngāi Tahu as a result of inappropriate land-use, subdivision and development. Protect existing riparian areas and enhance those areas that are degraded. Provide for Ngāi Tahu access to areas and sites associated with mahinga kai, wāhi tapu and wāhi taonga. General public access to culturally important sites occurs only in consultation with Ngāi Tahu.
Historic heritage	Adverse effects on wāhi tapu and other sites of significance, including unknown sites, as a result of inappropriate land-use, subdivision and development. Access to sites of cultural significance. Recognition of cultural landscape values. Need for a coordinated and collaborative approach to heritage management. Lack of understanding of statutory and non-statutory tools and processes for managing discoveries of taonga, accidental or otherwise.	Avoid adverse effects on wāhi tapu and other sites of cultural heritage value as a result of inappropriate land-use, subdivision and development. Wāhi tapu and wāhi taonga are given appropriate value in decision-making processes. Protection of all sites of significance, including those not registered as New Zealand Historic Places Trust or New Zealand Archaeological Association sites. Provide for Ngāi Tahu access to sites of significance. Ensure tikanga Māori is observed on wāhi tapu sites. Improve communication between Ngāi Tahu and local authorities. Enhance understanding of statutory and non-statutory tools and processes for managing discoveries of taonga, accidental or otherwise.

	Issues	Outcomes desired by Ngāi Tahu
Landscape	Impact of subdivision, use and development on cultural landscape values. Limited recognition of cultural landscapes in policy and planning, and the relationship between cultural landscapes and Ngāi Tahu culture, identity and well-being. An RMA focus on outstanding landscapes and natural features, and the processes used to identify such landscapes and features, can mean that cultural landscapes are not identified or protected.	Recognise cultural landscapes as an important component of landscape management and protection. Protect, enhance and restore Ngāi Tahu cultural landscapes. Establish processes to facilitate the identification of Ngāi Tahu cultural landscapes.
Energy	Effects on the environment and Ngāi Tahu values, including rivers and cultural landscape values, as a result of energy production, distribution and use. Inefficient energy use and impact on natural resources, particularly water.	Particular consideration is afforded to the relationship of Ngāi Tahu with water resources and the potential effects on this relationship as a result of energy generation. Encourage efficient energy use, such as passive solar gain, in developments.
Air	Discharges of contaminants to air, and effects on mahinga kai sites, wāhi tapu and other sites of significance. Poor air quality and effects on community health and well-being. Visual impacts of contaminants in air.	Air quality is maintained for humans, animals and plants. Mahinga kai areas, wāhi tapu sites and other sites of cultural significance are not compromised by poor air quality. Specific cultural considerations are recognised and provided for when developing standards for air quality (e.g. Māori health, deposition of air pollutants on mahinga kai or marae).
Natural hazards	Natural hazards and natural hazard mitigation may result in the loss of, or adverse effects on, values of importance to Ngāi Tahu. Natural ecosystems such as wetlands and riparian areas can help to avoid or reduce the impact of natural hazards.	Effects on values of importance to Ngāi Tahu considered as part of natural hazard management and planning. The role of wetlands and riparian areas to help to avoid or reduce the impact of natural hazards is recognised in natural hazard management.
Soil	Loss of soil qualities / effects on mauri of soils as a result of discharge to land activities. Induced soil erosion.	Human induced soil erosion is avoided. The mauri and life-supporting-capacity of soils is safeguarded.
Contaminated land	Effects on the land and water, and values of importance to tāngata whenua, including wāhi tapu, as a result of contaminated land.	Information sharing with Ngāi Tahu with regards to the location of contaminated sites, proposed land-use changes and remediation or mitigation work.
Hazardous substances	Use, storage, disposal and transport of hazardous substances may have an effect on land and water, native flora and fauna and associated cultural values. Need to look for alternatives to the use of hazardous substances.	Avoid adverse effects on the environment and Ngāi Tahu cultural well-being. Protect areas identified by Ngāi Tahu as sensitive for cultural reasons from adverse effects associated with the use, storage and disposal of hazardous substances. Alternatives to hazardous substances are encouraged.
Waste	Effects of residual waste disposal on air, land, water quality, mahinga kai and valued flora and fauna, and on Ngāi Tahu cultural well-being.	Support waste minimisation as an approach to waste management. Avoid adverse effects on the environment and Ngāi Tahu cultural well-being. Recognise and provide for the particular cultural (tikanga) issues associated with residual waste disposal in planning and decision-making.

CHAPTER 3
RESOURCE MANAGEMENT PROCESSES FOR LOCAL AUTHORITIES

Introduction

Sections 30 and 31 of the Resource Management Act 1991 (RMA) set out the functions of regional councils and territorial authorities for giving effect to the RMA. Integrated management is a key function for local authorities, with regional councils having the function of:

> *"the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region"*

and territorial authorities having the function of:

> *"the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district."*

Integrated resource management has two key elements:

1. *ensuring that the impacts of management of one resource on another, or on the environment generally, are taken into account; and*
2. *ensuring that agencies involved in resource management work together in an effective and coordinated way to promote sustainable management.*

Collaboration between the Canterbury Regional Council and the territorial authorities will help to ensure that matters addressed in the Canterbury Regional Policy Statement (CRPS) are efficiently and effectively implemented. It is also necessary to have processes for managing:

1. *new issues of regional significance as they arise*
2. *issues which cross local authority boundaries or issues between territorial authorities, or between regions*
3. *matters which are administered by two or more agencies, such as activities requiring consent from both the territorial authority and the Canterbury Regional Council.*

3.1

PROCESSES FOR RESOLVING CROSS-BOUNDARY ISSUES AND INTER-AGENCY COORDINATION OF PROCESSES

The Canterbury Regional Council seeks to establish and build upon working relationships with other resource management stakeholders. The desired outcome is that as new issues emerge in the region, they are managed through effective collaborative work between all relevant stakeholders. Additionally, the Canterbury Regional Council seeks to ensure that the processes it undertakes are efficient and wherever possible, reduce duplication of effort.

Cross-boundary issues involving the jurisdiction of the Canterbury Regional Council and/or one or more other local authorities or other agencies can arise from:

(i) differences in policies or methods; and

(ii) adverse effects of activities in one jurisdiction transferring/occurring in another.

For the following reasons, there is considerable potential for such issues to arise:

1. Territorial authority boundaries usually do not match catchment boundaries.
2. Waitaki District Council has territory in both Otago and Canterbury regions.
3. The northern neighbours, Tasman and Marlborough District Councils, have both district and regional responsibilities. Their management approach to issues will be necessarily different from that of the Canterbury Region. In addition, Canterbury has regional boundaries with the Otago and West Coast Regional Councils.
4. Local authorities share the responsibility for managing the coastal environment, with the coastal marine area being administered by the Canterbury Regional Council, and inland coastal areas administered by territorial authorities.
5. Urban growth requires integration between land use and infrastructure.
6. Te Rūnanga o Ngāi Tahu and papatipu rūnanga may have interests across regional and district council boundaries.
7. Utility operators operate locally, regionally and nationally significant infrastructure across local authority boundaries.
8. Some activities occur across local authority boundaries or require resource consent from two or more consent authorities.

The tools that local authorities may use to address cross-boundary issues and to coordinate processes are outlined below.

3.1.1 Implementation of the Canterbury Regional Policy Statement by local authorities through plans

Sections 67 and 75 of the RMA require that regional and district plans give effect to the CRPS.

The methods are the key provisions that state how local authorities will give effect to the CRPS. They also indicate how it is expected the policies will be implemented so that the objectives are achieved. Methods contained in the CRPS require or suggest that local authorities *will* or *should* or *may* do something.

Will indicates an action that must be taken to give effect to the policy, although there sometimes may be differences as to how that action is expressed within plans. In addition, some of these methods have qualifiers that make the method less directive, such as the use of will consider.

Should indicates an expectation that a course of action will be undertaken to implement the policy. However, there may be good reasons for the local authority to choose not to take that action. *Should* is also used to indicate actions that fall outside the RMA planning framework. This recognises that only district and regional plans are required to give effect to a regional policy statement.

May indicates discretion about whether or not to take a course of action, to be determined by the local authority.

There will be many instances where the provisions are already being implemented by local authorities. In these situations, no further action will be necessary to give effect to the CRPS.

In specific circumstances, the methods specify timeframes for implementation. Where these are not specified, implementation is to occur as soon as reasonably practicable.

Methods in the CRPS direct action from the regional council and territorial authorities. When the term "local authorities" is used, a method applies to both the regional council and territorial authorities. Territorial authorities will implement such methods within their own districts. There may be a need for some collaboration between the territorial authority and the regional council to ensure the method is enacted efficiently and effectively.

3.1.2 Monitoring statement

The Canterbury Regional Council will develop a strategy to monitor the effectiveness and efficiency of the CRPS that will sit alongside it as a non-statutory document. The monitoring strategy is an important part of the policy cycle that will assist with determining the efficiency and effectiveness of the provisions and whether the policy intervention that has been developed achieves the objectives sought.

Section 35 of the RMA requires regional councils to undertake a review of the efficiency and effectiveness of the policies and methods of a regional policy statement at five year intervals after a regional policy statement becomes operative. That review may inform changes that need to occur to the provisions of the regional policy statement.

Included in the framework for monitoring, is the development of a plan implementation database by the Canterbury Regional Council. This database will provide a tool that gives the ability to track the implementation of policies and methods through regional and district plans, and work programmes set out in Long Term Plans (LTPs) and in annual plans.

Through the strategy, indicators will be identified that will enable the Canterbury Regional Council to assess the impact that implementation of policies and methods is having on the social, economic, cultural and environmental well being of Canterbury, and whether they are the most appropriate for achieving the purpose of the RMA. It may not always be possible or efficient to monitor each and every provision, and where monitoring information is available for other purposes (e.g. state of the environment or community outcome monitoring), that data may be used in relation to the CRPS.

Because the CRPS is to be given effect through regional 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 and district plans. The Canterbury Regional Council will undertake a work programme to identify data the territorial authorities collect in the course of their normal monitoring regimes and to make arrangements for collection and sharing of data, including information that the regional council collects that may be of benefit fo territorial authorities.

The Canterbury Regional Council will encourage inclusion of the community in the design and implementation of the CRPS monitoring programme.

3.1.3 Working together

Throughout Canterbury, local authorities and other resource management stakeholders are involved in processes that affect one another. There are many inter-agency working parties, committees and groups who meet regularly to discuss these issues and provide solutions. Examples include the Mayoral Forum, Nga Rūnanga, the Regional Affairs Committee, the Canterbury Regional Energy Forum, the Regional Biodiversity Advisory Group and the Greater Christchurch Urban Development Strategy Partners group.

Groups such as these provide a valuable strategic input to planning and decision-making. They ensure that stakeholders work together to achieve common goals. The continuation of these groups, and the establishment of new groups as needs arise, will help to ensure that cross-boundary issues and issues affecting people across the Canterbury Region are addressed in a strategic and collaborative manner.

In relation to plans, there are many responsibilities relating to planning and consents for which both district and regional councils have functions under Sections 30 and 31 of the RMA. There may be benefits in the development of combined district and regional plans under Section 80 of the RMA to manage the effects of land-use, in particular on water-bodies. The effects of land use on waterbodies are significant cross boundary issues within the Canterbury Region. Combined plans are likely to more effectively resolve these issues by integrating the appropriate resource management outcomes and processes through the Schedule 1 process.

Local authorities will need to consider this framework, having regard to efficiency and effectiveness of having such plans, to achieve the resource management objectives of this policy statement, and as a means of achieving the vision and principles of the Canterbury Water Management Strategy.

3.1.4 Transfer of powers and delegation of functions

Section 33 of the RMA enables local authorities to transfer any of their functions, duties or powers under the RMA to another public authority. Sections 34 and 34A of the RMA enable local authorities to delegate their functions under the RMA to community boards, commissioners or employees. These tools can be used to achieve integrated management and to reduce duplication of effort by local and public authorities.

3.1.5 Joint management options

Section 36B of the RMA provides for local authorities to enter into joint management agreements with another statutory body (such as Te Rūnanga o Ngāi Tahu) or the Crown. Under a joint management agreement, the parties to that agreement are able to make decisions with the same legal effects as a local authority acting alone.

Joint management agreements enable important stakeholders to have an active role in the management of specific resources, and for specific purposes. They may be an appropriate tool for resolving cross-boundary issues.

3.1.6 Working together when processing resource consents

When processing resource consents for proposals that are likely to require resource consent from another local authority, joint processes could reduce the cost of processing for the applicant and help to resolve cross-boundary issues. Joint processes include practices such as notifying the resource consents together and joint hearing of the applications. Duplication of effort by local authorities, in making assessments pursuant to Sections 95D and 104 of the RMA, may also be avoided in joint processes.

It is good resource management practice to consider all of the effects of an activity together. If all consents are applied for at the same time for a particular activity, all of the effects of new activities can be considered at the same time. This helps with the consideration of any cumulative and wider effects of a particular proposal. In these circumstances, local authorities should consider the use of Section 91 of the RMA to ensure that applications are dealt with holistically. It is only where activities are sufficiently distinct that applications for consent should be separated.

Consideration should be given to notifying consents under special circumstances where an application from another local authority is to be notified, so that other consents for the same activity may be considered in an integrated manner.

Territorial authorities and the Canterbury Regional Council should seek to notify each other as soon as practicable if they receive an application for a proposal that is likely to require consents from more than one consent authority.

Although there is no specific procedure set out by the RMA to guide such joint effort, Sections 30(1)(a), 31(1)(a) and 36B recognise a need for integrated management and therefore provide the appropriate mandate for an agreement to be made.

The Canterbury Regional Council may seek such agreements with territorial authorities, and will encourage territorial authorities to take steps to enter into such agreements.

3.1.7 Joint hearings for resource consents

Section 102 of the RMA sets out the procedures for joint hearings by two or more consent authorities. Where an applicant must apply for resource consent from two or more local authorities for the same proposal, and the local authorities are to hold hearings for those resource consents, then a joint hearing must be held unless all local authorities and the applicant agree that separate hearings are appropriate.

Joint hearings ensure that the effects of a proposal and any cross-boundary issues are properly understood by all consent authorities, and also provide a more cost-effective process for the applicant.

3.1.8 Annual and long-term council community planning processes

Implementation of any resource management document must be resourced. The processes for allocation of funding and resourcing fall under the provision of the Local Government Act 2002 (LGA 2002). Annual plans set out the use of financial resources in the forthcoming year, while long-term plans forecast funding requirements over a ten-year period. Both financial plans are subject to special consultative procedures and both plans include objectives and indicators to enable the community to see how and why the expenditure was made and the effectiveness of it.

Financial planning processes provide an opportunity for local authorities to ensure that cooperation between agencies is budgeted for, including setting up structures for joint management and processes, interagency communication, implementing regional and interagency strategies and undertaking major projects together.

3.1.9 Triennial agreements

Section 15 of the LGA 2002 requires that all local authorities within a region must enter into an agreement containing protocols for communication and coordination among them for each three-year term of the Councils. The agreement must set out the process for consultation on new regional council activities.

The triennial agreement is an opportunity to put protocols in place for inter-agency coordination of processes and for resolving cross-boundary issues as they arise.

3.1.10 Working with the Environmental Protection Authority

Cross-boundary issues may arise that are significant at a national level. This is particularly likely when addressing nationally important infrastructure such as the electricity transmission grid or land transport infrastructure. If planning matters involve issues of national significance, the Canterbury Regional Council will advise the Minister for the Environment, and where appropriate, will work with the Environmental Protection Authority to ensure that consideration of the matter occurs in a transparent and timely manner. The Canterbury Regional Council will seek to promote the interests of the Canterbury community in these instances, including recommendations for the appointment of commissioners to any board of inquiry to be established to consider such proposals.

CHAPTER 4
PROVISION FOR NGĀI TAHU AND THEIR RELATIONSHIP WITH RESOURCES

Introduction

Issues of resource management significance to Ngāi Tahu outlined in Chapter 2 recognise the relationship between Ngāi Tahu and natural and physical resources. This chapter provides for Ngāi Tahu and their relationship with resources by setting out the tools and processes that the Canterbury Regional Council will use to engage with Ngāi Tahu as tāngata whenua in the management of natural and physical resources. Many of these tools and processes have been identified by Ngāi Tahu as key measures to achieve desired outcomes and sustain good working relationships with the Canterbury Regional Council.

4.1

BACKGROUND

For Ngāi Tahu as tāngata whenua, the natural environment (land, coasts, water, air and biodiversity) and how they engage with it, is a critical component of their identity as a people and in maintaining their culture. The ongoing ability to keep alive traditional practices passed down and gifted by ancestors, in places or on lands traditionally occupied by descendents, provides spirituality, a sense of belonging and of continuity.

Restoring, maintaining and enhancing cultural relationships between Ngāi Tahu and their ancestral lands, waters, wāhi tapu and taonga requires the provision of opportunities to protect and use resources and to be actively involved in decision-making processes to achieve environmental results that recognise this relationship in accordance with culture and tradition.

4.2

THE RELATIONSHIP BETWEEN NGĀI TAHU AND THE CANTERBURY REGIONAL COUNCIL

The Canterbury Regional Council has statutory responsibilities relating to the management of land, air, water and the coast in Canterbury. Under the Resource Management Act 1991 (RMA), the Canterbury Regional Council has functions for managing the use, development and protection of natural resources, controlling the effects of the use, development or protection of land through policy, plans and resource consents, and for investigating and monitoring the environment. The RMA sets out specific requirements for decisions in relation to tāngata whenua and in relation to iwi management plans. The RMA further promotes that the principles of the Treaty of Waitangi are to be taken into account in achieving the purpose of the RMA to promote sustainable management of natural and physical resources.

The Canterbury Regional Council has further functions under the Local Government Act 2002 (LGA 2002). The LGA 2002 provides for local authorities to promote the social, economic, environmental and cultural well-being of their communities, taking a sustainable development approach. Those exercising functions and powers under the LGA 2002 are to recognise and respect the Crown's responsibility to take account of the Treaty of Waitangi, and maintain and improve opportunities for Māori to contribute to local government decision-making processes. The Canterbury Regional Council must, in the course of the decision-making process, take into account the relationship of Māori and their culture and traditions with their ancestral land, water, sites, wāhi tapu, values, flora and fauna, and other taonga.

The Canterbury Regional Council has identified that maintaining good working relationships, building trust through a principle of partnership in accordance with the principles and purpose of the RMA and LGA 2002, and upholding the principles of the Treaty of Waitangi, will move toward improved recognition of the relationship (both cultural and traditional) of Ngāi Tahu as tāngata whenua with their ancestral lands, water, sites, wāhi tapu and other taonga. The principles of the Treaty of Waitangi are explained in more detail in the introduction to the Canterbury Regional Policy Statement (CRPS).

To achieve this, the concept of kaitiakitanga must be given particular regard. This means that the use, development and protection of natural and physical resources in the Canterbury region should be undertaken in a way that gives genuine consideration to the views of Ngāi Tahu as tāngata whenua. This consideration will inform the process and degree and/or level of participation or form that engagement will take with Ngāi Tahu.

4.3

TOOLS AND PROCESSES TO SUSTAIN GOOD WORKING RELATIONSHIPS

The Canterbury Regional Council recognises that maintaining good working relationships and building trust is essential to recognising and providing for the relationships between Ngāi Tahu (both cultural and traditional) and natural resources. This includes sharing of knowledge and information, opportunity for increased capacity to participate in decision-making and monitoring processes, to be consulted effectively, and to develop existing working relationships in new directions. The following tools and processes give effect to the requirements of the RMA by:

(1) recognising and providing for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga (Section 6(e) of the RMA);

(2) having particular regard to kaitiakitanga (Section 7(a) of the RMA); and

(3) taking into account the principles of the Treaty of Waitangi (Section 8 of the RMA).

In demonstrating its commitment to develop and maintain good working relationships, the Canterbury Regional Council will:

(1) take into account, and where possible, give effect to the principles of the Treaty of Waitangi including the principles of kawanatanga, rangatiratanga and partnership.

(2) act in accordance with the purpose and principles of the RMA, acting in good faith, through developed processes and procedures that actively accommodate and engage Ngāi Tahu tikanga in good environmental governance decisions.

(3) recognise individual papatipu rūnanga within their rohe and provide for wider involvement of papatipu rūnanga in the management of natural and physical resources.

(4) foster a principle of partnership on an ongoing basis and remedy issues that may arise between the Council and Ngāi Tahu.

(5) monitor the effectiveness and efficiency of the outcomes and actions within this statement.

The following tools and processes will be used and considered by the Canterbury Regional Council during the life of this policy document to maintain, sustain and foster good working relationships and demonstrate commitment.

The Canterbury Regional Council will:

4.3.1

In conjunction with Ngāi Tahu, undertake a review that will develop and assess a more strategic approach to ensure the Canterbury Regional Council is meeting its statutory obligations in the most effective manner in terms of its relationships with Ngāi Tahu. It will include the assessment of the effectiveness of existing relationships between the Canterbury Regional Council and Ngāi Tahu and the consent reporting framework under Section 42A of the RMA. This review may consider the appropriateness of Memoranda of Understanding, Strategies, Guidelines for Action or any other tool considered by both parties.

4.3.2

Use and take into account iwi management plans as a primary tool to:

(1) assist in the identification of issues of resource management significance to Ngāi Tahu and papatipu rūnanga including recognition of these issues through Regional Council decision-making functions.

(2) provide cultural context and understanding of values underpinning the relationship between Ngāi Tahu, papatipu rūnanga and the environment.

(3) understand, acknowledge and account for the importance of local knowledge and guidance about the environment at papatipu rūnanga level.

(4) identify statutory acknowledgements, sites of significance and importance to Ngāi Tahu and papatipu rūnanga, and understand why they are important.

(5) assist in the determination of the nature and extent of consultation that may be required over particular activities or places of importance.

(6) assist in the development of planning policy.

(7) assist decision makers to make an informed decision with respect to a proposal or development of policy.

4.3.3

Encourage and support, where appropriate and when approached (on a case-by-case basis), the development of iwi management plans including the provision of technical advice, administrative support and funding options.

4.3.4

Involve Ngāi Tahu and papatipu rūnanga in the plan development process from inception to ensure values are integrated and principles of the RMA and Treaty are given effect.

4.3.5

Provide papatipu rūnanga and, where appropriate, Te Rūnanga o Ngāi Tahu with opportunities to participate in the resource consent process as appropriate by:

(1) notifying and consulting affected papatipu rūnanga and, where appropriate, Te Rūnanga o Ngāi Tahu on notified resource consent applications which are site-specific, resource-specific or issues of significance to Ngāi Tahu as identified in iwi management plans and by papatipu rūnanga.

(2) ensuring contact details of the region's papatipu rūnanga are maintained, and iwi documents lodged with council by Te Rūnanga o Ngāi Tahu are recorded for applicant use and consultation purposes.

(3) encourage applicants to place applications on hold voluntarily to consult with rūnanga where appropriate. This will help to resolve issues at an early stage of proposals.

4.3.6

Endeavour to appoint tāngata whenua as commissioners on resource consent hearings panels and during plan development processes, particularly when making decisions on issues of resource management significance to Ngāi Tahu outlined in Chapter 2 — Issues of Resource Management Significance to Ngāi Tahu.

To be determined on case-by-case basis, the Canterbury Regional Council should:

4.3.7

Seek a cultural impact assessment or cultural value assessment as part of an assessment of environmental effects under Schedule 4 of the RMA, where an application is likely to impact on a significant resource management issue for Ngāi Tahu. Iwi management plans can be used as a tool to guide consideration of a need for a cultural impact assessment or cultural value assessment as part of an assessment of environmental effects.

4.3.8

Consider providing capacity for Ngāi Tahu (where parties consider this of mutual benefit) to be involved in studies and research to inform policy development.

4.3.9

Use cultural monitoring tools when monitoring the state of the environment. Outcomes from the state of the environment monitoring should be used to inform plan development processes.

4.3.10

When investigating methods to provide for greater involvement of Ngāi Tahu in the management of natural and physical resources, consider the option to transfer any one or more of its functions, powers or duties to the iwi authority under Section 33 of the RMA. Any such transfer will be discussed and mutually agreed between the parties prior to such transfer occurring.

4.3.11

Consider opportunities for the transfer of powers to committees such as the Māori Advisory Committee (or other similar Regional Council committees or joint committees including external stakeholders) on issues of resource management significance to Ngāi Tahu.

4.3.12

Continue to provide for involvement of Ngāi Tahu as tāngata whenua in decision-making processes, including Ngāi Tahu representation on working parties, technical advisory groups, during Canterbury Regional Council workshops and forums or other stakeholder committees that warrant a need.

4.3.13

Consider entering into joint management agreements about natural and physical resources under Section 36B to 36E of the RMA to promote collaborative projects and partnerships. The types of agreements could occur at varying levels and include:

(1) high level authority or control over a resource by Ngāi Tahu.

(2) an equal level of input by the Canterbury Regional Council and Ngāi Tahu working toward a collaborative process.

(3) a low level of authority or control over a resource by Ngāi Tahu, but with assurances to maintain input into the process led by the Canterbury Regional Council.

(4) provision of funding and resources by the Canterbury Regional Council to support joint agreements.

Any such joint management agreements will need to represent the community of interest, make efficient use of expertise and fulfil reporting and accountability functions.

4.3.14

Recognise the mana/importance and spirit of intent of statutory acknowledgements and regulations under the Ngāi Tahu Claims Settlement Act 1998 (NTCSA) and make provision for their embodiment, beyond their legally recognised expiry date, throughout regional council policy.

Territorial authorities, in order to give effect to their functions under the RMA will:

4.3.15

Include provisions for the relationship between Ngāi Tahu, their culture and traditions, and their ancestral lands, water, sites, wāhi tapu and other taonga within district plans.

4.3.16

Include methods for the protection of Ngāi Tahu ancestral lands, water, sites, wāhi tapu and other taonga within district plans.

4.3.17

Take into account iwi management plans during plan development.

Territorial authorities, in order to give effect to their functions under the RMA, should consider:

4.3.18

In the processing of resource consents, the protection of Ngāi Tahu ancestral lands, water sites, wāhi tapu and other taonga.

4.3.19

The appointment of tāngata whenua commissioners on resource consent hearing panels and during plan development processes, particularly when making decisions on issues of resource management significance to Ngāi Tahu outlined in Chapter 2 - Issues of Resource Management Significance to Ngāi Tahu.

4.4

PRINCIPAL REASONS TO IMPLEMENT TOOLS, METHODS AND PROCESSES

The ability to maintain good working relationships requires robust and long-term commitment and must recognise that environments change with time. The tools and processes outlined above build on existing relationships between the Canterbury Regional Council and Ngāi Tahu. The reasons for implementing the tools and processes set out in this chapter are:

(1) to ensure resource management issues of relevance to Ngāi Tahu as tāngata whenua are identified and to ensure the exploration of options to achieve resolution under legislation.

(2) to assist in the identification of effects and recognition of Part 2 matters under the RMA.

(3) to help local authorities and Ngāi Tahu as tāngata whenua to give effect to a principle of partnership.

(4) to result in mutual environmental benefits.

(5) to enable the exploration of opportunities for Ngāi Tahu to be actively involved in the exercise of kaitiakitanga both at operational and political levels.

(6) to recognise the fundamental need for effective communication and collaboration while also recognising the range of philosophies for managing natural and physical resources.

CHAPTER 5
LAND-USE AND INFRASTRUCTURE

Introduction

The issues and objectives within this chapter of the Canterbury Regional Policy Statement (CRPS) generally apply to all of the Canterbury region. However, many resource management issues associated with urban and rural-residential development tend to be concentrated in the Greater Christchurch area. For the Greater Christchurch area, the issues to be resolved, and the manner in which the objectives are to be implemented, are set out in Chapter 6 – Recovery and Rebuilding of Greater Christchurch.

Within this chapter, the issues, objectives and policies that relate to the Canterbury region inclusive of Greater Christchurch will be notated as 'Entire Region'; those provisions which are not relevant to Greater Christchurch will be notated as 'Wider Region'.

Accordingly, the achievement and implementation of the objectives, policies or methods in Chapter 6 – Recovery and Rebuilding of Greater Christchurch, take precedence within Greater Christchurch.

The focus of this chapter is on:

(1) development which results in changes to urban, rural-residential and rural areas, together with the infrastructural services which support this development.

(2) the strategic integration of land-use and regionally significant infrastructure in the wider region.

(3) recognition of the importance of regionally significant infrastructure to a community's economic wellbeing, social wellbeing, health and safety; and the need to provide for its establishment, retention and enhancement, as appropriate.

Development, including new land use, subdivision and infrastructure, results in changes in the places we work, live and associate with. Change can be positive or negative, depending on where, when and how it occurs. It can enable people and communities to provide for their social, economic and cultural well-being and can promote positive changes to the environment. However, if not appropriately managed, development can result in changes to natural and physical resources that do not promote sustainable management.

The strategic integration of land use with regionally significant infrastructure is important for the functioning of communities and economic wellbeing at the national, regional and local scale. Without effective regionally significant infrastructure the benefits of development will decline or development will result in unacceptable adverse effects on the environment. While there is a need to provide for the development, expansion and maintenance of this infrastructure, it is also important to manage how this occurs, in order to ensure the way in which it changes the environment is appropriate. The nature of the integration required will depend on the infrastructure. Not all regionally significant infrastructure may need to be integrated with land use.

Without limiting the generality of infrastructure, in the Canterbury region it includes:

- *(1) Electricity generation, transmission and distribution*
- *(2) Fuel distribution networks (including by pipeline, road, rail or sea)*
- *(3) Main highways and roads*
- *(4) Infrastructure for the irrigation of crops and pasture*
- *(5) Railways*
- *(6) River stopbanks and training*
- *(7) Supply of potable water for communities*
- *(8) Sewerage reticulation, treatment and disposal*
- *(9) Stormwater drainage reticulation*
- *(10) Telecommunication networks*
- *(11) Transport hubs, including airports and seaports*

Some infrastructure may be of national importance, and some may have regional or local importance. Some infrastructure may be critical to communities being able to recover promptly from damage from natural hazard events.

Consistent cross-boundary jurisdictional management in addressing the adverse effects of, and on, lineal infrastructure corridors is also necessary, particularly where such infrastructure serves the region generally, despite being located outside of or in only part of it. It is also important when such infrastructure traverses site, district or regional boundaries. Matters relevant to Chapter 5 and 6 are also contained in other sections of the Regional Policy Statement. As an example, energy is addressed in Chapter 16.

5.1 ISSUES

ISSUE 5.1.1 – ADVERSE EFFECTS OF DEVELOPMENT (WIDER REGION)

Development, including the associated use and provision of infrastructure and services, are important to enabling people and communities to provide for their social, economic and cultural well-being, but where not appropriately managed can result in significant adverse effects on the environment.

Explanation

Development, including the use and provision of infrastructure and services, particularly associated with regionally significant infrastructure, enables people and communities to provide for their social, economic and cultural well-being. However, it can result in a range of significant adverse effects on the environment. These adverse effects can occur individually or cumulatively.

The focus of the CRPS is on those matters that require an overview to achieve the integrated management of natural and physical resources. This may be because the benefits are regionally important, the consequences of development are geographically widespread or cumulative in nature, the resource affected is of importance to Canterbury, or significant interaction occurs between different resources.

The adverse effects on the environment of particular concern are:

(1) the loss and degradation of Canterbury's important:

- (a) amenity values
- (b) landscape values
- (c) historic heritage values
- (d) recreational values and the associated public access
- (e) ecosystem values
- (f) indigenous vegetation and habitats of

indigenous fauna values; and

(g) estuary, river margins and wetland values;

(2) the contamination of land and water bodies;

(3) the degradation of air quality;

(4) the undesirable changes to flow and level regimes of water bodies;

(5) those arising from the inefficient end-use of energy;

(6) the location of development where it is more vulnerable to impacts from natural hazards, for example, on low-lying coastal land prone to flooding and tsunami;

(7) the reduction in the rural primary productive base of Canterbury;

(8) the location of development in areas that lack the necessary infrastructure;

(9) reverse sensitivity effects and conflict between incompatible activities, for example where development including growth, limits the operation of existing and consented infrastructure;

(10) compromised access to high value aggregate resources within relatively close proximity to urban areas and in the vicinity of rural residential development including as a result of significant reverse sensitivity effects;

(11) the loss of the relationship of Ngāi Tahu and their culture and traditions with ancestral lands, water, sites, wāhi tapu and other taonga.

(12) the degradation of the natural character of the coastal environment.

The relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga can be adversely affected by development, particularly if it encroaches on resources of value to Ngāi Tahu, desecrates wāhi tapu and wāhi taonga or occurs over historical pā sites. Wāhi tapu areas may be associated with creation stories of tāngata whenua, a particular event (such as a battle or ceremony); it may be where the whenua (placenta) was returned to the earth, or where a certain type of valued resource is found. Wāhi tapu include kōiwi tāngata, urupā, waiwhakaheke tūpāpaku, historic pā, buried whakairo tuhituhi o neherā (archaeological and rock art sites), tohu and ana.

ISSUE 5.1.2 – INAPPROPRIATE DESIGN, LOCATION AND FUNCTION OF DEVELOPMENT (WIDER REGION)

Growth and development, if inappropriately designed and located, can reduce the community's well-being or health and safety.

Explanation

Development can either enable or adversely affect the ability of people and communities to provide for their social, economic and cultural well-being, and health and safety. Once development is established it is likely to exist for a number of generations. Changing the form and structure of established urban, rural-residential and rural areas can be difficult and expensive. Therefore, it is important to achieve a robust form of development that is responsive in the long term to the changing needs of people and communities.

Unless the design, location and function of development is carefully managed, it will not necessarily be able to:

(1) respond to changes in the demographic structure of the population;

(2) enable socially cohesive and resilient communities;

(3) improve the efficiency of energy use;

(4) reduce vehicle trip frequency, trip generation and distance, and improve modal choice so as to reduce adverse effects on the environment of high energy consumption and associated discharges to air resulting from dependence on private motor vehicles;

(5) make efficient use of physical resources within communities;

(6) efficiently and effectively provide public infrastructure such as roads, sewerage, stormwater and potable water;

(7) respond to the effects of climate change;

(8) recognise the relative value of land for urban, rural-residential and rural uses;

(9) recognise and avoid reverse sensitivity effects; and

(10) maintain or protect people's health, well-being and amenity.

Development will be influenced by changes in household composition, as well as migration, lifestyles and economic factors. Growth is not uniform across the region as sub-regional areas have distinct social and demographic characteristics and these will affect demand, in particular for housing and service provision. Accordingly, some sub-regional areas will be confronted with issues of accommodating growth in a manner that addresses wider growth patterns and the strategic integration of associated infrastructure. Other areas may be faced with maintaining their identity and the efficient use of infrastructure where there is minimal growth.

ISSUE 5.1.3 – LACK OF STRATEGIC INTEGRATION (ENTIRE REGION)

There can be a lack of strategic integration of regionally significant infrastructure with land-use.

Explanation

Infrastructural services and facilities, including network utilities and services, are necessary to enable people and communities (including future generations) to meet community well-being and provide for people's health and safety.

However, land-use and infrastructure require coordination and integration in order to ensure potentially significant benefits to people and the community are achieved and that the adverse effects on the environment are appropriately avoided, remedied, or mitigated and/or controlled. Consistent cross boundary jurisdictional management in addressing the adverse effects of, and on, regionally significant infrastructure, including lineal infrastructure corridors is also necessary.

If the strategic integration between land-use and infrastructure does not occur, this may result in:

(1) constraints on the safe, efficient and effective, use, development and operation of regionally significant infrastructure;

(2) the untimely, inefficient and costly provision of regionally significant infrastructure;

(3) regionally significant infrastructure unnecessarily adversely affecting the surrounding land-uses;

(4) adverse effects on the environment caused by the lack, or unsuitable provision, of appropriate infrastructure;

(5) an inability to facilitate the continued growth and expansion of regionally significant infrastructure and operations; and

(6) failure to realise the full, 'whole of operational life' value of investment into establishing regionally significant infrastructure.

ISSUE 5.1.4 – LAND USE AND TRANSPORT INTEGRATION (ENTIRE REGION)

The transport system can both adversely affect, and be adversely affected by, urban and rural form.

Explanation

As well as the effects that the transport system has on the environment through its contribution to urban form, transport also has a direct impact on the environment.

The transport system impacts both positively and negatively on existing communities. Roads, motorways, ports, airports, rail, and transport hubs can have effects on people and communities. These effects can be avoided, remedied or mitigated by design and through appropriate management of both the transport system and adjoining sensitive land uses, in a manner that does not compromise the effectiveness of such transport systems.

The transport system can also bring people and communities together and enable them to provide for their social, economic and cultural wellbeing, through improved accessibility, health and safety, modal choice and the provision of efficient networks.

The transport system is a significant regional resource providing for the movement of people, goods, services and resources. Integration of land use and transport is crucial for all communities and to promote the social, cultural and economic benefits that derive from the use and development of the transport system. People and freight need to be linked into efficient regional and national transport networks. Specifically they need effective and efficient access to ports and airports as part of the transport network, and to services in cities and towns.

Land use and transport systems need to be carefully integrated, with co-ordination between infrastructure providers and other agencies responsible for regional growth and development, to ensure that transport systems can:

(1) Promote positive contributions to consolidated urban forms;

(2) promote increased accessibility and mobility;

(3) avoid or mitigate adverse effects on the environment, including on sensitive activities;

(4) effectively and efficiently develop and expand; and / or

(5) realise the full value of investment into establishing regionally significant infrastructure.

ISSUE 5.1.5 – DIFFICULTY IN ESTABLISHING PAPAKĀINGA HOUSING AND MARAE (ENTIRE REGION)

Ngāi Tahu, as tāngata whenua, have difficulty establishing papakāinga housing and marae, and ancillary activities associated with these, on ancestral land identified for such purposes.

Explanation

Papakāinga housing is a form of housing development occurring on ancestral land which provides for mana whenua to live on that land. Papakāinga housing, marae and associated ancillary activities located on ancestral land are important to enable Ngāi Tahu to maintain their culture, traditions and relationships. These activities support Ngāi Tahu, providing for their culture and well-being through living in a culturally-based way.

Further, the ability to develop papakāinga settlements and marae on Māori freehold and Māori reservation land allows tāngata whenua to exercise their relationship, culture and traditions with this land and the surrounding natural resources.

There are multiple barriers to the development of papakāinga housing and marae. These include matters which are outside the influence of this CRPS, such as: the difficulty of obtaining loans for land that is multiple-owned; different views of the various owners of multiple-owned land; the cost of development, including compliance costs; and a lack of coordinated services and advice from the courts, central government and local authorities. The issue which can be influenced by this CRPS is the inability to appropriately develop resulting from provisions in regional and district plans.

5.2 OBJECTIVES

Objective 5.2.1 – Location, design and function of development (Entire Region)

Development is located and designed so that it functions in a way that:

(1) achieves consolidated, well designed and sustainable growth in and around existing urban areas as the primary focus for accommodating the region's growth; and

(2) enables people and communities, including future generations, to provide for their social, economic and cultural well-being and health and safety; and which:

- **(a) maintains, and where appropriate, enhances the overall quality of the natural environment of the Canterbury region, including its coastal environment, outstanding natural features and landscapes, and natural values;**
- **(b) provides sufficient housing choice to meet the region's housing needs;**
- **(c) encourages sustainable economic development by enabling business activities in appropriate locations;**
- **(d) minimises energy use and/or improves energy efficiency;**
- **(e) enables rural activities that support the rural environment including primary production;**
- **(f) is compatible with, and will result in the continued safe, efficient and effective use of regionally significant infrastructure;**
- **(g) avoids adverse effects on significant natural and physical resources including regionally significant infrastructure, and where avoidance is impracticable, remedies or mitigates those effects on those resources and infrastructure;**
- **(h) facilitates the establishment of papakāinga and marae; and**
- **(i) avoids conflicts between incompatible activities.**

The following policies implement this objective:

Policy 5.3.1, Policy 5.3.2, Policy 5.3.3, Policy 5.3.4, Policy 5.3.5, Policy 5.3.6, Policy 5.3.7, Policy 5.3.8, Policy 5.3.9, Policy 5.3.10, Policy 5.3.11, and Policy 5.3.12. Policy 5.3.13

Principal reasons and explanation

Development, including papakāinga and marae, offers significant social, economic and cultural benefits for the people residing and working in Canterbury. However, it may result in environmental change that is a threat to valued natural and physical resources. Natural resources can be finite and the effects of development, particularly on land resources, can be irreversible. The effects may be direct (for example replacement of rural by urban use or the intensification of the activity) or indirect (off-site or "spill-over" effects).

The pattern of development in the region strongly influences the use of energy, whether this is as a result of the demand for transport or energy required to establish and undertake the activity. As development intensifies and spreads, the demand for transport and energy use increases.

A consolidated pattern of urban development, as the primary focus for accommodating the region's growth, together with a limitation on the extent of areas of rural-residential activity, will:

(1) minimise energy use;

(2) promote more sustainable forms of development;

(3) encourage greater modal choice, reduced trip distances and promote healthier transport options;

(4) provide for the efficient use of existing infrastructure; and

(5) maintain regional identity and character.

New development also provides the opportunity to enhance the quality of the environment in appropriate circumstances, such as through the provision of open spaces, community facilities, and restoration of ecosystems.

Primary production from Canterbury's rural areas is of significance to the economic and social well-being of Canterbury's people and communities. It is foreseeable that the well-being of future generations will also be strongly influenced by the ability to continue with such primary production. It is important to manage resources and activities in rural areas so that the foreseeable potential of the rural primary base of Canterbury is maintained. This includes maintaining the primary production resource and the efficient provision of infrastructure and use of other natural resources such as water, in appropriate locations to support primary production.

Objective 5.2.2 – Integration of land-use and regionally significant infrastructure (Wider Region)

In relation to the integration of land use and regionally significant infrastructure:

(1) To recognise the benefits of enabling people and communities to provide for their social, economic and cultural well-being and health and safety and to provide for infrastructure that is regionally significant to the extent that it promotes sustainable management in accordance with the RMA.

(2) To achieve patterns and sequencing of land-use with regionally significant infrastructure in the wider region so that:

- **(a) development does not result in adverse effects on the operation, use and development of regionally significant infrastructure.**
- **(b) adverse effects resulting from the development or operation of regionally significant infrastructure are avoided, remedied or mitigated as fully as practicable.**
- **(c) there is increased sustainability, efficiency and liveability.**

The following policies implement this objective:

Policy 5.3.1, Policy 5.3.2, Policy 5.3.3, Policy 5.3.6, Policy 5.3.7, Policy 5.3.8, Policy 5.3.9, Policy 5.3.10, Policy 6.3.4, Policy 6.3.5 and Policy 8.3.4.

Principal reasons and explanation

Regionally significant infrastructure in the wider region is essential to enable the well-being, health and safety of people and communities and has the following characteristics:

(1) it significantly contributes to the social, economic and cultural well-being of people and communities;

(2) it is the subject of considerable financial investment;

(3) it is unlikely to be readily replaced or duplicated; and

(4) it requires integrated management with other natural and physical resources.

In relation to patterns of land-use, consideration of sequencing and costs of infrastructure development need to be factored into decision-making. These can have significant effects on efficiency and the economic well-being of communities.

Regionally significant infrastructure provides considerable economic and social benefits to the region. The nature and scale of such infrastructure is distinct to land use generally and has varying characteristics, and accordingly impacts. While the relationship between land use and regionally significant infrastructure is typically interrelated and interdependent such that the provision of infrastructure can have major implications on the sustainable pattern and sequencing of land use, some regionally significant infrastructure is of a nature that does not require it to be so closely integrated with urban areas.

When developing and using regionally significant infrastructure, it is not always practicable to 'internalise' all adverse effects on the environment. In some cases (e.g. airports, ports, and strategic road and rail corridors) the infrastructure influences the quality and use of the environment surrounding it.

Recognition of the importance of regionally significant infrastructure will lead to greater weight being given to its requirements. As a consequence, it is desirable to manage the location and form of the surrounding development, to reduce incompatibility and conflicts.

Places that improve liveability are identified in the 2005 New Zealand Urban Design Protocol as those places that provide a high quality of life where people choose to live and work. They provide attractive living environments, and offer good leisure and recreational opportunities, and they support a thriving cultural life. Liveable places provide choices in housing, work, transport and lifestyle opportunities.

Objective 5.2.3 – Transport network (Wider Region)

A safe, efficient and effective transport system to meet local regional, inter-regional and national needs for transport, which:

(1) supports a consolidated and sustainable urban form;

(2) avoids, remedies or mitigates the adverse effects of transport use and its provision;

(3) provides an acceptable level of accessibility; and

(4) is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.

The following policies implement this objective:

Policy 5.3.1, Policy 5.3.2, Policy 5.3.3, Policy 5.3.6, Policy 5.3.7, Policy 5.3.8, Policy 5.3.9, Policy 5.3.10, Policy 6.3.4, Policy 6.3.5 and Policy 16.3.1.

Principal reasons and explanation

An efficient transport system is vital to the economic prosperity of the Canterbury region, and to the well-being of its people and communities. Transport and land use are both interrelated and interdependent and should be mutually supportive. Well-designed transport systems can both service growth and development, reinforce growth and ensure efficient access to land, sea and air transport facilities.

Improvements in the regional transport network in both rural areas and existing urban areas can have impacts on the local communities that live there. One of the major impacts from increased traffic, or new roading infrastructure is severance to existing communities, as well as localised impacts of increased noise, dust and adverse amenity effects.

Where alternative means exist of meeting transport demand, environmental objectives can be achieved by giving preference to those transport choices with lower environmental effects, as well as promoting land use changes that will move towards improved accessibility for the communities it serves.

In many areas of Canterbury, where there is little sub-regional growth, and the existing urban pattern is largely developed, reliance on private motor vehicle use will remain the preferred, or only realistic means of travel at least in the medium term. However, cumulative land use and transport developments should not foreclose opportunities for improvements in accessibility and modal choice.

Policy 5.3.1 – Regional growth (Wider Region)

To provide, as the primary focus for meeting the wider region's growth needs, sustainable development patterns that:

(1) ensure that any

(a) urban growth; and

(b) limited rural residential development

occur in a form that concentrates, or is attached to, existing urban areas and promotes a coordinated pattern of development;

(2) encourage within urban areas, housing choice recreation and community facilities, and business opportunities of a character and form that supports urban consolidation;

(3) promote energy efficiency in urban forms, transport patterns, site location and subdivision layout;

(4) maintain and enhance the sense of identity and character of the region's urban areas; and

(5) encourage high quality urban design, including the maintenance and enhancement of amenity values.

This policy implements the following objectives:

Objective 5.2.1, Objective 5.2.2, Objective 15.2.1, Objective 16.2.1 and Objective 16.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Through the Canterbury Regional Land Transport Strategy, implement policies to integrate the development and use of the land transport network infrastructure with land-use.

Territorial authorities:

Will:

(2) Set out objectives, and policies, and may include methods in district plans which establish an approach for the integrated management of urban and zoned rural residential development with the primary focus of ensuring consolidated, well-designed and more sustainable urban patterns including the avoidance, remediation or mitigation of reverse sensitivity effects.

(3) Consider methods which promote good planning, building design and urban design that give effect to the New Zealand Urban Design Protocol (2005).

(4) Consider transport programmes under the Land Transport Management Act 2003 (LTMA) that promote better design and integration between land use and transport.

Local authorities:

Will:

(5) Work together where appropriate, with adjoining local authorities and, with providers of regionally significant infrastructure when identifying patterns and locations of development.

Should:

(6) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values.

Principal reasons and explanation

A consolidated form of urban and rural-residential development in and around existing cities, towns and villages is the pattern of development that will most efficiently and effectively achieve the relevant policies and objectives in the CRPS, particularly in relation to energy and infrastructure provision.

Rural residential development is typified by clusters of small allotments usually in the size range of up to 2.0 hectares zoned principally for residential activity. Rural-residential development will need to be well planned and coordinated in order to minimise adverse effects on such matters as: rural character and resources; rural infrastructure including the road network; and not foreclose development options in the vicinity of urban areas.

Existing rural residential zones adjacent to urban areas have often been developed to provide an edge to that urban area and provides a sympathetic transition between the urban area and the rural hinterland, or marks an appropriate limit to the extension of full urban development. Within the wider region it is important that areas zoned for rural residential development are located close to existing towns and villages so as to ensure efficient utility servicing and patterns of transport.

Policy 5.3.1 incorporates concepts of good urban design, and the encouragement of a range of choice within urban areas for residential and business development to meet the diverse needs of people within the region. High quality urban design creates pleasant living environments, and improvements in amenity values, which includes management of nuisance arising from excessive traffic, noise, odours and contaminants.

In determining an appropriate direction for managing urban growth, all relevant objectives need to be considered, including water management, energy, landscape and air quality. Accordingly, it is considered that a primary focus on consolidation within, or attached to, existing urban areas presents the most appropriate means to provide for the integrated management of all of the region's resources.

Intervention to promote sustainable resource management and the integrated management of effects, is undertaken for two reasons:

(a) a consolidated urban form is more likely to secure desired outcomes and sustainably manage effects; and

(b) that if left unimpeded, resulting development patterns, despite the extent and scale of growth pressures, are likely to produce adverse environmental effects, and costs to communities.

Approaches for achieving integrated management of urban and rural-residential development may include identifying where and how development is to be accommodated. This can be achieved, for example, through other legislation such as under the Local Government Act 2002 or through other process such as structure planning, particularly where there are development and growth pressures.

Policy 5.3.2 – Development conditions (Wider Region)

To enable development including regionally significant infrastructure which:

(1) ensure that adverse effects are avoided, remedied or mitigated, including where these would compromise or foreclose:

- **(a) existing or consented regionally significant infrastructure;**
- **(b) options for accommodating the consolidated growth and development of existing urban areas;**
- **(c) the productivity of the region's soil resources, without regard to the need to make appropriate use of soil which is valued for existing or foreseeable future primary production, or through further fragmentation of rural land;**
- **(d) the protection of sources of water for community supplies;**
- **(e) significant natural and physical resources;**

(2) avoid or mitigate:

- **(a) natural and other hazards, or land uses that would likely result in increases in the frequency and / or severity of hazards;**
- **(b) reverse sensitivity effects and conflicts between incompatible activities, including identified mineral extraction areas;**

and

(3) integrate with:

- **(a) the efficient and effective provision, maintenance or upgrade of infrastructure; and**
- **(b) transport networks, connections and modes so as to provide for the sustainable and efficient movement of people, goods and services, and a logical, permeable and safe transport system.**

This policy implements the following objectives:

Objective 5.2.1, Objective 5.2.2, Objective 5.2.3, Objective 11.2.1 Objective 15.2.1, Objective 16.2.1 and Objective 16.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Through the Canterbury Regional Land Transport Strategy, implement policies to integrate the development and use of the land transport network infrastructure with land-use.

(2) Set out objectives, policies and may include methods in regional plans to control the adverse effects of development on water bodies, including their value as sources of drinking water; and

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans, particular to each district:

- (a) that establish a comprehensive approach to the management of the location of urban and rural-residential development within the territorial authority area, including provisions requiring consideration as to how new land use will be appropriately serviced by transport and other infrastructure;
- (b) to avoid subdivision, use and development that does not meet the criteria set out in Policy 11.3.1 clauses (1) to (5) for known high hazard areas.

Local authorities:

Will:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values.

(5) Work together where appropriate, with adjoining local authorities and, with providers of regionally significant infrastructure when identifying patterns and locations of development.

(6) Set out objectives and policies, and may include methods in regional and district plans:

- (a) that identifies regionally significant infrastructure, and recognises its economic and social benefits;
- (b) that manage the adverse effects of, and from, the installation, operation, maintenance and/or development of regionally significant infrastructure.

Principal reasons and explanation

This policy establishes the standards to be met for development within the wider region, regardless of whether such development is located within, or outside of, existing urban areas. These qualities and attributes collectively promote sustainable management of natural and physical resources and the social, cultural and economic well-being of people throughout Canterbury.

The approach in Policy 5.3.1 seeks to ensure that urban and rural residential development outside of existing urban areas is to be avoided and limited respectively, so as not to compromise the efficient form and development of existing settlements as the primary focus for meeting the region's growth needs. District plans have a role in providing an appropriate and comprehensive zoned approach to new rural-residential development and new urban development to manage effects arising from these based on the demands, constraints and opportunities within the respective districts.

The standards under Policy 5.3.2(1) address a range of the implications resulting from development that require careful management so as to avoid the potential for adverse effects. This includes the need to avoid the encroachment of sensitive activities into rural areas that may result in reverse sensitivity effects on established rural activities or regionally significant infrastructure. Regard is also to be had to the prospect of the reduced productivity of the region's soil resources, through further fragmentation or a move to a more urban character. The policies also recognise that protecting historic heritage such as historic buildings, as well as areas of high natural character and significant landscape values are important parts of promoting sustainable development.

Policy 5.3.2(2) seeks that development should seek to avoid or mitigate natural and other hazards.

Policy 5.3.2(3), requires the integration of infrastructure with land use to ensure that adverse effects on the environment do not arise from inadequate infrastructure (such as stormwater sewerage, water or roading infrastructure). This may be achieved through infrastructure planning, land use controls, or a combination of both. The integration of transport

networks and modes can promote sustainable development by enhancing accessibility and social interaction, promoting health and safety and reducing environmental impacts.

Policy 5.3.3 – Management of development (Wider Region)

To ensure that substantial developments are designed and built to be of a high-quality, and are robust and resilient:

(1) through promoting, where appropriate, a diversity of residential, employment and recreational choices, for individuals and communities associated with the substantial development; and

(2) where amenity values, the quality of the environment, and the character of an area are maintained, or appropriately enhanced.

This policy implements the following objectives:

Objective 5.2.1, Objective 5.2.2, Objective 5.2.3, Objective 16.2.1 and Objective 16.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Through the Canterbury Regional Land Transport Strategy:

(a) promote and implement policies to reduce motor vehicle transport demand, especially with respect to single occupant private motor vehicle trips and motor vehicles powered by unsustainable fuels.

(b) support and implement programmes that make passenger transport services more effective and attractive.

(c) support and implement policies that encourage the use of active forms of transport such as walking and cycling.

(2) Promote that the New Zealand Urban Design Protocol (Ministry for the Environment, March 2005) is applied at the time of planning, assessing and undertaking urban development.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which, where relevant:

(a) establish a comprehensive approach for the management of urban and rural-residential development.

(b) ensure demonstration of accordance with this Policy for any substantial development through either:

(i) including an outline development plan within the district plan; or otherwise

(ii) specific provisions within the district plan to consider any substantial development, such as by way of the consideration of a concept plan;

including by requiring applicants to provide for a outline or concept plan to be lodged at time of application.

Local authorities:

Should:

(4) Co-operate to advance:

(a) energy conservation and efficiency programmes.

(b) growth and development planning.

(c) the development and implementation of appropriate resource management tools and techniques.

Principal reasons and explanation

Well designed urban and rural-residential development provides for the social, economic and cultural well-being of people and communities and will meet the foreseeable needs of future generations. Design influences the manner in which development functions and relates to the wider environment. It establishes long-term patterns of resource use and character. Effectively re-designing urban and rural-residential areas is generally difficult and expensive. While this policy specifically addresses the design of substantial developments, this must occur within the context of the considerations set out in Policy 5.3.1 and Policy 5.3.2.

This policy specifically sets out to purposefully require for substantial developments consideration of design matters to ensure such development is sustainable, safe, vibrant and efficient. A 'substantial development' will be dependent on the extent, context, location and scale of growth faced by sub-regional areas, and accordingly would be more appropriately considered by district councils, as relevant. However, factors would include the provision of a considerable extent of residential housing, and / or employment opportunities, the extension of existing zoned urban areas, and more intensive development which requires significant new public infrastructure.

For incremental developments that are not identified by the territorial authority as being substantial development, the environmental qualities identified in Policy 5.3.1 apply.

High quality development provides attractive environments in which to live, work and play. This includes:

(1) Protecting the important amenity values associated with existing cities, towns and villages;

(2) Achieving well designed developments that integrate with natural and physical resources; and

(3) Achieving opportunities for walking and cycling.

Robust development maintains or improves well-being, health and safety. This includes:

(1) Integrating all the natural and physical resource requirements of a development;

(2) Integrating the development into existing cities, towns and villages;

(3) Implementing traffic demand management measures, as appropriate;

(4) Integrating the provision for public passenger transport with development, as appropriate;

(5) Enabling people to meet their day-to-day needs within the local area; and

(6) Ensuring substantial development minimises risk from natural hazards.

Resilient development is able to respond to the foreseeable future needs of people and communities with the minimum change and reinvestment. This includes:

(1) Enabling housing types to meet changing population structure and preferences;

(2) Integrating substantial development with key transport infrastructure and opportunities;

(3) Planning for the effects of climate change and

(4) Achieving energy-efficient building location, orientation and design.

Development and/or asset spending programmes provide the opportunity to modify existing urban and rural-residential areas. The policy will achieve incremental changes by ensuring that: development is designed appropriately; development is well connected to existing areas; and due consideration is given to the broader effects (including future effects) and context of the development.

Policy 5.3.4 – Papakāinga housing and marae (Entire Region)

To recognise that the following activities, when undertaken by tāngata whenua with mana whenua, are appropriate when they occur on their ancestral land in a manner that enhances their ongoing relationship and culture and traditions with that land:

(1) papakāinga housing;

(2) marae; and

(3) ancillary activities associated with the above

And provide for these activities if:

(4) adverse effects on the health and safety of people are avoided or mitigated; and

(5) as a result of the location, design, landscaping and management of the papakāinga housing and marae:

- **(a) adverse effects on the following are avoided, and if avoidance is not practicable, mitigated:**
  - **(i) the important natural character values of coastal environment, wetlands, lakes, rivers and their margins**
  - **(ii) the values of the outstanding natural features and landscapes**
  - **(iii) the values of the historic heritage, and**
  - **(iv) the values of areas of significant indigenous vegetation and habitats of indigenous fauna; and**
- **(b) regard has been given to amenity values of the surrounding environment.**

This policy implements the following objective:

Objective 5.2.1

Methods

The Canterbury Regional Council:

Should:

(1) Coordinate with Te Rūnanga o Ngāi Tahu, papatipu rūnanga, and agents of the legal representatives of the beneficial owners of ancestral land when determining the effectiveness of this policy.

Territorial authorities:

Will:

(2) Within 3 years of Policy 5.3.4 becoming operative, set out objectives, policies and may include methods in district plans to implement this policy, including providing for:

- (a) papakāinga housing and ancillary activities to be established on ancestral land for the occupation of one or more of the beneficial owners who all are members of the same hapū as a result of the implementation of a partition or occupation order of the Māori Land Court.
- (b) marae and ancillary activities to be established on ancestral land in accordance with a direction of the Māori Land Court:
  - (i) in accordance with tikanga Māori; or
  - (ii) for the use of the beneficial owners.

Local authorities:

Should:

(3) Consult directly with the agents or the legal representatives of the beneficial owners of ancestral land on how to give effect to this policy.

(4) Together with Te Rūnanga o Ngāi Tahu, identify ancestral land of tāngata whenua with mana whenua, to inform their regional and district plans including by reference to:

- (a) The Māori Land Court's data-base recording land tenure under the Te Ture Whenua Māori Act 1993/ Māori Land Act 1993.
- (b) Te Rūnanga o Ngāi Tahu data-base of ancestral land and ancestral relationships.

Principal reasons and explanation

Papakāinga housing and marae located on ancestral land are integral to the identity and development of tāngata whenua. They are one of the essential elements that denote mana whenua.

Traditionally, a range of activities occur in conjunction with papakāinga housing and marae. The traditional activities include food gathering, storage and trade, manufacturing and trade of artisan goods, and the receiving and hosting of visitors. Often these ancillary activities determined where and why papakāinga housing and marae were established.

"Ancestral land" of tāngata whenua with mana whenua is generally land that has been owned by their ancestors and is not confined to land remaining in their ownership as Māori freehold or Māori customary land in accordance with Te Ture Whenua Māori Act 1993/Māori Land Act 1993. It requires some connection between culture and traditions and the land. Continuous ownership may be a relevant factor, and the extent to which a special relationship has been claimed or recognised by tāngata whenua with mana whenua across the generations. In each case, the effect of the proposed papakāinga housing and marae on the relationship must be considered on its merits.

The ownership rights, occupation, partitioning, alienation, and in some cases, use and development, of some forms of ancestral land is subject to Māori Land Court processes in accordance with Te Ture Whenua Māori Act 1993/Māori Land Act 1993.

Ancestral land for papakāinga housing and marae is a finite resource at (generally) fixed locations. It is predominately located in close proximity to natural resources which are highly valued by tāngata whenua, such as the coast, reflecting their strong relationship with these natural resources. Papakāinga housing and marae, together with their ancillary activities on ancestral land, allow tāngata whenua to exercise their relationship, culture and traditions with this land and the surrounding natural resources, including through exercising kaitiakitanga.

For these reasons, the development and use of papakāinga housing and marae, together with their ancillary activities, for members of the same hapū on ancestral land is generally appropriate. This is contrasted with similar physical forms

of the use of land developed for different purposes under different circumstances, which may not be appropriate. These need to be considered in light of other resource management policies.

Papakāinga housing and marae, together with their ancillary activities, should not adversely affect the health and safety of people. This requires that papakāinga housing and marae are; adequately serviced for sewage and stormwater disposal and potable water, safe from natural and other forms of hazard, and do not create hazards for other people and property.

Further, any papakāinga housing and marae development must recognise and respond to the other matters of national importance set out in Section 6 of the Resource Management Act 1991 (RMA). These may influence the location, design, landscaping and management of papakāinga and marae.

Finally, it is desirable that the development of papakāinga housing and marae, together with their ancillary activities, occurs in a way that is sensitive to any adverse effects on the amenity values of adjoining activities. However, not all of the adverse effects on existing amenity values need to be avoided where this would result in the aspirations for papakāinga housing and marae being unduly compromised.

Policy 5.3.5 – Servicing development for potable water, and sewage and stormwater disposal (Wider Region)

Within the wider region, ensure development is appropriately and efficiently served for the collection, treatment, disposal or re-use of sewage and stormwater, and the provision of potable water, by:

(1) avoiding development which will not be served in a timely manner to avoid or mitigate adverse effects on the environment and human health; and

(2) requiring these services to be designed, built, managed or upgraded to maximise their ongoing effectiveness.

This policy implements the following objective:

Objective 5.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which:

(a) avoid the cumulative effects of discharges from on-site sewage treatment and disposal systems.

(b) discourage discharges from new community sewage collection, treatment and disposal systems in circumstances where there is a suitable existing community system available.

(c) ensure the discharges of stormwater are managed so that the impact of the development on water quantity off the site is similar to that which existed prior to the development and results in no increase of downstream flood risk.

(d) ensure appropriate treatment of stormwater discharges occurs to avoid or mitigate inappropriate adverse effects on water quality.

(e) ensure that the discharge of sediment in stormwater does not result in significant adverse effects on the receiving water body.

(f) encourage and where appropriate require the progressive upgrading and development of discharges from sewage and stormwater systems, where these currently result in inappropriate adverse effects on the environment.

(g) enable the appropriate provision of potable water.

(h) enable water conservation and water efficiency through the collection, use and reuse of water, and alternative sewage disposal technology.

(i) avoid, or otherwise take into account through progressively upgrading existing sewage and stormwater systems infrastructure to avoid, the cultural effects on Ngāi Tahu associated with the direct discharge of human effluent into water from such systems.

(2) Collaborate with territorial authorities, Te Rūnanga o Ngāi Tahu/papatipu rūnanga, providers of the existing sewerage, stormwater and potable water infrastructure, and where appropriate the Medical Officer of Health at Community and Public Health, Canterbury District Health Board, to ensure development is appropriately served for the collection, treatment, disposal or re-use of sewage and stormwater, and the provision of potable water.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which:

(a) ensure, before any rezoning of land enabling more intensive development, the development provided for by the rezoning can be efficiently and effectively served for the collection, treatment and disposal of sewage and stormwater, and the provision of potable water, in order to avoid or mitigate adverse effects on the environment and human health.

(b) ensure that at the time of any rezoning of land enabling substantial developments which requires new public sewerage, stormwater and potable water infrastructure, an outline development plan is included within the district plan which provides

sufficient space at appropriate locations for these to be provided.

(c) ensure, at the time of subdivision and/or development, the manner in which the subdivision and/or development is to occur provides for the collection, treatment and disposal of sewage and stormwater, and the provision of potable water, in order to avoid or mitigate adverse effects on the environment and human health.

Local authorities:

Will:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values.

Should:

(5) Encourage, and may require:

(a) water conservation and water efficiency through the collection, use and reuse of water, provided that the health of individuals or the community is not put at risk.

(b) low environmental impact stormwater treatment and disposal systems.

Principal reasons and explanation

The provision of sewage and stormwater treatment and disposal, and the provision of potable water, are essential to the well-being and health of people and communities, and help to avoid or mitigate adverse effects on the environment. The management of stormwater and sewage is of particular cultural significance to Ngāi Tahu because of the potential for development to adversely affect their relationship with ancestral land, water, sites, wāhi tapu and other taonga.

Developments must effectively manage the disposal and treatment of sewage and stormwater recognising the receiving environment and the limitations that may exist in terms of environmental quality and the receiving capacity of the environment. Servicing, including, the provision of potable water must be considered early in the development process. This will ensure that appropriate decisions are made as to how servicing is to be achieved, whether the proposed development is appropriate, and what site limitations may exist. It will also allow joint consideration of the proposal where resource consents are required from the Canterbury Regional Council and city or district councils.

Water conservation and water efficiency can be achieved through a range of methods, including reuse.

Policy 5.3.6 – Sewerage, stormwater and potable water infrastructure (Wider Region)

Within the wider region:

(1) Avoid development which constrains the ongoing ability of the existing sewerage, stormwater and potable water supply infrastructure to be developed and used.

(2) Enable sewerage, stormwater and potable water infrastructure to be developed and used, provided that, as a result of its location and design:

(a) the adverse effects on significant natural and physical resources are avoided, or where this is not practicable, mitigated; and

(b) other adverse effects on the environment are appropriately controlled.

(3) Discourage sewerage, stormwater and potable water supply infrastructure which will promote development in locations which do not meet Policy 5.3.1.

This policy implements the following objectives:

Objective 5.2.1 and Objective 5.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which enable the development and use of sewerage and stormwater infrastructure while controlling adverse effects.

Should:

(2) Promote the efficient and effective use of sewerage, stormwater and potable water supply infrastructure, and discourage inappropriate development of infrastructure.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which:

(a) control the location of development sensitive to the effects of existing sewerage and stormwater infrastructure.

(b) provide for the upgrading of existing, and establishment of new sewerage and stormwater infrastructure while controlling adverse effects.

(c) restrict the upgrading or establishment of new sewerage and stormwater infrastructure that may facilitate development in locations which do not meet Policy 5.3.1.

(d) ensure that when any land is rezoned to enable a substantial development which requires significant new public sewerage, stormwater and potable water infrastructure, an outline development plan is included within the district plan.

Local authorities:

Will:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values.

Principal reasons and explanation

Sewerage, stormwater and potable water infrastructure makes important contributions to people's social, economic and cultural well-being, health and safety. Environmental health is also affected by this infrastructure.

Considerable public and private investment has been made in sewerage, stormwater and potable water infrastructure systems. It is important that land-use does not adversely affect the efficient use and development of these systems, for example, through the creation of the potential for reverse sensitivity effects in relation to odour.

Sewerage, stormwater, and potable water infrastructure can have adverse effects on the environment – for example, as a result of associated discharges to land or water, odour or amenity values. These effects are of particular cultural significance to Ngāi Tahu because of the potential to adversely affect their relationship with ancestral land, water, sites, wāhi tapu and other taonga. The adverse effects can be mitigated by appropriate location, design, and operation.

Changes to the sewerage, stormwater and potable water infrastructure can facilitate development. For example, this may occur as a result of increase in capacity of existing, or provision of new, infrastructure removing environmental and financial development constraints.

Policy 5.3.7 – Strategic land transport network and arterial roads (Entire Region)

In relation to strategic land transport network and arterial roads, the avoidance of development which:

(1) adversely affects the safe efficient and effective functioning of this network and these roads, including the ability of this infrastructure to support freight and passenger transport services; and

(2) in relation to the strategic land transport network and arterial roads, to avoid development which forecloses the opportunity for the development of this network and these roads to meet future strategic transport requirements.

This policy implements the following objectives:

Objective 6.2.1 and Objective 6.2.4

Methods

The Canterbury Regional Council:

Will:

(1) In the Canterbury Regional Land Transport Strategy identify the strategic land transport network.

Should:

(2) Collaborate with territorial authorities, road controlling authorities and the New Zealand Transport Agency to protect the appropriate functioning of the strategic land transport network and arterial roads.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which:

(a) minimise the requirement for upgrading of the strategic land transport network by ensuring that the existing capacity of this network is efficiently used and not compromised by new development.

(b) provide for the strategic integration of changes in land-use with the provision of any necessary strategic land transport network, recognising the availability of any necessary funding.

(c) minimise loss of function of the strategic land transport network and other arterial roads.

(d) support, as appropriate, the provision of public transport services.

(e) restrict the location of connection to the existing strategic land transport network, and as necessary to other arterial roads, to those locations where adverse effects on the existing infrastructure are mitigated.

(f) discourage the further development of the strategic land transport network if all practicable steps have not been taken by the infrastructure provider to mitigate the adverse effects on the community.

Local authorities:

Will:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values in respect of strategic land transport networks and arterial roads.

Should:

(5) Work together, including with neighbouring district and regional councils that adjoin the Canterbury Region, to adopt a consistent approach in relation to cross boundary issues for strategic land transport networks.

(6) Engage with the NZ Transport Agency to protect the appropriate functioning of the strategic land transport network.

Principal reasons and explanation

The policy applies across all the Canterbury Region. This is in direct recognition of the integrated nature of the transport system.

The strategic transport network and other arterial roads provide essential transport services to meet present and future regional, inter-regional and national transport needs, including supporting passenger and freight transport services. This infrastructure needs protection from adverse effects which undermine its ability to safely and efficiently enable those services to be provided. Canterbury's strategic regional land transport network consists of: the strategic road network, the strategic freight hubs and the rail network. In addition, other arterial roads are a locally important part of Canterbury's transport network.

Community needs are changing. Therefore existing transport infrastructure and land transport corridors within which future expansion of infrastructure can be accommodated needs to be safeguarded.

Policy 5.3.8 –Land use and transport integration (Wider Region)

Integrate land use and transport planning in a way:

(1) that promotes:

- **(a) the use of transport modes which have low adverse effects;**
- **(b) the safe, efficient and effective use of transport infrastructure, and reduces where appropriate the demand for transport;**

(2) that avoids or mitigates conflicts with incompatible activities; and

(3) where the adverse effects from the development, operation and expansion of the transport system:

- **(a) on significant natural and physical resources and cultural values are avoided, or where this is not practicable, remedied or mitigated; and**
- **(b) are otherwise appropriately controlled.**

This policy implements the following objectives:

Objective 5.2.1, Objective 5.2.2 and Objective 5.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which:

- (a) avoid development impacts on the efficient functioning of transport infrastructure.
- (b) enable the appropriate upgrading of existing and establishment of new transport infrastructure.
- (c) promote transport modes which have low adverse environmental effects.

Territorial authorities:

Will:

(2) Set out objectives, policies and / or methods in district plans which:

- (a) avoid land-uses that may result in adverse reverse sensitivity effects on transport infrastructure.
- (b) enable the appropriate upgrading of existing and establishment of new transport infrastructure.
- (c) address the interaction between land use and the transport system, including high traffic generators and the promotion of accessibility and modal choice as appropriate.
- (d) promote tranpsort modes which have low adverse environmental effects.

Local authorities:

Should:

(3) Engage with developers to promote accessibility and modal choice for substantial developments.

(4) Engage with the NZ Transport Agency to protect the appropriate functioning of the strategic land and transport network.

Principal reasons and explanation

As the region grows, the transport network inclusive of road, rail, air and sea-based transportation infrastructure, will be required to increase capacity to service this growth. Roading, walking and cycling networks, and appropriate public transport infrastructure can greatly assist in not only improving access and mobility of people and communities, but can also assist in achieving broader environmental objectives in terms of emissions, noise and safety.

Many sub-regional areas will not experience significant growth that would efficiently and effectively justify significant changes to increase modal choice and accessibility for their entire community. However, cumulative land use and transport developments should not foreclose such opportunities.

The operation, maintenance and future development of the transport system can be significantly constrained by the adverse environmental impact of encroaching activities and development. Identifying appropriate standards to limit incompatible activities would ensure that non-compatible land uses are avoided or the effects are otherwise mitigated to ensure the ongoing operation, maintenance, upgrading and development of significant transport infrastructure is not compromised.

Policy 5.3.8 recognises the need for planning for growth and development and the provision of local, regional and national transport infrastructure to proceed side-by-side in a coordinated and integrated way. This is to ensure that necessary growth and development is properly and appropriately serviced and also to ensure that unsustainable demands are not placed on existing transport infrastructure. If this integration does not occur there is the potential for growth and development to be constrained or directed to less favourable areas with associated social, economic and environmental costs.

Policy 5.3.9 – Regionally significant infrastructure (Wider Region)

In relation to regionally significant infrastructure (including transport hubs):

(1) avoid development which constrains the ability of this infrastructure to be developed and used without time or other operational constraints that may arise from adverse effects relating to reverse sensitivity or safety;

(2) provide for the continuation of existing infrastructure, including its maintenance and operation, without prejudice to any future decision that may be required for the ongoing operation or expansion of that infrastructure; and

(3) provide for the expansion of existing infrastructure and development of new infrastructure, while:

(a) Recognising the logistical, technical or operational constraints of this infrastructure and any need to locate activities where a natural or physical resource base exists;

(b) avoiding any adverse effects on significant natural and physical resources and cultural values and where this is not practicable, remedying or mitigating them, and appropriately controlling other adverse effects on the environment; and

(c) when determining any proposal within a sensitive environment (including any environment the subject of section 6 of the RMA), requiring that alternative sites, routes, methods and design of all components and associated structures are considered so that the proposal satisfies sections 5(2)(a) – (c) as fully as is practicable.

This policy implements the following objectives:

Objective 5.2.1, Objective 5.2.2 and Objective 8.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which:

(a) provide for regionally significant infrastructure by reducing constraints on their efficient and effective operation, maintenance and upgrade.

(b) avoid development that may impact on regionally significant infrastructure

(c) avoid, remedy or mitigate the adverse effects of regionally significant infrastructure on the environment.

Should:

(2) Collaborate with territorial authorities, the New Zealand Transport Agency representatives of Timaru Airport and maritime facilities at Kaikōura and Timaru as well as representatives of the surrounding communities to protect the appropriate functioning of such regionally significant infrastructure.

(3) Collaborate with territorial authorities, and where appropriate operators of identified transport hubs and representatives of the surrounding communities to protect the appropriate functioning of identified transport hubs.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans which:

(a) avoid sensitive and incompatible land-uses within proximity of identified transport hubs and regionally significant infrastructure where the quality of current or future environment is incompatible with the health requirements and amenity value expectations of people adjacent or within part of the receiving environment of activities undertaken by regionally significant infrastructure.

(b) avoid land-uses that directly adversely affect the safe operation of regionally significant infrastructure.

(c) avoid, remedy or mitigate the adverse effects of regionally significant infrastructure on the environment.

Principal reasons and explanation

Regionally significant infrastructure including transport hubs and the Timaru Airport and maritime facilities at Kaikōura and Timaru is important for the social and economic well-being of Canterbury. Such facilities provide for the effective movement of people and goods within, into and out of Canterbury, creating important connections between people, places and markets.

When developing, modifying, maintaining and operating regionally significant infrastructure, it is not always practicable, or feasible to internalise all adverse effects on the environment. This often influences the quality and character of the environment surrounding such activities. Consequently, care is needed in terms of avoiding, or managing development that if located within the receiving environment of such facilities may

affect their efficient and effective operation and development.

Development may result in activities which are incompatible with the efficient use and development of regionally significant infrastructure. These may be incompatible because they:

(1) require a quality, character or type of environment which cannot be reasonably achieved in close proximity to such activities

(2) create features which adversely affect the operation and safety of such activities.

Development sensitive to the effects of regionally significant infrastructure, particularly for residential uses, are to be avoided if they may result in the development and use of such facilities being constrained. Often sensitivity arises because the development is incompatible with the noise generated within, or by the facility, including associated activities such as freight storage and movement, especially night time operations.

For the Timaru Airport, sensitive activities within close proximity to the airfield would be impacted by overflying planes and glare from airport and approach path lighting which may lead to issues surrounding the safe and efficient functioning of airport operations. For maritime facilities, incompatible activities may also adversely affect operations and safety by creating the potential for conflict between port operations and recreational users in or near shipping zones.

The policy also seeks to avoid development in the vicinity of the Timaru Airport which may directly constrain its development and use. This typically relates to matters which constrain the Airport's safe operation, and includes development underneath the airport's approach and departure paths.

Regionally significant infrastructure will be required to minimise their adverse effects on the surrounding environment to the extent practicable. This includes: managing interfaces to surrounding development to reduce impacts on amenity values; implementing measures to control noise; and ensuring that there is appropriate provision for the necessary management of hazardous substances and stormwater.

Policy 5.3.10 –Telecommunication infrastructure (Wider Region)

Within the wider region:

(1) Avoid development which constrains the ability of telecommunication infrastructure in Canterbury to be developed and used.

(2) Enable telecommunication infrastructure to be developed and used provided that, as a result of its location and design;

(a) the adverse effects on significant natural and physical resources and cultural values are avoided, or where this is not practicable, remedied, mitigated; and

(b) other adverse effects on the environment are appropriately controlled.

This policy implements the following objectives:

Objective 5.2.1 and Objective 5.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which:

(a) avoid development on the beds of lakes and rivers that impact on the efficient functioning of telecommunication infrastructure.

(b) enable the appropriate upgrading of existing and establishment of new telecommunication infrastructure.

Should:

(2) Collaborate with territorial authorities and the telecommunications industry to protect the appropriate functioning of telecommunication infrastructure.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which:

(a) avoid land-uses that may result in adverse reverse sensitivity effects on telecommunication infrastructure.

(b) enable the appropriate upgrading of existing and establishment of new telecommunication infrastructure.

(c) avoid, remedy, mitigate or offset the adverse effects of telecommunication infrastructure on the environment.

Local authorities:

Should:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values in respect of telecommunication infrastructure.

Principal reasons and explanation

Telecommunication services make important contributions to people's economic and social well-being, health and safety. Considerable public and private investment has been made in telecommunications systems. It is not reasonably foreseeable that these systems will become redundant or be replaced.

It is important that land-use does not adversely affect the efficient operation and development of these systems. Further, new telecommunication infrastructure can have adverse effects on the environment. These can be minimised by appropriate location and design.

Policy 5.3.11 – Community-scale irrigation, stockwater and rural drainage infrastructure (Wider Region)

In relation to established and consented community-scale irrigation, stockwater and rural drainage infrastructure:

(1) Avoid development which constrains the ability of this infrastructure in Canterbury to be operated, maintained and upgraded;

(2) Enable this infrastructure to be operated, maintained and upgraded in Canterbury to more effectively and efficiently transport consented water provided that, as a result of its location and design:

(a) the adverse effects on significant natural and physical resources and cultural values are avoided, or where this is not practicable, mitigated; and

(b) other adverse effects on the environment are appropriately managed.

This policy implements the following objective:

Objective 5.2.1 and Objective 5.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans which:

(a) avoid development that unnecessarily impacts on the functioning of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure.

(b) provide for the appropriate upgrading of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure.

(2) Collaborate with Te Rūnanga o Ngāi Tahu/papatipu rūnanga, territorial authorities, and the rural community and representatives to protect the appropriate functioning of established community-scale irrigation, stockwater and rural drainage infrastructure.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which:

(a) avoid development that unnecessarily impacts on the functioning of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure.

(b) provide for the appropriate upgrading of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure.

(c) avoid, remedy or mitigate the adverse effects of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure on the environment.

Local authorities:

Should:

(4) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining Ngāi Tahu values.

Will:

(5) Set out objectives and policies, and may include methods in regional and district plans which: avoid, remedy or mitigate the adverse effects of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure on the environment.

Principal reasons and explanation

Existing and consented community-scale irrigation, stockwater and rural drainage infrastructure are important to Canterbury's rural economy. They contribute significantly to Canterbury's well-being, are the subject of considerable public and private financial investment, and are unlikely to be readily replaced or duplicated.

Policy 5.3.11 is limited to existing and consented community-scale irrigation, community-scale stockwater and community-scale rural drainage infrastructure. In this context established means that infrastructure that is present in the environment.

The focus of the policy is on infrastructure, not the associated resource consents to take, use, dam or divert water. The resource management issues, objectives, policies or methods relating to water are found in Chapter 7 - Fresh Water.

The ongoing functioning of existing and consented community-scale irrigation, stockwater and rural drainage infrastructure is dependent on the infrastructure continuing to provide effective and efficient conveyance of water. This is influenced by:

(1) the ongoing management of the infrastructure itself, including the efficiency of the infrastructure to transport the existing consented water; and

(2) the surrounding land-uses affecting the ability of the infrastructure to be efficiently and effectively used.

Policy 5.3.12 – Rural production (Wider Region)

Maintain and enhance natural and physical resources contributing to Canterbury's overall rural productive economy in areas which are valued for existing or foreseeable future primary production, by:

(1) avoiding development, and / or fragmentation which;

(a) forecloses the ability to make appropriate use of that land for primary production; and / or

(b) results in reverse sensitivity effects that limit or precludes primary production.

(2) enabling tourism, employment and recreational development in rural areas, provided that it:

(a) is consistent and compatible with rural character, activities, and an open rural environment;

(b) has a direct relationship with or is dependent upon rural activities, rural resources or raw material inputs sourced from within the rural area;

(c) is not likely to result in proliferation of employment (including that associated with industrial activities) that is not linked to activities or raw material inputs sourced from within the rural area; and

(d) is of a scale that would not compromise the primary focus for accommodating growth in consolidated, well designed and more sustainable development patterns.

and;

(3) ensuring that rural land use intensification does not contribute to significant cumulative adverse effects on water quality and quantity.

This policy implements the following objectives:

Objective 5.2.1 and Objective 15.3.1

Methods

The Canterbury Regional Council:

Should:

(1) Identify soil resources of importance and collaborate with territorial authorities, Te Rūnanga o Ngāi Tahu/paptipu rūnanga and other stakeholders to identify appropriate management methods in relation to those soil resources.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans which:

- (a) identify areas to be used for primary production, taking into account natural resources through appropriate provisions in district plans.
- (b) control the adverse effects of subdivision and land-use in rural areas, including by:
  - (i) ensuring subdivision and development does not foreclose the ability to utilise natural resources such as soil which is, or foreseeably could be, valued for rural productive purposes.
  - (ii) ensuring appropriate separation between consented and permitted rural productive activities and those land-uses which may result in reverse sensitivity effects on rural productive activities.
  - (iii) managing the interface between the edge of environments sensitive to the effects of rural production activities and areas in productive use to reduce conflict.
  - (iv) specifying appropriate provisions to manage tourism, employment, and recreational development in rural areas consistent and compatible with rural values and resources, an open rural environment and a consolidated approach to development patterns.
  - (v) specifying appropriate controls on rural land-use including subdivision intensification, infrastructure provision and waterway setbacks to manage effects on water quality.

Principal reasons and explanation

The rural productive base of Canterbury is essential to the economic, cultural and social well-being of its people and communities. Enabling the use of natural and physical resources to maintain the rural productive base is a foreseeable need of future generations.

The ability to appropriately utilise natural resources is a vital element in supporting the efficient and effective rural productive activities. These natural resources include soil, the growing medium for food for animals and for many horticultural and arable crops. Different soils are valued for different reasons. Versatile soils (Classes I and II under the Land-use Capability Classification System) are that part of the soil resource that will support the widest range of productive uses with the least inputs. Soils with lower versatility can be valued for other rural productive activities, such as vineyards.

The policy seeks the management of those areas of rural Canterbury for which inherent characteristics and location meaningfully contribute, or will foreseeably contribute, to the rural productive economy of Canterbury. Generally this means that, notwithstanding the current use of these soils, options for their future use for rural productive purposes should not be unnecessarily foreclosed.

Subdivision and land-use change in identified rural productive areas, for instance to create new urban and rural-residential development, can lead to new environmental requirements that are incompatible with rural production. For example, a new housing subdivision may create new requirements for a neighbouring farm to prevent spray drift of agrichemicals. When this occurs, the rural productive activities can be limited in a way that reduces efficiency, and may even cease. This is an example of 'reverse sensitivity effects'.

In order to maintain the rural productive base of Canterbury, separation and management of the interface between rural production and other activities sensitive to the effects of rural production, is necessary.

A number of recreational, employment and tourist activities are already established in the rural area, and contribute to the regions social and economic well-being. Recreational, employment and tourist activities can be consistent and compatible with an open space rural environment, where landscape values and the productivity of the region's soil resources are maintained, and reverse sensitivity effects avoided or mitigated.

Rural based employment, including industrial activities such as those that involve a raw material or product that is derived from the rural area (such as dairy factories or timber yards), as opposed to general industrial activities, contribute greatly to rural employment and are directly linked with primary rural production. Accordingly, the effects of such rural based employment, especially where these are of a small scale, or remain consistent and compatible with an open space rural environment, where landscape values are maintained, and reverse sensitivity effects are avoided, are generally anticipated within the region's rural areas.

Policy 5.3.13 – Spread of wilding trees (Wider Region)

Avoid, or minimise as far as practicable, the risk of wilding tree spread, through the location of planting, design of planting, species selection and management, once planting has occurred.

This policy implements the following objective:

Objective 5.2.1, Objective 9.2.1, Objective 12.2.1 and Objective 12.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Collaborate with territorial authorities, landowners and forestry managers to implement wilding tree spread avoidance measures by:

  (a) the choice of planting sites;

  (b) the choice of tree species;

  (c) plantation design;

  (d) the implementation of land management regimes in areas at risk of wilding tree spread from new plantings.

(2) Include provisions in a Regional Pest Management Strategy to assist in avoiding the risk of wilding tree spread, including consideration of specific non-regulatory methods such as rates relief, monitoring, and dissemination of information/education, that may assist parties in controlling the further spread of wilding trees.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans which minimise the risk of wilding tree spread.

Principal reasons and explanation

Wilding trees are self-sown exotic trees, especially coniferous species. New or replacement forestry tree plantings can cause similar, and exacerbate any existing, adverse effects of wilding tree spread. Therefore, it is appropriate to manage the risk of wilding tree spread from new forestry plantations.

Canterbury is adversely affected by existing wilding tree spread. Within most river catchments there is some wilding spread. The worst affected areas are the Mackenzie basin, the Rakaia and Waimakariri river catchments, and the Amuri Range near Hanmer Springs. This existing wilding conifer tree spread issue is managed as a pest issue primarily under the Regional Pest Management Strategy. Considerable public and private financial and human resources are dedicated to reducing the adverse effects of this conifer tree spread.

The observed adverse effects of wilding tree spread in Canterbury include:

(1) the reduction of indigenous biodiversity values as a result of wilding trees out-competing and smothering indigenous plant communities, altering environments favourable to indigenous fauna and flora, and drying out wetlands and riparian areas.

(2) the degradation of important landscape values as a result of wilding trees establishing in landscapes.

(3) the reduction in rural productive values as a result of the displacement of pasture on country where conditions are favourable to their spread. This displacement can result in a loss of pastoral production from those land types, which reduces the values of that land.

(4) Wilding tree spread is limited by factors such as the location of seed sources, prevailing winds, seed size and surrounding land-use. Establishment is limited by altitude, climatic conditions, soil types, vegetation, and grazing.

5.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) New urban and rural residential development is consolidated in, around and integrated with existing urban areas.

(2) All rural-residential development is located in areas zoned for rural residential development.

(3) New urban and rural residential development maintains and improves the functioning and qualities of the existing urban areas.

(4) New development is appropriately serviced by sewerage, stormwater, potable water and multi-modal transport infrastructure.

(5) New urban development provides for community facilities where appropriate.

(6) Canterbury's important natural and physical resources affected by development are maintained.

(7) Regionally significant infrastructure provides safe, effective and efficient services to people and the community.

(8) The rural primary productive potential of Canterbury is maintained.

(9) Ngāi Tahu can develop appropriate papakāinga housing and marae on ancestral land.

(10) Potential land use, subdivision and/or development conflicts are avoided.

CHAPTER 6
RECOVERY AND REBUILDING OF GREATER CHRISTCHURCH

Introduction

The insertion of this chapter into the Canterbury Regional Policy Statement (CRPS) was directed by the Minister for Canterbury Earthquake Recovery in the Land Use Recovery Plan for Greater Christchurch and under section 27 of the Canterbury Earthquake Recovery Act 2011.

The chapter is consistent with the Recovery Strategy for Greater Christchurch and the Christchurch Central Recovery Plan, and supports their implementation.

This chapter focuses on the metropolitan urban area of Greater Christchurch and towns stretching from Lincoln, Prebbleton and Rolleston in the south to Kaiapoi, Rangiora and Woodend/Pegasus in the north and the rural areas between Rangiora, Rolleston and Lincoln. The geographic extent of Greater Christchurch, for the purposes of this chapter, is shown in Map A (page 64). The Ashley River/Rakahuri lies to the north, the Waimakariri River cuts through the centre, the Port Hills and Selwyn River lie to the south and Pegasus Bay and Lyttelton Harbour/Whakaraupo are to the east. It excludes the area of Banks Peninsula as indicated in Map A. In Waimakariri District, Two Chain Road is the western boundary of the sub-region and in Selwyn District the western boundary follows Highfield and Station Roads (shown on Map A). It does not extend to the coastal waters adjoining this area.

Chapter 6 provides a resource management framework for the recovery of Greater Christchurch, to enable and support earthquake recovery and rebuilding, including restoration and enhancement, for the area through to 2028. Recovery in Greater Christchurch is also supported by provisions in Chapter 5 – Land use and infrastructure that are notated "Entire Region". The provisions in the remainder of the CRPS also apply.

The purpose of Chapter 6 is to enable recovery by providing for development in a way that achieves the purpose of the Resource Management Act 1991.

For discussion and provisions regarding specific resource matters (for example, energy, biodiversity and landscape), further reference should be made to other chapters in the CRPS.

6.1 ISSUES

ISSUE 6.1.1 – ENABLING RECOVERY, REBUILDING AND DEVELOPMENT

How to provide certainty to the community and businesses around how Greater Christchurch will accommodate expected population and household relocation and growth, housing needs and economic activity during the recovery period in an efficient and environmentally sustainable manner. This includes providing for a diverse community with a range of incomes, needs and business types.

Explanation

While the needs for Greater Christchurch in the long term are important, recovery and rebuilding in the short term are critical.

The community requires certainty around where recovery development will take place during the recovery period to enable planning for delivery of infrastructure and protection of key resources such as strategic transport networks, water supply, and other significant natural and physical resources. In particular, it is important that resources are directed to specific geographic areas, to enable efficient and effective public investment in strategic, network and social infrastructure. Without certainty and forward planning, recovery for the Central City, Key Activity Centres and neighbourhood centres will be slower, and will result in inefficient investment decisions being made by infrastructure providers and developers, and incur unnecessary additional costs for local authorities.

When making decisions around accommodating residential and business relocation and growth over the recovery period, it is recognised that there is a range of needs among the community, in terms of both residential accommodation and business provision. A spectrum of housing types needs to be available to accommodate people on different levels of income and with different requirements, including a possible temporary working population, as well as providing for diversity among the different business types that operate within Greater Christchurch, from small offices and retail through to large industrial sites. It is important that the functions of different types of business zones are protected to ensure that lower-value industrial land is not competing with potentially higher-value office and retail development.

ISSUE 6.1.2 – ADVERSE EFFECTS ARISING FROM DEVELOPMENT

Development can result in adverse effects on the environment, which if not identified and avoided, remedied or mitigated where appropriate, could result in inappropriate outcomes for the region's natural and physical resources, and reduce Greater Christchurch's resilience and ability to provide for the needs of people and communities. Poorly planned development can increase risk from natural hazards and the effects of climate change, create resource use conflicts, increase community isolation, prevent the efficient and effective delivery of infrastructure and services, reduce economic viability and result in greater overall energy consumption.

Explanation

There are a number of environmental challenges to providing for recovery, rebuilding and development in Greater Christchurch. These need to be recognised and provided for through a clear planning framework. For Greater Christchurch, the key resource management issues include:

(a) The potential for contamination of Christchurch City's drinking water as a result of inappropriate development over the unconfined aquifer to the west of the city;

(b) The negative effects of stormwater being discharged directly into waterways without land-based or wetland treatment;

(c) The potential to compromise or lose significant natural resources, character and amenity, and lost opportunities for enhancement;

(d) The potential to undermine the role and function of the Central City and Key Activity Centres, together with the investment made in these centres;

(e) Risk to people and property from natural hazards such as flooding, coastal inundation, earthquakes, rockfall, rock roll or coastal erosion;

(f) Sea-level rise and the effects of climate change;

(g) Conflicts between legitimately established activities and sensitive activities which seek to locate in proximity to these (reverse sensitivity);

(h) Efficient and effective provision for maintenance, upgrade and delivery of services and infrastructure, in particular strategic infrastructure;

(i) Minimising energy consumption;

(j) Providing for development in the right place, at the right time, to meet the needs of the community.

Within these issues lies an opportunity to plan for better outcomes and make better decisions about the resources that are used for Greater Christchurch to rebuild and recover.

A key element in successful recovery and rebuilding is the recognition of existing infrastructure and service delivery. It is important that relocation and growth during the recovery period do not compromise the efficient operation of infrastructure, particularly strategic infrastructure.

Recovery can be more effectively and efficiently achieved if it supports existing centres of activity, such as the Central City, Key Activity Centres and neighbourhood centres. Some recent urban development has not utilised the opportunities available to integrate effectively with existing urban centres.

The links between the size of a future urban footprint and the level of energy used need to be given weight. Urban growth occurred before the earthquakes across Greater Christchurch in a way that resulted in accelerated energy use, in particular where development has created a more dispersed and fragmented urban form. Smaller and consolidated urban

footprints encourage the use of less energy, especially those areas where travel patterns can be reduced through optimum relationships between residential, employment, shopping, educational and recreational activities. They also provide better opportunity and choice for people in terms of transport modes.

The costs of the infrastructure necessary to sustain rebuilding and recovery are significant. There are advantages in extending existing services and encouraging a scale of growth sufficient to promote servicing economies rather than meeting the demands of dispersed development.

Costs of growth must be factored into location decisions, as unplanned growth can impact on the rural land resource, existing rural industries and rural character.

ISSUE 6.1.3 – TRANSPORT EFFECTIVENESS

Urban land use and development in inappropriate locations, or that is poorly integrated with transport networks, can adversely affect the efficient use, development and recovery of transport infrastructure and services, through:

(a) the location of residential and other sensitive activities close to strategic transport networks;

(b) high energy use associated with private car dependency and the need to travel greater distances;

(c) inefficient development and operation of strategic transport networks;

(d) less opportunities for modal choice for transport;

(e) adverse public health outcomes;

(f) reduced safety; and

(g) a failure to optimise the use of available capacity within the existing transport network.

Explanation

An efficient and effective transport system through the period of the Greater Christchurch rebuild, and continuing on through its recovery, will deliver much greater economic returns to Canterbury. This period will be challenging, and it is acknowledged that there are likely to be reduced levels of service which new development is likely to exacerbate.

Helping ensure environmental sustainability from a transport perspective means that existing key transport hubs such as airports and ports must be safeguarded. Land use patterns need to be organised so that energy requirements are minimised and the efficient functioning of strategic transport networks is not compromised by traffic associated with local development or reverse sensitivity concerns. Reduced efficiency in the transport network will increase costs for businesses, as well as commuters. Poorly integrated development, or development in inappropriate locations, can also affect the accessibility and uptake of public transport and active modes of transport, and combined with increased air pollution can reduce the potential for improved public health.

Well-designed development that integrates with transport networks, and that makes efficient use of existing capacity, is essential to providing for business growth and access to community services, as important components of rebuilding and recovery.

ISSUE 6.1.4 – AMENITY AND URBAN DESIGN

While the speed of recovery is important, so too is the quality of the built form. Poorly designed development can adversely affect urban amenity values, rural amenity values, historic heritage, health and safety, integration with community, educational, social and commercial facilities, and overall liveability. These matters are important for retaining population and attracting skilled workers and new business opportunities. They will affect the timing and the success of recovery.

Explanation

Sometimes the desire to rebuild quickly competes with the desire to build well or build back better. Enabling timely and appropriate development during the recovery period in a manner that does not compromise the key values of either existing or future communities is a challenge that must be recognised at Greater Christchurch, city, district and neighbourhood levels. Rebuilding can also impact on issues of significance to Ngāi Tahu, affecting their relationship with ancestral lands, water, sites, wāhi tapu and other taonga. In particular, good urban design will contribute to vibrant and renewed centres and help support wider wellbeing objectives such as quality of life, economic vitality and crime reduction.

ISSUE 6.1.5 – RURAL RESIDENTIAL IMPACTS

Rural residential development, if unconstrained, has the potential to change the character of rural areas and to create adverse effects on established rural, farming (including agricultural research farms) and quarrying activities through reverse sensitivity. It also can result in dispersed settlement patterns, and inefficient forms of development and provision of services.

Explanation

Many of the rural western areas of Greater Christchurch remained undamaged during the earthquakes and are also located out of the area identified as being prone to liquefaction, making them more desirable locations to live. However, rural residential development is associated with reverse sensitivity effects and can give rise to requests for the extension of urban services and exacerbates dispersed settlement patterns, leading to inefficient use of infrastructure and impacts on rural production. This can lead to pressures for future urbanisation, which is difficult to achieve in an effective manner given that the land use pattern has been established for a different purpose.

Objective 6.2.1 - Recovery framework

Recovery, rebuilding and development are enabled within Greater Christchurch through a land use and infrastructure framework that:

(1) identifies priority areas for urban development within Greater Christchurch;

(2) identifies Key Activity Centres which provide a focus for high quality, and, where appropriate, mixed-use development that incorporates the principles of good urban design;

(3) avoids urban development outside of existing urban areas or greenfield priority areas for development, unless expressly provided for in the CRPS;

(4) protects outstanding natural features and landscapes including those within the Port Hills from inappropriate subdivision, use and development;

(5) protects and enhances indigenous biodiversity and public space;

(6) maintains or improves the quantity and quality of water in groundwater aquifers and surface water bodies, and quality of ambient air;

(7) maintains the character and amenity of rural areas and settlements;

(8) protects people from unacceptable risk from natural hazards and the effects of sea-level rise;

(9) integrates strategic and other infrastructure and services with land use development;

(10) achieves development that does not adversely affect the efficient operation, use, development, appropriate upgrade, and future planning of strategic infrastructure and freight hubs;

(11) optimises use of existing infrastructure; and

(12) provides for development opportunities on Māori Reserves in Greater Christchurch.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.9, 6.3.10, 6.3.11

Principal reasons and explanation

The purpose of this objective is to provide for an outcome where appropriate urban development is enabled within specified spatial areas around Greater Christchurch, so that resources can be focused on rebuilding, and delivering growth and recovery to those priority areas. This provides certainty to all resource users as to locations for development, enabling long-term planning and funding for strategic, network and social infrastructure (such as schooling and healthcare), and protection of Greater Christchurch's natural and physical resources.

The recognition of existing constraints in terms of natural and physical resources is a critical part of successful growth management. This objective identifies the key elements of natural and physical resources in Greater Christchurch that must be protected in order to ensure that harm to the natural environment is minimised.

Objective 6.2.2 – Urban form and settlement pattern

The urban form and settlement pattern in Greater Christchurch is managed to provide sufficient land for rebuilding and recovery needs and set a foundation for future growth, with an urban form that achieves consolidation and intensification of urban areas, and avoids unplanned expansion of urban areas, by:

(1) aiming to achieve the following targets for intensification as a proportion of overall growth through the period of recovery:

- **(a) 35% averaged over the period between 2013 and 2016**
- **(b) 45% averaged over the period between 2016 to 2021**
- **(c) 55% averaged over the period between 2022 and 2028;**

(2) providing higher density living environments including mixed use developments and a greater range of housing types, particularly in and around the Central City, in and around Key Activity Centres, and larger neighbourhood centres, and in greenfield priority areas and brownfield sites;

(3) reinforcing the role of the Christchurch central business district within the Greater Christchurch area as identified in the Christchurch Central Recovery Plan;

(4) providing for the development of greenfield priority areas on the periphery of Christchurch's urban area, and surrounding towns at a rate and in locations that meet anticipated demand and enables the efficient provision and use of network infrastructure;

(5) encouraging sustainable and self-sufficient growth of the towns of Rangiora, Kaiapoi, Woodend, Lincoln, Rolleston and Prebbleton and consolidation of the existing settlement of West Melton;

(6) Managing rural residential development outside of existing urban and priority areas; and

(7) Providing for development opportunities on Māori Reserves.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.9, 6.3.10, 6.3.11

Principal reasons and explanation

The rebuilding and recovery of Greater Christchurch rely on appropriate locations, quantity, types, and mixes of residential and business development to provide for the needs of the community.

Consolidation of existing urban settlements is the form of development most likely to minimise the adverse effects of travel for work, education, business and recreation, minimise the costs of new infrastructure and avoid adverse effects of development on sensitive landscapes, natural features and areas of high amenity. This will enable Greater Christchurch to build back better, and support the recovery of central Christchurch. Greater intensification within Christchurch's urban area through infill (particularly in the Central City, and around Key Activity Centres, and neighbourhood centres) and brownfield redevelopment will reduce the need for further expansion of peripheral areas, and some intensification of the centres of smaller towns is also expected to meet changing needs. A significant proportion of intensification will take place in the city rather than Selwyn and Waimakariri; however, the contribution of these areas to the overall growth pattern is important. The objective sets targets for the contribution of infill and intensification as a proportion of overall growth, and aligns with the growth management approach in the Greater Christchurch Urban Development Strategy. Where monitoring indicates that these levels are not being achieved, further policy responses may be required to increase intensification within existing urban areas.

Changing demographic patterns, including an ageing population and smaller households, are expected to increase the desirability of higher density housing. The demolition and ageing of housing stock provides an opportunity for redevelopment at higher densities and an increased range of housing types that provides not only choice for those needing to relocate, but also for future generations. Increased intensification is anticipated to occur over time as rebuild opportunities are realised, requiring appropriately located and designed greenfield development that also provides for medium density housing during the time of transition.

Following the earthquakes and the subsequent damage and red zoning of properties, a number of Māori have sought to return to and live on the Māori Reserves set aside by the Crown in the 19th century for the then present and future needs of local Ngāi Tahu. Providing for development opportunities on those reserves will enable the descendants of the original grantees to return and realise the original intent of those reserves.

Objective 6.2.3 – Sustainability

Recovery and rebuilding is undertaken in Greater Christchurch that:

(1) provides for quality living environments incorporating good urban design;

(2) retains identified areas of special amenity and historic heritage value;

(3) retains values of importance to Tangata Whenua;

(4) provides a range of densities and uses; and

(5) is healthy, environmentally sustainable, functionally efficient, and prosperous.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.9, 6.3.11

Principal reasons and explanation

Intensification and consolidation of residential development in Christchurch needs to protect areas of special amenity and historic heritage value, as these contribute to the area's identity and character. For Greater Christchurch particular attention should be paid to the provision of open space, maintenance and promotion of a sense of identity and character, and the availability of community and recreation facilities and appropriately located business centres, so as to ensure the maintenance and/or provision of high quality living environments.

The focus on quality living environments also necessitates giving consideration to environmental aspects that contribute to health and wellbeing, such as energy efficiency in housing and sunlight access.

Objective 6.2.4 – Integration of transport infrastructure and land use

Prioritise the planning of transport infrastructure so that it maximises integration with the priority areas and new settlement patterns and facilitates the movement of people and goods and provision of services in Greater Christchurch, while:

(1) managing network congestion;

(2) reducing dependency on private motor vehicles;

(3) reducing emission of contaminants to air and energy use;

(4) promoting the use of active and public transport modes;

(5) optimising use of existing capacity within the network; and

(6) enhancing transport safety.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.9, 6.3.11

Principal reasons and explanation

Land use patterns that are integrated with transport infrastructure minimise energy use through network optimisation, operation and maintenance, and provide for the social and economic wellbeing of the community, and people's health and safety. Land use patterns that are integrated with transport infrastructure create a network with shorter journey times for all modes. This integration enables greater travel mode choice. Recovery development that is not well integrated with transport infrastructure can result in increased car dependency, higher energy use, greater traffic volumes, and inefficient freight movement.

Objective 6.2.5 – Key activity and other centres

Support and maintain the existing network of centres below as the focal points for commercial, community and service activities during the recovery period:

(1) The Central City

(2) Key Activity Centres

(3) Neighbourhood centres.

These centres will be high quality, support a diversity of business opportunities including appropriate mixed-use development, and incorporate good urban design principles.

The development and distribution of commercial activity will avoid significant adverse effects on the function and viability of these centres.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.4, 6.3.5, 6.3.6, 6.3.7, 6.3.8, 6.3.11

Principal reasons and explanation

It is important to maintain the existing network of Key Activity Centres and the Central City as focal points for commercial, community and service activity during the recovery phase and to support the identified priority areas. This recognises the investment made in these places, and their preference as a location for future development as businesses shift around the city over the period of recovery. In addition, by virtue of their density, mix of activities and location on strategic transport networks, Key Activity Centres support the provision of public transport and intensification of residential activity within surrounding residential areas. This intensification will provide housing choice for those households needing to relocate, and will accommodate growth during the recovery period. Inappropriate development outside of Key Activity Centres may undermine the community's investment in these existing centres and weaken the range and viability of the services they provide.

It is important to note that the Key Activity Centres are not homogeneous, especially within Christchurch City. The extent that business and residential intensification is directed to occur across these Christchurch City centres is dependent on their scale and function.

The role of neighbourhood centres is also recognised for the service role they play to local communities and as a location for appropriate business development.

Objective 6.2.6 – Business land development

Identify and provide for Greater Christchurch's land requirements for the recovery and growth of business activities in a manner that supports the settlement pattern brought about by Objective 6.2.2, recognising that:

(1) The greenfield priority areas for business in Christchurch City provide primarily for the accommodation of new industrial activities;

(2) Except where identified for brownfield redevelopment, areas used for existing industrial activities are to be used primarily for that purpose, rather than as a location for new commercial activities;

(3) New commercial activities are primarily directed to the Central City, Key Activity Centres, and neighbourhood centres;

(4) A range of other business activities are provided for in appropriate locations; and

(5) Business development adopts appropriate urban design qualities in order to retain business, attract investment and provide for healthy working environments.

The following policies implement this objective:

Policies 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.3.8, 6.3.11

Principal reasons and explanation

The provision of adequate land for recovery and future business activities is important for long-term economic growth and the provision of both employment and services for the sub-region's existing and future communities. Enabling appropriate new business activity close to existing and future residential development helps achieve a greater range of travel options, promote accessibility and reduce energy usage. The locations selected for industrial business land development are also key for rebuilding and the forward planning of the transportation network and associated freight hubs. While there is some capacity for the demand for further industrial business land to be met through the redevelopment of existing zoned land, particularly within Christchurch City, the greenfield priority areas for business provide for the accommodation of new, primarily industrial business activities. There may also be requirements for relocation of business activities to better land, or areas with potential for expansion where land is currently constrained.

In relation to different types of business land, it is important for recovery of the Central City, Key Activity Centres and neighbourhood centres that certain types of business are directed to certain locations. This will ensure that markets compete fairly for similar uses, rather than lower cost land being developed for higher value uses and reducing availability of land for activities such as industrial use. There will, however, be circumstances where redevelopment of brownfield industrial land is appropriate for a range of uses, without impacting on recovery of the Central City or Key Activity Centres as sought in Objective 6.2.5. Some commercial activities will have particular locational constraints and are not suitable for centres, such as yard-based retailers and car-yards, and the need to identify a place for these activities is recognised.

Achieving high quality urban design is as important in business areas as in other areas of the city, but there may be some business areas that require greater design focus depending on their role and function.

Policy 6.3.1 – Development within the Greater Christchurch area

In relation to recovery and rebuilding for Greater Christchurch:

(1) give effect to the urban form identified in Map A, which identifies the location and extent of urban development that will support recovery, rebuilding and planning for future growth and infrastructure delivery;

(2) give effect to the urban form identified in Map A (page 64) by identifying the location and extent of the indicated Key Activity Centres;

(3) enable development of existing urban areas and greenfield priority areas, including intensification in appropriate locations, where it supports the recovery of Greater Christchurch;

(4) ensure new urban activities only occur within existing urban areas or identified greenfield priority areas as shown on Map A, unless they are otherwise expressly provided for in the CRPS;

(5) provide for educational facilities in rural areas in limited circumstances where no other practicable options exist within an urban area; and

(6) avoid development that adversely affects the function and viability of, or public investment in, the Central City and Key Activity Centres.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

The Regional Council:

Will

(1) Have regard to Policy 6.3.1 in relation to any consents relating to urban activities outside of existing urban areas or greenfield priority areas in Greater Christchurch, and consider deferral under s91 where other consents are required from another local authority, so that the effects of a proposal can be considered together.

(2) Initiate any changes required to Map A of the CRPS where monitoring indicates a need for further greenfield priority areas to be included to enable the release of new greenfield land, prior to the review of the CRPS.

Territorial authorities:

Will

(3) Provide for the rebuilding and recovery of Greater Christchurch in accordance with the Land Use Recovery Plan for Greater Christchurch, Policy 6.3.1 and Map A, by including in district plans objectives, policies and rules (if any) to give effect to the policy.

(4) Investigate and implement methods in district plans for promoting development and enhancement of Key Activity Centres.

Should

(5) Consider appropriate administrative and financial methods to enable and encourage Key Activity Centres to fulfil their function, and to promote intensification of identified urban areas and brownfield redevelopment.

Local authorities:

Should

(6) Provide for sequencing, provision and funding of infrastructure that supports the pattern of settlement in Map A, including through changes to the CRPS, provisions in district plans, regional plans, the Regional Land Transport Strategy, Long Term Plans, other infrastructure plans, and any relevant strategic planning documents, whether prepared under the Local Government Act 2002, the Resource Management Act 1991 or the Land Transport Management Act 2003.

Principal reasons and explanation

Map A shows existing urban areas and priority areas for development for Greater Christchurch. These areas are identified as being required to provide sufficient land zoned for urban purposes to enable recovery and rebuilding through to 2028. The Policy and Map A provide a clear, co-ordinated land use and infrastructure framework for the recovery of Greater Christchurch.

To ensure that recovery resources are managed efficiently and sustainably, the provisions identify where certain types of development can take place, and where they cannot take place. The provisions also recognise that specific activities are provided for outside of urban areas elsewhere in the CRPS, such as papakāinga housing and marae under Policy 5.3.4 and educational facilities where no other practicable options for locating the facility exist. It is anticipated that established urban activities located outside of the identified urban area will be able to continue to operate their activities, with any expansion considered on a case-by-case basis.

Within the existing urban area, Key Activity Centres are also indicated. These provide a focus for commercial activities and residential intensification. While post-earthquake business growth has increased in many of the Key Activity Centre areas, inappropriate non-centre growth has also occurred. Moving towards 2016, when the Order in Council that enables businesses to be run from residential locations expires, it will be important to refocus commercial activities to the Central City and Key Activity Centres, and where appropriate neighbourhood centres, so that the function of these centres as a focus for economic activity is reinforced.

Policy 6.3.2 – Development form and urban design

Business development, residential development (including rural residential development) and the establishment of public space is to give effect to the principles of good urban design below, and those of the NZ Urban Design Protocol 2005, to the extent appropriate to the context:

(1) Tūrangawaewae – the sense of place and belonging – recognition and incorporation of the identity of the place, the context and the core elements that comprise the place. Through context and site analysis, the following elements should be used to reflect the appropriateness of the development to its location: landmarks and features, historic heritage, the character and quality of the existing built and natural environment, historic and cultural markers and local stories.

(2) Integration – recognition of the need for well-integrated places, infrastructure, movement routes and networks, spaces, land uses and the natural and built environment. These elements should be overlaid to provide an appropriate form and pattern of use and development.

(3) Connectivity – the provision of efficient and safe high quality, barrier free, multimodal connections within a development, to surrounding areas, and to local facilities and services, with emphasis at a local level placed on walking, cycling and public transport as more sustainable forms of transport.

(4) Safety – recognition and incorporation of Crime Prevention Through Urban Design (CPTED) principles in the layout and design of developments, networks and spaces to ensure safe, comfortable and attractive places.

(5) Choice and diversity – ensuring developments provide choice and diversity in their layout, built form, land use housing type and density, to adapt to the changing needs and circumstances of the population.

(6) Environmentally sustainable design – ensuring that the process of design and development minimises water and resource use, restores ecosystems, safeguards mauri and maximises passive solar gain.

(7) Creativity and innovation – supporting opportunities for exemplar approaches to infrastructure and urban form to lift the benchmark in the development of new urban areas in the Christchurch region.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.2.

Should

(2) Develop urban design guidelines to assist developers with addressing the matters set out in Policy 6.3.2.

(3) Consider the principles of good urban design as reflected in the New Zealand Urban Design Protocol (2005) in urban design processes.

Principal reasons and explanation

Good urban design is critical to the rebuilding and recovery of Greater Christchurch. Urban design ranges in scale from the design and layout of the whole city, to the suburb, block, street and section design, or even to the architecture of the building and surrounding landscape. It becomes particularly important in the development of the street and block structure, at the interface between buildings/structures and spaces, and between public and private space. Urban design input can take place through the development of outline development plans, creation of development controls for zones, or at a finer-grained level through a resource consent process.

Good urban design can increase the functionality, amenity and efficiency of urban areas in Greater Christchurch. It will support the economic performance of Greater Christchurch, its attractiveness as a tourist destination, and its ability to attract and retain new or returning residents and increase the quality of life of its existing residents. In particular, addressing the matters listed will:

(1) assist with reducing crime;

(2) reduce travel times, fuel usage and therefore greenhouse gas emissions, and dependence on private motor vehicles;

(3) provide for a high standard of physical amenities;

(4) minimise adverse effects on other areas such as flooding, traffic congestion and degraded water;

(5) protect important features of the natural environment;

(6) provide protection of historic heritage from inappropriate development, and enhance its values;

(7) improve the mental and physical wellbeing of its residents; and

(8) create efficient development patterns.

It is recognised that urban design is also about a process, where ideally collaboration takes place. Local authorities need to be clear about their expectations for development, to ensure efficient management through resource consent or plan change processes. As such, the development of clear, user friendly guides, developed in consultation with the development industry and professional institutes, for different types of development are a necessary means of achieving good design outcomes that will support the rebuilding and recovery of Greater Christchurch.

Policy 6.3.3 – Development in accordance with outline development plans

Development in greenfield priority areas and rural residential development is to occur in accordance with the provisions set out in an outline development plan or other rules for the area. Subdivision must not proceed ahead of the incorporation of an outline development plan in a district plan. Outline development plans and associated rules will:

(1) Be prepared as:

- **(a) a single plan for the whole of the priority area; or**
- **(b) where an integrated plan adopted by the territorial authority exists for the whole of the priority area and the outline development plan is consistent with the integrated plan, part of that integrated plan; or**
- **(c) a single plan for the whole of a rural residential area; and**

(2) Be prepared in accordance with the matters set out in Policy 6.3.2;

(3) To the extent relevant show proposed land uses including:

- **(a) Principal through roads, connections with surrounding road networks, relevant infrastructure services and areas for possible future development;**
- **(b) Land required for community facilities or schools;**
- **(c) Parks and other land for recreation;**
- **(d) Land to be used for business activities;**
- **(e) The distribution of different residential densities, in accordance with Policy 6.3.7;**
- **(f) Land required for stormwater treatment, retention and drainage paths;**
- **(g) Land reserved or otherwise set aside from development for environmental, historic heritage, or landscape protection or enhancement;**
- **(h) Land reserved or otherwise set aside from development for any other reason, and the reasons for its protection from development;**
- **(i) Pedestrian walkways, cycleways and public transport routes both within and adjoining the area to be developed;**

(4) Demonstrate how Policy 6.3.7 will be achieved for residential areas within the area that is the subject of the outline development plan, including any staging;

(5) Identify significant cultural, natural or historic heritage features and values, and show how they are to be protected and/or enhanced;

(6) Document the infrastructure required, when it will be required and how it will be funded;

(7) Set out the staging and co-ordination of subdivision and development between landowners;

(8) Demonstrate how effective provision is made for a range of transport options including public transport options and integration between transport modes, including pedestrian, cycling, public transport, freight, and private motor vehicles;

(9) Show how other potential adverse effects on and/or from nearby existing or designated strategic infrastructure (including requirements for designations, or planned infrastructure) will be avoided, remedied or appropriately mitigated;

(10) Show how other potential adverse effects on the environment, including the protection and enhancement of surface and groundwater quality, are to be avoided, remedied or mitigated;

(11) Show how the adverse effects associated with natural hazards are to be avoided, remedied or mitigated as appropriate and in accordance with Chapter 11 and any relevant guidelines; and

(12) Include any other information that is relevant to an understanding of the development and its proposed zoning.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.6

Methods

The Regional Council:

Will

(1) Establish a protocol and guidelines to assist all parties involved in the preparation of outline development plans to ensure Policy 6.3.3 is efficiently and effectively applied.

Territorial authorities:

Will

(1) Require an outline development plan to be developed and incorporated into district plans, prior to, or at the same time as, rezoning land for urban use in greenfield priority areas.

(2) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.3.

Should

(4) Ensure that financial provision is made for delivery of infrastructure to greenfield priority areas for development.

Principal reasons and explanation

The use of outline development plans for residential and business greenfield development is necessary for the recovery of Greater Christchurch. They will assist with the efficient use of resources when planning land uses, provide for sustainable urban development, and ensure adequate housing supply and choice to facilitate earthquake recovery. Background information provided through the process provides the necessary background evaluation work before or at the same time as the land is rezoned.

Outline development plans provide a mechanism for integrating urban development with infrastructure, making the best use of existing infrastructure, and identifying and providing for the additional infrastructure required to meet the needs of incoming residents and businesses. They also provide the mechanism for integrating new development with existing urban areas, and of achieving the type and form of development necessary to accommodate urban growth in a sustainable way. Staging may be required to allow for infrastructure upgrades, enabling parts of a development to be delivered earlier.

In addition, these plans help to provide certainty for the community, developers, network utility providers and territorial authorities, and ensure that all constraints associated with the development of an area are investigated, addressed or protected at the time of initial zoning for urban purposes. By identifying opportunities for low impact urban design and development early on in the land development process, recovery will be enabled by building new developments in a better way.

Policy 6.3.4 – Transport effectiveness

Ensure that an efficient and effective transport network that supports business and residential recovery is restored, protected and enhanced so that it maintains and improves movement of people and goods around Greater Christchurch by:

(1) avoiding development that will overload strategic freight routes;

(2) providing patterns of development that optimise use of existing network capacity and ensuring that, where possible, new building projects support increased uptake of active and public transport, and provide opportunities for modal choice;

(3) providing opportunities for travel demand management;

(4) requiring integrated transport assessment for substantial developments; and

(5) improving road user safety.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.4.

(2) Include objectives and policies, and may include rules in district plans to ensure that, where possible, development provides for, and supports increased uptake of active and public transport; and provides opportunities for modal choice, including walking and cycling.

(3) Include trigger thresholds in district plans for development where an integrated transport assessment is required.

(4) Identify strategic freight routes

Local authorities:

Should

(5) Give consideration to any transport projects that may be needed to give effect to Policy 6.3.4 and include them in their Annual Plans, the Three Year Plan, Long Term Plans, the Regional Land Transport Programme or other infrastructure plans, as appropriate.

(6) Provide options for travel demand management.

Principal reasons and explanation

Changing travel patterns since the earthquakes have placed significant stress on Christchurch's transport infrastructure. With pressure on to enable more land development in response to the earthquakes, there will inevitably be a tension on how to respond to transport needs with limited funds. The Councils and New Zealand Transport Agency will look to prioritise transport improvements where they provide greatest return on the investment. This means that the usually expected levels of service for future development may be lower in the interim until the transport maintenance and improvement can catch up. It is recognised that efficient and effective movement of goods within Greater Christchurch is important for the rebuild of the city and outlying townships, and also important for future wellbeing and energy efficiency.

One way to achieve this is through provision for active forms of transport, such as cycling and walking. Other forms of travel demand management may also lead to efficient transport and encourage a compact urban form. The earthquakes resulted in a significant reduction in public transport use. With new routes in place and travel patterns more settled, public transport use in Christchurch is increasing and is on track to return to pre-earthquake levels. A compact urban form and travel demand management will build upon the natural return to public transport use in Christchurch.

It is also important that Christchurch is able to protect its key transport infrastructure including the airport, rail networks, transport hubs and strategic routes from reverse sensitivity effects. These infrastructure services play a critical role in the functioning and economic wellbeing of the region.

The policy also requires development of integrated transport assessments for substantial developments. By focusing on large developments that have the potential to impact on strategic transport networks, territorial authorities will be able to fully consider all of the transport impacts together, and developers will be able to develop better responses to contribute to an efficient transport system.

An efficient and effective transport network that meets the changed needs of people and businesses, and enables accessible, sustainable, affordable and safe travel choices, is necessary for recovery.

Policy 6.3.5 – Integration of land use and infrastructure

Recovery of Greater Christchurch is to be assisted by the integration of land use development with infrastructure by:

(1) Identifying priority areas for development to enable reliable forward planning for infrastructure development and delivery;

(2) Ensuring that the nature, timing and sequencing of new development are co-ordinated with the development, funding, implementation and operation of transport and other infrastructure in order to:

- **(a) optimise the efficient and affordable provision of both the development and the infrastructure;**
- **(b) maintain or enhance the operational effectiveness, viability and safety of existing and planned infrastructure;**
- **(c) protect investment in existing and planned infrastructure; and**
- **(d) ensure new development does not occur until provision for appropriate infrastructure is in place;**

(3) Providing that the efficient and effective functioning of infrastructure, including transport corridors, is maintained, and the ability to maintain and upgrade that infrastructure is retained;

(4) Only providing for new development that does not affect the efficient operation, use, development, appropriate upgrading and safety of existing strategic infrastructure, including by avoiding noise sensitive activities within the 50dBA Ldn airport noise contour for Christchurch International Airport, unless the activity is within an existing residentially zoned urban area, residential greenfield area identified for Kaiapoi, or residential greenfield priority area identified in Map A (page 64); and

(5) Managing the effects of land use activities on infrastructure, including avoiding activities that have the potential to limit the efficient and effective, provision, operation, maintenance or upgrade of strategic infrastructure and freight hubs.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.5.

(2) Include objectives, policies and rules in district plans to manage reverse sensitivity effects between strategic infrastructure and subdivision, use and development, including for residential and rural-residential activities.

Local authorities:

Should

(3) Give consideration to any infrastructure projects that may be needed to give effect to Policy 6.3.5 and include them in their Annual Plans, the Three Year Plan, Long Term Plans, the Regional Land Transport Programme or other infrastructure plans, as appropriate to enable the orderly and efficient development of priority areas.

Principal reasons and explanation

In order to achieve a co-ordinated and efficient recovery, development of urban areas must be integrated with the provision of infrastructure, including ensuring that existing strategic infrastructure can continue to operate efficiently and effectively. Access for freight movements to and from the major ports in Greater Christchurch must be maintained and enhanced, and not compromised by the location of new urban development.

Priority areas for development are generally clustered to the north, west and south-west of existing urban areas. These areas are all close to existing major infrastructure corridors which connect to the growth areas in the north and Waimakariri District, and to the south and on to Selwyn District. The growth areas have been assessed as having the best potential to accommodate residential and business growth through to 2028 whilst achieving a consolidated urban form and an efficient and orderly provision of infrastructure. It is important that timing and sequencing of development are aligned with funding and implementation of infrastructure.

Strategic infrastructure represents an important regional and sometimes national asset that should not be compromised by urban growth and intensification. Strategic infrastructure such as Christchurch International Airport, the Lyttelton Port of Christchurch, the State Highway and strategic road networks and rail corridors is required to support Greater Christchurch's recovery through transporting such things as building materials, equipment and personnel. The locational requirements and existing investment in strategic infrastructure means that it is extremely inefficient for them to relocate, and effects of land use on their operation can significantly reduce efficiency and attractiveness as transport options. The operation of strategic infrastructure can affect the liveability of residential developments in their vicinity, despite the application of practicable mitigation measures to address effects, which in turn exerts pressure on the infrastructure to further mitigate their effects. It is better to instead select development options where such reverse sensitivity constraints do not exist.

The only exception to the restriction against residential development within the 50dBA LdN airport noise contour is provided for at Kaiapoi.

Within Kaiapoi land within the 50dBA Ldn airport noise contour has been provided to offset the displacement of residences as a result of the 2010/2011 earthquakes. This exception is unique to Kaiapoi and also allows for a contiguous and consolidated development of Kaiapoi.

Policy 6.3.6 – Business land

To ensure that provision, recovery and rebuilding of business land in Greater Christchurch maximises business retention, attracts investment, and provides for healthy working environments, business activities are to be provided for in a manner which:

(1) Promotes the utilisation and redevelopment of existing business land, and provides sufficient additional greenfield priority area land for business land through to 2028 as provided for in Map A;

(2) Recognises demand arising from the relocation of business activities as a result of earthquake-damaged land and buildings;

(3) Reinforces the role of the Central City, as the city's primary commercial centre, and that of the Key Activity Centres;

(4) Recognises that new commercial activities are primarily to be directed to the Central City, Key Activity Centres and neighbourhood centres where these activities reflect and support the function and role of those centres; or in circumstances where locating out of centre, will not give rise to significant adverse distributional or urban form effects;

(5) Recognises that new greenfield priority areas for business in Christchurch City are primarily for industrial activities, and that commercial use in these areas is restricted;

(6) Recognises that existing business zones provide for a range of business activities depending on:

- **(i) the desired amenity of the business areas and their surrounds; and**
- **(ii) the potential for significant distributional or urban form effects on other centres from new commercial activity.**

(7) Utilises existing infrastructure availability, capacity and quality;

(8) Ensures reverse sensitivity effects and conflicts between incompatible activities are identified and avoided or mitigated against;

(9) Ensures close proximity to labour supply, major transport hubs and passenger transport networks;

(10) Encourages self-sufficiency of employment and business activities within communities across Greater Christchurch;

(11) Promotes, where appropriate, development of mixed-use opportunities, within Key Activity Centres provided reverse sensitivity issues can be appropriately managed; and

(12) Incorporates good urban design principles appropriate to the context of the development.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

Territorial Authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.6.

(2) Identify trigger thresholds for office and retail commercial activities in industrial areas where these activities are likely to give rise to distributional effects, particularly on larger commercial centres, or result in reverse sensitivity effects.

Should

(3) Consider appropriate administrative and financial arrangements to enable and encourage business land provision to occur.

(4) Identify neighbourhood centres in district plans.

Principal reasons and explanation

The provision of adequate land for future business activities is a key requirement for successful rebuilding and recovery, and for the economic wellbeing of Greater Christchurch. There was significant damage to industrial and other business land and buildings throughout Greater Christchurch, resulting in a shift of business both from the eastern side of the city to the west, and also from the Central City out into the suburbs. Ongoing insurance issues may continue to place pressure on further demands to relocate. In addition to this, an Order in Council that enables residential land to be used for business activities will expire in 2016, creating further demand for developed business land. Through the rebuilding process, commercial development needs to focus on reinforcing the Central City and Key Activity Centres, as well as the network of neighbourhood centres, so that these areas can regenerate quickly.

Provision of new business land should be focused around existing infrastructure to minimise public costs and in particular to achieve integration with transport networks. Locating appropriate business land close to existing and future residential development helps to achieve a greater range of travel options as well as reducing energy usage. Greater self-sufficiency of employment within districts, suburbs and settlements is also desirable in terms of community development and social sustainability. It will be important that, as time passes, the use of industrial land for short-term accommodation for retail and offices is discouraged, and existing and recovering centres that cater for these uses are reinforced.

Policy 6.3.7 – Residential location, yield and intensification

In relation to residential development opportunities in Greater Christchurch:

(1) Subject to Policy 5.3.4, residential greenfield priority area development shall occur in accordance with Map A. These areas are sufficient for both growth and residential relocation through to 2028.

(2) Intensification in urban areas of Greater Christchurch is to be focused around the Central City, Key Activity Centres and neighbourhood centres commensurate with their scale and function, core public transport routes, mixed-use areas, and on suitable brownfield land.

(3) Intensification developments and development in greenfield priority areas shall achieve at least the following residential net densities averaged over the whole of an ODP area (except where subject to an existing operative ODP with specific density provisions):

- **(a) 10 household units per hectare in greenfield areas in Selwyn and Waimakariri District;**
- **(b) 15 household units per hectare in greenfield areas in Christchurch City;**

(4) Intensification development within Christchurch City to achieve an average of:

- **(a) 50 household units per hectare for intensification development within the Central City;**
- **(b) 30 household units per hectare for intensification development elsewhere.**

(5) Provision will be made in district plans for comprehensive development across multiple or amalgamated sites.

(6) Housing affordability is to be addressed by providing sufficient intensification and greenfield priority area land to meet housing demand during the recovery period, enabling brownfield development and providing for a range of lot sizes, densities and appropriate development controls that support more intensive developments such as mixed use developments, apartments, townhouses and terraced housing.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.7.

(2) Identify areas in district plans that are suitable for urban intensification, including brownfields redevelopment.

(3) Include objectives, policies and rules in district plans for comprehensive development across multiple or amalgamated sites in appropriate locations.

Should

(4) Consider incentives to encourage intensification and brownfields redevelopment.

(5) In relation to Christchurch City, continue to promote medium to high density residential development, particularly within the Central City.

(6) Co-ordinate the sequencing, provision and funding of infrastructure in Annual Plans, the Three Year Plan, Long Term Plans, the Regional Land Transport Programme or other infrastructure plans, as appropriate, to enable the orderly and efficient development of priority areas.

Principal reasons and explanation

The earthquakes have resulted in some significant short-term impacts on the housing market, pushing up demand in the short term for temporary accommodation during the recovery and rebuilding period, and relocation of residents from red-zoned areas. This short-term demand is expected to slowly return to normal growth.

Accommodating the increased demand for households can be achieved in two ways, through greenfield expansion into priority areas, and through intensification within existing urban areas. To support a sustainable urban form, this intensification is ideally located around the Central City, Key Activity Centres and neighbourhood centres consistent with their scale and function, and core public transport routes, within mixed use areas where residential activities can support business activities, and on brownfield sites. Further work will be required to increase intensification, and work towards accommodating future growth within existing urban areas.

Certain areas in Christchurch City have been identified for more intensive residential use for many years. Other suitable areas may be identified, including the redevelopment of brownfields sites for residential or mixed-use activities. Providing for intensification in and around the Central City and Key Activity Centres will help ensure good access to commercial, community and recreational facilities and to public transport. Councils have the ability to encourage greater uptake of intensification in selected areas through investment such as the provision of land improvements to open space and the streetscape.

In order to efficiently utilise the identified priority areas to accommodate recovery and rebuild development, minimum densities are to be achieved. This will help to create a compact urban form that supports existing centres and can be served efficiently by infrastructure, including public transport. It will also help to ensure that housing supply and housing choice, including affordable housing options, meet demand and enable recovery.

Policy 6.3.8 - Regeneration of brownfield land

To encourage and provide for the recovery and regeneration of existing brownfield areas through new comprehensive residential, mixed-use or business developments, provided such activities will ensure the safe and efficient functioning of the transport network and will not have significant adverse distributional or urban form effects on the Central City, Key Activity Centres and neighbourhood centres, or give rise to significant reverse sensitivity effects.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.8.

Should

(2) Identify in district plans brownfield sites that are appropriate for redevelopment.

(3) Give consideration to appropriate administrative and financial arrangements to enable and encourage brownfield redevelopment to occur.

Principal reasons and explanation

Brownfield redevelopment will support the efficient reuse and recovery of underutilised or abandoned land. This will support the recovery of these areas and their wider neighbourhoods by bringing higher intensity and often more appropriate activities into these locations, and enhance the amenity of the area.

Redevelopment will also help to reduce the adverse effects of travel for work, business and recreation, limit the costs of new infrastructure, and avoid the adverse effects of development on sensitive landscapes, natural features and areas of high amenity. Significant adverse effects such as reverse sensitivity, distributional or urban form impacts on the Central City, Key Activity Centres and neighbourhood centres, and impacts on the transport network, need to be avoided or mitigated.

Such regeneration projects should occur in a comprehensive manner to ensure that good urban design and amenity outcomes are achieved. Councils have the ability to encourage redevelopment in selected areas through investment such as the provision of and improvements to open space and the streetscape.

Policy 6.3.9 – Rural residential development

In Greater Christchurch, rural residential development further to areas already zoned in district plans as at 1st January 2013 can only be provided for by territorial authorities in accordance with an adopted rural residential development strategy prepared in accordance with the Local Government Act 2002, subject to the following:

(1) In the case of Christchurch City, no further rural residential development is to be provided for within the Christchurch City Plan area;

(2) The location must be outside the greenfield priority areas for development and existing urban areas;

(3) All subdivision and development must be located so that it can be economically provided with a reticulated sewer and water supply integrated with a publicly owned system, and appropriate stormwater treatment and disposal;

(4) Legal and physical access is provided to a sealed road, but not directly to a road defined in the relevant district plan as a Strategic or Arterial Road, or as a State highway under the Government Roading Powers Act 1989;

(5) The location and design of any proposed rural residential development shall:

- **(a) avoid noise sensitive activities occurring within the 50 dBA Ldn air noise contour surrounding Christchurch International Airport so as not to compromise the future efficient operation of Christchurch International Airport or the health, well-being and amenity of people;**
- **(b) avoid the groundwater protection zone for Christchurch City's drinking water;**
- **(c) avoid land between the primary and secondary stop banks south of the Waimakariri River;**
- **(d) avoid land required to protect the landscape character of the Port Hills;**
- **(e) not compromise the operational capacity of the Burnham Military Camp, West Melton Military Training Area or Rangiora Airfield;**
- **(f) support existing or upgraded community infrastructure and provide for good access to emergency services;**
- **(g) avoid significant reverse sensitivity effects with adjacent rural activities, including quarrying and agricultural research farms, or strategic infrastructure;**
- **(h) avoid significant natural hazard areas including steep or unstable land;**
- **(i) avoid significant adverse ecological effects, and support the protection and enhancement of ecological values;**
- **(j) support the protection and enhancement of ancestral land, water sites, wāhi tapu and wāhi taonga of Ngāi Tahu;**
- **(k) where adjacent to or in close proximity to an existing urban or rural residential area, be able to be integrated into or consolidated with the existing settlement; and**
- **(l) avoid adverse effects on existing surface water quality.**

(6) An outline development plan is prepared which sets out an integrated design for subdivision and land use, and provides for the long-term maintenance of rural residential character.

(7) A rural residential development area shall not be regarded as in transition to full urban development.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4

Methods

The Regional Council:

Will

(1) Have regard to Policy 6.3.9 in relation to any consents relating to rural-residential activities in Greater Christchurch, and consider deferral under s91 where other consents are required from another local authority, so that the effects of a proposal can be considered together.

Territorial authorities:

Will

(2) Include in district plans objectives, policies and rules (if any) to give effect to Policy 6.3.9.

Should

(3) Develop a rural residential strategy for the district to inform the extent of rural residential activity and outcomes sought for this form of development within the district.

Principal reasons and explanation

An important aspect of residential capacity includes the contribution of rural residential development, which is provided for in Waimakariri and Selwyn Districts where it accords with a relevant rural residential strategy. Many of the rural western areas of Greater Christchurch remained undamaged during the earthquakes and are also located out of the area identified as being prone to liquefaction, making them more desirable locations to live.

At the same time, it is also important to manage the extent of rural residential activity due to the pressure it places on infrastructure, its impact on transport efficiency, and the maintenance of rural character and rural land use for production. In the case of Christchurch City, further rural-residential activity also has the potential to constrain future urban expansion options through to 2028, or otherwise be affected by noise contours for the airport, and so it is not provided for within the area covered by the Christchurch City Plan. Rural residential development can have significant effects disproportionate to the numbers of households living within this form of development, and more than limited provision would undermine the achievement of recovery.

Rural residential development is therefore provided for to a limited extent during the recovery period in recognition of the desirability of providing a range of choice in housing types for those needing to relocate, without compromising the overall intent of consolidation in the CRPS. Policy 6.3.11 requires that the supply and update of rural residential activity will be monitored, and this will inform any future changes to the provisions, or areas provided for rural residential use.

Policy 6.3.10 – Māori Reserves

Recognise and provide for the relationship of local Ngāi Tahu with their ancestral lands, waters, wāhi tapu and taonga by enabling Māori Reserves within the Greater Christchurch area to be developed and used for their intended purposes for which they were originally reserved, taking into account the following matters where relevant:

(a) flooding, inundation and other natural hazards;

(b) rural amenity and outlook;

(c) compact urban form;

(d) range of housing options;

(e) provision of appropriately sized local retail/ commercial centres;

(f) any outline development plan; and

(g) the range of lot sizes and densities.

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2

Methods

Territorial authorities:

Will

(1) Include in district plans objectives, policies and rules (if any) in relation to Māori Reserve Land in Greater Christchurch that recognise and provide for their intended purpose, and give effect to Policies 6.3.2, 6.3.3 (except 6.3.3(1) and (4)) and 6.3.4.

(2) Consult with Te Rūnanga o Ngāi Tahu and Papatipu Rūnanga to develop those plan provisions.

(3) In relation to development at Māori Reserve 873, provide for development opportunities for Ngāi Tūāhuriri by the inclusion of objectives, policies, rules and an Outline Development Plan within the District Plan to give effect to Policy 6.3.10.

(4) In relation to Māori Reserve 873, include objectives, policies and/or rules, within the District Plan, that place appropriate controls on the size and scale of Tuahiwi.

(5) Monitor and report on, at two yearly intervals, growth within Māori Reserve 873 to determine whether amendments to district plan objectives, policies and rules are required to either limit inappropriate growth and development or facilitate further growth and development.

Should

(6) Co-ordinate the sequencing, provision and funding of infrastructure in Long Term Plans, or other infrastructure plans, to enable the orderly and efficient development of Māori Reserves.

Principal reasons and explanation

The earthquakes and the subsequent damage and red zoning of properties in Waimakariri District and Christchurch City has led to a number of Māori seeking opportunities to return to ancestral lands, including land at Māori Reserve 873 (Tuahiwi) and Māori Reserve 875 (Rāpaki). This policy recognises the original intent of the land purchase deeds of the 19th century to provide for the present and future needs of local Ngāi Tahu landowners and their descendants.

It is important that any development of Māori Reserves is enabled in a way that meets the needs of Māori and other residents, whilst protecting natural and physical resources through maintaining and enhancing the environmental qualities and rural amenity of the area.

Māori Reserves in Greater Christchurch have not been identified as priority areas, nor as rural residential as development of this land is seen as something that will likely take a more dense form in certain areas and this could result in a more closely settled development pattern. However, it is considered important that any development is of a size and scale appropriate for the surroundings and that rural amenity and outlook is maintained. For these reasons it is considered important that an Outline Development Plan is prepared in consultation with the landowners within those reserves to guide and manage development.

Policy 6.3.11 Monitoring and Review

In relation to development in Greater Christchurch:

(1) The Canterbury Regional Council, in conjunction with the territorial authorities, shall undertake adequate monitoring to demonstrate both in the short term and the long term that there is an available supply of residential and business land to meet the Objectives and Policies of this Chapter.

(2) The Canterbury Regional Council, in conjunction with the territorial authorities, shall undertake monitoring of the supply, uptake and impacts of rural residential land use and development.

(3) Prior to initiating a review of this chapter, for the purposes of information the Canterbury Regional Council may request the organisation or agency responsible for the operation of Christchurch International Airport to undertake a remodelling of the air noise contours relating to the airport.

(4) The Canterbury Regional Council, following relevant territorial authority input, shall initiate a review of the extent and location of land for development if any of the following situations occur:

- **(a) a shortfall in available land is identified by monitoring under Policy 6.3.11; or**
- **(b) it is identified that altered circumstances have arisen or will arise either in one or more parts of Greater Christchurch, in relation to the expected availability of sub–regional infrastructure, and a reconsideration of the extent, location and timing of land for development is necessary to achieve the objectives and policies of this chapter.**

(5) Any change resulting from a review of the extent, and location of land for development, any alteration to the Greenfield Priority Areas, or provision of new greenfield priority areas, shall commence only under the following circumstances:

- **(a) infrastructure is either in place or able to be economically and efficiently provided to support the urban activity;**
- **(b) provision is in place or can be made for safe, convenient and sustainable access to community, social and commercial facilities;**
- **(c) the objective of urban consolidation continues to be achieved;**
- **(d) urban land use, including industrial and commercial activities, does not increase the risk of contamination of drinking water sources, including the groundwater recharge zone for Christchurch's drinking water;**
- **(e) urban development does not lie between the primary and secondary stopbanks south of the Waimakariri River which are designed to retain floodwaters in the event of flood breakout;**
- **(f) the landscape character of the Port Hills is protected;**
- **(g) sufficient rural land is retained to maintain the open space landscape character either between or surrounding the areas of urban activity within Greater Christchurch; and**
- **(h) the operational capacity of strategic infrastructure is not compromised.**

This policy implements the following objectives:

Objectives 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6

Methods

(1) The monitoring for Policy 6.3.11 may include but is not limited to:

- any information published by or sought from Statistics New Zealand.
- annual surveys of business and residential land uptake, including Greenfield Priority Area development and redevelopment.
- annual surveys of the development capacity of zoned and serviced land.
- obtaining and analysing a range of information to assist with the understanding and prediction of future needs, including information on market behaviour and social and economic trends.

(2) The monitoring for Policy 6.3.11 shall include such matters as the councils consider relevant and appropriate.

(3) The Canterbury Regional Council shall prepare a comprehensive monitoring report in relation to Policy 6.3.11 at least every three years, and make it publicly available.

(4) Any remodelling in terms of Policy 6.3.11(3) shall:

- involve an assessment of projected future airport business growth and operation, and shall take into account, but not be limited to aircraft movements, flight tracks, fleet mix and runway utilisation; and
- be accompanied by the report of an independent panel of airport noise experts who have undertaken a peer review of the inputs, assumptions and outcomes of the remodelling; and
- shall be provided to the Canterbury Regional Council in the form of a comprehensive report along with an executive summary or summary report.

(5) The Canterbury Regional Council shall make the summary report of any remodelling under Method 4 publicly available as soon as practicable after receiving it.

(6) Any amended growth pattern shall be given effect through the provisions of any relevant regional plan, changes to the Regional Policy Statement, district plans, the Regional Land Transport Strategy, the Regional Land Transport Programme, Annual Plans, Three Year Plans, Long Term Plans and any relevant strategic planning process, as appropriate.

(7) Territorial authorities shall make appropriate arrangements to enable the achievement of any changes resulting from a review under Policy 6.3.11.

Principal reasons and explanation

Relocation, population, household and business growth can be affected by a wide range of variables. The policy framework should be responsive to this variation in order to meet any changes in circumstances. Policy 6.3.11 is intended to ensure enough land is available and in the right locations to facilitate recovery through to 2028. Monitoring a range of statistics and trends is a key factor in this management. Anticipating the number of relocated or new households and the business activity to be accommodated, as well as the form that these are likely to take, indicates the land areas required for successful recovery.

Policy 6.3.11 also provides that the circumstances for altering the priority area provisions of this chapter are:

(a) There is determined to be insufficient land within the Priority Areas over the recovery period;

(b) Altered circumstances have arisen in relation to anticipated timing of the infrastructure required to support the development planned by this chapter;

(c) There are changes to the relocation and growth management assumptions upon which the objectives and policies of this chapter are based.

6.4 ANTICIPATED ENVIRONMENTAL RESULTS

(1) Recovery and rebuilding is enabled within Greater Christchurch.

(2) Priority areas and existing urban areas identified provide the location for all new urban development.

(3) Significant natural resources are protected from inappropriate development.

(4) People are protected from unacceptable risk from natural hazards.

(5) Infrastructure, and urban and rural development, are developed in an integrated manner.

(6) The use of existing infrastructure is optimised.

(7) Development opportunities are provided for on Māori Reserves.

(8) Growth is provided for through both greenfield and brownfield development opportunities.

(9) Higher density living environments are provided.

(10) Greenfield development is provided for at a rate that meets demand and enables the efficient provision and use of infrastructure.

(11) Growth of rural towns within Greater Christchurch is sustainable and encourages self-sufficiency.

(12) Rural residential development is appropriately managed.

(13) Development incorporates good urban design.

(14) Areas of special amenity, heritage value, or importance to Ngāi Tahu are retained.

(15) Residential development contains a range of densities.

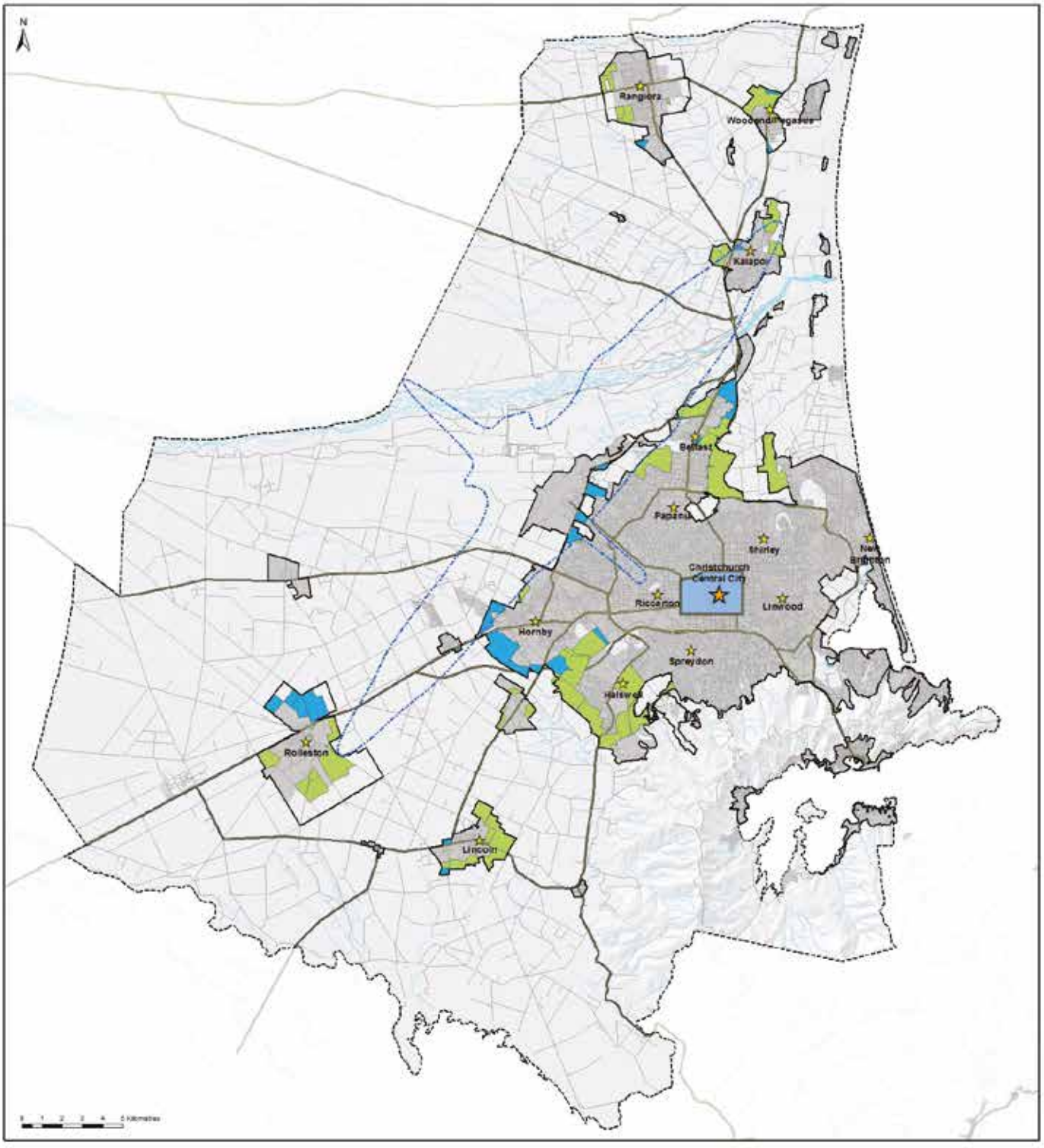
(16) Transport infrastructure appropriately manages network congestion, dependency of private vehicles is reduced, emissions and energy use from vehicles is reduced, and transport safety is enhanced.

(17) The function and role of the Central City, the Key Activity and neighbourhood centres is maintained.

(18) Sufficient business land is provided for, and different types of business activity take place in appropriate locations, adopting appropriate urban design qualities.

Map A

Greenfield Priority Areas (viewable in more detail at www.ecan.govt.nz)



Scale:
1:125,000
(Original sheet size A2)

Publication Date:
20/11/2013

Coordinate System:
NZGD 2000 New Zealand Transverse Mercator

Disclaimer:
This map is a static output of depicted layers and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Map Document:
5646_Changes_to_LURP_PriorityMap.mxd

NSG

CERA

CHAPTER 7
FRESH WATER

Introduction

Fresh water is an essential natural resource, locally, regionally and nationally for all New Zealanders. Canterbury's groundwater and its wetlands, lakes, rivers and their margins have many values and uses. Fresh drinking water is essential for all living things. Fresh water bodies are habitats for aquatic ecosystems. They have important natural character, cultural, recreational, amenity and aesthetic values; and support a variety of economic and social activities associated with those values. The abstraction and use of groundwater and surface water is necessary for a variety of economic activities, for example irrigation, hydro-electricity generation, and various industrial, manufacturing and commercial activities. We need water to live; we need water and the associated infrastructure to provide for our economic, social, cultural and environmental well-being.

Fresh water gives our primary production, tourism, and energy generation sectors a competitive advantage in the global economy.

The National Policy Statement for Freshwater Management 2011 sets out objectives and policies that direct local authorities to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. This Regional Policy Statement must give effect to any National Policy Statements.

Water is an essential and integral part of the connection between Ngāi Tahu, as tāngata whenua, and their tribal territory. Wai Māori or fresh water is a tāonga. The life-giving and life-sustaining properties of water are intrinsically linked to the spiritual, cultural, economic, environmental and social well-being, survival and identity of Ngāi Tahu whānui. The particular cultural, spiritual, historic and traditional association of Ngāi Tahu with many of the rivers, lakes and wetlands in Canterbury is recognised by the Ngāi Tahu Claims Settlement Act 1998, through instruments such as Statutory Acknowledgements. Within Canterbury, there are

eleven lakes, nine rivers and two wetlands recognised within Statutory Acknowledgements.

Canterbury has substantial fresh water resources, but due to a combination of climate and geography, water is not always available at the required places and times, to satisfy all the competing demands and values. Surface water resources can be split into three catchment types:

(1) Alpine catchments, which include extensive braided river systems, lakes and wetlands, created with the retreat of glaciers at the end of the last ice age;

(2) Foothill and coastal hill catchments, fed by southerly or north-easterly rainfall, with a combination of permanently flowing and ephemeral streams and wetlands; and

(3) Lowland, springfed streams and wetlands.

The coastal lagoons/hapua created where these rivers reach the sea, are an integral part of the riverine environment. Coastal lagoons/Hapua possess significant cultural values and also often have important ecological and recreational values.

The region's alpine rivers provide a unique set of resource management challenges. They are the largest and most reliable sources of water for abstraction and use, but also have important natural character, ecological, cultural, recreational, wilderness and amenity values. The importance of managing our braided rivers is discussed under Issue 7.1.3 and policies 7.3.1 and 7.3.2.

Canterbury has extensive groundwater systems. Most of the plains and inland basins have unconfined gravel aquifers, meaning the material surrounding them is porous and water and pollutants (known as contaminants) can leak between them. Some parts of the plains have aquifers which are less leaky, known as semi-confined aquifers; and in some areas there are confined aquifers, where the material around them is impermeable. Canterbury's groundwater system is very complex and there are aspects of it which are not yet well-researched and understood, particularly deep groundwater and the interconnectivity of surface water and groundwater in some areas.

In relation to the management of water resources, regional councils have functions to control:

(1) The taking, use, damming and diversion of water and the quantity, level and flow of water in any water body;

(2) The discharge of contaminants on to land or into water, and discharge of water into water; and

(3) The use of land for the purpose of the maintenance or enhancement of the quality of water in water bodies, or ecosystems in water bodies.

District councils control effects of activities on the surface of water and effects of land uses on the environment, generally. Both councils also have functions to maintain indigenous biological diversity.

Canterbury Water Management Strategy

The Canterbury Water Management Strategy (updated July 2010) (CWMS) has been developed to foster a collaborative approach to managing water within the region, considering the many and often competing values and uses of fresh water. The strategy is the product of a collaborative approach by local authorities, central government agencies, users of fresh water and groups representing various interests and viewpoints on fresh water management within the community. The CWMS is based on a concept of total or holistic management of water; environmental protection and restoration or enhancement proceeds in parallel with abstraction and use of water, greater efficiency in water use, and, where appropriate, developing water storage and distribution infrastructure.

The CWMS has three components:

(1) Outcomes, being a vision, principles, and targets for water management;

(2) Delivery mechanisms to achieve those targets, for example water harvest and storage schemes and biodiversity protection and enhancement programmes; and

(3) A governance structure for delivering the CWMS, using community-based Water Management committees working collaboratively to develop solutions to water issues in each zone (or the region for the Regional Committee) which are acceptable to a broad range of interest groups in the community.

The Regional Water Committee and each zone committee are charged with preparing an implementation programme of actions to address fresh water issues in the region (Regional Committee) or their zone (Zone Committee). These programmes are known as the RIP (Regional Implementation Programme) or ZIPs (Zone Implementation Programmes).

Relationship between Canterbury Regional Policy Statement (CRPS) and CWMS

The CWMS is not a policy statement or plan prepared under the RMA, and it cannot override the provisions of the RMA or the statutory policy statements and plans prepared under that Act. However, the Council may have regard to other relevant strategies or plans in preparing the Regional Policy Statement and any regional plans and this could include Regional and Zone Implementation Plans. The CWMS vision, principles and targets integral to promoting the sustainable management of water under the RMA, and as such have been incorporated into the objectives and policies of this chapter of the CRPS, where they meet the requirements of the RMA. In addition, Section 63 of the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010 (ECan Act 2010) requires the regional council to have particular regard to the vision and principles of the CWMS, as set out in Part 1, Schedule 1 to the ECan Act, in making decisions on the regional policy statement and regional plans.

The RPS identifies some matters which may be addressed through the RIP or ZIPs, in the methods to implement some of the policies in this chapter. In addition, the RIP or a ZIP may identify matters which that committee would like to be addressed in a plan prepared under the RMA. Any such request will be considered by the Canterbury Regional Council where the council agrees it is necessary to achieve the purpose of the RMA and the request complies with the other statutory requirements of the RMA.

ISSUE 7.1.1 - MANAGEMENT OF WATER AND EXERCISING STEWARDSHIP AND KAITIAKITANGA OVER WATER

Individuals and the community cannot effectively exercise stewardship, and Ngāi Tahu as tāngata whenua cannot effectively exercise kaitiakitanga, to resolve water management issues.

Explanation

Water is a public resource, which has very important values and uses for many sectors of the community. It is an integral part of the culture and identity of Ngāi Tahu. While water permits are issued to individuals to undertake a single activity for a specified time, the hydrological cycle is a highly connected system which does not adhere to property boundaries. Water resources cannot be effectively managed as a series of individual, disconnected activities, or as a resource which has only set values or uses (whether they are environmental, economic, social or cultural). Every activity involving fresh water, either singularly or cumulatively, affects other activities, values and uses of water, and therefore a high duty of care is necessary when using, or discharging into water.

Different values and expectations within the community can result in water management being controversial and adversarial. If people and the community become more engaged in the stewardship of the resource, including the ability of Ngāi Tahu to fulfil its role as kaitiaki, this may facilitate solutions to water management which are more acceptable to a wider range of interests in the community. As part of promoting sustainable management of natural and physical resources under the RMA, local authorities are required to have particular regard to kaitiakitanga (Section 7(a)) and the ethic of stewardship (Section 7(aa)). Managing water resources in a way which enables Ngāi Tahu to exercise kaitiakitanga also helps facilitate rangitaritanga; one of the principles of the Treaty of Waitangi/Te Tiriti O Waitangi. Local authorities are is required to take into account the principles of the Treaty of Waitangi in achieving the purpose of the RMA, under Section 8 of the Act. Integrated water management is also consistent with the Ngāi Tahu ethic of Ki Uta Ki Tai – 'from the mountains to the sea', which is recognised in Objective 7.2.3.

ISSUE 7.1.2 — ADVERSE EFFECTS OF ACTIVITIES ON FRESH WATER

The quality or quantity of water; and the natural character, life supporting capacity to support ecosystem processes, and indigenous species including their ecosystems of fresh water bodies can be affected:

(1) directly, through taking, damming or diverting water, discharging contaminants into water or by land uses which drain or modify water bodies or their margins; and

(2) indirectly, as a result of the development or intensification of land uses and the associated discharge or run-off of contaminants;

and not all effects, particularly cumulative effects, are fully understood and easily managed.

Explanation

The quality or quantity of water and the natural character of surface water bodies, are important indicators of the health of fresh water resources and their associated values. The National Policy Statement for Freshwater Management includes the requirement to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of freshwater in sustainably managing the use and development of land, discharges of contaminants and in the taking, using, damming or diverting of freshwater.

Natural character includes a range of qualities, and features created and sustained by nature, such as the quality and quantity of water, the character of the bed substrate, the natural processes which move sediment, water and biota, and the values and characteristics these processes give rise to. Natural character includes the aquatic ecosystems which the water body supports including the diversity and abundance of indigenous species, the presence of healthy and resilient riparian margins, and its surroundings, including landforms and vegetation. The natural character of a fresh water body often gives rise to associated values and uses, for example recreational and amenity values, and social and economic activities which are based on these values. Natural character can help provide a sense of place for people and communities, and when it is degraded this sense of place can be affected.

For Ngāi Tahu as tāngata whenua, the values of freshwater also include the mauri of the water body and its spiritual, historical or cultural significance. For Ngāi Tahu, these things are inseparable from the physical characteristics of the water body. The relationship between Ngāi Tahu, as tāngata whenua, and fresh water forms a fundamental part of the cultural identity and heritage of Ngāi Tahu. Abstraction and poor water quality can have adverse effects on the relationship between Ngāi Tahu and fresh water including their culture and traditions. This is because the life-supporting capacity and/or mauri of the resource can be affected, including its ability to support healthy habitat for mahinga kai and to provide for customary uses.

Many water bodies in the region have altered water quality, reduced flows or levels, or modified natural characteristics, from what they had prior to European settlement. This is an outcome of developing and utilising natural resources for community wellbeing. However in recent years an increasing number of fresh water bodies have experienced deteriorating water quality, flows or levels (groundwater) or other reductions in natural character. Specific causes can include:

(1) Higher concentrations of nutrients, toxins and pathogenic microorganisms in surface water and groundwater, and more sediment entering surface water bodies, often corresponding with changes or intensification of land uses in catchments, for example urban development or changes in rural production. In some circumstances non-human sources of contamination such as bird colonies have also contributed to higher concentrations.

(2) Increased abstraction of groundwater, which is affecting the duration and frequency of low flows particularly in lowland spring fed streams, which has been observed both in catchments with increased irrigation and in catchments with increased rural-

residential development. In some catchments there has been increased irrigation or increased rural residential development. Increased abstraction of groundwater may affect the duration and frequency of low flows.

(3) Increased abstraction from surface water, which is prolonging periods of low flow, and increasing the frequency, duration and length of drying reaches in the larger foothill streams and rivers.

(4) Loss of riparian and wetland habitats, both directly through draining wetlands and indirectly, when declining ground and surface water levels cause wetlands to dry up.

(5) Changes in vegetation, including the spread of willows and wattles originally planted to stabilise river banks or for flood protection; and in some catchments with low rainfall, the spread of exotic forestry can reduce rainfall run-off and affect river flows.

The above matters show the interconnected nature of surface water, groundwater and land-uses and the difficulty with trying to manage these effects by focussing on a single activity at a single point within the hydrological system. An integrated approach is needed to the management of fresh water and the relationship between water and land uses activities. The health of some streams has improved markedly through programmes such as the Living Streams initiative, relying on the combined efforts of water users, permit holders, the regional council, landowners, and industry groups.

Sometimes the flow, quality or natural characteristics of fresh water bodies are altered through one large-scale activity or development, for example a hydro-electricity generation or irrigation scheme. However, in many cases, the changes result from the cumulative effects of many small-scale activities, and it is these cumulative effects which are often the hardest to manage. The scale of individual activities is often too small to argue that the effects of that one activity will be more than minor, and the changes are often gradual, making it hard to pinpoint exactly when the cumulative effects start.

In addition, some of the effects of activities on fresh water bodies are not fully understood or easily managed. For example, neither the duration for which nitrates are held in soil before leaching into groundwater (the lag effect), or the relationship between shallow and deep groundwater, is well researched in Canterbury. In other cases, there isn't the information available about individual catchments or specific fresh water bodies to fully assess the effects of activities. For example, while there are many rivers in the region with comprehensive flow records, there are many which have very short, intermittent or no flow records. There is also very limited data on the actual amount of water abstracted for irrigation. With the introduction of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, and working with water permit holders and water resource users, this information gap should be remedied over time. In the interim, models need to be used to depict water abstraction behaviour. The accuracy of these models is based on a number of the underlying assumptions which can be subjected to scientific scrutiny and/or lead to costly litigation.

ISSUE 7.1.3 — NEED FOR HIGH QUALITY FRESH WATER FOR DRINKING WATER SUPPLIES, CUSTOMARY USES AND OTHER ACTIVITIES

High quality, fresh water is essential to provide drinking water for people and livestock, community water supplies, Ngāi Tahu customary uses, contact recreation and other activities which require high quality, fresh water. Some fresh water bodies no longer have sufficient water quality to provide for these activities, and without effective management of land uses and discharges, other fresh water bodies may also become unsuitable for these activities.

Explanation

High quality, fresh water is fundamental to people's health and well-being and the health of animals and ecosystems. It is also fundamental to the culture and traditions of Ngāi Tahu. Many rivers, streams and some groundwater sources in the region cannot be used for human drinking water without treatment. Some streams, rivers and lakes can no longer be used by Ngāi Tahu for customary uses

such as gathering mahinga kai, and are no longer suitable for swimming or other contact recreation. If water quality continues to deteriorate in the region, the costs of supplying potable drinking water will increase and opportunities to enjoy customary uses, contact recreation and other activities will continue to decrease.

Over 85% of the region's population has access to community water supplies. The remainder of the population sources water from private groundwater and surface water takes, or from rain water. Community water supplies vary in scale and their level of treatment. The largest community water supply is for Christchurch, drawn from the Christchurch-West Melton groundwater system. It is reliable and of very high quality, without treatment. For this community drinking water supply to remain reliable and untreated, the quantity and quality of fresh water in the Christchurch-West Melton groundwater system must be carefully managed, as must the land uses and discharges to land, within the Christchurch groundwater protection zones.

Other communities, such as Timaru, Ashburton and Kaikōura, obtain their water from a mix of surface water and groundwater. A few communities, such as Akaroa, depend on surface water sources to provide most or all of their water supplies. Some smaller community water supplies in the region have restricted use in summer, and some are vulnerable to contamination from activities upstream of the intake(s). If these supplies do fail, it can be costly to fix them because of the small number of users. There are also a number of households within rural areas who provide their own domestic and stockwater supplies, usually from small streams or shallow bores. In some catchments, particularly where groundwater abstraction and use is heavy, some of these traditional sources of domestic and stockwater supply are no longer reliable; and there is not always a community supply available or capacity in the community supply, to serve additional properties. Access to reliable and cost-effective drinking water supplies is also an issue for some marae in the region, especially those in rural areas, where they are remote from community water supplies.

Livestock also needs access to fresh water. Livestock is less sensitive to water quality issues than people, but fresh water must still be of a suitable quality and be available at the appropriate time, to meet this need. High quality fresh water is also important to allow for customary uses, contact recreation and some commercial activities such as fresh water aquaculture.

It is expected that as Canterbury's population grows and people's expectations change, there will be more demand for high quality fresh water. There is also likely to be increasing competition for fresh water for other uses (see Issue 7.1.3) and pressure on water quality from more intensified rural and urban land uses.

ISSUE 7.1.4 — THE BENEFITS OF AND DEMAND TO ABSTRACT AND USE FRESH WATER FOR ECONOMIC WELL-BEING AND THE COSTS AND EFFECTS OF MEETING THIS DEMAND AND REALISING BENEFITS

Meeting, in ways that are economically feasible and environmentally sustainable, the demands to abstract and use freshwater for a variety of activities that are necessary or beneficial for economic wellbeing.

Explanation

Fresh water is an essential resource for irrigation, hydro-electricity generation and a variety of industrial and commercial activities and other infrastructure, which contribute to the region's economic productivity, and our economic and social well-being. In many cases these uses involve substantial sunk investment which is dependent on access to freshwater. Currently, Canterbury contributes a significant amount of New Zealand's hydro-electricity generation capacity with lakes Tekapo and Pukaki providing approximately 57% of New Zealand's hydro storage capacity. Canterbury also contains over 70% of New Zealand's irrigated land. In 2009, approximately 500 000 hectares of rural land was irrigated in Canterbury. There is potential to increase both the area of land under irrigation and improve the reliability of supply; with associated economic benefits to local communities and the regional and national economies. Additional irrigation water also has the potential to increase the versatility of our production systems and resilience of the economy, especially if the projected changes in weather patterns resulting from climate change, occur. Because of the varying demands for water, it is important that Ngāi Tahu, stakeholders, and the wider community are to be consulted in identifying and establishing solutions to water allocation.

Regional climate change projections suggest there will be:

(1) Generally more variable rainfall within any year (and therefore a reduction in the reliability of supply of water) and increases in summer temperatures (and therefore increased evaporation and irrigation demand).

(2) Decreases in winter rainfall on the east coast (and therefore a decrease in groundwater recharge from rainfall).

(3) Increases in rain in the Alps and less snow (and therefore reduced summer base flows and greater flow variability in alpine rivers).

Most water abstracted for irrigation purposes in the region occurs as 'run of river' takes from rivers and streams, or groundwater takes. Most of these sources are recharged from local southerly and north-easterly rainfall (excepting areas recharged from the alpine rivers), so tend to be most depleted at the same time as the demand for irrigation water is highest. This condition results in increased impacts of abstraction on the environment and less reliability of supply for the abstractor. In many catchments, the amount of water that can be allocated for abstraction from these sources is at or over the limit for both sustaining a healthy river or groundwater system and maintaining a reasonable reliability of supply. As of 2009, some 10 groundwater zones identified within the Natural Resources Regional Plan were at or over the allocation limits set in the plan, and another four are over 80% allocated.

On the demand side, Canterbury's industrial and agricultural base is growing; and if the region becomes drier, improvements in water use efficiency along with more irrigation will be needed to maintain existing and enable future primary production activities to occur. In addition, demand for electricity is increasing and (sub 27.18 EECA) there is a national requirement for more renewable electricity generation. The National Policy Statement for Renewable Electricity Generation reflects the Government's goal to have 90% of New Zealand's electricity generated from renewable sources by 2025 (in an average hydrological year providing it

does not compromise security of supply). In order to achieve this target existing renewable electricity activities will need to be maintained and new renewable electricity activities will need to be developed. The National Policy Statement identifies that the need to develop, operate, maintain and upgrade renewable electricity generation activities and the benefits of renewable electricity generation are matters of national significance. In the Canterbury context this will primarily be achieved through hydro and some wind generation. The nationally significant Waitaki Hydro Scheme is located within the Canterbury Region. Pursuant to the Resource Management Act the benefits of renewable energy are specifically acknowledged as a matter to have particular regard to. The use and development of renewable energy results in a range of benefits and positive effects.

On the supply side, there is a need to recognise and provide for existing uses of water such as for hydro-electricity where even minor reductions in the generation output of existing activities can cumulatively have significant adverse effects on national, regional and local renewable electricity generation output. Current water sources are predicted to become less reliable; and the abstraction and use of water for irrigation, and other activities can result in positive and adverse effects on the environment. To achieve the purpose of the RMA, we need to manage both the positive and adverse effects of these activities.

Improvements in the efficiency of water use are an important part of managing the region's water resources. However, improvements in efficiency are not going to be sufficient on their own to satisfy likely future demand; and one of the tools for improving efficiency in the use of water for irrigation is to improve reliability of supply.

Most of the region's alpine rivers are also at or near their full allocation for reliable 'run of river' takes. However, they contain substantial additional water in the form of flow modulation, including freshes, which, if able to be harvested and stored, could provide a substantial quantum of reliable water for irrigation, hydro-electricity generation and other uses, as well as providing an opportunity for environmental and recreational improvements. These catchments are fed from north-westerly or westerly rainfall, so they often have freshes flowing at times when irrigation demand is highest on the Canterbury Plains. However, these alpine rivers also have high natural character, ecological and recreational values that need to be accommodated, and significant cultural and amenity values associated with their 'natural character'. Freshes and flow variability play a key role in sustaining the natural character, ecosystem processes and healthy functioning of alpine rivers, especially braided rivers.

Braided rivers are internationally very rare geomorphological features and Canterbury's braided rivers are ecologically unique. The alpine rivers, both the braided and non-braided sections, play a vital role in transporting sediment to the Canterbury coast; they have high recreational values; and the upper catchments are often relatively unmodified, yielding high wilderness and natural character values. The alpine rivers dominate Canterbury's landscape. They are of great cultural significance to Ngāi Tahu and are fundamental to the sense of place and identity for many Cantabrians. The challenge is to find ways in which water from the alpine rivers can be harvested, stored and used which are affordable economically and which retain the other important values of these rivers and their catchments.

The importance given to improving and maximising the efficient allocation and efficient use of water is provided for within the National Policy Statement on Freshwater Management. Both the National Policy Statement and the Canterbury Water Management Strategy include specific reference to the transfer of water permits as a means to improve and maximise the efficient allocation of water. Section 136 of the RMA provides for the transfer of water permits under certain circumstances and subject to certain requirements, including expressly allowing for it in a regional plan. Where a water resource is close to or fully allocated, transfer mechanisms can promote the efficient use of water resources, especially where potential demand may exceed availability of water for utilisation. In the case of fully allocated catchments, transfers will need to be considered in a comprehensive and integrated manner.

ISSUE 7.1.5 — INEFFICIENT ALLOCATION AND USE OF WATER

Inefficient infrastructure or methods for abstracting, applying or using water result in more water being used to support an activity than necessary; and

Managing the alloction and use of fresh water on an ad hoc basis can result in less efficient use of the water resources in a catchment, than if uses are appropriately combined or water sources integrated.

Explanation

Inefficient use of water is an issue in the region because it means more water is used to support some activities than necessary; or more activities could benefit from the use of the same amount of water, if efficiency is improved. This is particularly important in areas where the demand for water for abstraction and use exceeds the water available and in areas where fresh water bodies are affected by over-abstraction. Improved efficiency means some water could remain 'in-stream' without affecting current reliability of supply and the environmental costs of ineffecient use, including reduced flows and increased flushing of nutrients through to groundwater, are avoided.

This issue deals with efficiency in the abstraction and use of water, in two ways. The first matter relates to efficiency in the delivery and application of water for individual activities and how much is 'lost' through leaky infrastructure, careless use or the technology used. Some of this inefficiency is easily corrected, for example fixing leaking pipes and joins, not watering soils over field capacity, turning off taps and not running water to waste. Some older technology and infrastructure for abstracting, conveying and applying water is, by design, less efficient than more modern systems, for example open channels need and lose more water in conveyance than piped systems. This form of inefficiency is less easy to address than inefficiency resulting from careless use of water or poor maintenance of systems, because there is often significant capital cost involved in changing to more efficient technology, especially if substantial redesigning of infrastructure is required.

Improving reliability of supply is also an important tool to improve efficiency of water use. Unreliable water supplies

can lead to inefficient water use if people use more water than they need when it is available, to try and reduce the impacts of water restrictions when they are applied. Reliability of supply can be improved through the taking and storage of water during freshes.

Furthermore, both the National Policy Statement on Freshwater Management and the Canterbury Water Management Strategy include specific reference to the transfer of water permits as a means to improve and maximise the efficient allocation of water.

A second issue with water efficiency relates to maximising the number of uses that can be supported from the abstraction of fresh water in a catchment or even across catchments. Any changes to allocation methods and water use policies will be more widely accepted and enduring where they are developed in collaboration with water permit holders and industry. Water is also used in-situ by salmon farms and other users. Some abstractive users also derive benefit from the same water that electricity is generated from.

Water use efficiency may also be achieved through combining or integrating water sources within a catchment, for example replacing groundwater with a surface water scheme to irrigate an upper catchment may improve reliability of supply and reduce effects on lowland springs, streams and groundwater in the lower catchment.

This second sort of efficiency is much harder to address. It requires the cooperation of many parties, sufficient demand to make it feasible, and catchment-wide management of water resources rather than managing individual activities in specific locations, which has been the traditional approach to water management in Canterbury under the RMA. However, given the current and likely increasing demand for water abstraction in the region, and the costs of developing new water harvest and storage schemes, this sort of efficiency needs to be an increasing part of water management.

7.2 OBJECTIVES

Objective 7.2.1 – Sustainable management of fresh water

The region's fresh water resources are sustainably managed to enable people and communities to provide for their economic and social well-being through abstracting and/or using water for irrigation, hydro-electricity generation and other economic activities, and for recreational and amenity values, and any economic and social activities associated with those values, providing:

(1) the life-supporting capacity ecosystem processes, and indigenouse species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded;

(2) the natural character values of wetlands, lakes and rivers and their margins are preserved and these areas are protected from inappropriate subdivision, use and development and where appropriate restored or enhanced; and

(3) any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for.

The following policies implement this objective:

7.3.1 to 7.3.7, and 7.3.9 to 7.3.12.

Principal reasons and explanation

Objectives are the goals for fresh water management in the region, to achieve the purpose of the RMA. They are achieved by implementing the policies in this chapter. There is a strong emphasis on setting the framework for water management in the region through the use of regional plans based on community involvement through the Regional Implementation Programme (RIP) and the Zone Implementation programmes (ZIPs) developed by the Regional and Zone committees under the CWMS.

Objective 7.2.1 identifies the values and uses of fresh water that must be provided for and their relativity, to promote sustainable management of fresh water.

Objectives 7.2.2 and 7.2.3 set further goals for how water will be managed to provide for the values and uses set out in Objective 7.2.1.

To promote the sustainable management of fresh water, it is necessary to resolve the competing uses and values of fresh water, set out in the issues. Under Objective 7.2.1 fresh water in the region is managed firstly to safeguard its life-supporting capacity (being the need to sustain aquatic ecosystems), to provide drinking water, to enable the exercise of customary uses, and to preserve the mauri and natural character values of fresh water and protecting lakes, rivers, wetlands and their margins from inappropriate subdivision, use and development. Ngāi Tahu, as tāngata whenua, has, and continues to use, fresh water for customary purposes. For Ngāi Tahu, customary use is about sustainable use, and includes the need to manage, protect and improve habitats and ecosystems to enable the mahinga kai resource to be sustained.

Within a framework that ensures these first order uses and values are provided for, fresh water is then managed to provide for its other values and uses. These other values and uses include the need to abstract and/or use water to support a variety of economic activities, and the need to provide for recreational and amenity values and activities associated with those values. There is no hierarchy or preference between abstraction and recreation or other activities – they are all important for the economic and social well-being of people and communities. Ideally, a fresh water body should be managed to provide for a wide range of these uses and values, but where this cannot be achieved, an assessment of the relative importance of these activities in achieving the purpose of the RMA, will need to be made in each catchment.

Objective 7.2.2 - Parallel processes for managing fresh water

Abstraction of water and the development of water infrastructure in the region occurs in parallel with:

(1) improvements in the efficiency with which water is allocated for abstraction, the way it is abstracted and conveyed, and its application or use;

(2) the maintenance of water quality where it is of a high standard and the improvement of water quality in catchments where it is degraded; and

(3) the restoration or enhancement of degraded fresh water bodies and their surroundings.

The following policies implement this objective:

7.3.1 and 7.3.3 to 7.3.12

Principal reasons and explanation

Objective 7.2.2 recognises the concept of parallel processes for managing the region's fresh water resources: the need to provide additional water for abstraction; to improve efficiency of water use; to develop water infrastructure; and to address environmental degradation, all at the same time. 'Parallel processes' does not mean additional abstraction first and dealing with environmental effects later; nor does it mean no more abstraction until all environmental issues have been addressed. To disallow any further abstraction or use until all current environmental issues are resolved provides no catalyst for existing users of fresh water to tackle these issues. In addition, increased ability to manage water following infrastructure development will help to address environmental issues as well as providing for commercial use. Continuing to take and use water for abstraction without addressing inefficient use or adverse effects, will not achieve the purpose of the RMA. Parallel processes reflects the concepts in the definition of sustainable management in Section 5(2) of the RMA; using and developing resources while sustaining them for future generations and addressing any adverse effects that result.

Objective 7.2.3 - Protection of intrinsic value of waterbodies and their riparian zones

The overall quality of freshwater in the region is maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems are safeguarded.

The following policies implement this objective

7.3.1 to 7.3.3, 7.3.7, 7.3.9, 7.3.12 and 9.3.5

Principal reasons and explanation

Objective 7.2.3 recognises that water has value in its own right, in addition to its value for cultural, social, economic and recreational uses. While Objectives 7.2.1 and 7.2.2 establish environmental limits within which development must occur, Objective 7.2.3 addresses the value of water itself. This value underpins many of the other values that are derived from freshwater, and it is important that the overall quality of water is safeguarded for present and future generations.

Objective 7.2.4 - Integrated management of fresh water resources

Fresh water is sustainably managed in an integrated way within and across catchments, between activities, and between agencies and people with interests in water management in the community, considering:

(1) the Ngāi Tahu ethic of Ki Uta Ki Tai (from the mountains to the sea);

(2) the interconnectivity of surface water and groundwater;

(3) the effects of land uses and intensification of land uses on demand for water and on water quality; and

(4) kaitiakitanga and the ethic of stewardship; and

(5) any net benefits of using water, and water infrastructure, and the significance of those benefits to the Canterbury region.

The following policies implement this objective

7.3.4 to 7.3.7, 7.3.9 and 7.3.13

Principal reasons and explanation

Objective 7.2.4 requires water to be managed in an integrated way that recognises fresh water as part of an interconnected hydrological system; and as part of a larger environment. Managing water in an integrated way, rather than as a single resource at a single point in time, facilitates improved management of cumulative effects of multiple activities and the links between water takes, land uses and discharges. Water harvesting and storage development can facilitate integrated management by encouraging different ways of using water that have lower environmental impacts. Some of this infrastructure represents a substantial level of investment which has a long productive life.

The approach in Objective 7.2.4 also enables water management to better consider the Ngāi Tahu ethic of Ki Uta Ki Tai from the mountains to the sea; which, as well as helping ensure whole catchment management of water resources, helps recognise and provide for Ngāi Tahu's cultural relationship with its tāonga (water) as required under Section 6(e) of the RMA.

Objective 7.2.4 also reflects the aspirations expressed in the CWMS to move from a fragmented and contested form of fresh water management to a collaborative management system to satisfy the multiplicity of important values and uses fresh water has. To do this successfully, Objective 7.2.3 envisages a water management regime that facilitates community stewardship of water resources and enables Ngāi Tahu, as tāngata whenua to exercise kaitiaki. As part of promoting sustainable management, particular regard is to be had to kaitiakitanga and the ethic of stewardship under Sections 7(a) and 7(aa) of the RMA.

Policy 7.3.1 – Adverse effects of activities on the natural character of fresh water

To identify the natural character values of fresh water bodies and their margins in the region and to:

(1) preserve natural character values where there is a high state of natural character;

(2) maintain natural character values where they are modified but highly valued; and

(3) improve natural character values where they have been degraded to unacceptable levels;

unless modification of the natural character values of a fresh water body is provided for as part of an integrated solution to water management in a catchment in accordance with Policy 7.3.9, which addresses remedying and mitigating adverse effects on the environment and its natural character values.

This policy implements the following objectives:

Objective 7.2.1, 7.2.2 and 7.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Engage with Ngāi Tahu to identify features of natural character that are significant from a cultural perspective and fresh water bodies Ngāi Tahu considers possess significant natural character values.

(2) Set objectives, policies and rules in regional plans to:

  (a) Identify and protect wetlands, lakes, rivers or their margins which are:

    (i) Valued because they are in a state of high natural character or in a modified state of natural character but valued in their current state, and the key elements which contribute to that natural character; and

    (ii) Unacceptably degraded, and the key values which need to be enhanced and to what level.

  (b) Identify areas in which natural character values may be modified by taking, using, damming or diverting water, to achieve the purpose of the RMA.

  (c) Establish and implement environmental flow regimes, water allocation regimes and water quality standards in catchments to address the natural character values of fresh water bodies.

  (d) Control the taking, use, damming and diverting of water and the discharge of contaminants on to land or into water, to maintain the natural character values of fresh water bodies.

  (e) Provide for financial contributions, or use of other environmental compensation or offsets, to help mitigate adverse effects on fresh water or enhance values, where appropriate.

(3) Investigate and where appropriate promote alternative, less invasive vegetation for bank stabilisation and flood protection works, than for example, willow or wattle species.

(4) Provide information and assistance, where appropriate, to individuals and community groups looking to eradicate pest species within and around the beds and margins of rivers, lakes and wetlands.

Local authorities:

Will:

(5) Work together to ensure consistency in the identification of areas with high natural character in regional and district plans.

(6) Seek and have regard to recommendations from The Regional Water Management Committee and the zone water management committees relating to areas for protection (non-regulatory) or enhancement of their natural character values within their zone, and action(s) to undertake that enhancement.

Principal reasons and explanation

Canterbury's many different water bodies, from small springs to large braided rivers, lakes and wetlands, support a diverse range of natural values. The plants, animals and ecosystems, landscapes and landforms, and their associated amenity and wilderness values are important locally. The importance of the values of some of our fresh water bodies, especially our larger lakes and braided rivers are recognised nationally and internationally. They also form a fundamental part of the cultural identity and heritage of Ngāi Tahu, of subsequent settlers, and of the Canterbury community today. Many of the upper catchments of our alpine rivers are relatively unmodified, with some areas enjoying water quality, flows and levels which are considered in their natural state. Other lakes and rivers have had their natural character modified in various ways, for example through the erection of structures, changes in vegetation, or the abstraction of water, but their modified natural character is still highly valued.

One of the matters to be considered as part of promoting the sustainable management of our natural and physical resources, is preserving the natural character values of our lakes, rivers and wetlands and their margins and their protection from inappropriate subdivision, use and development (Section 6(a)). Preserving the natural character of fresh water which is in a high natural state or which is modified but highly valued under Policy 7.3.1, is not intended to preclude all activities within the catchment, irrespective of their effects. Rather it requires activities to preserve the key elements which contribute to the natural character values of these fresh water bodies and protect these from inappropriate subdivision, use and development.

It is also a fundamental part of achieving the purpose of the RMA that water is made available for abstraction for irrigation, hydro-electricity generation and other activities, to provide for our economic and social well-being. If we are to shift to using the alpine rivers as a more sustainable source of water for this activity, and relieve the effects current abstraction is having on foothill and lowland catchments; then it is likely that some catchments with relatively high natural character values or character which is modified but highly valued, will need to be modified through large-scale abstraction, diversion, damming or storage of water.

Policy 7.3.1 recognises and provides for this activity to occur in areas which are assessed and identified as appropriate for modification for this purpose. This approach to managing natural character values achieves the purpose of the RMA, which requires a broad overall judgement to be made on any proposal, considering but not overridden by, the duty to recognise and protect the preservation of the natural character of lakes, rivers, wetlands and their margins from inappropriate subdivision, use or development, under Section 6(a) of the RMA. However, the modification of areas of high or highly valued natural character needs to be part of an integrated solution to fresh water management in a catchment, as set out in Policy 7.3.9; and any adverse effects of the activity on natural character values needs to be remedied or mitigated as part of that integrated solution. Offsetting some of the loss of natural character with restoration or improvements in natural character in another part of the catchment may be an appropriate mitigation measure.

Policy 7.3.1 is implemented through the use of regional or district plans to identify the natural character of fresh water bodies, and the use of regional plans to outline integrated solutions to water management in a catchment.

Canterbury Regional Council has flood management responsibilities which includes planting for bank stabilisation and flood protection. Some of the species used have been invasive, and Council intends to investigate using less invasive species and/or indigenous species.

Policy 7.3.2 – Natural character of braided rivers and lakes

To maintain the natural character of braided rivers, and of natural lakes by:

(1) subject to clause (3), by prohibiting the damming of each of the main-stem of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki rivers;

(2) in respect of every other braided river in the region; by ensuring any damming of a braided river does not reduce the braided character of the the main stem;

(3) in respect of every natural lake by limiting any use of the lake for water storage so its level does not exceed or fall below the upper or lower levels of its natural operating range;

(4) clauses 1 – 3 do not restrict continued operation, maintenance or upgrading of any water storage scheme, irrigation scheme or hydro-electricity generation scheme for which lawful consent was in effect when this regional policy statement becomes operative, subject to the activity:

a) remaining a similar scale, intensity and character; and

b) not resulting in any additional significant adverse effect on the natural character of the river or lake.

This policy implements the following objective:

Objective 7.2.1, 7.2.2, and 7.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set objectives, policies and methods in regional plans to:

(a) Identify on a map the main stem of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki rivers;

(b) Prohibit damming on the main stem of braided rivers listed in the Policy;

(c) For those braided rivers not subject to 9.3.1(3) manage the damming of those rivers, to enable effects on the braided character of the main stem to be assessed.

(d) Manage damming the outlet of any natural lake and require any damming keeps the lake within its natural operating range, unless it has already been modified.

(e) Identify on a map all the natural lakes within the region.

Principal reasons and explanation

Braided rivers are internationally rare and the ecology and habitat values of Canterbury's braided rivers are unique. Braided rivers depend on variability in flow, the passing of freshes and flood flows and the transport of sediment, to maintain their braided characteristics. The transport of sediment down the major alpine rivers is also very important in managing sediment along the Canterbury coast. The alteration of their naturally fluctuating water level could have a significant adverse effect on their natural character. Similarly, our natural lakes have significant natural character, ecological and cultural values, particularly those in high country catchments and coastal lagoons/hapua.

The CWMS Immediate Steps restoration actions and planning initiatives call for the maintenance or restoration of the natural character of braided rivers, coastal lagoon/hapua and wetlands, and the natural character and levels of high country lakes. The CWMS has identified feasible options for storing water without damming the main stems of alpine braided rivers or raising the level of natural lakes beyond their natural operating range. This means the uppper catchments of the listed braided rivers can be protected and/or restored to a largley natural state.

Policy 7.3.2 applies in addition to Policy 7.3.1, to those fresh water bodies identified in Policy 7.3.2. Policy 7.3.2 does not apply to the main stem of braided rivers which are already dammed or natural lakes which have already been raised or modified, if the activity is part of maintaining or upgrading the existing infrastructure. In these cases, the effects of damming the water body already exist. It may better achieve the purpose of the RMA to allow those effects to continue. In some cases, additional effects created by upgrading existing infrastructure may better achieve the purpose of the RMA than

creating new storage elsewhere. Any of these activities will still need to be assessed through the regional planning and resource consent processes to ensure they achieve the purpose of the RMA. Similarly, Policy 7.3.2 does not preclude in-stream damming of braided rivers (other than those listed), provided the braided character of the main stem is not compromised.

Policy 7.3.2 applies in addition to Policy 7.3.1. As such, it does not preclude a regional plan from prohibiting damming of any other river or stream in the region, where doing so is necessary to achieve the purpose of the RMA. Similarly it does not preclude more restrictive controls on the use of lakes for water storage, including lakes which have already had their operating levels modified, where such controls are necessary to achieve the purpose of the RMA.

The term 'main stem' refers to that stem of a braided river that carries water to the coast or sea. A 'natural lake' is a lake which is created by natural geomorphic processes, not by human beings, and includes a naturally created lake which has had its flow or levels modified by human activity, such as damming. In these cases the exception in the policy for existing harvest and storage schemes, applies.

To avoid doubt, 'damming' in relation to Policy 7.3.1 refers to the act of damming the full width of a river bed or a lake outlet, so that the flow of water and sediment downstream can be controlled or prevented. It does not refer to directing the flow of a braid or channel within the river bed to enable a surface water take or as part of flood protection works, nor the temporary damming of water to allow for the installation, maintenance or repair of infrastructure in the bed of a river.

Policy 7.3.2 is implemented through policies and rules in regional plans to manage the damming and diversion of surface water.

Policy 7.3.3 – Enhancing fresh water environments and biodiversity

To promote, and where appropriate require the protection, restoration and improvement of lakes, rivers ,wetlands and their riparian zones and associated Ngāi Tahu values, and to:

(1) identify and protect areas of significant indigenous vegetation and significant habitats, sites of significant cultural value, wetlands, lakes and lagoons/hapua, and other outstanding water bodies; and

(2) require the maintenance and promote the enhancement of indigenous biodiversity, inland basin ecosystems and riparian zones; and

(3) promote, facilitate or undertake pest control.

This policy implements the following objective:

Objective 7.2.1, 7.2.2, 7.2.3 and 7.2.4

Methods

Local authorities:

Will:

(1) In regional and district plans as appropriate to the functions of each council, include:

  (a) Methods to identify and protect sites and areas with threatened indigenous flora or fauna species, significant cultural values, wetlands, and lakes and lagoons/hapua, in accordance with the provisions of Sections 6(a), (c), (e), (f) and (g) of the RMA; and

  (b) Provisions to manage land uses and vegetation removal within riparian margins.

  (c) Include standards in a district plan that remove the requirement for resource consent from the territorial authority, if resource consent is granted by the Canterbury Regional Council for the same purpose.

(2) Engage with Ngāi Tahu, as tāngata whenua to identify the fresh water sites of significance to Ngāi Tahu and the ways to enhance Ngāi Tahu values. This process should be assisted by the use of cultural monitoring tools and iwi management plans.

(3) When developing methods to identify, protect and enhance sites and areas of ecological value, have regard to the vision and principles of the CWMS.

(4) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management committees relating to establishing and undertaking programmes to protect, restore or enhance degraded lakes, rivers, wetlands and riparian areas, in accordance with the targets and 'first steps' biodiversity programme in the CWMS.

Should:

(5) When developing methods to identify, protect and enhance sites and areas of ecological value, have regard to the Canterbury Biodiversity Strategy (2008), or any other biodiversity strategy developed for the relevant district.

Principal reasons and explanation

The declining health of lakes, rivers, wetlands and their surroundings, and the associated effects on biodiversity and amenity values, is an issue in the region. For Ngāi Tahu, the habitat of tāonga species and mahinga kai resources within the region needs to be improved, so that the environment can continue to provide the necessities of life as well as ensuring that traditional practices are not lost to future generations.

The improvement of fresh water values requires a dual approach of proactive "on-the-ground" programmes and improved regulatory planning frameworks which require remediation or protection where necessary to achieve the purpose of the RMA. Fresh water can then be managed in a more integrated manner, recognising the links between fresh water bodies and their surroundings, and between aquatic and terrestrial ecosystems. Policy 7.3.3 focuses on both the use of provisions in regional and district plans to identify and protect existing sites and areas with significant values in accordance with Part 2 of the RMA; and on proactive "on-

the-ground" programmes, to restore or enhance specific sites or areas. The methods should be targeted at specific sites and areas within catchments, where tangible results in protection or enhancement can be achieved.

This chapter of the CRPS deals specifically with fresh water environments, but this should not be interpreted as restricting the application of Policy 7.3.3 to aquatic ecosystems. The land areas surrounding and linking fresh water bodies also contribute to their values. The key to implementing Policy 7.3.3 is targeted programmes and intervention considering the costs and benefits of such actions. Further provisions to maintain and enhance indigenous biodiversity within the region are found in Chapter 9 – Indigenous Ecosystems and Biodiversity.

Policy 7.3.4 – Water quantity

In relation to the management of water quantity:

(1) to manage the abstraction of surface water and groundwater by establishing environmental flow regimes and water allocation regimes which:

- **(a) manage the hydrological connections of surface water, groundwater and the coastal environment;**
- **(b) avoid long-term decline in groundwater levels and saltwater intrusion of coastal groundwater resources;**
- **(c) protect the flows, freshes and flow variability required to safeguard the life-supporting capacity, mauri, ecosystem processes and indigenous species including their associated ecosystems and protect the natural character values of fresh water bodies in the catchment, including any flows required to transport sediment, to open the river mouth, or to flush coastal lagoons;**
- **(d) provide for any existing or reasonably foreseeable needs of surface water or groundwater for individual, marae or community drinking water or stockwater supplies;**
- **(e) support the exercise of customary uses, including any flows required to maintain wetlands or water quality for customary uses; and**
- **(f) support any flow requirements needed to maintain water quality in the catchment;**

and, having satisfied the requirements in (a) to (f), provide for:

- **(g) recreational values (including the patterns and timing of flow variability desired by recreational users) and amenity values; and**
- **(h) any actual or reasonably foreseeable demand for abstraction (for uses other than those listed in (d) above), unless Policy 7.3.4(2) applies;**

and

(2) Where the quantum of water allocated for abstraction from a water body is at or exceeds the maximum amount provided for in an environmental flow and water allocation regime:

- **(a) avoid any additional allocation of water for abstraction or any other action which would result in further over-allocation;**

  and
- **(b) set a timeframe for identifying and undertaking actions to effectively phase out over-allocation; and**
- **(c) effectively addresses any adverse effects of over-allocation in the interim.**

This policy implements the following objectives:

7.2.1, 7.2.2 and 7.2.4.

Methods

The Canterbury Regional Council:

Will:

(1) Set objectives, policies and methods in regional plans to:

- (a) Establish and implement environmental flow and water allocation regimes for surface water resources in the region, in accordance with all relevant policies, including but not limited to Policy 7.3.4, Policy 7.3.10 and Policy 7.3.11 with the following priority order:
  - (i) All alpine rivers which are used for abstraction;

(ii) Foothills catchments where there is high demand for abstraction and high allocation. including the Selwyn/Waikirikiri, Ashburton/Hakatere, Hinds, Pareora, Orari, and Waipara catchments.

(iii) Catchments which are nearly, fully or over-allocated and under continued demand for further water.

(b) Establish and implement groundwater allocation regimes for all groundwater resources in the region in accordance with Policy 7.3.4 with the following priority order:

(i) Catchments where surface water bodies are adversely affected by groundwater abstraction;

(ii) Catchments which are nearly, fully or over-allocated and under continued demand for further water.

(2) Control the take, use, damming or diversion of surface water or groundwater in accordance with environmental flow and water allocation regimes.

(3) Engage with Ngāi Tahu, as tāngata whenua in the setting of environmental flow and water allocation regimes, to identify the mauri of fresh water bodies and requirements for customary uses.

(4) Ensure provision is made in all surface and ground water allocation regimes for water to meet actual and reasonably foreseeable needs for individual, marae, community and stockwater supplies.

The Canterbury Regional Council:

May:

(5) Work with stakeholders through the Regional and Zone Water Committees to consider ways in which efficiency gains can be provided to consent holders, except in over-allocated catchments.

Territorial authorities:

Will:

(6) Provide for life supporting flows, drinking water supplies and stock water supplies as a priority take during periods of water shortage.

(7) Identify any requirements for existing or additional water for community or municipal drinking or stockwater supplies, for the Canterbury Regional Council to provide for as part of setting or reviewing environmental flow and water allocation regimes; and

(8) Consider access to and availability of fresh water in catchments for individual domestic or stockwater supply, when setting provisions for subdivision in rural areas in district plans.

Local authorities:

Will:

(9) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management Committees relating to:

(a) fresh water bodies where flow regimes or allocation limits need review;

(b) developing and implementing a plan to address Policy 7.3.4(2)(b), including investigating opportunities for water storage and harvesting schemes as one possible method; and

(c) options or solutions to assist abstractors to adapt to new flow regime or allocation conditions set in accordance with Policy 7.3.4.

Principal reasons and explanation

Policy 7.3.4(1) requires the Canterbury Regional Council to establish environmental flow and water allocation regimes to manage the quantity of water in fresh water bodies and the effects of abstraction. Managing the abstraction of water through environmental flow and water allocation regimes has two outcomes: sustaining the life-supporting capacity and protecting in stream values of water bodies; and ensuring that abstraction regimes offer a sufficient level of reliability for abstractors from the effects of additional water takes. Each environmental flow and water allocation regime will be particular to a catchment, depending on the size and nature of the fresh water bodies, the relationship between surface water and groundwater; the values of the fresh water bodies; and the number and nature of abstractions.

Policy 7.3.4(1) establishes a consistent set of parameters which need to be considered in any catchment in the region when developing an environmental flow and water allocation regime, and establishes a relationship between the different values to be considered. The flows which safeguard the life-supporting capacity of fresh water bodies and provide for drinking and stockwater supplies and the exercise of customary uses, take precedence. The relative importance of flows for in-stream recreational and amenity values and abstraction for other purposes (than drinking water supplies) are given secondary preference; but as both sets of values and uses are important for providing for economic and social well-being, there is no hierarchy between them. Rather a value judgment is required to be made in each catchment, depending on the relative importance of these values and uses to achieving the purpose of the RMA.

Environmental flow and water allocation regimes in the region are to be developed in accordance with all relevant policies, including but not limited to Policy 7.3.4(1), Policy 7.3.10 and Policy 7.3.11.

Policy 7.3.4(2) deals with the management of water quantity in catchments where allocation has reached the maximum allocation allowable under an environmental flow and water allocation regime. The policy indicates no additional abstraction is allowed, and measures must be put in place to try and reduce the effects of the over-allocation over time. For the purposes of Policy 7.3.4(2)(a), the renewal of water permits are not considered to be additional allocation which would result in further over-allocation. What is an appropriate timeframe for reducing the over-allocation of water for abstraction will vary in each catchment depending on the severity of the over-allocation and its effects, and the costs of remedial options. Therefore this matter needs to be addressed as part of a regional plan for that catchment.

Environmental flow regimes and water allocation limits are valuable tools for managing the cumulative effects of water abstraction in a catchment, so adhering to the limits set in such regimes when granting resource consents to take water is important. Where the flow regime or water allocation limits need review, this should be done though changing the regime or limits in the relevant regional plan.

For environmental flow and water allocation regimes to effectively manage water resources, provision needs to be made for existing and likely future domestic and stockwater

requirements. The total quantum of water taken for individual and community domestic and stockwater in the region is very small relative to the amounts abstracted and used for other activities, so these takes have not always been assessed in establishing water allocation regimes, in the past. However, as pressure on our water resources increases and the quality of fresh water declines, there is a greater need to assess and provide water for these uses when calculating allocation limits and setting environmental flow regimes.

Chapter 5, Policy 5.3.5 deals with the provision of adequate water supply as part of the growth of towns and settlements. The adequate provision of domestic and stock water is also important in rural areas, especially on smaller properties and marae, where people may have few options for securing a water supply. The Canterbury Regional Council and territorial local authorities should work together to identify areas where fresh water may not be of sufficient quantity, quality or reliability to provide for domestic and stockwater needs, and to ensure this matter is considered when making provisions for subdivision and residential density in rural areas.

Policy 7.3.5 – Water quantity and land uses

To avoid, remedy or mitigate adverse effects of land uses on the flow of water in surface water bodies or the recharge of groundwater by:

(1) controlling the diversion of rainfall run-off over land, and changes in land uses, site coverage or land drainage patterns that will, either singularly or cumulatively, adversely affect the quantity or rate of water flowing into surface water bodies or the rate of groundwater recharge; and

(2) managing the planting or spread of exotic vegetation species in catchments where, either singularly or cumulatively, those species are or are likely to have significant adverse effects on flows in surface water bodies.

This policy implements the following objective:

Objective 7.2.1, 7.2.2 and 7.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies; and may include methods in regional plans to:

  (a) Manage the diversion of surface water and drainage of land in both rural and urban environments;

  (b) Identify catchments where controls on changing from short to tall vegetation cover are needed and methods to manage these changes.

(2) Investigate the feasibility of options to thin or remove exotic plant species in surface water bodies which are adversely affected by prolonged low flow periods.

(3) Investigate and where appropriate promote alternative, less invasive vegetation, or indigenous vegetation for bank stabilisation and flood protection works, than for example, willow or wattle species.

Local authorities:

Will:

(4) Consider, jointly, the effects of changes in land uses on land drainage patterns and stormwater disposal requirements, as part of the zoning of land for residential, commercial or industrial uses.

Principal reasons and explanation

Changes in land use can affect the flows or quantity of water in fresh water bodies. Diverting or modifying surface waterways, wetlands or other land drainage features can affect the land drainage system downstream, for example removing the source of water to support wetlands or other tributaries. This change can affect ecological and other 'in stream' and riparian values of those waterways, and affect any person relying on them as a source of domestic or stock water.

In rural areas, afforestation of land in catchments can help reduce the size of peak flood flows by intercepting rainfall run-off, but this interception means it can also prolong the length and severity of low flow conditions. Increasing the area of hard surface in urban areas with residential or commercial

development can cause quicker and higher flood peaks, increasing the rate and amount of rainfall run-off compared with pasture or other vegetative ground cover. At the same time, the green spaces where these flood waters can disperse are also reduced.

The effects of land uses on flows into water bodies are managed through: provisions in regional plans to manage the diversion of surface water; controls on the planting of exotic forestry in catchments where afforestation may adversely affect low flows; and a joint approach between regional and district councils to managing potential effects of urban development on stormwater run-off. This matter needs to be addressed at the time land is zoned for residential or commercial development, rather than at the time the subdivision and building occurs. It is at the rezoning stage, that all parties can work together to ensure appropriate provisions can be made to manage the effects of increased rainfall run-off, including potential effects on land down-stream of the proposed development.

Policy 7.3.6 – Fresh water quality

In relation to water quality:

(1) to establish and implement minimum water quality standards for surface water and groundwater resources in the region, which are appropriate for each water body considering:

- **(a) the values associated with maintaining life supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, and natural character of the water body;**
- **(b) any current and reasonably foreseeable requirement to use the water for individual, marae or community drinking water or stockwater supplies, customary uses or contact recreation;**
- **(c) the cultural significance of the fresh water body and any conditions or restrictions on the discharge of contaminants that may be necessary or appropriate to protect those values; and**
- **(d) any other current or reasonably foreseeable values or uses;**

and

(2) to manage activities which may affect water quality (including land uses), singularly or cumulatively, to maintain water quality at or above the minimum standard set for that water body.

and

(3) where water quality is below the minimum water quality standard set for that water body, to avoid any additional allocation of water for abstraction from that water body and any additional discharge of contaminants to that water body, where any further abstraction or discharges, either singularly or cumulatively, may further adversely affect the water quality in that water body:

- **(a) until the water quality standards for that water body are met; or**
- **(b) unless the activities are undertaken as part of an integrated solution to water management in the catchment in accordance with Policy 7.3.9, which provides for the redress of water quality within that water body within a specified timeframe.**

This policy implements the following objectives:

7.2.1, 7.2.2 and 7.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to:

- (a) Set water quality standards for surface water and groundwater resources considering the matters set out in Policy 7.3.6(1); and
- (b) Control the discharge of contaminants into water or on to land where it may enter water, to ensure achievement of water quality standards in the catchment within a specified timeframe.

(2) Engage with Ngāi Tahu, as tāngata whenua in the setting of water quality standards to identify fresh water bodies with significant cultural values and any associated restrictions on the discharge of contaminants.

Local authorities:

Will:

(3) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management committees relating to:

- (a) Identifying and implementing actions to improve water quality in catchments with degraded water quality.
- (b) Identifying fresh water bodies which require water quality standards to be reviewed in a regional plan.
- (c) Establishing the current or reasonably foreseeable values or uses.

Should:

(4) Support industry-led guidelines, codes of practice and evnironmental accords where these would lead to the achievement of objectives in the Regional Policy Statement.

Principal reasons and explanation

Policy 7.3.6(1) manages water quality by requiring the setting and implementation of water quality standards for fresh water bodies in the region. Deteriorating water quality is arguably the single biggest issue with fresh water management in the region over the last 10 years. Water quality standards are set considering the matters set out in Policy 7.3.6(1), including the values associated with maintaining life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, and natural character of the water body and its associated values, any actual or likely demand for high water quality for drinking or stockwater supplies, customary uses or contact recreation; the cultural values of the fresh water body and any discharges of contaminants which may be inappropriate; and any other values or uses of the water body. There are some contaminants which can be treated and discharged to water in ways which do not adversely affect the chemical composition or physical condition of the water, but due to the nature of the contaminant are culturally inappropriate. Examples include, human ashes or treated sewage or effluent being discharged into water bodies which are used for mahinga kai.

In a similar way to environmental flow and water allocation regimes, water quality standards are a tool to manage the cumulative effects of land uses and discharges on water quality. Therefore it is important that the minimum standards are adhered to and that any changes required to water quality standards are made through amending or exempting the standard in the relevant regional plan, rather than breaching it.

Policy 7.3.6(2) provides for managing activities in catchments where water bodies do not meet the minimum water quality standard set. Two alternatives are offered. There is no further abstraction from or discharges of contaminants into that water body, if these activities may make the water quality worse. Alternatively, further abstraction or discharge can occur if it is part of an integrated solution to water management in the catchment which is addressing the degraded water quality. This latter approach recognises that new development can be a catalyst for improvements in the status quo, whereas preventing new activities does not, in itself, provide an incentive to address issues resulting from the effects of existing activities. What is an appropriate timeframe for improving water quality will vary in each catchment, depending on the extent of water quality degradation and its effects, and the costs of remedial options. Therefore this matter needs to be addressed as part of a regional plan for that catchment.

Policy 7.3.7 – Water quality and land uses

To avoid, remedy or mitigate adverse effects of changes in land uses on the quality of fresh water (surface or ground) by:

(1) identifying catchments where water quality may be adversely affected, either singularly or cumulatively, by increases in the application of nutrients to land or other changes in land use; and

(2) controlling changes in land uses to ensure water quality standards are maintained or where water quality is already below the minimum standard for the water body, it is improved to the minimum standard within an appropriate timeframe.

This policy implements the following objectives:

7.2.1, 7.2.2, 7.2.3 and 7.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to:

(a) Establish water quality standards, and, where appropriate, catchment contaminant load thresholds and controlling contaminants entering fresh water within surface water catchments or groundwater zones.

(b) Provide for the adoption of management practices and techniques (including the use of incentives) which manage the effects of land-uses on fresh water in both urban and rural environments.

c) Manage activities which affect water quality, singularly or cumulatively.

Local authorities:

Will:

(2) Work together to manage the adverse effects of land uses on freshwater quality including appropriate controls on land uses in district or regional plans. This may include adopting a holistic approach to the management of the impacts of development such as low-impact urban design and development principles, and riparian management.

(3) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management Committees relating to land use practices in their zones which are adversely affecting water quality, and actions, including landholder, community-based, or industry initiatives (for example audited self-management), which could be undertaken to reduce the effects of these land uses on water bodies.

Principal reasons and explanation

Many land uses produce or use contaminants such as nutrients, pathogenic microorganisms, toxins and sediments, which can enter water via diffuse (non-point source) pathways, causing water quality to decline. Contamination of water can occur from rural, industrial and urban land uses, and is often associated with the intensification of land uses with changing farming practices or urban expansion. A single contaminant may have little effect, but cumulative effects of multiple sources of contamination can result in significant reductions in water quality. Intensifying land uses can involve increasing the input of fertiliser and/or water on rural land to increase production, increased use of agrichemicals on higher value crops, or increasing the amount of sediment or chemicals in stormwater run-off from urban or industrial development.

These forms of water contamination are known as non-point source or diffuse discharges, and are best controlled by managing the land uses which cause them. Managing land uses enables landholders to make proactive decisions about land management from the outset, including how they are going to manage their activities to comply with any water quality standards set for a catchment.

Any controls on land uses to manage non-point source or diffuse discharges need to relate to the land use(s) which cause(s) the effects, and address cumulative effects. However, it is also important that where effects of land uses on water quality are uncertain or unproven, that a precautionary approach is taken in accordance with Policy 7.3.12.

In urban areas, diffuse sources of contaminants entering rivers and groundwater can be managed using tools such as low-impact urban design and catchment management approaches; for example, minimising sediment and stormwater run-off from impervious areas, minimising earthworks in construction, and use of vegetation to assist in trapping sediment and pollutants. Measures in rural areas can include: the use of riparian margins and wetlands to trap and filter rainfall run-off before it enters waterways; managing the timing and application rate of fertilisers to plant uptake; siting silage pits, offal pits and other facilities where contaminants may concentrate away from water bodies or flow paths; and keeping livestock, especially cattle and deer, out of waterways.

Collaboration between Canterbury Regional Council, territorial authorities and land managers (rural or urban) is vital to manage this issue. The significance of the water quality issue in each catchment, its cause(s), and whether existing activities need to adopt new practices well as new activities, are all matters which need to be considered in determining whether and to what extent land uses are managed. These matters are specific to each water quality issue and so are

best determined on a catchment-by-catchment basis. Where a land use is managed through a regional plan to address effects on water quality, district plans will need consistent provisions, such as the identification of appropriate land use zones.

Policy 7.3.8 – Efficient allocation and use of fresh water

To improve efficiency in the allocation and use of fresh water by:

(1) ensuring the infrastructure used to reticulate and apply water is highly efficient relative to the nature of the activity, for any new take or use of water;

(2) ensuring the infrastructure used to reticulate and apply water is increasingly efficient (where not already highly efficient) for existing takes and uses of water, having regard to:

- **(a) the nature of the activity;**
- **(b) the benefits and costs of achieving a higher level of efficiency;**
- **(c) practicable options to implement any change required; and**
- **(d) the physical environment in which the activity takes place.**

(3) ensuring the quantities of water allocated, as part of a water allocation regime or by grant of water permit, is no more than is necessary for the proposed use for all activities, including urban uses and municipal supplies;

(4) recognising the importance of reliability in supply for irrigation;

(5) recognising the potential for efficiency in infrastructure through combined uses of water and energy efficient infrastructure; and

(6) promoting the integrated management and use of fresh water resources within or across catchments.

This policy implements the following objectives:

7.2.1, 7.2.2 and 7.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans, which will:

- (a) Require a high level of efficiency in terms of infrastructure for the reticulation and use of water.
- (b) Limit the amount of water allocated to any activity to what is demonstrated to be reasonable for the activity. Engage with water users to establish methodologies for doing so.
- (c) Provide for specific water storage and distribution schemes identified in regional and zone implementation programmes, where such schemes achieve the purpose of the RMA.
- (d) Recognise improved reliability of supply as a means to improve efficiency in water use for irrigation.
- (e) Allocate the taking or use of water to activities or areas where it is necessary or desirable to ensure the most efficient use of water and achieve the purpose of the RMA.
- (f) Ensure, to the extent of its powers, that before additional water is made available as a result of new water harvest and storage schemes, existing water permits which irrigate the same land areas are voluntarily surrendered or amended to avoid duplication or redundancy in the allocation of water.
- (g) Set the conditions and circumstances for the transfer of water permits to take or divert water within a water body and avoiding any transfers that would be inconsistent with Policy 7.3.4.

(2) Work with central government to provide on-going support for the implementation of the outcomes from the Canterbury Water Management Strategy (2009) and its programmes.

(3) Engage with Ngāi Tahu, as tāngata whenua, to identify the fresh water of significance to Ngāi Tahu and the ways to enhance Ngāi Tahu values. This process will be assisted by:

- (a) use of cultural monitoring tools.
- (b) iwi management plans.

May:

(4) Work with stakeholders through the Regional and Zone Water Committees to consider ways in which efficiency gains can be provided to consent holders, except in over-allocated catchments.

Local authorities:

Will:

(5) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management committees relating to:

- (a) Identifying and implementing actions to assist existing abstractors to improve efficiency in their practices so they can comply with efficiency requirements when they have to apply for new resource consents or conditions of consent are reviewed.
- (b) Options for improving water efficiency in catchments as part of both existing activities and new activities, where doing so is within the Regional Council's powers and accords with the RMA.

Principal reasons and explanation

Improvements in water use efficiency should be made across all water users in the region, including in urban areas as well as rural areas. Improving the efficiency with which water is abstracted and used to get the desired outcome(s), is one way to manage the increasing demand for water for abstraction and some of the effects on water quality of irrigation. Efficiencies can be considered several ways. The most common measures of efficiency in water abstraction are: ensuring the infrastructure to take, reticulate and apply the water is efficient, with maximum accuracy in application and minimal leakage and wastage; and allocative efficiency, granting an amount of water for abstraction which is reasonable for the intended use.

Other methods for increasing efficiency include improving reliability of supply. This will encourage abstractors to

use water only as needed, rather than using more than is required when water is available to help mitigate the effects of restrictions when they apply. Another approach to improve efficiency is associated with the manner in which water for abstraction is sourced within a catchment. Individuals abstract water from the source which is most accessible to them, but on a catchment basis it may be more efficient to have people in one area using a water source that is not the closest one to them, so the source closest to them can be used elsewhere (i.e. through transferring water take permits). This may require the transfer of permits to facilitate.

To promote sustainable management of the region's fresh water resources, new abstraction projects need to provide for improved efficiency in the use of water in all the areas covered by Policy 7.3.8. These areas include providing for more reliable water, through the use of harvest and storage of surface water and the redistribution or rationalisation of water sources within and across catchments, to ensure a more efficient distribution. The CWMS identifies possible options to provide additional water for abstraction, based on these principles.

Policy 7.3.9 – Integrated solutions to fresh water management

To require integrated solutions to the management of fresh water by developing and implementing comprehensive management plans which address the policies of this Statement including addressing all the relevant matters set out in Appendix 2.

This policy implements the following objectives:

7.2.1, 7.2.2, 7.2.3 and 7.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Require regional plans to:

(a) include a plan or strategy for the comprehensive management of the fresh water resources of each catchment addressing the issues set out in Appendix 2 which are relevant to that catchment;

(b) include provisions to manage natural character values, life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems values, water quality, quantity and the effects of land uses activities on water quality and quantity within each catchment;

(c) allocate fresh water consistent with the purpose of the RMA, and

(d) identify conditions to be complied with before taking, use or abstraction in any catchments proceeds.

May:

(2) Work with stakeholders through the Regional and Zone Water Committees to consider ways in which efficiency gains can be provided to consent holders, except in over-allocated catchments.

Local authorities:

Will:

(3) Seek and have particular regard to recommendations from the Regional Water Management Committee and Zone Water Management committees and regional plans relating to:

(a) Goals or visions for the comprehensive management of fresh water which includes the control of land use activities in respect of their effects on water quality and quantity within or across catchments (as relevant to their functions) to reach the targets of the CWMS;

(b) Actions (regulatory and non-regulatory), and an appropriate timetable that are required or desired to give effect to the goal or vision; and

(c) Consent applications or proposals for integrated solutions that are progressing ahead of the regional planning process.

Principal reasons and explanation

Policy 7.3.9 implements all the fresh water objectives in the CRPS, but in particular Objective 7.2.2. Objective 7.2.2 introduces the concept of parallel processes as a way to manage water resources in the region. That is, the abstraction of any additional water for irrigation, hydro-electricity generation or other economic activities must proceed in tandem or parallel with measures to improve efficiency in water use, and to protect, restore or enhance the natural character and values of fresh water environments. Policy 7.3.9

uses the concept of integrated solutions, based on developing comprehensive water management plans for catchments, to implement parallel processes within catchments.

Integrated solutions manage the whole catchment and possibly across catchments; using the development of additional irrigation or hydro-generation, or improvements in reliability of supply of water, as catalysts to address other water management issues in the catchment. The explanation of Objective 7.2.2 records how this approach may provide more impetus for addressing current issues than simply locking down catchments that have water management issues. The use of integrated solutions also facilitates an integrated approach to water management which achieves aspects of Objective 7.2.3.

Integrated solutions are delivered largely through regional plans prepared under the RMA. There is also an opportunity for the Regional and Zone Water Management committees to develop integrated solutions to water management in the region or in a particular zone through the RIP or ZIPs; but the integrated solution can only be enforced if it is included in a regional plan prepared under the RMA. A RIP or ZIP is expected to include the action needed to give effect to the integrated solution and an appropriate timetable for doing so, recognising that some actions may take time.

The matters which must be included in the comprehensive development plans that facilitate integrated solutions are set out in Appendix 2. Not all matters will be relevant in all catchments, but there are some fundamental matters relating to natural character values, water quality, quantity, and land uses and which must be covered in every catchment. These fundamental matters are listed in the methods above. A proposed activity may not have to implement every aspect of the integrated solution across the entire catchment or catchments covered. However, the proposed activity must achieve part of the integrated solution within a specific area of the catchment and, in doing so, must not preclude options to implement the integrated solution over the rest of the catchment or catchments covered.

Policy 7.3.10 - Harvest & storage of fresh water

To recognise the potential benefits of harvesting and storing surface water for:

(1) improving the reliability of irrigation water and therefore efficiency of use;

(2) improving the storage potential and generation output of hydro-electricity generation activities;

(3) increasing the irrigated land area in Canterbury;

(4) providing resilience to the impacts of climate change on the productivity and economy of Canterbury;

(5) reducing pressure on surface water bodies, especially foothill and lowland streams, during periods of low flow;

and facilitate the conversion of resource consents to abstract water under 'run of river' conditions to takes to storage, where this can be done under conditions which maintain or enhance the surface water body.

This policy implements the following objectives:

7.2.1, and 7.2.2 and 7.2.3 in part.

Methods

The Canterbury Regional Council:

Will:

(1) Set objectives polices and methods in regional plans to:

  (a) provide for the harvesting and storage of water in environmental flow and water allocation regimes;

  (b) allow for the consideration of resource consents to take water as either 'run of river' or to storage, with appropriate conditions where granted; and

  (c) provide for irrigation schemes that harvest and store water where such proposals achieve the purpose of the RMA and give effect to the CRPS.

(2) Seek and have particular regard to recommendations from the Regional Water Management Committee and the Zone Water Management Committees relating to implementation of this Policy.

Principal reasons and explanation

The Canterbury Water Management Strategy has targets for increasing the area of irrigated land. Increased efficiency is part of the approach as is water harvesting and storage. Storage can also have benefits for other commercial activities or for recreational and social activities, and as a response to climate change. Storage may also assist with the restoration and enhancement of freshwater bodies, for example through reduced abstraction from lowland streams and groundwater systems during periods of low flow.

The explanation to Issue 7.1.4 discusses some of the issues with abstracting water as 'run of river' takes in terms of reliability of supply and hence efficient use of water, and also in terms of effects on the environment, especially during periods of low flow. The harvesting and storage of water during high flow periods is a potential way to address these issues. Converting existing run of river abstractions to abstraction for on-farm or community storage areas, is one of the easier ways in which the effects of existing abstraction on rivers during periods of low flow can be mitigated, without affecting the reliably of supply for the abstractor. In fact, takes to storage usually enhance reliability of supply.

However, the abstraction must be undertaken in a way which does not affect flow variability especially in braided rivers, or increase the amount of water that can be abstracted compared with a run of river take during periods of low flow, or in rivers which are fully or over-allocated. The process for conversion must also be easy and cost-effective for the consent holder to encourage the uptake; and consents should be flexible enough to allow the abstractor to choose whether the water is taken to storage or for immediate application depending on their needs. As long as the conditions surrounding each type of take are appropriate to its effects, this flexibility can be incorporated into the resource consent.

Policy 7.3.11 – Existing activities and infrastructure

In relation to existing activities and infrastructure:

(1) to recognise and provide for the continuation of existing hydro-electricity generation and irrigation schemes, and other activities which involve substantial investment in infrastructure; but

(2) require improvements in water use efficiency and reductions in adverse environmental effects of these activities, where appropriate.

This policy implements the following objectives:

7.2.1 and objectives 7.2.2 and 7.2.4 in part.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans (including environmental flow and water allocation regimes) that:

  (a) Recognise and provide for the continuation of existing hydro-electricity and irrigation schemes and other existing water takes, uses, damming and diversions, which involve substantial investment in infrastructure, as appropriate; and

  (b) Require these existing activities to make on-going improvements in water efficiency and reductions in adverse environmental effects, as appropriate, including through reviewing conditions on resource consents.

May:

(2) Work with stakeholders through the Regional and Zone Water Committees to consider ways in which efficiency gains can be provided to consent holders, except in over-allocated catchments.

Principal reasons and explanation

Resource consents to allow the taking, use, damming or diversion of water or the discharge of contaminants have limited duration under the RMA (a maximum of 35 years). Therefore all existing activities must, at some point, renew their permissions (unless the activity does not require resource consent). The expiry of a resource consent can be an opportunity to reconsider an activity, however, any reconsideration is tempered by three factors:

Activities involving large-scale infrastructure are limited in the extent they can be altered; many of these activities are essential to the social or economic well-being of people and communities; and there is usually considerable capital investment in the activity.

The RMA provides a slightly different framework for considering resource consent applications for existing activities where consents have expired, and applications for new activities. Section 104(2A) of the RMA requires the consent authority to have particular regard to the value of the investment of the existing consent holder; and Sections 124B and 124C give priority to existing consent holders over new applicants in relation to activities where resources are allocated (which includes water).

Policy 7.3.11 takes a pragmatic approach to existing hydro-electricity generation and irrigation schemes, and other activities which involve substantial investment and infrastructure, by recognising them and providing some certainty in regional plans that these activities can continue. This may include provision for these activities within environmental flow and water allocation regimes. However, there is a requirement that existing activities continue to improve their water use efficiency and reduce other environmental effects as new technologies and information allow; as would be the requirement should those existing activities be applying for resource consent for the first time under the RMA today. One way in which this can be achieved in the current statutory framework, is through granting resource consents for the maximum period under the RMA, but placing more emphasis on regular monitoring of effects and review of operating conditions.

Policy 7.3.12 - Precautionary approach and allocation without a planning framework

To take a precautionary approach to the allocation of water for abstraction, the damming or diversion of water, or the intensification of land uses or discharge of contaminants, in circumstances where the effects of these activities on fresh water bodies, singularly or cumulatively, are unknown or uncertain.

This policy implements the following objectives:

7.2.1, 7.2.2, 7.2.3 and 7.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Set objectives, policies and methods in regional plans to:

  (a) Identify areas where information is unknown or uncertain, and identify what steps may be taken to address the knowledge gap and how resources shall be managed in the interim.

  (b) Manage activities where there is no catchment specific information or provisions.

  (c) Consider the use of adaptive management conditions on resource consents where potential effects can be managed by adjusting the quantity, rate or

timing when water can be abstracted or used or contaminants discharged, relative to the conditions of the water body or receiving environment.

(2) Manage its investigation and monitoring programmes to address gaps in knowledge and information, and prioritise work programmes accordingly.

(3) Liaise with other stakeholders and organisations to facilitate research and information sharing.

(4) Seek and have regard to recommendations from the Regional Water Management Committee and Zone Water Management Committees in implementing Policy 7.3.12 and its methods.

Principal reasons and explanation

Incomplete knowledge about the state of fresh water resources in Canterbury and the relationship between activities and effects was discussed as part of Issue 7.1.1. Sustainable management of natural and physical resources under the RMA is difficult to achieve when effects are unknown or uncertain.

Many activities involving water or the discharge of contaminants are essential for our health and our economic and social well-being; and many of the gaps in the knowledge will take lengthy research to fill. However, it is usually more difficult to remedy adverse effects of activities after the fact, than to avoid them in the first instance.

Policy 7.3.11 signals a precautionary approach to dealing with fresh water issues where information is incomplete or relationships not well understood. A precautionary approach does not mean that all activities should be prevented. The degree of caution in a precautionary approach will vary, depending on the significance of the activity for people's well-being, the potential effects of the activity, the extent of knowledge, and the degree of concern over potential effects; and will require a case-by-case judgment to be made. A precautionary approach need not be applied where a sufficient level of certainty exists in relation to the receiving environment and/ or effects on that receiving environment.

One tool that can be used to facilitate activities when effects are unknown or uncertain is adaptive management conditions. These are conditions whereby consent holders have to adjust the scale or timing of their activity, or change other practices, to suit the conditions of the fresh water resource or the receiving environment, at any time. For these conditions to work, the consent holder needs to be able to adapt to the changing conditions under which they can operate, and also there needs to be clear expectations, communication, and an agreed monitoring regime. Audited self-management may also be appropriate.

The methods to implement this policy include the use of regional plans to both identify information gaps in relation to fresh water management in catchments in the region and to guide how activities should be managed in those cases.

Policy 7.3.13 – Resolution of freshwater management issues

To encourage the involvement of people and communities in the management of fresh water, including:

(1) community stewardship of water resources and programmes to address fresh water issues at a local catchment level;

(2) Ngāi Tahu, as tāngata whenua, exercising kaitiakitanga in accordance with tikanga Māori; and

(3) providing opportunities for consent holders to take greater stewardship of fresh water resources, within consent conditions.

This policy implements the following objectives:

7.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Engage with Ngāi Tahu as tāngata whenua, on the management of fresh water in the region, including:

(a) identifying the fresh water resources of significance to Ngāi Tahu and the culturally appropriate management of the effects of activities on these;

(b) understanding the customary values, uses and relationships associated with specific fresh water bodies;

(c) resolving issues related to unnatural mixing of water sourced from different water bodies;

(d) recognising that Statutory Acknowledgement Areas are of ongoing significance to Ngāi Tahu beyond the expiry of the Ngāi Tahu Claims Settlement (Resource Management Consent Notification) Regulations 1999, for activities within, adjacent to, or impacting directly on the Statutory Acknowledgements contained within the Ngāi Tahu Claim Settlement Act 1998;

(e) instituting appropriate activities and processes to facilitate the involvement of Ngāi Tahu in water management decision-making processes, including taking into account iwi management plans and developing appropriate co-governance structures; and

(f) developing and implementing protocols for the recognition and exercise of kaitiakitanga within the Ngāi Tahu rohe.

(2) Consult with territorial authorities, local people and communities and other stakeholders and interest groups in the development of regional plans and plan changes to manage fresh water under the RMA.

(3) Provide procedures and mechanisms to facilitate stewardship and self-management of water resources within the conditions set by a regional plan or resource consent, including:

(a) localised transfer of water allocations between consent holders, subject to safeguards to prevent unintended consequences for the environment or other users;

(b) self-monitoring, auditing and reporting within the set environmental thresholds; and

(c) group allocation and sharing strategies to allow consent holders to optimise access to fresh water which is available for allocation.

Local authorities:

Will:

(4) Implement the CWMS, including:

(a) establishing the Regional Water Management Committee and Zone Committees;

(b) establishing Regional and Zone Implementation Programmes to address fresh water issues.

(5) Support integrated approaches to the management of water and the effects of land uses between regional and district plans.

Principal reasons and explanation

Successful coordinated freshwater management occurs with active participation from people and communities at the local or catchment level. Once freshwater management decisions are made, it is important that people retain confidence in the management of the resource by implementing and, where necessary, enforcing those decisions. This recognises the Ngāi Tahu ethic of Ki Uta Ki Tai - from the mountains to the sea, whereby the environment, including how it functions, how people relate to it and how it can be looked after, is managed holistically, recognising linkages between ecosystems, resources and people.

Policy 7.3.12 seeks to promote a framework for fresh water management that involves greater participation and action by local people and communities in three ways:

(1) Firstly by using the Water Management Zone Committee structure to get local people and communities involved in developing strategies and programmes to address fresh water issues within their local catchments.

(2) Secondly, through working closely with Ngāi Tahu in planning and decision-making around fresh water to ensure that their values, customs and traditions are taken into account and their ability to exercise kaitiakitanga over fresh water is fostered,

(3) Thirdly, by providing opportunities within the regulatory framework for fresh water management, for consent holders to take more responsibility for how they manage their taking and use of fresh water or their discharge of contaminants, provided they can meet standards required to protect the environment.

In addition, industry groups and organisations have a valuable role to play in improving the management of freshwater in the region. This role includes the development of industry good practice guidelines and the provision of advice and support.

7.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) The economic, social, cultural and environmental well-being of the region is fostered through improved management of the region's fresh water resources.

(2) Groundwater is managed within sustainable allocation thresholds and water quality regimes.

(3) Water quality and quantity for community water and stockwater supplies are safeguarded.

(4) Water quality at locations used for customary uses or recreation is maintained or improved.

(5) The health of freshwater ecosystems is maintained or enhanced.

(6) The natural character of Canterbury's braided river systems and natural lakes is protected from inappropriate subdivision, use and development.

(7) The cultural significance of fresh water to Ngāi Tahu as tāngata whenua is better recognised and incorporated in the management of fresh water.

(8) The exercise of stewardship and kaitiakitanga, and opportunities for Ngāi Tahu customary use, will increase.

(9) Management of fresh water is integrated within the community and across all management organisations.

(10) Within environmental thresholds, reliable water will be available for abstraction and use.

(11) A shift to the harvest and storage of water for irrigation and improved reliability of supply.

(12) Water is used more efficiently.

(13) The potential for agricultural productivity in the region is increased.

(14) Potential output of hydro-electricity generation from the region is maintained or enhanced, including providing opportunities for additional renewable electricity generation output to be provided.

CHAPTER 8
THE COASTAL ENVIRONMENT

Introduction

Canterbury's coastline runs for nearly 800 kilometres, from Kēkerengu in the north to the mouth of the Waitaki River in the south. Canterbury's coastal environment has distinctive and important features, including the natural beach dune vegetation of Kaitorete Spit and coastal river mouth wetlands and lagoons. It is home to populations of unique species and rare and endemic indigenous plant species that contribute to Canterbury's identity, including hector's dolphins, white-flippered, yellow-eyed and little blue penguins, hutton's shearwater, stokell's smelt and katipo spiders. Resident and migrating whales, great white sharks and basking sharks also spend time in regional waters.

***The coastal environment** will vary from place to place depending upon the extent to which it affects or is (directly) affected by coastal processes and the management issue concerned. The extent and characteristics of the coastal environment is defined in the Policy 1 of the New Zealand Coastal Policy Statement. The coastal marine area is defined in s2(1) RMA, and except for control of subdivisions, it is excluded from a territorial authority's district. The Regional Council is responsible for the coastal marine area.*

This chapter addresses issues related to activities in the coastal environment, including the appropriate occupation and use of the coastal marine area (CMA). Many activities take place in the coastal environment and, in a number of areas, there is competition for the use and occupation of water space and coastal land. In some areas, there is strong demand for land with sea views as a location for dwellings. Public access occurs along much of the coast, and in places, there are high levels of private vehicle and vessel use. The coastal environment contains the major ports of Lyttelton and Timaru, as well as other smaller marine facilities such as those servicing fishing and

tourism in Kaikōura and Akaroa and valuable renewable energy resources such as high wind speeds and good wave energy potential. State highway and rail transport links and network utilities run close to the sea, and in places they are vulnerable to storm damage, erosion and the possible effects of climate change and sea-level rise. There are numerous point or non-point discharges of contaminants into the coastal environment, adversely affecting coastal water quality.

The coastal environment has a high concentration of sites of significance and strong ancestral connections for Ngāi Tahu as tāngata whenua. It is therefore of immense spiritual, historical, cultural and traditional importance to Ngāi Tahu, with characteristics that hold special value. The CMA contains two areas that must be statutorily acknowledged in accordance with the Ngāi Tahu Claims Settlement Act 1998 (NTSCA): Kaikōura /Te Tai o Marokura and Banks Peninsula /Te Tai o Mahaanui. There are also statutory acknowledgements for rivers, parts of which are in the coastal environment. Coastal lagoons/hapua and estuaries are particularly important to Ngāi Tahu as tāngata whenua for mahinga kai and other cultural reasons.

The coastal environment is subject to numerous natural processes, including coastal erosion, the actions of storm surges and tsunamis, seawater inundation, earthquakes and undersea landslides. Climate change and associated sea level rises are important factors when considering coastal development and coastal hazards. This will increase pressure for additional protection works in and along the inshore boundary of the CMA.

The Canterbury Regional Policy Statement (CRPS) must give effect to national policy statements including the New Zealand Coastal Policy Statement (NZCPS). The NZCPS was issued by notice in the New Zealand Gazette on 4 November 2010 and took effect on 3 December 2010. This chapter of the CRPS seeks to give immediate effect to as many of the provisions of the NZCPS as possible. In some instances, however, it will be necessary to implement additional processes to gather the information that will be necessary to give meaningful effect to the provisions of the NZCPS. These additional processes may also involve spatially mapping the extent of Canterbury's coastal environment, including identification of the landward boundary, so as to then enable a more detailed identification of what activities are appropriate where in the coastal environment.

The CRPS identifies the method of developing regional and/or district coastal strategies to gather and assimilate the information that will be necessary to give effect to the NZCPS. It is anticipated that these coastal strategies will be developed under the Local Government Act 2002 and will set out the future direction of coastal management in the Canterbury region. The coastal strategies are expected to result in changes to the CRPS, and regional and district plans.

8.1 ISSUES

ISSUE 8.1.1 – LACK OF KNOWLEDGE REGARDING COASTAL RESOURCES

There is a lack of knowledge about the natural processes taking place in the coastal environment (particularly the coastal marine area), and the values associated with the coastal environment. In addition to this, gaining such information comes at a significant cost and will take time to obtain

Explanation

The NZCPS sets out a number of challenges for local authorities to address in the management of the coastal environment. The key issue is the gathering of information to support and develop policies and methods to achieve the policies of the NZCPS.

The lack of knowledge about the coastal environment, particularly the coastal marine area, coupled with the difficulties and costs of obtaining knowledge, are significant impediments to assessing the state of the coastal environment and the effects of human activities on that environment. Because there is no known base state from which to assess the effects of natural and man made change, this creates difficulties when assessing the possible effects of ongoing and proposed activities in the coastal environment. In addition, because the coastal marine area in Canterbury is extensive and wave action is vigourous, it is extremely difficult and expensive to collect any but the most basic data on the state of the coastal marine area.

New programmes to extend our knowledge of the coastal marine area must therefore be tailored to what can realistically be conducted and must be focussed on the provision of essential data. It is also important to develop information sharing between agencies to provide the best possible basis for decision making.

ISSUE 8.1.2 – PROVIDING FOR THE INTEGRATED MANAGEMENT OF NATURAL AND PHYSICAL RESOURCES AND ACTIVITIES IN THE COASTAL ENVIRONMENT

Administrative and jurisdictional boundaries that exist within the coastal environment can hinder the integrated management of the coastal environment. This can make management of coastal resources difficult, as natural processes, physical resources and activities cross boundaries and require integrated management.

Explanation

The existence of administrative and jurisdictional boundaries in the coastal environment, particularly the Coastal Marine Area boundary, requires integration of management across these boundaries to allow people and communities to be able to provide for their social, economic and cultural well-being and their health and safety while protecting the whole range of values of the coastal environment.

ISSUE 8.1.3 – HUMAN ACTIVITIES AND THEIR ADVERSE EFFECTS ON THE COASTAL ENVIRONMENT

Activities in the coastal environment can have adverse effects on:

(1) the natural character of that environment; and

(2) other natural, cultural, amenity, ecological, recreational and historic heritage values.

Explanation

People and communities need to be able to provide for their social, economic and cultural well-being and their health and safety through the occupation, subdivision, use and development of the coastal environment in appropriate places. Such activities often rely on the unique values of the coastal environment.

Recreational activities and dwelling places are often enhanced by natural and amenity values associated with coastal landscapes, ecosystems and remoteness. Cultural activities, such as the gathering of kaimoana, rely on natural values such as high water quality and healthy, functioning ecosystems. Kaitiakitanga or guardianship of the values of the coastal environment is a responsibility of Ngāi Tahu as tāngata whenua and provides mana to them.

Commercial activities, such as marine farming and fishing, depend on environmental quality, while ports depend on being able to develop land and build facilities in the coastal environment, as well as being able to maintain and develop access to those ports by both sea and land. In addition, the costal environment contains renewable energy resources of significant value.

If activities are undertaken inappropriately, there may be adverse effects on the very values that support those activities. For example, too many watercraft may diminish amenity values for other users, some activities may damage the sea floor, adversely affect water quality or pollute areas used for mahinga kai or other cultural activities. Activities contributing to river mouth closings can also have consequent effects on ecosystems including mahinga kai.

Cumulative effects of development may detract from the natural character of the coast and place coastal water quality and other features at risk, particularly in areas of high natural character. Such development may also create pressures for hazard mitigation that can have adverse effects on natural character and on the natural processes of beach and estuarine areas.

The ports of Timaru and Lyttelton, network utilities and other regionally significant infrastructure need to be located in the coastal environment. There are also other commercial fishing, energy and tourism facilities that need access to, and use of, the coastal environment.

The preservation of natural character of the coastal environment and its protection from inappropriate subdivision, use and development is a requirement of the Resource Management Act 1991 (RMA). The degree or level of natural character of an area depends on:

(1) The extent to which natural elements, patterns and processes occur; and

(2) The nature and extent of modifications to the ecosystems and landscape/ seascape.

The highest degree of natural character (the greatest naturalness) occurs where there is least modification. The effect of different types of modification upon the natural character of an area varies with the context and may be perceived differently by different parts of the community.

ISSUE 8.1.4 – REGIONALLY SIGNIFICANT INFRASTRUCTURE AND COMMERCIAL MARITIME FACILITIES

Regionally significant infrastructure or other commercial maritime facilities often require a location in the coastal environment. Their operation and development can also be adversely affected by other activities.

Explanation

Regionally significant infrastructure is an essential physical resource within the coastal environment. In addition to land, air and sea transport systems, it includes those built structures necessary for supplying services to the community, such as water and power supply, the state highway network, telecommunications, waste disposal and flood protection and renewable energy generation. The efficient and effective operation and development of regionally significant infrastructure, which includes the ports of Timaru and Lyttelton, is essential for the well-being of the Canterbury community. In addition, as recognised in the NZCPS the coastal environment contains renewable energy resources of significant value.

Regionally significant infrastructure may need to be located within the CMA on a long-term basis and this may require restrictions on or exclusion of other persons or activities. Similarly, there are other commercial maritime facilities such those catering for tourism, aquaculture, fishing, energy exploration and production, boat storage and mooring and scientific research, that whilst not necessarily regionally significant, are appropriately located and operated in the CMA.

Activities undertaken in inappropriate places can be unsafe or interfere with the operation of regionally significant or other infrastructure. Activities such as fishing or anchoring above pipes or cables on the seabed by recreational vessels, or navigating recreational vessels close to commercial wharves, can adversely affect their operation.

ISSUE 8.1.5 – PROVISION OF APPROPRIATE ACCESS

There is a need to maintain and enhance public access, and access for Ngāi Tahu, to and along the coastal marine area while controlling those aspects of public access, such as some types of vehicle use, which threaten the values of the coastal environment.

Explanation

Access to and along the CMA is important for the well-being of people and the community. In particular, access for recreation, food gathering and fishing and for cultural activities, is a fundamental part of life in Canterbury. There must also be access to and along the CMA for commercial purposes such as for port operations, aquaculture, fishing, energy and tourism.

Restrictions on public access can be entirely appropriate. For example, access to sites of cultural significance to Ngāi Tahu as tāngata whenua, including wāhi tapu or tauranga waka sites, by the general public may be insensitive to the cultural or spiritual traditions of Ngāi Tahu. Restricted access may be necessary for conservation purposes. Some areas, such as sand dunes or areas where birds nest on the ground, are particularly sensitive to the adverse effects of vehicles. Access across private land can impinge on the legal rights of the landowner. Access may need to be restricted if there are hazards such as unstable cliffs, presence of natural toxins or dangers to health and safety from farming or other activities.

There is a need to strike a balance between providing and maintaining access that enables the health and well-being of the community, while ensuring that this access does not cause significant adverse effects on coastal values.

ISSUE 8.1.6 – THE ADVERSE EFFECTS OF HUMAN ACTIVITIES ON THE WATER QUALITY OF THE COASTAL MARINE AREA

Point and non-point discharges of contaminants entering the coastal marine area can cause adverse effects on coastal water quality and the associated values of the coastal environment.

Explanation

The CMA is frequently a receiving environment for contaminants, including sediment. Most discharges to this area originate from land-based activities. Some of these discharges arrive indirectly, via natural waterbodies, while other discharges, such as stormwater and treated or untreated sewage, are piped or flow directly from land into the CMA. Others are the result of discharges from vessels, including hull scrapings, ballast water, bilge contents, tank overflows, ship waste and sewage. Contaminants from these discharges can cause adverse effects on marine life, natural character and amenity values, recreation opportunities and on commercial undertakings such as tourism and aquaculture.

The assimilative capacity of the coastal environment to absorb waste is not limitless. Because people and communities value its naturalness, the sea should not necessarily be considered the most desirable place for the receiving of waste from continued development along the coast. Contaminant discharges, especially sewage, into the CMA, are particularly abhorrent to the values of Ngāi Tahu. The issue is also of importance to Ngāi Tahu as tāngata whenua because of the effects on the mauri of the coastal environment and on mahinga kai.

ISSUE 8.1.7 - NATURAL HAZARDS IN THE COASTAL ENVIRONMENT

There is a need to assess the effects of climate change, and coastal hazards such as coastal erosion, on the coastal environment , and develop responses where human assets and natural values are threatened by such coastal hazards

Explanation

Much of the coastal environment of the Canterbury region is subject to coastal erosion. This erosion may well be exacerbated by climate change, putting at risk regionally significant infrastructure and public and private structures and assets. There is a need to maintain and develop methods of accurately assessing the rates of coastal erosion and the effects of climate change and the risks that these pose. Accurate information will enable the development of long-term strategies to avoid, remedy or mitigate the risks, while preserving the natural values of the coastal environment. The issue of natural hazards is more fully covered in Chapter 11.

8.2 OBJECTIVES

Objective 8.2.1 – Increasing knowledge of the coastal environment and its resources

A programme of information gathering is undertaken on the natural processes, ecosystems and resources in the coastal environment; with the purpose of providing the basis for:

(1) Development of a coastal strategy (ies) within five years to address the management of the coastal environment in Canterbury

(2) Consequential changes to the Canterbury Regional Policy Statement, any relevant regional coastal plan(s) and district plans.

The following policies implement this objective:

Policy 8.3.1

Principal reasons and explanation

The development of coastal strategies will assist in managing the coastal environment in Canterbury. In addition, the NZCPS must be given effect to through regional policy statements and regional and district plans but in many instances, the information required to give effect to the NZCPS is unavailable or insufficient. This objective sets out a process for resolving these requirements, initially requiring the gathering of information, followed by the development of a coastal strategy (or strategies), with consequential changes to the regional policy statement statements and regional and district plans.

There is a need to develop a programme of research and information gathering to provide the basis for the assessment of effects on the coastal environment and for future planning and decision making. This may mean that statutory and non-statutory plans and policies may need to be developed in parallel with each other, rather than sequentially. While such information requirements can appear to be limitless, programmes will need to be tailored to meet known information shortfalls where information is considered to be essential to underpin good decision making about coastal planning issues.

Objective 8.2.2 – Provision for appropriate activities in the coastal environment

A framework is provided for appropriate occupation, subdivision, use and development of the coastal environment while managing the adverse effects of those activities.

The following policies implement this objective:

Policy 8.3.1, Policy 8.3.2, Policy 8.3.3 and Policy 8.3.4

Principal reasons and explanation

There is a need to enable appropriate occupation, subdivision, use and development of the coastal environment, particularly the occupation and use of the CMA, where Section 12 of the RMA restricts activities in the CMA unless authorised by a regional rule or resource consent. However, enabling the occupation, subdivision, use and development of the coastal environment should not be at a significant cost to coastal values and there is a need to take account of the potential effects of coastal hazards, including those likely to be exacerbated by sea-level rise and other climate change effects.

The preservation of the natural character of the coastal environment and its protection from inappropriate subdivision, use and development can be achieved in part through protection or restoration of natural landscapes, features, processes and indigenous biodiversity.

In addition to provision for infrastructure, natural character, access and water quality matters, managing adverse effects will also usually involve consideration of the following matters:

1. Safeguarding the life-supporting capacity and/or mauri of coastal ecosystems and the natural processes that sustain them.
2. Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna.
3. Protecting outstanding natural features and landscapes from inappropriate subdivision, use and development.
4. Maintaining and enhancing amenity and recreational values of the coastal environment.
5. Providing for the relationship of Ngāi Tahu and their culture and traditions with ancestral land, water, sites, wāhi tapu and other taonga.
6. Protecting the historic heritage values of sites, buildings, places or areas from inappropriate occupation, subdivision, use and development.
7. Protecting surf breaks of national significance

Consideration of these matters may assist with determining the appropriateness of occupation, subdivision, use and development in the coastal environment. These matters are also addressed through policies in other chapters of the CRPS.

Objective 8.2.3 – Regionally significant infrastructure and commercial maritime facilities

Subdivision, use or development in the coastal environment does not adversely affect the efficient development and use of regionally significant infrastructure and other commercial maritime activities.

The following policies implement this objective:

Policy 5.3.9, Policy 8.3.1, Policy 8.3.3 and Policy 8.3.4

Principal reasons and explanation

There is a need to recognise that regionally significant infrastructure such as ports, network utilities, transport networks and flood protection works will need to be located in the coastal environment, and that they will need to be developed in response to future growth of population and economic activity in the region.

Other maritime facilities that provide for commercial activities such as tourism, aquaculture, energy exploration and production, fishing, boat storage and mooring and scientific research also need to occur, and be provided for in the coastal environment.

Activities in the coastal environment should not significantly adversely affect the efficient and effective operation, maintenance or development of regionally significant infrastructure or other commercial maritime facilities.

Objective 8.2.4 – Preservation, protection and enhancement of the coastal environment

In relation to the coastal environment:

(1) Its natural character is preserved and protected from inappropriate subdivision, use and development; and

(2) Its natural, ecological, cultural, amenity, recreational and historic heritage values are restored or enhanced.

The following policies implements this objective:

Policy 8.3.1, Policy 8.3.2, Policy 8.3.3 and Policy 8.3.5

Principal reasons and explanation

It is desirable to assess and provide for the preservation of areas of natural character, and to protect it from inappropriate subdivision use and development and it is also desirable to restore the natural character of the coastal environment in appropriate circumstances. It is also desirable to maintain or enhance amenity values of the coastal environment. This objective, along with the provisions of Chapter 12 – Landscape, and Chapter 9 – Ecosystems and Indigenous Biodiversity addresses these requirements.

Adverse effects of past activities have, in places, degraded the coastal environment. In these places, enhancement to restore the coastal environment may be appropriate. Elsewhere, maintenance of the quality of the existing coastal environment may be more appropriate. Human activity has, and continues to degrade some areas that are highly valued even in their degraded state.

Objective 8.2.5 – Provision of access

Maintenance and enhancement of appropriate public and Ngāi Tahu access to and along the coastal marine area to enhance recreational opportunities and to enhance the ability of Ngāi Tahu as tāngata whenua to access kaimoana and exercise tikanga Māori.

The following policies implement this objective:

Policy 8.3.3 and Policy 8.3.4

Principal reasons and explanation

Maintenance and enhancement of appropriate public access to and along the CMA is desirable, but improved access should not significantly compromise other values. For example, public access may need to be restricted for safety, operations, cultural or conservation purposes and must reflect property rights. Varying standards of access, including access to wāhi tapu, wāhi taonga and kaimoana, should reflect community needs and the needs of Ngāi Tahu as tāngata whenua.

Objective 8.2.6 – Protection and improvement of coastal water

Protection of coastal water quality and associated values of the coastal environment, from significant adverse effects of the point and non-point discharge of contaminants; and enhancement of coastal water quality where it has been degraded.

The following policies implement this objective:

Policy 8.3.4, Policy 8.3.5, Policy 8.3.6 and Policy 8.3.7

Principal reasons and explanation

The coastal environment is used for a variety of purposes that may degrade water quality. The objective seeks to protect the values associated with coastal water quality, and this may mean its maintenance for a particular purpose, expressed through water quality standards.

The discharge of contaminants can cause significant adverse effects on marine life, the natural character of the coast, cultural and amenity values and recreation opportunities. Some forms of discharges into the CMA, particularly human sewage, are abhorrent to Ngāi Tahu as tāngata whenua.

In many cases, the quality of the coastal water is good and meets water quality standards. This includes large areas of coastal water in its natural state. However, in some circumstances, water quality has been degraded so that its use is restricted. For example, there are areas where swimming is a popular activity but is at times compromised either directly or indirectly from land-use or discharges. Similarly, other areas may have special cultural values but are also compromised by discharges. Such discharges therefore need to be managed to improve the values of coastal water.

Policy 8.3.1 – Improving understanding of the coastal environment

To improve knowledge and understanding of the coastal environment by:

(1) Assessing and prioritising the information requirements needed to develop a strategy for managing the coastal marine area and the coastal environment and for identifying the extent of the coastal environment;

(2) Developing efficient means of gathering information;

(3) Using best practice methodologies for assessing values and promoting collaboration where appropriate;

(4) Integrating information gathering between local authorities and other appropriate agencies.

This policy implements the following objectives:

Objective 8.2.1

Methods

The Canterbury Regional Council:

Will:

(1) As lead agency, work together with all agencies to develop a regional coastal strategy followed, if necessary, by a notified change to the Regional Policy Statement and, where appropriate, regional plans, within 5 years of the Regional Policy Statement becoming operative.

(2) Work with stakeholders, other local authorities and Ngāi Tahu to gather information to inform the development of a coastal strategy (or strategies) for the Canterbury Region; including

(a) gathering information on the following key issues addressed by the NZCPS

(i) the extent and characteristics of the coastal environment

(ii) areas or sites of significance or special value to Ngāi Tahu

(iii) identify areas that are important in terms of cross boundary issues for local authorities (including hapū or iwi rohe boundaries)

(iv) regionally significant infrastructure, particularly where it is located in the Coastal Marine Area

(v) known mineral resources

(vi) potential for renewable energy resources in the coastal environment

(vii) sites of significant indigenous biodiversity (RMA Section 6(c) sites)

(viii) sites of historic heritage value

(ix) areas that are, or may be, inappropriate for subdivision, use and development

(x) coastal processes, resources or values that are under threat or at significant risk from adverse cumulative effects

(xi) coastal water quality, including areas where water quality is significantly degraded

(xii) biodiversity values associated with those taxa, habitats or areas identified in Policy 11 of the NZCPS

(xiii) identification and mapping of areas of high and outstanding natural character

(xiv) identification and mapping of outstanding natural features and landscapes

(xv) identification of surfbreaks of regional and national significance

(xvi) identification of public open space and access in the coastal environment

(xvii) areas sensitive to the use of motor vehicles

(xviii) identification of areas potentially affected by coastal hazards, including tsunami

(xix) fisheries resources such as taiapure and mahinga mātaitai and other non-commercial Māori customary fishing

(b) make the information above available to the community and use this as a basis for developing a strategy that seeks to resolve the issues the information raises.

(3) Work with all agencies and groups involved in the coastal environment to identify information gaps and priorities and coordinate information gathering.

Local authorities:

Will:

(4) Work together to implement the coastal strategy (ies) through regional plans and district plans. Where appropriate, changes will be made to the Regional Policy Statement at the same time to incorporate information that has cross-boundary implications.

Principal reasons and explanation

The functioning of natural processes and the effects of human activities on those processes are not well understood, especially in relation to the CMA. The nature of that area also means that it can be difficult and expensive to carry out research and data gathering needed to properly inform resource management decisions. It is necessary that the limited time and money available for such work is directed to gathering essential information and that the programmes of all agencies are complementary where possible. The Regional Council will be the leading agency in developing a regional coastal strategy(ies).

Policy 8.3.2 – Providing for the integration of management of natural and physical resources and activities in the coastal environment

(1) Provide for the co-ordinated management or control of activities within the coastal environment, and which could cross administrative boundaries, through the development of coastal strategies, particularly:

(i) across the local authority boundary between the coastal marine area and land;

(ii) across local authority boundaries within the coastal environment, both within thecoastal marine area and on land; and

(iii) where hapū or iwi boundaries or rohe cross local authority boundaries;

(2) Work collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management, such as where land or waters are held or managed for conservation purposes.

This policy implements the following objectives:

Objective 8.2.1, Objective 8.2.2, Objective 8.2.3 and Objective 8.2.4

Methods

The Canterbury Regional Council:

Will:

(1) As lead agency, work together with all agencies to develop a regional coastal strategy followed, if necessary, by a notified change to the Regional Policy Statement and, where appropriate, regional plans, within 5 years of the Regional Policy Statement becoming operative.

Local authorities:

Will:

(2) Work together to implement the coastal strategy (ies) through regional plans and district plans. Where appropriate, changes will be made to the Regional Policy Statement at the same time to incorporate information that has cross-boundary implications.

Should:

(3) Work together and with other agencies to develop a regional coastal strategy or district coastal strategies to integrate planning for the coastal environment.

Principal reasons and explanation

Many of the activities and much of the development that takes place in the coastal environment has effects on natural processes and the values of the area that are cross the boundaries of local government and other bodies. In order to produce positive outcomes in relation to management responsibilities, it is important that the actions of all agencies are co-ordinated towards generally agreed goals. Non-statutory coastal strategies represent an approach that can achieve broad integration and can provide direction for statutory obligations and cultural responsibilities.

Policy 8.3.3 – Management of activities in the coastal environment

Within the coastal marine area provide a framework for:

(1) the use and occupation of coastal space;

(2) the use and development of the natural and physical resources of the coastal marine area;

(3) the extraction of sand, shingle, shell, or other natural materials;

(4) the emission of noise;

(5) activities on the water and on the foreshore and seabed.

(6) protecting the values of the coastal environment

while avoiding, or where this is not practicable, remedying or mitigating adverse effects within the coastal environment on:

(a) the life-supporting capacity and/or mauri of coastal ecosystems and the natural processes that sustain them;

(b) indigenous species, areas of significant indigenous vegetation and significant habitats of indigenous fauna;

(c) natural character (including associated natural processes), outstanding natural features and outstanding natural landscapes;

(d) amenity, cultural and recreational values;

(e) coastal areas of cultural significance identified in consultation with Ngāi Tahu as tāngata whenua;

(f) the health and safety of people;

(g) historic heritage values, including historic heritage and historic cultural landscapes;

(h) surf breaks of national significance;

(i) the efficient and effective operation, maintenance and development of regionally significant infrastructure or other commercial maritime facilities.

This policy implements the following objectives:

Objective 8.2.1, Objective 8.2.2 and Objective 8.2.2.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan to manage activities and protect values in the coastal marine area.

Should:

(2) As far as practicable, and insofar as those Acts allow the Council to do so, give effect to Policy 8.3.1 through provisions in its:

  (a) Regional Oil Spill Contingency Plan under the Maritime Transport Act 1994,

  (b) pest management strategies under the Biosecurity Act 1993, and

  (c) navigation safety bylaws made under the Local Government Act 1974.

Local authorities:

Should:

(3) Work together to develop a regional coastal strategy or district coastal strategies to manage activities in the coastal environment.

Will:

(4) Engage with Ngāi Tahu as tāngata whenua to identify coastal areas of significance and/or characteristics of the coastal environment that are of special value to Ngāi Tahu and the ways to protect Ngāi Tahu values. This process will be assisted by iwi management plans.

Principal reasons and explanation

Most activities on land occur as of right, unless there is a rule in a regional or district plan that controls that activity. Activities involving the use of the natural resources of the CMA are directly controlled under Section 12 of the RMA where such activities need to be authorised by a regional rule or resource consent. Management of these resources at a regional or central government level is necessary both to allocate, and to protect them.

Section 12 of the RMA also restricts the occupation of coastal space unless there is a rule in a regional plan, or a resource consent, expressly allowing that occupation.

The policy recognises that activities occurring within the CMA can adversely affect the wider coastal environment. The policy is intended to ensure that activities within the CMA are appropriately managed to avoid adverse effects on the significant natural resources of the coastal environment, and the values associated with those resources.

Areas of value that may require protection from activities include:

(1) any area within the intertidal or subtidal zone that contains unique, rare, distinctive or representative marine life or habitats.

(2) areas used by marine mammals as breeding, feeding or haul-out sites.

(3) breeding, roosting or feeding areas of indigenous bird species.

(4) any area that contains locally, regionally, nationally or internationally significant ecosystems, habitat types, vegetation or individual species, including adequate buffer zones.

(5) historic heritage sites, places or areas.

(6) Coastal landforms, submerged platforms and seascapes, and geo-conservation sites or areas that are regionally, nationally or internationally representative or unique.

Coastal areas of significance identified in consultation with Ngāi Tahu as tāngata whenua will include: wāhi tapu, urupā, tauranga waka and mahinga kai areas. Activities near or within these areas should be undertaken in accordance with tikanga māori as determined in consultation with the appropriate papatipu rūnanga.

Policy 8.3.4 – Preservation of the natural character of the coastal environment

To preserve and restore the natural character of the coastal environment by:

(1) protecting outstanding natural features and landscapes including seascapes from inappropriate occupation, subdivision, use and development;

(2) protecting and enhancing indigenous ecosystems and associated ecological processes;

(3) promoting integrated management of activities that affect natural character in the coastal environment and the coastal marine area, in particular coastal landforms and landscapes that are significant, representative or unique to the region;

(4) avoiding new development adjacent to the coastal marine area that will compromise areas of high natural character; and

(5) in appropriate situations, imposing or reviewing restoration or rehabilitation conditions on resource consents and designations.

This policy implements the following objectives:

Objective 8.2.1 and Objective 8.2.3.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan to manage development activities in the coastal marine area to preserve the natural character of the coastal environment and protect it from inappropriate subdivision use and development; and promote integrated management between land and the coastal marine area.

Should:

(2) Work with agencies and interest groups to develop methods of identifying the natural character of the coastal environment and carry out that identification on the basis of those agreed methods.

(3) Advocate for and promote the establishment of reserves, covenants, district plan provisions and management agreements, both within the coastal marine area and in other parts of the coastal environment, which will preserve areas of high natural character and protect them from inappropriate subdivision use and development in that environment.

This should include Ngāi Tahu efforts to protect resources of the coastal environment through the use of customary management tools such as rāhui, mātaitai and taiāpure.

(4) Promote and coordinate with territorial authorities options for the integrated management between land and the coastal marine area, in particular landforms or landscapes that are significant, representative or unique to the region. As part of this process it should ensure that Ngāi Tahu, as tāngata whenua, are engaged in the development and implementation of options.

(5) Take into account the goals, principles and priorities of the 2008 Canterbury Biodiversity Strategy in making decisions on the management of activities in the coastal marine area and in making associated decisions about the maintenance of indigenous biodiversity in the coastal marine area.

Territorial authorities:

Will:

(6) Set out objectives and policies, and may include methods in district plans to preserve the natural character of the coastal environment and protect it from inappropriate subdivision, use and development.

These provisions will include measures avoiding inappropriate development adjacent to and along the coastal marine area boundary that will significantly compromise existing areas of high natural character, particular provisions relating to subdivision, and provisions for achieving integrated management between land and the coastal marine area

Local authorities:

Will:

(7) Engage with Ngāi Tahu as tāngata whenua to identify coastal areas of high natural character that are of special value to Ngāi Tahu and the ways to protect Ngāi Tahu values. This process will be assisted by iwi management plans.

Should:

(8) Work together to develop a regional coastal strategy or district coastal strategies to promote the preservation and restoration of the natural character of the coastal environment and its protection from inappropriate subdivision, use and development.

Principal reasons and explanation

This policy seeks to preserve the natural character of the coastal environment through the protection of natural landscapes, features, processes and indigenous biodiversity and by ensuring that occupation, subdivision, use, and development (including their location, scale, density and design), avoids, remedies, or mitigates adverse effects on natural character.

The preservation of the natural character of the coastal environment is important to the social, cultural and economic well-being of the Canterbury community. It is the natural character and the values associated with that natural character that enable the community to have high-quality recreation opportunities, provide for the ability of Ngāi Tahu to have a relationship with the coastal environment, and provide opportunities for commercial activities such as tourism, aquaculture, energy and fishing.

Restoration of the natural character of the coastal environment is appropriate in some circumstances. Restoration actions could include:

(1) restoring indigenous habitats and ecosystems where these have been significantly adversely affected and life-supporting capacity and/or mauri is compromised.

(2) creating or enhancing habitat for threatened indigenous species.

(3) encouraging regeneration of indigenous species, and using local genetic stock, where practicable, when restoring habitat.

(4) reducing or eliminating discharges of contaminants that are causing significant adverse effects, particularly cumulative effects.

(5) requiring, where practicable, restoration conditions on resource consents for the continuation of activities that have compromised natural character.

(6) restoring dunes and other natural coastal features or processes.

(7) protecting and restoring riparian margins.

(8) removing redundant structures and materials that lack historic heritage, amenity or recreational value.

Integrated management is important to ensure that agencies involved in management of the coastal resource work together in an effective and coordinated manner to ensure the sustainable management of the resource, and appropriately address cross-boundary issues. This is important for areas that are significant, representative or unique to the region.

Examples of areas where integrated management may be particularly important include:

(1) Banks Peninsula (Te Pataka o Rakaihautu)

(2) Kaitorete Spit

(3) The Timaru reefs

(4) The Kaikōura coastline (Te Tai o Marokura)

(5) Clarence River fan (Waiau-toa)

(6) Coastal lagoons/hapua including those of the Conway (Tutae Putaputa), Waiau, Hurunui, Ashley/Rakahuri, Rakaia, Ashburton/Hakatere, Hinds, Rangitata, Opihi and Waitaki Rivers,

At the coast, Mean High Water Springs generally marks the boundary between the RMA responsibilities of territorial and regional authorities and creates an artificial division of natural processes and values. The coast is, however, an area of high landscape sensitivity where there is a seamless visual connection between the sea and the land.

The policy is not wholly about protection, rather it seeks to provide for the integrated management of the areas identified by proposing that the Canterbury Regional Council work collaboratively with territorial authorities, and Ngāi Tahu as tāngata whenua, to develop plans and strategies which recognise landscape and other coastal values.

Policy 8.3.5 – Maintenance and enhancement of public and Ngāi Tahu access

To maintain and enhance public and Ngāi Tahu access to and along the coastal marine area, subject to:

(1) protecting public health and safety.

(2) avoiding significant adverse effects on natural, physical, amenity, recreational, cultural and historic heritage values of the coastal environment.

(3) avoiding damage to natural buffers to coastal erosion.

(4) protecting Ngāi Tahu sites of special value.

(5) protecting the stability, performance, maintenance and operation of regionally significant infrastructure in the coastal environment or other commercial maritime facilities.

(6) avoiding conflicts with the legal rights and lawful activities of owners/occupiers of land in the coastal environment.

(7) ensuring compliance with legislative maritime security requirements for ships and port facilities.

This policy implements the following objectives:

Objective 8.2.1, Objective 8.2.2, Objective 8.2.3 and Objective 8.2.4.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan to manage, in conjunction with territorial authorities, appropriate access to and along the coastal marine area.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans to maintain and enhance appropriate public access to the coastal marine area.

Local authorities:

Should:

(3) Work together with government agencies and land occupiers or owners and government agencies to:

(a) advocate for and promote actions to provide or enhance appropriate access to and along the coastal marine area; and

(b) ensure that there are bylaws, physical barriers or other measures in place to control the entry to or passage along the parts of the coastal marine area that have high values, and where they need protection from particular types of public access.

In particular, this may include provisions in district plans, esplanade and other reserves, covenants, bylaws, management agreements, and the construction and maintenance of physical barriers or other measures that will manage access.

(4) Recognise public and Ngāi Tahu access as issues in district or regional coastal strategies.

Will:

(5) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to:

(a) Maintaining and enhancing Ngāi Tahu access to and along the coastal marine area; and

(b) Protecting Ngāi Tahu cultural values and sites of significance from inappropriate public access.

Principal reasons and explanation

Better access to and along the CMA is a matter of national importance, but should not be at a cost to other values. Public foot access to and along the CMA is usually a benign activity, but vehicle access can often lead to problems through the vehicle use itself and access for other purposes such as dumping or burning rubbish.

Territorial authorities have an important role in controlling such access. Management of access within the CMA can be a matter addressed in plans, but other measures such as territorial authority beach bylaws and regional council navigation safety bylaws may be more effective and more readily implemented.

This policy recognises the need to maintain and enhance public walking access to and along the CMA. In doing so there is a need for local authorities to work with Ngāi Tahu as tāngata whenua, in accordance with tikanga Māori, to identify characteristics of the coastal environment that are of special value to tāngata whenua, including wāhi tapu, tauranga waka, mahinga mātaitai and taonga raranga. Provision must be made, as far as practicable, and in accordance with tikanga Māori, for the maintenance or enhancement of access for tāngata whenua.

There is a need to control public access to commercial ports for safety and security, including compliance with the International Code for the Security of Ships and of Port Facilities under the Maritime Security Act 2004.

Policy 8.3.6 – Regionally significant infrastructure

In relation to regionally significant infrastructure in the coastal environment:

(1) provide for its efficient and effective development, operation, maintenance and upgrade;

(2) provide for a range of associated activities that have an operational requirement to be located in that environment;

(3) recognise the potential of renewable resources in the coastal environment, such as energy from wind, waves, current and tides; and

(4) avoid development that may result in reverse sensitivity effects that constrain the ability of the infrastructure to be developed and used (because of the imposition of time or other operational constraints)

Such provisions should avoid, remedy or mitigate the adverse effects on that environment and take into account:

(a) that the ports of Lyttelton and Timaru need to dredge and deposit spoil in the coastal marine area outside the port areas to remain operational.

(b) that regionally significant infrastructure may need to be further developed in response to commercial opportunities and community needs.

(c) that the operators of regionally significant infrastructure need to have their own controls over access to operational areas, and that public access to such areas is not always appropriate.

(d) national port noise standards.

(e) the effects of coastal erosion, climate change and sea level rise.

This policy implements the following objective:

Objective 8.2.1, Objective 8.2.2, Objective 8.2.4 and Objective 8.2.5.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan that provide for regionally significant infrastructure by reducing constraints on their efficient and effective development, operation, maintenance and upgrade while avoiding, remedying or mitigating adverse effects and the effects on them of other activities, including reverse sensitivity effects, as far as practicable.

Should:

(2) Consider the transfer of functions, powers or duties where the operation of rules governing noise can best be administered by the appropriate territorial authority.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans that:

(a) recognise that regionally significant infrastructure needs to be able to operate and develop in an efficient and effective manner in the coastal environment.

(b) avoid land-uses that have reverse sensitivity effects on regionally significant infrastructure in the coastal environment.

Local authorities:

Should:

(4) Work together to develop a regional coastal strategy or district coastal strategies to integrate planning for the coastal environment, including regionally significant infrastructure.

Principal reasons and explanation

The effective and efficient operation and development of regionally significant infrastructure is essential for the well-being of the community. When developing, modifying, maintaining and operating regionally significant infrastructure, it is not always practicable to 'internalise' all adverse effects on the environment. In the case of sea ports, the infrastructure influences the quality of the environment surrounding it. As a result, care needs to be taken locating activities that may affect the efficient and effective operation and development of regionally significant infrastructure, including noise sensitive activities.

There is a need for the recognition and appropriate provision for activities, such as renewable energy generation and reclamations associated with ports and transport networks, that are important to the social, economic, and cultural well-being of people and communities, and that, by their very nature, need to be located in the CMA.

Regionally significant infrastructure includes commercial maritime facilities at Kaikōura and the ports of Lyttelton and Timaru. They are important for the social and economic well-being of Canterbury. They provide for the effective movement of people and goods within, into and out of Canterbury, creating important connections between people, places and markets.

Development may result in activities which are incompatible with the efficient use and operation of regionally significant infrastructure at Kaikōura or the ports of Lyttelton and Timaru. These may be incompatible because they require a level or type of environment which cannot be reasonably achieved close to the facilities at Kaikōura or the ports of Lyttelton and Timaru – for example in relation to noise or safety. They may also adversely affect operations and safety by creating the potential for conflicts, for example encouraging water recreation in or near shipping zones.

Policy 8.3.7 – Improve water quality in degraded areas

To improve the quality of Canterbury's coastal waters in areas where degraded water quality has significant adverse effects on natural, cultural, amenity and recreational values.

This policy implements the following objective:

Objective 8.2.3 and Objective 8.2.5.

Methods

The Canterbury Regional Council

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan that will establish water quality classifications, set water quality standards and control the discharge of contaminants in the coastal marine area, including provisions to review the conditions on existing discharges to ensure that the receiving waters meet the relevant water quality standards.

(2) Set out objectives and policies, and may include methods in regional plans applying outside of the coastal marine area, to recognise and provide for the inter-relationships between water quality in a water catchment and the quality of coastal water.

Will:

(3) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to the improvement of coastal water quality in degraded areas.

Principal reasons and explanation

Coastal water is generally in its natural state and is valued by the community for its naturalness and for cultural, amenity and recreational purposes. Water quality in its natural state is particularly important to the relationship that tāngata whenua have with water, particularly coastal water. However, there are areas where there is and has been contamination, either directly or indirectly from land-use or through freshwater contamination. Restoration of degraded coastal water in many of these areas may be appropriate to enable the area to be

used for cultural, amenity or recreational purposes. As an example, tāngata whenua may desire that the quality of the waters within certain coastal environments, such as the upper reaches of Lyttelton Harbour / Whakaraupo, is restored to a standard suitable for traditional kaimoana gathering.

It also needs to be recognised that the coastal environment is used for a variety of purposes that will have degraded the water quality. The coastal water in those areas may have a water quality classification other than a natural state standard. It is not necessarily appropriate for the water quality in those areas to be restored to its natural state if the ongoing nature of the activities is essential for community well-being.

Policy 8.3.8 – Discharge of contaminants to coastal water that is in a natural state

To manage discharges of contaminants into the coastal marine area to maintain coastal water quality that is currently in its natural state.

This policy implements the following objective:

Objective 8.2.6

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in its regional coastal plan and other relevant regional plans that will include setting water quality standards for coastal water and managing land-use and surface water quality, where it directly or indirectly affects coastal water, including provisions to review the conditions on existing discharges to ensure that receiving waters meet the relevant water quality standards and ongoing monitoring of coastal water quality.

(2) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to setting water quality standards for coastal water and managing land-use and surface water quality.

Principal reasons and explanation

Natural state standard is a water quality classification in the RMA. It requires no alteration of water quality outside of a mixing zone. There is a need to manage direct discharges of contaminants into the CMA, as well as indirect discharges of contaminants through surface and groundwater flowing into coastal waters, in order to keep coastal water in its natural state and to comply with any relevant water quality standards.

Policy 8.3.9 – Direct discharge of sewage into the coastal marine area

To ensure that human sewage is not discharged directly into the coastal marine area without treatment and where:

(1) Alternative methods, sites and routes for undertaking the discharges have been considered; and

(2) There has been consultation with Ngāi Tahu as tāngata whenua and particular regard had for their values and the effects of discharges on those values;

the human sewage is treated in a manner appropriate to the receiving environment.

This policy implements the following objective:

Objective 8.2.5

Methods

The Canterbury Regional Council

Will

(1) Set out objectives and policies, and may include methods in its regional coastal plan and other relevant regional plans, to avoid direct discharge of sewage into the coastal marine area unless it meets the requirements of the policy.

Should

(2) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to the discharge of sewage into the coastal marine area.

Principal reasons and explanation

It is recognised that the direct discharge of human sewage into the CMA is highly undesirable, although in some cases it may be necessary and justified.

The discharge of contaminants, particularly human sewage (both treated and untreated), to coastal waters is particularly abhorrent to the values of Ngāi Tahu as tāngata whenua. The concern is a result of both physical changes to the water and effects on the culture and traditions of Ngāi Tahu. Discharges such as these can be avoided or the adverse effects managed in a culturally appropriate way, such as by using wetlands as biofilters.

8.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Where occupation, use and development of the coastal environment has occurred, significant adverse effects will have been avoided, remedied or mitigated.

(2) The efficient and effective development, operation, maintenance and upgrade of regionally significant infrastructure will have been able to occur while associated adverse effects on the environment appropriately avoided, remedied or mitigated.

(3) The natural, amenity, recreational, cultural, landscape and historic heritage values of the coastal environment will be maintained and in some places enhanced.

(4) Public access to and along the coastal marine area will have been improved.

(5) Maintenance and enhancement of Ngāi Tahu access to mahinga kai, wāhi tapu and wāhi taonga and other sites of cultural significance to and along the coastal marine area will have occurred.

(6) The natural, cultural, amenity and recreational values of coastal water will be protected from discharges of contaminants that could significantly affect such values.

(7) The quality of degraded coastal water will have been enhanced, particularly where there is high contact recreation and the water has not been classified for other purposes.

(8) The quality of coastal water existing in its natural state will have been maintained.

(9) The quality of coastal water in areas valued by Ngāi Tahu as tāngata whenua for mahinga kai will have been maintained.

CHAPTER 9
ECOSYSTEMS AND INDIGENOUS BIODIVERSITY

Introduction

This chapter addresses issues relating to exotic and indigenous ecosystems and indigenous biodiversity, including the impact of plant and animal pests. As well as wider issues relating to ecosystems and indigenous biodiversity generally, this chapter particularly addresses wetlands as important ecosystems. Whilst this chapter provides an overview of issues associated with land, water and the coastal marine area, the focus is on the requirements of Section 6(c) of the RMA in relation to the management of land use and its effects on ecosystems and indigenous biodiversity. Other chapters in this policy statement also address ecosystem matters specific to those chapters, including the protection of the natural character of the coastal environment (Chapter 8) and of rivers and lakes and their margins (Chapters 7 and 10), and the protection of the wider landscapes and natural features Chapter 12).

***Ecosystem** means a system of interacting terrestrial or aquatic living organisms within their natural and physical environment. In Section 2 of the Resource Management Act, ecosystems and their constituent parts are part of the environment and include people and communities.*

However, in Chapter 9 the focus for "ecosystems" is thier natural components and their contrivution to the maintenance of indigenous biodiversity.

***Indigenous biodiversity** includes all plants and animals that occur naturally in New Zealand and have evolved or arrived without any assistance from humans. Indigenous species include migratory species visiting New Zealand on a regular or irregular basis.*

Ngāi Tahu as tāngata whenua have a significant interest in the protection, management and restoration of indigenous ecosystems and biodiversity. This stems from their close interaction with Canterbury's indigenous biodiversity over

centuries of occupation and the importance of it in Māori culture, including its significance as mahinga kai and taonga species. Chapter 2 outlines in more detail the relationship of Ngāi Tahu with the indigenous biodiversity of Canterbury.

Despite the biodiversity and ecosystem losses that have occurred over time, there remains a range of indigenous habitats, ecosystems, and species that contribute to Canterbury's distinctive natural character. This highlights the importance of long-term initiatives to maintain and enhance the ecosystems and indigenous biodiversity of the region. Some of the most significant and distinctive ecosystems in Canterbury include the major braided river systems, the network of culturally and ecologically significant river mouths, estuaries and lagoons, including Lake Ellesmere/Te Waihora, the largely unmodified alpine environments, extensive high country and intermontane basins, naturally rare limestone outcrops, coastal dune systems and many lakes and wetlands that provide, nationally and internationally significant bird habitat. The range of habitats associated with these ecosystems include alpine herbfields and scree communities, the sub-alpine and montane tall tussock grasslands, red, silver and mountain beech forests, induced short tussock grasslands of the intermontane basins, mixed podocarp/broadleaf forests of the foothills and Banks Peninsula, specialised plant communities adapted to the limestone outcrops, the highly depleted shrublands and savannah grasslands of the plains, and coastal dune vegetation including examples of the nationally rare native pingao. The Canterbury alpine environment contains many unique species and vegetation communities, extensive screes, bare rock, permanent icefields and glaciers. The iconic high country landscapes are characterised by extensive examples of tall and short tussock grasslands, native shrublands and beech forest communities. The most significant losses in indigenous habitat and biodiversity have occurred in lowland and coastal environments where up to 90% of the original indigenous vegetation has been lost. Indigenous vegetation and habitats remaining in these areas, including dryland kanuka and kowhai savannah vegetation, native grasses, and freshwater and coastal wetlands, are fragmented and under continued threat from land use intensification, edge effects and pest invasion. Canterbury's coastal environment has distinctive and nationally important features including the natural beach dune vegetation of Kaitorete Spit and coastal river mouth wetlands.

Canterbury's ecosystems are home to a number of unique and rare fauna. The Canterbury mudfish/kowaro is endemic to the region. Acutely threatened birds such as wrybill/ngutu-pare, black-fronted tern/tara and black stilt/kakī have important habitat areas within the region. At least seven threatened lizard species are found within the region. The coastal environment is home to populations of the rare Hector's and other dolphins, penguins and other marine birds and seals. Resident and migrating whales are also present in regional waters. The region's indigenous species include a number of fish, birds, plants and marine mammals specifically recognised by the Crown in the Ngāi Tahu Claims Settlement Act 1998 (NTCSA) as taonga species.

The Biodiversity Strategy for the Canterbury Region was adopted, in 2008, by the regional council, together with most territorial authorities, Ngāi Tahu and a number of other government and private agencies. It is the basis for a more coordinated and cooperative approach to the protection of indigenous biodiversity and aims to provide guidance and a common focus for biodiversity management initiatives across the region. It has identified actions and targets that will be reviewed regularly. The strategy is a non-statutory document, intended to sit alongside, but not replace, Resource Management Act 1991 (RMA) provisions relating to biodiversity that can take a more regulatory approach. The strategy recognises that a combination of measures, both regulatory and voluntary, are required if biodiversity outcomes are to be achieved.

There is also a National Biodiversity Strategy, and a number of territorial authorities in Canterbury have adopted biodiversity strategies for their own districts. The district strategies can be more specific in terms of individual projects and protected areas in these districts.

STATEMENT OF LOCAL AUTHORITY RESPONSIBILITIES

Section 62 of the RMA requires a regional policy statement to state the local authority responsible, in the whole or any part of the region, for specifying the objectives, policies, and methods for the control of the use of land to maintain indigenous biological diversity.

Joint responsibilities:

(1) The Canterbury Regional Council and territorial authorities will have shared responsibility for specifying the objectives, policies and methods for the control of the use of land in the beds of rivers and lakes and in wetlands for maintenance of indigenous biological diversity only where:

  (a) a territorial authority has identified in a district plan an area of significant indigenous vegetation or a significant habitat of indigenous fauna, that includes a bed of a river or lake or a wetland; or

  (b) there are indigenous vegetation clearance provisions in a district plan that apply to areas of the district that include a bed of a river or lake, or a wetland.

The Canterbury Regional Council:

(2) except as provided for in (1) above, will be solely responsible for specifying the objectives, policies and methods for the control of the use of land for the maintenance of indigenous biological diversity in the coastal marine area, in beds of rivers and lakes, and in wetlands.

Territorial authorities:

(3) will be solely responsible for specifying the objectives, policies and methods for the control of the use of land for the maintenance of indigenous biological diversity on all land outside of wetlands, the coastal marine area, and beds of rivers and lakes.

9.1 ISSUES

ISSUE 9.1.1 – THE ONGOING LOSS AND DEGRADATION OF ECOSYSTEMS AND INDIGENOUS BIODIVERSITY

Land use and development, and the introduction and spread of animal and plant pests, have contributed to the ongoing loss and degradation of Canterbury's ecosystems and indigenous biodiversity.

Explanation

Ongoing habitat loss and modification as a result of land-use and development, and the impact of animal and plant pests, remain the principal threats to ecosystems and indigenous biodiversity in Canterbury today. It is widely accepted that, since the arrival of humans in New Zealand, there has been a significant decline in indigenous biodiversity and this loss is continuing. In some areas, such as in the farmed areas of the Canterbury Plains, loss of the original indigenous vegetation is virtually complete. In lowland and coastal areas, remaining indigenous vegetation is in small, scattered fragments and waterways have been significantly modified. Much of the region's freshwater and coastal wetlands have been drained and filled. The region's previously extensive wetlands have been greatly reduced in size, particularly in coastal and lowland areas, and increasingly, in drylands and inland basins. It is widely accepted that less than ten percent of Canterbury's original wetlands remain today.

In recent years, there has been a considerable increase in the level of understanding and recognition of the importance of indigenous biodiversity, and the impacts of its loss and degradation on the values held by people and communities, including effects on Ngāi Tahu culture, identity and wellbeing. This has resulted in an increase in biodiversity-related initiatives at all levels, from individual landowners protecting streams, wetlands and areas of indigenous vegetation, to community groups supporting action in their area, to central and local government increasing resources and programmes related to biodiversity. However, Canterbury's ecosystems and indigenous biodiversity have continued to decline, mostly due to intensification of land-use and the ongoing effects of introduced species, including domestic stock. The majority of the most threatened ecosystems are situated in lowland environments and predominantly in private ownership. Achieving protection of these areas therefore relies heavily on the support of private landowners and will remain the most critical challenge for future biodiversity management.

ISSUE 9.1.2 — CHALLENGES TO THE PROTECTION OF SIGNIFICANT INDIGENOUS VEGETATION AND HABITATS

While knowledge and recording of areas of indigenous vegetation and habitats of indigenous fauna in Canterbury is improving and increasing, there remains uncertainty around the identification of ecosystem values and their significance, particularly where there are access issues. This can make the identification and protection of these areas from the adverse effects of land use and development, challenging.

Explanation

As well as the overall decline in our indigenous biodiversity, many remaining areas of significant indigenous vegetation and significant habitats of indigenous fauna are potentially threatened and are likely to be lost without ongoing maintenance and protection. Protection of such areas is a matter of national importance under Section 6(c) of the RMA, so the development of clear guidance for the determination of significance will be essential for their identification and protection. Some of these areas may also have significant cultural heritage values for Ngāi Tahu and warrant protection under section 6(e) of the RMA.

Lowland, coastal and montane environments have seen the greatest loss of indigenous vegetation and habitat and continue to face the greatest threats from the intensification of land use. As a consequence, remaining indigenous biodiversity in these locations has a correspondingly higher significance and is in greatest need of protection, and where possible, restoration. The majority of these lowland areas are found on freehold land, so the ability to access these areas for identification and assessment of their values and threats will be dependent on the cooperation and support of the landowner. Seeking this support continues to be one of the key challenges for achieving the objectives below.

9.2 OBJECTIVES

Objective 9.2.1 – Halting the decline of Canterbury's ecosystems and indigenous biodiversity

The decline in the quality and quantity of Canterbury's ecosystems and indigenous biodiversity is halted and their life-supporting capacity and mauri safeguarded.

The following policies implement this objective:

Policy 9.3.1, Policy 9.3.2, Policy 9.3.3, Policy 9.3.5, and Policy 9.3.6.

Principal reasons and explanation

Issue 9.1.1 identified that, despite an increase in biodiversity related initiatives, Canterbury's ecosystems and indigenous biodiversity continue to decline which recognises the need for active management to occur. Objective 9.2.1 sets a goal of halting this decline. This will depend on safeguarding the life-supporting capacity of these ecosystems. Many of Canterbury's indigenous plants and animals, and the landscapes and ecosystems that support them, are recognised nationally and, in some cases, internationally, so it is vital that their continuing decline be halted. Halting the decline is also important because Canterbury's ecosystems and indigenous biodiversity help define the region and also form a fundamental part of the cultural identity and heritage of the Canterbury community, including Ngāi Tahu as tāngata whenua.

Objective 9.2.2 – Restoration or enhancement of ecosystems and indigenous biodiversity

Restoration or enhancement of ecosystem functioning and indigenous biodiversity, in appropriate locations, particularly where it can contribute to Canterbury's distinctive natural character and identity and to the social, cultural, environmental and economic well-being of its people and communities.

The following policies implement this objective:

Policy 9.3.4, Policy 9.3.5 and Policy 9.3.6.

Principal reasons and explanation

In addition to the protection of Canterbury's ecosystems and indigenous biodiversity, their enhancement and restoration may also be desirable where this will contribute to sustaining the inherent biological diversity of these systems in the long term. The benefits of such enhancement or restoration can include reducing the edge effects from the surrounding environment, creating new habitats or ecosystems, and increasing connectivity. Some restoration or enhancement projects may be incompatible with surrounding land uses or infrastructure if sited inappropriately, for example the expansion of bird habitat close to major airport flight paths, or the winter shading of strategic road corridors by tall, dense vegetation growth. In some circumstances ecosystem functioning may rely on unusual factors, such as grazing regimes or isolation from surrounding habitats which may encourage pest or predator invasion. The relationship of Māori with their culture and traditions is a matter of national importance under Section 6(e) that can be recognised and provided for through the identification of ecosystems and indigenous biodiversity of significance to Ngāi Tahu, including those valued as mahinga kai or taonga species, and their protection in a manner consistent with Ngāi Tahu cultural values and principles. Restoration or enhancement of indigenous vegetation or habitats can also contribute to the cultural well-being of Ngāi Tahu, including contributing to outcomes sought in relation to mahinga kai and taonga species.

Many ecosystems and habitats are fragmented, and it is important to restore greater connectivity between them. Connectivity brings benefits for the functioning of ecosystems and the enhancement of indigenous biodiversity that are greater than the sum of the benefits of protecting individual areas. This is also reflected in the Ngāi Tahu concept of Ki Uta Ki Tai (from the mountains to the sea).

Ecosystems and indigenous biodiversity provide a range of benefits and ecosystem services that contribute to the social, cultural, environmental and economic well-being of Canterbury's people and communities. Restoration or enhancement of ecosystem functioning, and indigenous biodiversity will therefore contribute to sustaining the services provided by these ecosystems. For example, enabling the pursuit of a range of recreational, research and educational opportunities. Cultural benefits will also result, including being able to recognise and continue traditions, knowledge and customary uses for Ngāi Tahu as tāngata whenua, including mahinga kai. There are also economic benefits from the restoration and enhancement of Canterbury's ecosystems and indigenous biodiversity, such as through tourism, improvements to water quality and quantity, and marketing the 'clean, green environment' image.

Objective 9.2.3 – Protection of significant indigenous vegetation and habitats

Areas of significant indigenous vegetation and significant habitats of indigenous fauna are identified and their values and ecosystem functions protected.

The following policies implement this objective:

Policy 9.3.1, Policy 9.3.2, Policy 9.3.3, Policy 9.3.5 and Policy 9.3.6.

Principal reasons and explanation

The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna are matters of national importance under Section 6(c) of the RMA that must be recognised and provided for. One of the major impediments to their protection is the limited information available for their identification and requirements for protection. Many areas are already protected but there are other areas of significant vegetation and habitats that remain at risk.

Policy 9.3.1 – Protecting significant natural areas

1) Significance, with respect to ecosystems and indigenous bidiversity, will be determined by assessing areas and habitats against the following matters:

(a) Representativeness

(b) Rarity or distinctive features

(c) Diversity and pattern

(d) Ecological context

The assessment of each matter will be made using the criteria listed in Appendix 3.

2) Areas or habitats are considered to be significant if they meet one or more of the criteria in Appendix 3.

3) Areas identified as significant will be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities.

This policy implements the following objectives:

Objective 9.2.1 and Objective 9.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to provide for the identification and protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna in water bodies including wetlands, in the coastal marine area, and in river and lake beds.

(2) Provide guidelines applicable to Canterbury which will assist in the application of the matters to determine areas of significant indigenous vegetation and significant habitats of indigenous fauna that can be used by the Canterbury Regional Council, territorial authorities and others.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans to provide for the identification and protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.

District plan provisions will include appropriate rule(s) that manage the clearance of indigenous vegetation, so as to provide for the case-by-case assessment of whether an area of indigenous vegetation that is subject to the rule comprises a significant area of indigenous vegetation and/or a significant habitat of indigenous fauna that warrants protection.

(4) Engage with Ngāi Tahu as tāngata whenua, and use iwi management plans, to help identify areas and habitats that have particular significance to Ngāi Tahu and to protect them in a manner consistent with Ngāi Tahu cultural values and principles.

Should:

(5) Continue to work with landowners to identify the location of significant indigenous vegetation and significant habitats of indigenous fauna for inclusion in district plans.

If other significance criteria are already set out in an existing district plan to achieve the same purpose, existing district plan criteria will apply until those criteria are reviewed.

Existing specified areas of significant indigenous vegetation, or significant habitats of indigenous fauna in a district plan, shall be deemed to be consistent with the significance matters set out in this policy.

(6) Give consideration to controls or other provisions in district plans that require the fencing of areas of significant indigenous vegetation and significant habitats of indigenous fauna and the control or exclusion of animal and plant pests when subdivision occurs.

(7) Consider the use of incentives in district plans for protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna in relation to subdivision.

Local authorities:

Should:

(8) Protect areas of significant indigenous vegetation and significant habitats of indigenous fauna as they undertake their own activities and operations. This should apply unless the adverse effects on the areas or habitats cannot be avoided, because they are necessary for the maintenance of erosion or flood protection structures or for the prevention of damage to life or property by floods.

(9) Advocate, promote or provide targeted financial and other support or guidance for the appropriate establishment of:

(a) reserves

(b) covenants

(c) heritage orders

(d) bylaws

(e) community initiatives

(f) management agreements

(g) and physical works by private landowners and occupiers, Ngāi Tahu and environmental organisations, to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna.

Principal reasons and explanation

Under Section 6(c) of the RMA, the policy statement and local authorities undertaking functions under the RMA have to recognise and provide for the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna as matters of national importance. The relationship between Māori and their culture and traditions, and their ancestral lands, water, sites, wāhi tapu, and other taonga, also has to be recognised and provided for as a matter of national importance. Achieving this statutory function will require local authorities to engage with Ngāi Tahu to identify areas and habitats that have particular significance. Chapter 2, Issues of Resource Management Significance and Chapter 4, Provisions for Ngāi Tahu and Their Relationship with Resources provide a cultural context and tools and processes for engaging with Ngāi Tahu. The roles of regional councils and territorial authorities for the protection of areas of significant vegetation and habitat are outlined in the introduction section of this chapter.

The matters for determining significance of an area of indigenous vegetation, and a habitat of indigenous fauna, fall within the groupings of representativeness, rarity/distinctiveness, diversity and pattern and ecological context. Criteria are required for determining significant indigenous vegetation and significant habitats, particularly where there may be little information currently available and investigation is required.

The policy sets out the matters to be assessed when evaluating these areas. Vegetation or habitats may qualify as significant under one, or several of the matters listed, in determining whether the threshold of significance is met. Such assessments are likely to arise through the course of an application for resource consent, or a change to a district or regional plan. The policy gives guidance for local authorities, applicants and decision-makers.

While areas of significant indigenous vegetation and significant habitats of indigenous fauna are often identified in plans, it is difficult to ensure that all significant sites are included, because of issues with access and ecosystem information. The methods therefore seek that as a minimum, territorial authorities will include indigenous vegetation clearance rules that act as a trigger threshold for significance to be determined on a case-by-case basis.

Policy 9.3.2 – Priorities for protection

To recognise the following national priorities for protection:

(1) Indigenous vegetation in land environments where less than 20% of the original indigenous vegetation cover remains.

(2) Areas of indigenous vegetation associated with sand dunes and wetlands.

(3) Areas of indigenous vegetation located in "originally rare" terrestrial ecosystem types not covered under (1) and (2) above.

(4) Habitats of threatened and at risk indigenous species.

This policy implements the following objectives:

Objective 9.2.1 and Objective 9.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may incude methods in regional plans for the purpose of maintaining the indigenous vegetation and habitats of those areas that meet the priorities for protection. These may control the use of the coastal marine area, control the use of land in wetlands and in river and lake beds.

Should:

(2) Investigate the range of effective options for the protection of areas that meet the priorities for protection, including controls, best management practices, codes of practice, covenants, incentives, subsidies and other forms of assistance to provide for the long-term ecologically sustainable management of these areas.

(3) Include provisions in a pest management strategy, prepared under the Biosecurity Act 1993, which gives priority to the control of pests located in areas and habitats that meet the priorities for protection.

Territorial authorities:

Should:

(4) Recognise the national priorities for the protection of biodiversity through objectives, policies or methods in district plans.

Local authorities:

Should:

(5) Maintain the indigenous vegetation of those areas or habitats, where they meet the priorities for protection, in undertaking their own operations and activities. This should apply except in those situations where vegetation removal cannot be avoided, and is necessary, for example, for the maintenance of erosion or flood protection structures or for the prevention of damage to human life, health or property by floods or fire.

(6) Work together with other local authorities, Ngāi Tahu, local communities and key stakeholder groups to identify those species/habitats/ecosystems that are most vulnerable to disturbance and need to be given legal protection to provide for their long-term survival.

Principal reasons and explanation

The policy recognises the national priorities established by the government in the National Priorities for Protecting Rare and Threatened Native Biodiversity on Private Land (2007). The government recognises that councils have the lead role in putting the statement of national priorities into practice in line with their functions under Sections 30 and 31 of the RMA. The government's expectation is that the priorities will be used to support and inform councils' responsibilities under the RMA through a co-operative framework.

The Land Environments of New Zealand (LENZ) land classification system provides a framework for identifying areas of indigenous vegetation at greatest risk. Environments with less than 30% of their original vegetation remaining and/or with less than 20% of their area protected are considered to be at risk. The 20% protection threshold has been chosen in the LENZ system because below 20% the momentum of decline of indigenous vegetation becomes much more difficult to reverse. A significant proportion of land environments in Canterbury fall below this threshold, in particular the Canterbury Plains. This increases the significance of any remaining areas of indigenous vegetation or habitat, particularly on the plains.

Wetlands and dune vegetation are recognised as being of high national priority as ecosystems that have become uncommon due to human activity, and remain at a high risk of being lost due to continuing human intervention. The national priorities identify wetlands as ecosystems and habitats in most need of protection wherever they remain. The priorities are not intended to cover constructed dunes or wetlands where these did not previously exist.

"Originally rare" terrestrial ecosystems, as defined in the definitions, are a high priority as they encompass ecosystems that are of very limited extent, and are very unusual, and are therefore important in terms of the proportion of rare and threatened species they support.

Policy 9.3.3 – Integrated management approach

To adopt an integrated and co-ordinated management approach to halting the decline in Canterbury's indigenous biodiversity through:

(1) working across catchments and across the land/sea boundary where connectivity is an issue for sustaining habitats and ecosystem functioning

(2) promoting collaboration between individuals and agencies with biodiversity responsibilities

(3) supporting the various statutory and non-statutory approaches adopted to improve biodiversity protection

(4) setting best practice guidelines for maintaining indigenous biodiversity values, particularly maintaining conditions suitable for the survival of indigenous species within their habitats, and safeguarding the life-supporting capacity and/or mauri of ecosystems

This policy implements the following objectives:

Objective 9.2.1 and Objective 9.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to provide for an integrated approach to biodiversity management across the Canterbury region.

(2) Promote and support collaboration between key agencies and individuals with responsibilities for the management of ecosystems and indigenous biodiversity.

Should:

(3) Support the vision, goals and priorities of the Canterbury Biodiversity Strategy 2008 in protecting areas of indigenous vegetation and habitats of indigenous fauna through its own operations and activities.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to achieve the integrated management of the actual or potential effects of land use on the life-supporting capacity and/or mauri of ecosystems and the protection of indigenous biodiversity

Should:

(5) Establish best practice guidelines and monitoring systems for land use activities that avoid, remedy or mitigate adverse effects on the life-supporting capacity of ecosystems and contribute to the effective maintenance of indigenous biodiversity.

(6) Identify cross-boundary issues for the maintenance of indigenous biodiversity and establish protocols for inter-agency cooperation to address these issues.

Local authorities:

Will:

(7) Engage with Ngāi Tahu as tāngata whenua, and use iwi management plans to help identify areas and habitats that have particular significance to Ngāi Tahu and to protect them in a manner consistent with Ngāi Tahu cultural values and principles.

Should:

(8) In undertaking their own operations and activities, protect the life-supporting capacity and/or mauri of ecosystems. This should apply except in those situations where the adverse effects on ecosystems cannot be avoided, and are necessary, for example, for the maintenance of erosion or flood protection structures or for the prevention of damage to human life, or property by floods or fire, or for the safeguarding of public health.

(9) Recognise potential effects of climate change on the life-supporting capacity and/or mauri of ecosystems and species distribution.

(10) When developing and implementing programmes to safeguard the life-supporting capacity of ecosystems, take into account the vision, goals, targets and outcomes of the Canterbury Water Management Strategy (2009)

(11) Through their Water Zone Committees take a strategic approach to the setting of priorities and targets for biodiversity improvement in the development of their Regional and Zone Implementation Programmes (RIPs and ZIPs).

Principal reasons and explanation

Halting the current decline in biodiversity will only be achieved by adopting an integrated and coordinated management approach. Such an approach will recognise that Canterbury's ecosystems and indigenous biodiversity must be managed within and across catchments so that the interconnectivity of species and habitats is provided for. The Ngāi Tahu philosophy of Ki Uta Ki Tai (from the mountains to the sea) will be an integral feature of this process.

Increased extreme weather (rainfall, drought) events, temperature changes and sea level rises as a result of global climate change will place greater natural stresses on Canterbury's ecosystems and indigenous biodiversity. Potential effects on biodiversity are expected to include gradual changes in the nature of existing habitats, changes in species distribution, and increased threats from pests and disease. Simply protecting habitats may not be sufficient if these habitats are going to change. As part of a more co-ordinated approach to biodiversity management, local authorities and others need to anticipate such possible changes to habitats and provide long-term protection to those areas where species are likely to relocate in response to these changes.

An integrated and coordinated management approach will also recognise that there is a need for cooperation between the many statutory and non-statutory agencies and organisations within the Canterbury region that have biodiversity related responsibilities and objectives. This will be complemented by the adoption of a collaborative relationship between the many communities, individuals and landowners across the region who have biodiversity related interests.

Various agencies are involved in maintaining, enhancing or restoring indigenous ecosystems and indigenous biodiversity or in funding such activities. They include Te Rūnanga o Ngāi Tahu and papatipu rūnanga, government and statutory agencies at national, regional and local levels and a wide range of voluntary organisations, professional groups, and biodiversity resource users. These include environmental and community trusts, environmental organisations, industry groups, private companies, landowners and occupiers, and individual citizens.

Ngāi Tahu as tāngata whenua have a strong interest in the management of activities which affect ecosystems. This is both as traditional users of many indigenous species, including mahinga kai species, and as significant landowners and commercial fishers. It is important that in safeguarding the mauri (the spiritual life force) and life-supporting capacity of ecosystems, we identify the potential for activities to have adverse effects on ancestral lands, water, and sites, and on the relationship Ngāi Tahu as tāngata whenua have with those lands, waters and sites.

To Ngāi Tahu as tāngata whenua, indigenous vegetation and biodiversity provide a vast range of natural resources, important for mahinga kai and a wide range of natural remedies or rongoā. Mahinga kai refers to Ngāi Tahu interests in traditional food and other natural resources and the places where those resources are obtained. Rongoā is the Māori term for medicines that are produced from indigenous plants in New Zealand. The use of these medicines prevented and provided remedies for many sicknesses. Rongoā is still being practised and is used extensively by Māori today.

Canterbury Regional Council projects that support a collaborative approach to the protection of ecosystems and biodiversity include those under its "Living Streams", "Improving Urban Waterways" and "Integrated Catchment Management" programmes, and work undertaken in establishing, maintaining and improving its regional parks.

Finally, the need for a strategic approach will be vital. Given the decline that has already occurred, the first priority must be protecting and sustaining those habitats and ecosystems that are the most threatened and significant. The second priority will be protecting a representative range of indigenous habitats and ecosystems characteristic of the Canterbury region, and encouraging the restoration of those habitats that have been lost or severely degraded. While the protection of these habitats is the first step, the management of the habitat will also be crucial to the long-term survival of the component species. The development of best practice guidelines for maintaining indigenous biodiversity values, particularly for species that are threatened or at risk, within these habitats will enable landowners to make informed decisions on the future management of these areas.

The Canterbury Water Management Strategy (2009) includes as a measure of its success, that "ecosystems, habitats and landscapes will be protected and progressively restored and indigenous biodiversity will show significant improvement" within 10 years. It sets a number of targets to

maintain and improve the health of ecosystems associated with water bodies with local authorities taking a key role in its implementation through the development of regional and district plans. Putting these targets into a strategic framework through the development of Regional and Zone Implementation Plans (RIPs and ZIPs) will ensure that they complement the overall approach set for the region.

Policy 9.3.4 – Promote ecological enhancement and restoration

To promote the enhancement and restoration of Canterbury's ecosystems and indigenous biodiversity, in appropriate locations, where this will improve the functioning and long term sustainability of these ecosystems.

This policy implements the following objective:

Objective 9.2.2.

Methods

The Canterbury Regional Council:

Should:

(1) Support the vision, goals and priorities of the Canterbury Biodiversity Strategy 2008 for the enhancement, restoration and protection of areas of indigenous vegetation and habitats of indigenous fauna when undertaking its own operations and activities.

Territorial authorities:

Should:

(2) Consider the use in district plans of indigenous biodiversity enhancement or restoration incentives in relation to subdivision.

(3) Ensure that enhancement or restoration activities are managed so that they are compatible with adjacent existing and consented land use activities, including airports.

Local authorities:

Should:

(4) Advocate, promote or provide targeted financial and other support or guidance to improve or restore ecosystems and indigenous biodiversity, including the establishment of:

  (a) reserves
  (b) covenants
  (c) heritage orders
  (d) bylaws
  (e) community initiatives
  (f) management agreements
  (g) and physical works by private landowners and occupiers, Te Rūnanga o Ngāi Tahu and environmental organisations, to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna
  (h) best practice guidance and monitoring systems to improve the quality and effectiveness of restoration and enhancement outcomes.

(5) Support restoration programmes which implement the outcomes from the Canterbury Water Management Strategy (2009) and its implementation programmes.

(6) Engage with Ngāi Tahu as tāngata whenua, and use iwi management plans to help identify areas and habitats that have particular significance to Ngāi Tahu and to protect, restore and enhance them in a manner consistent with Ngāi Tahu cultural values and principles

(7) Through Water Zone Committees and Regional and Zonal Implementation Programmes (RIPs and ZIPs) identify priority areas for environmental restoration and enhancement.

Principal reasons and explanation

Restoration and enhancement of indigenous biodiversity are major features of the national and regional biodiversity strategies. These strategies recognise that without proactive management, Canterbury's ecosystem and indigenous biodiversity values may continue to decline.

Remnant and re-established indigenous forest is most commonly found in gullies and alongside streams. Such strips are important refuges for indigenous biodiversity, but many are too small or isolated to sustain viable populations of rare or threatened species for very long. However, the forest remnants can provide temporary footholds, and can form the basis of permanent habitat if they are expanded and/or connected.

Fragmentation of natural areas through ongoing land-use change has produced many isolated remnants that are important for biodiversity but vulnerable to continuing degradation, including invasion by plant and animal pests and the loss of indigenous species. There is a need for action to restore fragmented, degraded or scarce natural habitat, to restore essential ecosystem functions, ecosystems and indigenous biodiversity in particular, and to extend the area of particular habitat types. Restoration is needed to provide connections between currently isolated fragments of natural ecosystems. This may be essential to maintain these ecosystems as a whole.

Restoration and enhancement of areas of indigenous vegetation and habitats can lead to both beneficial and adverse outcomes depending on the siting of the restored areas in relation to existing developments and infrastructure. Development of water retention ponds in new subdivisions can provide important habitat for wetland and game bird species. Some developments, however, may be incompatible with the encouragement of biodiversity expansion, for example the risk of bird strike resulting from the enhancement of bird habitat in the vicinity of the flight path areas for aircraft taking off or approaching major airports. Awareness of the likely consequences of habitat enhancement and restoration can provide a useful basis for designing "appropriately located" restoration programmes that will minimise conflicts between land uses.

Policy 9.3.5 – Wetland protection and enhancement

In relation to wetlands:

(1) To assess an ecologically significant wetland against the matters set out in Policy 9.3.1 and the national priorities listed in Policy 9.3.2. For the purposes of this policy, ecologically significant wetlands do not include areas that are both predominately pasture and dominated by exotic plant species and where they are not significant habitats of indigenous fauna.

(2) To ensure that the natural, physical, cultural, amenity, recreational and historic heritage values of Canterbury's ecologically significant wetlands are protected.

(3) To generally promote the protection, enhancement and restoration of all of Canterbury's remaining wetlands.

(4) To encourage the formation of created wetlands that contribute to the restoration of indigenous biodiversity.

(5) To protect adjoining areas of indigenous and other vegetation which extend outside an ecologically significant wetland and are necessary for the ecological functioning of the wetland.

This policy implements the following objectives:

Objective 9.2.1, Objective 9.2.2 and Objective 9.2.3.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to ensure that Canterbury's ecologically significant wetlands and their values are protected, to provide for the enhancement and restoration of these and other wetlands. The provisions will provide for, where appropriate, the formation of new artificial or created wetlands where they provide biodiversity restoration benefits.

Should:

(2) Continue to work with land owners, and coordinate with the investigations of other agencies, to identify and establish and maintain an inventory of ecologically significant wetlands in the region.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans to control the effects of the subdivision, use, development, or protection of land to ensure that ecologically significant wetlands are protected.

Should:

(4) Set out objectives and policies, and may include methods in district plans to provide for, where appropriate, the formation of created wetlands where they will provide biodiversity restoration benefits.

May:

(5) Consider including standards in a district plan that remove the requirement for a resource consent from the territorial authority for the use of a wetland, if a resource consent is granted by the Canterbury Regional Council for the same purpose.

Local authorities:

Should:

(6) In undertaking their own operations and activities, protect remaining ecologically significant wetlands. This should apply unless adverse effects on wetlands cannot be avoided because they are necessary for the maintenance of erosion or flood protection structures or for the prevention of damage to life or property by floods.

(7) Advocate, promote or provide targeted financial and other support or guidance for the appropriate establishment of:

(a) reserves,

(b) covenants,

(c) heritage orders,

(d) community initiatives,

(e) management agreements, and associated physical works, by private land-owners and occupiers, Ngāi Tahu and environmental organisations,

(f) best practice guidance for the design and implementation of programmes for wetland protection and enhancement that will maintain, enhance and restore wetlands and create new wetlands, without impacting on the effective operation of critical services and infrastructure.

(8) Use iwi management plans and engage with Ngāi Tahu as tāngata whenua to identify the significant cultural values for wetlands/repo raupo and to protect, restore and enhance them in a manner consistent with those cultural values and their principles.

(9) When developing and implementing programmes for wetland protection or enhancement, take into account the vision, goals, targets and outcomes of the Canterbury Water Management Strategy (2009) and its implementation programmes.

Principal reasons and explanation

The term "wetland" encompasses both freshwater wetlands associated with rivers, lakes and land-bordered tarns and swamps; and brackish (saline) estuarine wetlands including coastal lagoons, marshes and estuaries. As a result of human activities, the total area of wetland within Canterbury has been greatly reduced from its former extent.

The future of ecologically significant wetlands as natural features and habitats can be made more secure. This can be achieved by protecting them from threats to their natural character, their existence or their ecological functioning that result from incompatible uses of land and water. It is also necessary to protect them from abstraction of water, diversion of inflows, or deliberate actions to degrade them.

The Canterbury Water Management Strategy (2009) has set an immediate goal for no further loss of wetlands, together with long term targets for improvements in the ecological functioning and habitat diversity of wetlands and an increase in the total area of wetlands through restoration and construction.

To protect wetlands and their ecological functioning, it is often necessary to protect adjoining areas of indigenous and other vegetation which extend outside the wetland. These provide buffering and contribute to the biological diversity, habitat values and integrity of wetland areas, as well as contributing to their natural character. Adverse effects may arise from earthworks, the presence of stock or domestic animals on adjacent land or within the wetland, burning, plant and animal pests, the excessive application or release of contaminants or nutrients in a wetland or its catchment, the planting or removal of plants, and any drainage or irrigation of the adjacent land that could affect the water table within the wetland. In addition, it is also possible that in-stream water storage and the resulting modification of the flow regime may result in the dewatering of hydraulically connected riparian wetlands.

It may sometimes be appropriate to use created wetlands for the treatment of industrial discharges, including stormwater. Created wetlands are a useful means of buffering and treating waste and water runoff to protect adjacent natural waterways and wetlands. They can also provide natural habitats for indigenous species.

The risk of bird strike resulting from the enhancement or creation of wetlands in the vicinity of Christchurch International Airport is an example of the need for careful design and location of wetland

enhancement projects. The location of wetland areas in relation to the airport approach flight paths and the habitat components of the wetland will influence the level of risk posed by such a project. The development of best practice guidelines for wetlands design will contribute to a better understanding of the outcomes of the enhancement of wetlands and the likely long-term beneficial and adverse effects on the surrounding environment.

The long-term security of some species, such as the Canterbury mudfish/kowaro, can only be improved by increasing available areas of quality habitat, and to assist with this, the policy encourages restoration and enhancement where feasible. A greater range and area of wetland would also be an asset to the people of Canterbury, by enhancing cultural and recreational opportunities and amenity values. Regulation, as a method to implement the policy, may not be appropriate in all instances. Various forms of encouragement, education or incentives might be more effective.

The ecological value of wetlands/repo raupo (and specific indigenous plant species) is a matter of great importance to Ngāi Tahu as tāngata whenua. Making use of the natural functions and cleansing abilities of wetland ecosystems is a recurring theme in iwi management plans. Some wetlands are culturally significant as mahinga kai or wāhi tapu sites.

Policy 9.3.6 – Limitations on the use of biodiversity offsets

The following criteria will apply to the use of biodiversity offsets:

(1) the offset will only compensate for residual adverse effects that cannot otherwise be avoided, remedied or mitigated;

(2) the residual adverse effects on biodiversity are capable of being offset and will be fully compensated by the offset to ensure no net loss of biodiversity;

(3) where the area to be offset is identified as a national priority for protection under Policy 9.3.2, the offset must deliver a net gain for biodiversity;

(4) there is a strong likelihood that the offsets will be achieved in perpetuity; and

(5) where the offset involves the ongoing protection of a separate site, it will deliver no net loss, and preferably a net gain for indigenous biodiversity conservation.

Offsets should re-establish or protect the same type of ecosystem or habitat that is adversely affected, unless an alternative ecosystem or habitat will provide a net gain for indigenous biodiversity.

This policy implements the following objectives:

Objective 9.2.1, Objective 9.2.2 and Objective 9.2.3.

Methods

The Canterbury Regional Council:

Should:

(1) Set out objectives and policies, and may include methods in regional plans to ensure that biodiversity offsets are included as appropriate forms of mitigation in those circumstances set out in the policy.

Territorial authorities:

Should:

(2) Set out objectives and policies, and may include methods in district plans to ensure that biodiversity offsets are included as appropriate mitigation in those circumstances set out in the policy.

Principal reasons and explanation

Biodiversity offsets are the final step in a hierarchical process in which adverse effects on indigenous biodiversity are best avoided, then remedied, and finally mitigated. Only in the latter case should off-site biodiversity offsets be considered to deal with residual unavoidable adverse effects.

The most desirable form of offsetting will be achieved in situ or adjacent to the area affected. Only this way will it be likely to minimise the impacts on ecosystem functioning and the complexity of the component biodiversity with respect to species composition, habitat structure and the context of the area within the wider landscape. Offsetting at a different location is unlikely to be able to replicate all such aspects of the original area.

There will be cases where the indigenous biodiversity at risk is so significant that it should not be significantly modified or destroyed under any circumstances (other than when necessary for avoiding risks to human health and safety). There are also situations where residual effects cannot be fully compensated because the biodiversity is highly vulnerable or irreplaceable, for example where the vegetation or habitat is so rare or reduced that there are few or no opportunities to deliver an offset. In such cases offsetting cannot be considered as a means of environmental compensation for adverse effects.

The goal of a biodiversity offset is to achieve "no net loss" which means that the compensation provided by an offset should represent like for like in terms of the species or habitats that are adversely affected. In some circumstances the restoration of a degraded area or the creation of a new area that replicates the original habitat lost may provide appropriate compensation. There is a preference for the re-establishment or protection of the same type of ecosystem or habitat to avoid the difficulty of assessing relative values of different ecosystems or habitats of different species. Trade-offs involving different species will not always adequately compensate for the loss of the originally threatened species. However, the policy does recognise that where significant indigenous biodiversity benefits can be achieved, and where those significant benefits are considered to outweigh the adverse effects on the ecosystem or habitat, the protection of other habitats may be appropriate.

There also needs to be certainty that the proposed offsets will occur. Some offset measures such as indigenous planting will take a long time to establish and become useful in a biodiversity role. The overall goal is that there should be no net loss, and preferably an overall gain in the state of indigenous biodiversity as a result of the project and its biodiversity offsets.

***Biodiversity offset** means a measurable conservation outcome resulting from actions which are designed to compensate for significant residual adverse effects on biodiversity arising from human activities after all appropriate prevention and mitigation measures have been taken. The goal of a biodiversity offset is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure and ecosystem function. They typically take the form of binding conditions associated with resource consents and can involve bonds, covenants financial contributions and biodiversity banking.*

9.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) There are more areas of significant indigenous vegetation and significant habitats of indigenous fauna that are identified and protected.

(2) The overall functioning and intrinsic values of Canterbury's existing ecosystems and indigenous biodiversity are protected from the adverse effects of land use and development activities.

(3) There is an overall improvement in the long-term sustainability of those ecosystems that are a priority for protection.

(4) There is an increase in the number and effectiveness of biodiversity-related initiatives in Canterbury that contribute to the protection and enhancement of indigenous biodiversity and to safeguarding the life-supporting capacity and/or mauri of ecosystems generally.

(5) There is no further loss of the area, diversity or functioning of ecologically significant wetlands in Canterbury.

(6) The relationship of Ngāi Tahu with their sites and habitats of cultural significance is enhanced.

CHAPTER 10
BEDS OF RIVERS AND LAKES AND THEIR RIPARIAN ZONES

Introduction

This chapter addresses the beds of rivers and lakes and their associated riparian zones. A river's bed is the land that the waters of the river cover at its fullest flow without overtopping its banks. A lake's bed is the land that the waters of the lake cover at its highest level without exceeding its margin. The riparian zone is an area where there is direct interaction between terrestrial and freshwater ecosystems, and it extends from the water's edge across the bank of a river and across the margins of a lake. Riparian zones are important areas for biodiversity.

River and lake beds, and their associated riparian zones, are important natural features in Canterbury which is characterised by its many large braided rivers. Riparaian zones are integral to the mahinga kai customs and values of Ngāi Tahu. A number of these areas are associated with Statutory Acknowledgement Areas and nohoanga sites. These rivers and their beds are especially distinctive, and an important part of the regions natural and geological processes. Foothill streams and rivers and lowland spring-fed streams are also important at a local level. Canterbury is also characterised by its many lakes of varying sizes, including the large lakes created by hydro-electric dams.

Lake and river beds and their riparian zones are vital elements of the Canterbury landscape and important habitats for flora and fauna. These provide birds and fish with essential pathways between the coast and inland habitats. The riparian zone is an important area for the management of water quality and ecological resources. It provides a buffer for effects between land and rivers or lakes. Riparian vegetation, both indigenous and exotic, is important for mitigating the effects of non-point source discharges, moderating in-stream water temperature, maintaining the stability of shorelines and stream banks, providing habitats for flora and fauna, and its contribution to the overall natural character of rivers and lakes. However, in some cases, the presence of exotic vegetation within the riparian zone can adversely affect the flow and level of the adjoining waterway and can also displace indigenous vegetation.

Beds of lakes and rivers and riparian zones are locations where important structures and activities occur associated with essential structures, regionally significant infrastructure, and critical infrastructure. For many activities there are no other location options available.

ISSUE 10.1.1 – ACTIVITIES CAN ADVERSELY AFFECT BED AND RIPARIAN VALUES

Activities occurring within the beds of rivers and lakes and their riparian zones may be important for community well-being, but can adversely affect the natural, physical, cultural, amenity, recreational and historic heritage values of those beds and riparian zones.

Explanation

River and lake beds and their riparian zones are important areas for social, cultural and economic use by the Canterbury community. These areas often provide the location for new and existing essential structures and for other activities, many of which may not be able to locate elsewhere. Essential structures often represent significant capital investment and they can provide economic and social benefits.

Activities taking place in beds include those for: bed management relating to protection from floods; providing for recreational opportunities; water storage; and providing areas where Ngāi Tahu, as tāngata whenua, can access mahinga kai. Gravel, sand and rock extraction from river beds provides material for industry. River and lake beds are often used for farming activities, with margins converted to pasture, and fences within the beds controling stock.

Some of these activities have the potential to cause adverse effects on the natural environment on the functioning of waterbodies, and on spawning areas and fish passage.

ISSUE 10.1.2 – ACTIVITIES AFFECTING FLOOD-CARRYING CAPACITY

Some activities within the beds of rivers and on their banks or margins can reduce flood-carrying capacity or exacerbate the adverse effect of floods.

Explanation

This issue relates to activities in the beds of rivers, and on their banks or margins, affecting their flood-carrying capacity, rather than the effects on flooding, if any, of activities in the wider riparian zone which are addressed elsewhere in the Canterbury Regional Policy Statement. The terms "banks or margins" is used here rather than "riparian zones" because the activities and their effects are more localised.

*The **bank of a river** is the physical or constructed edge of the river that contains its flows.*

*The **margin** is defined as the land immediately adjacent to the bed of a river, wetland, lake or estuary which is likely to be affected by a high water table, flooding, fluvial erosion, or sediment deposition, and often contains distinctive vegetation. The size of the margin will vary according to local site factors but may extend to the limits demarcated by natural river terraces and constructed stop banks.*

River beds are used for a range of activities that benefit the community. However, some of those activities can adversely affect flood-protection works in, or on, the bank or margin of the bed. Such activities can also exacerbate the adverse effects of floods and adversely affect the flood-carrying capacity of a river.

The margins of rivers contain natural features such as vegetation and wetlands that naturally contain or reduce the effects of flood flows. Removal of exotic and indigenous vegetation or bed material such as rocks, or gravel can hasten the erosion of banks and margins, exacerbating the effects of flooding. Vegetation planting or the invasion of pest plants can unduly confine a river. The deposition of bed material, earthworks, the building, placing, or removing of structures in the beds, and the diversion and release of water may similarly exacerbate the effects of flooding. Similar activities in the margins adjacent to the bed can also create these effects.

ISSUE 10.1.3 – ACTIVITIES AFFECTING ESSENTIAL STRUCTURES

Activities can adversely affect the stability, performance or operation of essential structures located in, on, under or over the beds of rivers and lakes and on their banks or margins.

Explanation

***Essential structures** in beds include, but are not limited to, bridges, fords, and other structures associated with the State Highway network, cables, support structures for infrastructure, pipelines and other crossings, water intakes, water conduits and races, canals for the conveyance, storage and discharge of water, dams, including those for major electricity generation facilities or irrigation schemes, river gauging towers and flood-protection works and plantings. See Glossary and Definitions section.*

This issue is only concerned with effects of activities on essential structures in, on, under or over the beds, banks and margins of rivers and lakes. Essential structures, critical infrastructure and regionally significant infrastructure outside of river and lake beds and margins, including within riparian zones, are addressed elsewhere in the Canterbury Regional Policy Statement. Essential structures enable the well-being of the Canterbury community, by providing services such as transport routes, electricity distribution and protection from floods. Essential structures that are located in the beds and margins of river and lakes are necessarily placed there because thier function is directly related to the river or lake such as a stop bank or irrigation canal, or they are part of a linel network such as a road or electricity pylon that must cross the river or lake bed. Activities that affect the stability, preformance or operation of essential structures, may in turn affect the well-being of the community by putting provision of those services at risk. Activities that can adversely affect the stability and performance of essential structures include:

(1) diversion of river flows or the release of water
(2) construction of other structures
(3) river flood-protection works
(4) vegetation planting or removal
(5) excavation, deposition or removal of gravel and other material.
(6) inappropriate residential, recreational or building development near essential structures.

ISSUE 10.1.4 – ACCESS TO AND ALONG RIVER AND LAKE BEDS

Continued and enhanced public and Ngāi Tahu access to and along river and lake beds enables the use and enjoyment of those areas, but can have adverse effects on bed values and can negatively affect the function and operation of essential structures, private property rights and the cultural values of Ngāi Tahu as tāngata whenua.

Explanation

It is a matter of national importance under section 6 of the Resource Management Act 1991 (RMA) that the maintenance and enhancement of public access to and along lakes and rivers is recognised and provided for. It is important to enable, maintain and enhance public and Ngāi Tahu access to the natural, cultural and physical resources of many river and lake beds. For Ngāi Tahu, such access will serve to enhance their relationship with their ancestral lands, water, sites, wāhi tapu and other taonga. However, public and Ngāi Tahu access needs to be appropriately managed so as to avoid adverse effects on the range of values associated with the beds of lakes and rivers and their riparian zones, and also upon surrounding landowners/occupiers and owners of infrastructure.

In general, there is a public expectation that there will be access to and along the region's river and lake beds. However, certain types of access, including unconditional access, can compromise other values of the river and lake beds and essential structures. For example, vehicles at certain times and outside of established tracks can damage bird-nesting sites and repeated disturbance of a bird colony can severely affect breeding. While the RMA requires enhanced access to be recognised and provided for, only appropriate access should be provided for or enhanced and this does not necessarily mean upgrading access for vehicles.

Access across private land is not always available or appropriate for commercial, health and safety, security or privacy reasons. The type of access and the time or dates of what is appropriate access may also vary. For example, vehicle and foot access at lambing time or when the ground is saturated may adversely affect primary production. Public access where farm or construction machinery is operating, or where stock such as cattle or deer pose a hazard, may give rise to safety concerns.

Ngāi Tahu are the owners of the bed of Lake Ellesmere/Te Waihora and there is a Department of Conservation and Ngāi Tahu joint management plan for the lake and its bed administered by the Te Waihora Management Board. Ngāi Tahu values, such as those associated with wāhi tapu, Fenton Reserves or Nohoanga sites, may also require special protection in places from inappropriate access by the public, who may not be aware of tikanga māori. There are instances where Ngāi Tahu as tāngata whenua require access to sites associated with mahinga kai and the gathering of cultural resources, wāhi tapu and wāhi taonga (including in Fenton Reserves and Nohoanga), where it is not appropriate to have permanent public access.

Land tenure and ownership are other factors that should be considered. Where there are legal roads or existing public access rights, there is public expectation that access should continue to be provided for or enhanced. Where AMF rights (*ad medium filum* "to the centre line") exist, the river bed is private land. In other cases, property boundaries were originally set along the mid or bank line of a river, and the river has since altered its course, often several times. Much of the river and lake bed land in Canterbury is still in public ownership, owned by the Crown or by local authorities.

10.2 OBJECTIVES

Objective 10.2.1 – Provision for activities in beds and riparian zones and protection and enhancement of bed and riparian zone values

Enable subdivision, use and development of river and lake beds and their riparian zones while protecting all significant values of those areas, and enhancing those values in appropriate locations.

The following policies implement this objective:

Policy 10.3.1 and Policy 10.3.2

Principal reasons and explanation

The natural character of lakes and rivers and their margins and their protection from inappropriate subdivision, use, and development are matters of national importance under the RMA that must be recognised and provided for. Maintenance and enhancement of the quality of the environment is a matter for which particular regard must be had to under the RMA. The restrictions on the use of river and lake beds in the RMA mean that there is a need to enable the appropriate use and development of river and lake beds while protecting their values.

There is also a need to enable the establishment, maintenance, repair and upgrade of essential structures in beds and many other commercial, recreational or cultural activities that are required to take place in the beds. Such activities include planting for river protection, or aggregate extraction.

River and lake beds and riparian zones are important natural resources, having natural character and providing habitats for indigenous flora and fauna and for trout and salmon. These and other values of the beds and riparian zones should be protected from inappropriate use and development in accordance with the purpose and principles of the RMA, and those values may also be enhanced.

Objective 10.2.2 – Maintenance of flood-carrying capacity of rivers

To maintain the flood carrying capacity of rivers.

The following policies implement this objective:

Policy 10.3.1, Policy 10.3.3 and Policy 10.3.4

Principal reasons and explanation

The flood-carrying capacity of Canterbury's rivers must be managed and maintained to reduce potential losses in relation to land and settlement. Floods also have ecological benefits in 'flushing' waterways, removing algae, and transporting bed material. Human activities and natural events can reduce the flood-carrying capacity of a river. Vegetation planting or dumping and the associated spread of pest plants and other uncontrolled vegetation within the beds of rivers can impede flood flows. Inappropriate deposition or removal of bed material, earthworks, and building or removing structures in the bed can divert flood flows and exacerbate flood effects. However, appropriate management of some activities in river beds, such as gravel extraction, can improve flood-carrying capacity. Extraction of aggregates also has economic benefits.

Some activities outside of river beds but on their banks and margins, such as vegetation removal or building structures, can adversely affect the movement of flood flows. Removal of vegetation and other river bed material can limit the flood protection benefits they would otherwise provide, such as diverting flows or keeping flows within desired boundaries.

Objective 10.2.3 – Protection of essential structures

Protection of the stability, performance and operation of essential structures from activities in river and lake beds and on their banks or margins.

The following policies implement this objective:

Policy 10.3.1, Policy 10.3.3, Policy 10.3.4 and Policy 10.3.5

Principal reasons and explanation

Some structures in, on, under or over river beds are essential for the well-being of the community and damage to, or failure of, those structures should be avoided. Activities such as removal or disturbance of bed material or vegetation can interfere with the operation of essential structures or their ability to withstand floods.

Objective 10.2.4 – Public and Ngāi Tahu access to and along rivers and lakes

Maintenance and enhancement of public and Ngāi Tahu access to and along rivers and lakes.

The following policy implements this objective:

Policy 10.3.5

Principal reasons and explanation

Maintenance and enhancement of public and Ngāi Tahu access to and along rivers and lakes is generally desirable because recreation and cultural opportunities in these areas can be enhanced. However, some access can cause conflicts with other values, including those of physical resources and infrastructure, and may be inappropriate. Access should not compromise the relationship that Ngāi Tahu have as kaitiaki.

Access should not be at the cost of significant adverse effects on natural, amenity, recreational, cultural and historic heritage values or on the legitimate rights of owners or occupiers of river or lake bed land and adjacent land or on infrastructure.

Policy 10.3.1 – Activities in river and lake beds and their riparian zones

To provide for activities in river and lake beds and their riparian zones, including the planting and removal of vegetation and the removal of bed material, while:

(1) recognising the implications of the activity on the whole catchment;

(2) ensuring that significant bed and riparian zone values are maintained or enhanced; or

(3) avoiding significant adverse effects on the values of those beds and their riparian zones, unless they are necessary for the maintenance, operation, upgrade, and repair of essential structures, or for the prevention of losses from floods, in which case significant adverse effects should be mitigated or remedied.

This policy implements the following objectives:

Objective 10.2.1, Objective 10.2.2 and Objective 10.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to enable and to control activities in river and lake beds.

Should:

(2) Take into account the vision, goals and priorities of the Canterbury Biodiversity Strategy 2008 in its operations and activities, including those in river and lake beds and their riparian zones.

(3) Should advocate and promote the appropriate establishment of: reserves, covenants, heritage orders, bylaws and management agreements that will avoid, remedy or mitigate adverse effects on the values of river and lake beds and their riparian zones.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to control the effects of the inappropriate subdivision, use, development, or protection of land to avoid, remedy or mitigate adverse effects on the values of the riparian zones of rivers and lakes.

May:

(5) Control the use of land within lakes and river beds for maintenance of indigenous biological diversity where:

(a) the territorial authority has identified in a district plan an area of significant indigenous vegetation or a significant habitat of indigenous fauna, that includes a bed of a lake or river; or

(b) there are indigenous vegetation clearance provisions in a district plan that apply for areas of the district that are larger than, but include, a bed of a lake or river.

Local authorities

Will:

(6) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to the carrying out of activities in the beds of rivers and lakes and their riparian zones.

Should:

(7) Undertake investigations to identify areas within the beds of rivers and lakes and their riparian zones, where there are significant values that need to be protected from inappropriate subdivision, use and development. This will include coordination with the investigations of other agencies including the Department of Conservation, and Ngāi Tahu as tāngata whenua. Iwi management plans will be used to identify significant Ngāi Tahu cultural values, but will not be the only means of identifying such values.

(8) Recognise and provide for the integrated nature of whole catchments in managing and enabling activities in river and lake beds and their riparian zones, and in developing and applying measures to avoid, remedy or mitigate adverse effects on the values of the beds and riparian zones.

May:

(9) Consider including standards in plans that remove the requirement for a resource consent for the use of land in a bed of a lake or river, if a resource consent from another local authority is granted for the same activity.

Principal reasons and explanation

Regional plan provisions are required to manage river and lake beds, whereas district plans manage the effects of land-use activities over the whole of a district, including land within river and lake beds and their riparian zones. An integrated and consistent approach to controlling land-use over a whole district is desirable, and may result in dual regional council and territorial authority responsibilities for some activities. The allocation of responsibilities for control of land-use for maintaining indigenous biological diversity, set out in Chapter 9 - Ecosystems and Indigenous Biodiversity, recognises this shared role for indigenous biodiversity in river and lake beds as being both necessary and appropriate.

A significant river and lake bed activity that will need to be provided for and controlled through regional plans is the excavation of gravels and other material such a boulders for the construction industry. Different bed areas will each require different management plans, rules and strategies to deal with particular localised issues such as: competition for access to more valuable sources of material; positive and negative effects on the flood carrying capacity of rivers; effects on gravel and sediment transfer to the coast; and the need to protect bed structures such as bridges, groynes and stop banks.

River and lake beds and their riparian zones are important habitats for flora and fauna and provide corridors for movement. The riparian zone provides a buffer for effects between land and river or lake processes. Riparian vegetation can be important for mitigating the effects of non-point source discharges, and for maintaining the stability of shorelines and stream banks, ecosystems and the natural character of rivers and lakes and their riparian zones.

Activities such as construction and use of dams, weirs and other structures may have both positive and adverse effects on flood flows.

Whole catchment management of river and lake beds and their riparian zones is an integrated management approach. It

recognises the ecological and hydrological linkages between land and water ecosystems and the potential adverse effects that can result from inappropriate management of activities in river and lake beds and their riparian zones. Whole catchment management is a systematic effort to understand and manage a river catchment through interactive interpretation and analysis, and management of the linkage between ecosystems, resources and people. It involves not only a planning and policy framework, but the development of monitoring, reporting, geographical information system analysis, information databases, area management and succession tools for natural resource management.

Whole catchment management corresponds with the Ngāi Tahu concept of Ki Uta Ki Tai, (meaning "from the mountains to the sea"). This is the Ngāi Tahu way of understanding the natural environment, including how it functions, how people relate to it and how it can be managed appropriately. Whole catchment management also involves partnership with territorial authorities, particularly in riparian zones, where they have an important role in controlling the effects of land-use and controlling access.

Policy 10.3.2 – Protection and enhancement of areas of river and lake beds and their riparian zones

To preserve the natural character of river and lake beds and their margins and protect them from inappropriate subdivision, use and development, and where appropriate to maintain and/or enhance areas of river and lake beds and their margins and riparian zones where:

(1) they exist in a degraded state and enhancement will achieve long-term improvement in those values;

(2) they have ecological values for which protection and/or enhancement will assist in the establishment or re-establishment of indigenous biodiversity or ecosystems, particularly for ecosystems that are threatened or unrepresented in protected areas;

(3) they have existing significant trout or salmon habitat;

(4) maintenance and/or enhancement will improve or establish connections between habitats and create corridors for indigenous species and trout and salmon and their movement between areas;

(5) riparian zones provide a buffer from activities that may adversely affect bed values;

(6) opportunities exist to create habitat corridors for plants and animals; or

(7) riparian zones provide spawning or other significant habitats for at risk or threatened species, such as inanga or Canterbury mudfish.

This policy implements the following objective:

Objective 10.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to preserve the natural character of river and lake beds and protect them from inappropriate subdivision, use and development and to maintain and enhance river and lake bed values as appropriate.

(2) Ensure that activities undertaken by the Canterbury Regional Council do not restrict the Regional Councils river control functions

Should:

(3) Undertake investigations to identify areas within the beds of rivers and lakes and their margins and riparian zones, where there are significant values that need greater priority for protection from inappropriate use or development.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in their district plans to control the effects of the subdivision, use, development, or protection of land in riparian zones for protecting indigenous biodiversity and preserving natural character and protect them from inappropriate subdivision, use and development. In particular, riparian zones should be a priority for enhancement or environmental mitigation where development, subdivision or changes in use occur.

Local authorities:

Will:

(5) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to the protection and enhancement of areas of river and lake beds, their margins and riparian zones.

Should:

(6) Recognise and provide for the integrated nature of whole catchments in managing and enabling activities in river and lake beds and their margins and riparian zones, and in developing and applying measures to avoid, remedy or mitigate adverse effects on the values of the beds and riparian zones.

(7) Advocate and promote the establishment of reserves, covenants, heritage orders, plan provisions and management agreements that will maintain and where appropriate, enhance the values of areas of river and lake bed and their margins and riparian zones. This will include the management of local authority reserves and leased land.

(8) Advocate and promote the establishment and maintenance of riparian vegetation, and indigenous vegetation in particular, along the riparian zones of rivers and lakes to reduce the adverse effects of land-use on water quality and to maintain, and where appropriate, to enhance the values of the beds and riparian zones of rivers and lakes.

(9) Undertake or fund projects that will maintain and where appropriate, enhance areas of river and lake beds and their margins and riparian zones that have significant values.

Principal reasons and explanation

Preservation of the natural character of beds of lakes and rivers from inappropriate subdivision, use and development is a matter of national importance under the RMA that must be recognised and provided for. Enhancement of amenity values and the quality of the environment are matters that be given particular regard under the RMA. Enhancement of areas of river and lake beds that have significant natural values can restore the balance of the natural ecosystem. Increasing the total area, quality or amount of some natural ecosystems may be needed for long-term sustainability of those ecosystems.

Natural character consists of the range of qualities and features created by nature. For fresh water environments, including beds, this includes the integrity, functioning, and resilience of that environment as a result of: natural qualities such as water quality, quantity and bed substrate; natural processes such as the movement of sediment, water and biota; and natural life-supporting capacity and/or mauri, including for natural ecosystems and biodiversity. Natural character also incorporates landscapes and landforms, characteristics of special spiritual, historical or cultural significance to Māori, and significant places or areas of historic or cultural significance.

Identification of areas within the beds of rivers and lakes and their riparian zones, where there are significant values that can and should be protected from effects of inappropriate land-use activities, will enable the Canterbury Regional Council, territorial authorities and other bodies to prioritise their work programmes that protect, maintain and enhance these values.

The social, environmental and cultural well-being of the Canterbury community can be improved through the enhancement of areas of river and lake beds that have significant natural, physical, amenity, recreational, cultural or historic heritage values. Regulation, which establishes minimum standards, is by itself insufficient to enhance these values, and non-regulatory methods are also necessary. This policy is also given effect to through Chapter 7 Freshwater and Chapter 9 Ecosystems and indigenous biodiversity.

Policy 10.3.3 – Management for flood control and protecting essential structures

To manage activities in river and lake beds and their banks or margins to:

(1) avoid or, where this is not practicable, to remedy or mitigate adverse effects on vegetation that controls flood flows or protects river banks or lake margins from erosion; and

(2) avoid adverse effects on the stability, performance, operation, maintenance, upgrade and repair of essential structures that are located in, on, under or over a river or lake bed or its bank or margin.

This policy implements the following objectives:

Objective 10.2.2 and Objective 10.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans:

  (a) to control the use of land in river and lake beds and their banks and margins in order to avoid or mitigate flood hazards. This will include protecting vegetation and structures that control flood flows or stop river banks or lake margins from eroding; and

  (b) to protect the stability, performance, operation and maintenance of essential structures that are in, on, under or over a river or lake bed or its bank or margin.

Should:

(2) Investigate and, where appropriate, promote alternative, less invasive vegetation, or indigenous vegetation for bank stabilisation and flood protection works, then for example, willow or wattle species.

(3) In undertaking its operations and activities, take actions to avoid or mitigate adverse effects on the passage of floodwaters or on vegetation or structures that control flood flows or erosion, and on the stability, performance, maintenance or operation of essential structures in, on, under or over the beds of lakes and rivers or their banks or margins.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to control the subdivision, use, development, or protection of land outside of river and lake beds, for the purpose of avoiding or mitigating flood hazards and to enable the Canterbury Regional Council to carry out its functions in regard to flood protection works, including the maintenance of flood mitigation structures and vegetation.

Principal reasons and explanation

Both the Canterbury Regional Council and Christchurch City Council have functions in regards to flood protection works. The policy applies to the beds, banks and margins of rivers and lakes rather than their wider riparian zones because it is concerned with the effects of activities close to the bed on flood-carrying capacity, on flood-control measures and on essential structures. Activities outside of the beds, banks and margins of lakes and rivers are addressed elsewhere in the Canterbury Regional Policy Statement.

Activities on the banks or margins of rivers and lakes can adversely affect the integrity and functioning of essential structures and flood-protection works and vegetation in, and adjacent to, the bed and can exacerbate the adverse effects of floods.

The policy and methods seek to reduce losses from flooding while recognising that some activities such as dams and weirs and other structures may have effects on flood flows but are necessary for the overall well-being of the community.

Policy 10.3.4 – Removal of vegetation and bed material from river beds

To manage the use and removal of vegetation and bed material in river beds and their margins to ensure:

(1) the maintenance of flood-carrying capacity of rivers

(2) the protection of essential structures; and

(3) erosion control and prevention.

provided its management does not adversely affect:

(a) the instream and other values of the beds including habitat and associated ecosystems; or

(b) the stability, performance, operation and maintenance, upgrade and repair of essential structures.

This policy implements the following objectives:

Objective 10.2.2 and Objective 10.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans that provide for the appropriate removal of vegetation and bed material from river beds for the purpose of maintaining the flood-carrying capacity of the rivers.

Should:

(2) Undertake investigations to identify areas within the beds of rivers which require protection because there are significant values that would be adversely affected by the removal of vegetation or bed material.

(3) Advocate, promote and provide information about the removal of bed vegetation and bed material where it will assist in maintaining the flood-carrying capacity of river beds. This will include the removal of natural resources such as gravel where its build-up can increase flood risks.

(4) In undertaking its operations and activities, ensure that bed vegetation and bed materials are removed, when and where it will assist in maintaining flood-carrying capacity without significantly adversely affecting the values of the beds or the stability, performance or operation of essential structures.

(5) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to the removal of vegetation and bed material from river and lake beds and their margins.

Principal reasons and explanation

The policy and its methods seek to reduce losses from flooding. The policy recognises that while vegetation or bed material removal from some parts of the bed is desirable or essential, some removal of bed vegetation or material can adversely affect the values of the beds or the stability, performance or operation of essential structures. Removal of bed material and vegetation could also result in adverse effects on habitats, natural character or on cultural values.

Policy 10.3.5 – Maintenance and enhancement of public and Ngāi Tahu access

To promote the maintenance and enhancement of public and Ngāi Tahu access to and along the beds of rivers and lakes, and to ensure that subdivision use and development does not result in inappropriate loss of existing access, subject to:

(1) protecting public health and safety, and avoiding conflict between different types of access;

(2) avoiding adverse effects on the values of the beds, or stability of banks;

(3) protecting Ngāi Tahu cultural values and sites of significance from inappropriate public access;

(4) protecting the stability, performance and operation of essential structures in, on, under or over the beds;

(5) ensuring the integrity of flood-protection vegetation is maintained;

(6) avoiding conflicts with the legal rights and lawful activities of owners/occupiers of river or lake beds and adjacent land, or of the owners/operators of infrastructure in, on, under or over the bed; and

(7) engaging with the Walking Access Commission to identify and negotiate issues around public access.

This policy implements the following objective:

Objective 10.2.4

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to control the entry to, or passage along, river and lake beds and their banks or margins, and to discourage such entry where it is inappropriate. This may include measures to avoid adverse effects on the values of the beds from vehicle or other access to, or along, those beds.

Territorial authorities:

Should:

(2) Consider appropriate measures that will maintain and enhance and, where appropriate, control public access to and along the beds of rivers and lakes.

Local authorities:

Will:

(3) Identify areas where there is existing public access that should be retained, and identify locations where access is desirable, and the conditions under which that access shall occur. These areas may be illustrated on a map, and if so, they should be regularly updated.

(4) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to identify Ngāi Tahu values relevant to:

(a) Maintaining and enhancing Ngāi Tahu access to and along the beds of rivers and lakes; and

(b) Protecting Ngāi Tahu cultural values and sites of significance from inappropriate public access.

Should:

(5) Advocate and promote the appropriate establishment of reserves, covenants, heritage orders, plan provisions, esplanade reserves and strips, bylaws and management agreements that will maintain and enhance and, where appropriate, control public access to, and along, the beds of rivers and lakes and their banks or margins.

(6) Advocate, promote and undertake actions to provide appropriate vehicle or other access to river and lake beds and their banks or margins and, when and where appropriate, to control or prevent such access through provisions in plans, reserves, covenants, heritage orders, esplanade reserves and strips, bylaws and management agreements, or the construction and maintenance of physical barriers or other measures.

Principal reasons and explanation

Better access to and along river and lake beds is desirable for people's enjoyment and the kaitiaki relationship of Ngāi Tahu, but should not be at a significant cost to other values. The type and timing of access and passage to and along the beds may also be controlled pursuant to Policy 10.3.2.

Public foot access to and along river and lake beds is usually a benign activity, but vehicle access can often lead to problems through the vehicle use itself and access for other undesirable purposes such as dumping or burning rubbish. Territorial authorities have an important role in controlling such access.

Access to sites of cultural significance is important to Ngāi Tahu as tāngata whenua, including access to wāhi tapu or tauranga waka sites. However access to them by the general public may be insensitive to the cultural or spiritual traditions of Ngāi Tahu.

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Activities within the beds of rivers and lakes and their riparian zones or access to, or along, the beds will be provided for and controlled.

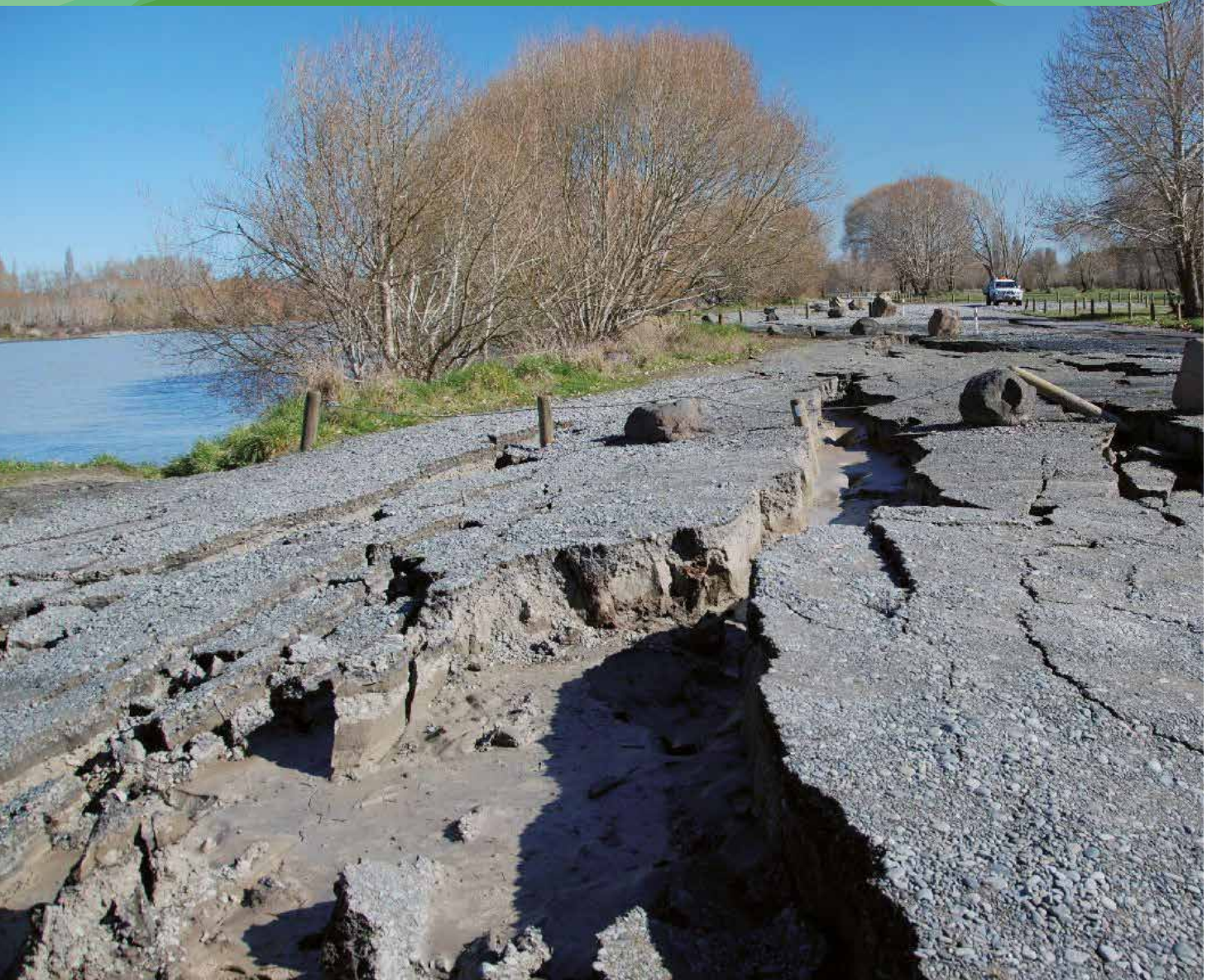
(2) The values and natural character of river and lake beds and their riparian zones will be maintained or enhanced.

(3) The flood-carrying capacities of rivers will be maintained.

(4) Essential structures in river and lake beds and on their banks or margins will be protected from activities that affect their stability, performance or operation.

(5) Public and Ngāi Tahu access to and along the beds of rivers and lakes will be appropriately provided for, enhanced or controlled.

CHAPTER 11
NATURAL HAZARDS



Introduction

This chapter provides a framework for managing natural hazard risk in Canterbury. It also sets out the responsibilities of the local authorities in the region for the control of land-use to avoid or mitigate natural hazards. It recognises the need to work closely with the Canterbury Civil Defence Emergency Management Group and to coordinate and integrate, where possible, management under the Resource Management Act 1991 (RMA), the Building Act 2004, the Local Government Act 2002 (LGA), the Civil Defence Emergency Management Act 2002, and other legislation.

The term "natural hazard" is usually associated with major geophysical events or natural occurrences, such as earthquakes and associated tsunamis, volcanic activity, wildfires, landslips, storm surges, coastal erosion, extreme erosion and sedimentation events, or extreme weather events such as flooding, drought, snow (and avalanches) and high winds. Their hazardous nature is a result of their effects on human activities.

***Natural hazards** are the effects of natural occurrences on the environment and, in particular, on the human occupation of an area. This can be described as:*

Assets + natural occurrences = natural hazards

In this context, assets include people, property, infrastructure and other aspects of the environment.

The Canterbury region has experienced and remains vulnerable to a wide range of natural hazards – including earthquakes, tsunamis, extreme weather events, landslips and subsidence. Examples of natural hazards since European settlement include: tsunamis in 1868, 1877, 1960 and 2010; extreme high winds in 1975; flooding in South Canterbury in 1986; drought in the late 1980's; and heavy snowfalls in 1992 and 2006. In 1868 there was widespread flooding throughout Canterbury, and the Waimakariri River flooded the centre of Christchurch. Significant earthquakes have occured in North Canterbury in 1888 and 1901, at Arthur's Pass in 1929, at Darfield in 2010, and Christchurch in 2011. The spire of the Christ-Church Cathedral has been felled three times by earthquakes.

The hierarchy approach that this chapter sets out for dealing with natural hazards is threefold. In order of priority:

(1) Avoidance – Keeping assets away from hazard prone areas, this includes land-use planning to avoid new development in hazard prone areas, and matching land-use to anticipated changes in climatic conditions. If avoidance is not possible, then:

(2) Mitigation – Managing or reducing the effects of natural hazards while acknowledging that there will be some residual adverse effects from natural hazards, and that some development (particularly infrastructure) may have to be located in areas prone to natural hazard events. This includes constructing physical works such as stop-banks, retaining walls and sea walls; retaining natural features such as dunes and wetlands; constructing resilient buildings and infrastructure; developing and implementing warning systems; and developing community preparedness. To manage residual risk, then:

(3) Response and recovery – Responding to the consequences of natural hazard events. This includes immediate response and longer term rebuilding and restoration of communities and infrastructure, and insurance.

Reducing natural hazard risk, by either reducing the likelihood of the natural hazard event or by reducing the potential consequences, usually involves financial, environmental or social cost. These costs must be weighed against the benefits gained from reducing the risk, and it is acknowledged that a combination of avoidance, mitigation and recovery may be appropriate. Some measures, particularly structural measures such as river works, stop-banks and sea walls, may transfer rather than reduce risk, or may adversely affect ecosystems and amenity values. Environmental effects caused by mitigation works, including effects of special significance to Ngāi Tahu, must be considered by those managing natural hazards.

Climate change and associated sea-level rise could affect the severity of natural hazards. Across Canterbury, change in long-term temperatures, rainfall patterns, and wind conditions may, among other things, increase or decrease the frequency and severity of flooding, wildfire, drought, landslip, erosion, sedimentation, coastal erosion and coastal inundation. Recognition of the importance of climate change will help to ensure that communities can manage natural hazards appropriately and can also adapt, and become resilient to the effects of a changing climate.

During the earthquake recovery period, the government and the Canterbury Earthquake Recovery Authority also have responsibilities for decisions on land use in response to natural hazard events, as a result of the Canterbury Earthquake Recovery Act 2011.

STATEMENT OF LOCAL AUTHORITY RESPONSIBILITIES

Section 62 of the Resource Management Act 1991 (RMA) requires that a regional policy statement must state the local authority responsible in whole or any part of the region for specifying the objectives, policies and methods for the control of the use of land to avoid or mitigate natural hazards.

Local authority responsibilities for the control of the use of land for natural hazards in the Canterbury Region are as follows:

(1) The Canterbury Regional Council

Will be responsible for specifying the objectives, policies and methods for the control of the use of land in the following areas:

(a) within the 100-year coastal erosion hazard zones, as defined by maps in the Canterbury Regional Coastal Environment Plan; and

(b) within the beds of rivers and lakes; and

(c) within the coastal marine area for the purpose of avoiding or mitigating natural hazards.

(2) Territorial authorities

Will be responsible for specifying the objectives, policies, and methods for the control of the use of land, to avoid or mitigate natural hazards in their respective areas excluding those areas described in 1(a), 1(b) and 1(c) above.

(3) Joint Responsibilities

Local authorities will have joint responsibility for specifying the objectives, policies, and methods for the control of the use of land, to avoid or mitigate natural hazards in areas subject to seawater inundation. The Canterbury Regional Council will be limited to developing objectives, policies and non-regulatory methods. Territorial authorities will develop objectives, policies and methods which may include rules.

ISSUE 11.1.1 – RISKS FROM NATURALLY OCCURRING EVENTS

People, property, infrastructure, culturally significant sites and the environment are at risk from naturally occurring events in the Canterbury region.

Explanation

The geological, climatic and coastal processes occurring within the region can have natural cycles and extremes. These include: earthquakes, landslips, floods, droughts, wind and snowstorms, tsunamis, erosion and inundation, and wildfires. Climate change is predicted to increase the frequency and intensity of storms and droughts, and to raise sea levels. A natural hazard exists where these naturally occurring events adversely affect or may adversely affect people, property, infrastructure, culturally significant sites or the environment. The outcome of this interaction may range in scale from a nuisance to a catastrophe, and is a cost to, or impact on, the community concerned.

ISSUE 11.1.2 – DEVELOPMENT AND NATURAL HAZARDS

Development of land can increase the impact of natural hazards.

Explanation

Human activities can change the likelihood of some natural hazards. For example, cutting into slopes to create roads and building platforms can increase the likelihood of landslips. Removing vegetation from river catchments and development can increase the severity of flooding.

ISSUE 11.1.3 – HAZARD MITIGATION WORKS

Hazard mitigation works can cause adverse effects on the environment, including habitat, landscape and amenity values, historic heritage, mahinga kai, and other taonga.

Explanation

Hazard mitigation works are works intended to control the effects of natural events and provide benefits to people and the community. They include flood control works such as stop-banks, or land stabilisation works such as tree planting or retaining walls. As well as having benefits for some groups and individuals, these works, like any development, can have adverse effects on the environment and the social, economic and cultural well-being of the community, and these effects need to be managed.

Adverse effects may also be caused by the mitigation measures themselves. For example, seawalls built for coastal erosion protection purposes may transfer erosion problems to adjacent areas due to end-wall effects.

ISSUE 11.1.4 – EXPECTATION OF SECURITY

Mitigation works can create an unrealistic expectation of security, thereby encouraging inappropriate development and and increasing the impacts of natural hazards.

Explanation

In addition to the potential adverse effects hazard mitigation works may have on the environment, they may also exacerbate the adverse effects of natural events by reducing perception of risk and thereby encouraging inappropriate development.

The presence of mitigation structures such as stop-banks may create a false sense of security, where people believe that the structure eliminates all risk of the particular natural event it is designed to manage. In reality, mitigation structures are only built to manage the effects of natural hazards up to a certain design level.

River stop-banks may be designed to contain flood flows, for example up to and including a design 1 in 50 year return period flood. During more severe flood events, when flows exceed the design level, those stop-banks will be overtopped and flood breakouts onto the floodplain will occur. With all river stop-banks, there is also a residual risk that they may fail at a flow less than the design capacity due to erosion of the stop-bank. Increased development on the floodplain, behind these stop-banks, will cause an increase in the effects and costs to the community if and when the stop-bank fails or is overtopped.

Physical mitigation works, such as seawalls or stopbanks, should only be considered in combination with other mitigation measures, for example, information and education, and limiting the scale and density of development in areas likely to be subject to moderate to high risk of damage.

ISSUE 11.1.5 – CLIMATE CHANGE

Climate change is expected to increase the severity of natural hazard events, and cause sea levels to rise.

Explanation

Climate change is likely to affect natural and human environments into the future. Projected effects include sea level rise and an increase in the severity of weather-related natural hazard events.

Climate change and associated sea-level rise could affect the severity of natural hazard events. Across Canterbury, change in long-term temperatures, rainfall patterns, and wind conditions may, among other things, increase or decrease the frequency and severity of flooding, wildfire, drought, landslip, erosion, sedimentation, coastal erosion and coastal inundation. Recognition of the importance of climate change will help to ensure that communities can manage natural hazards appropriately and can also adapt, and become resilient to the effects of a changing climate.

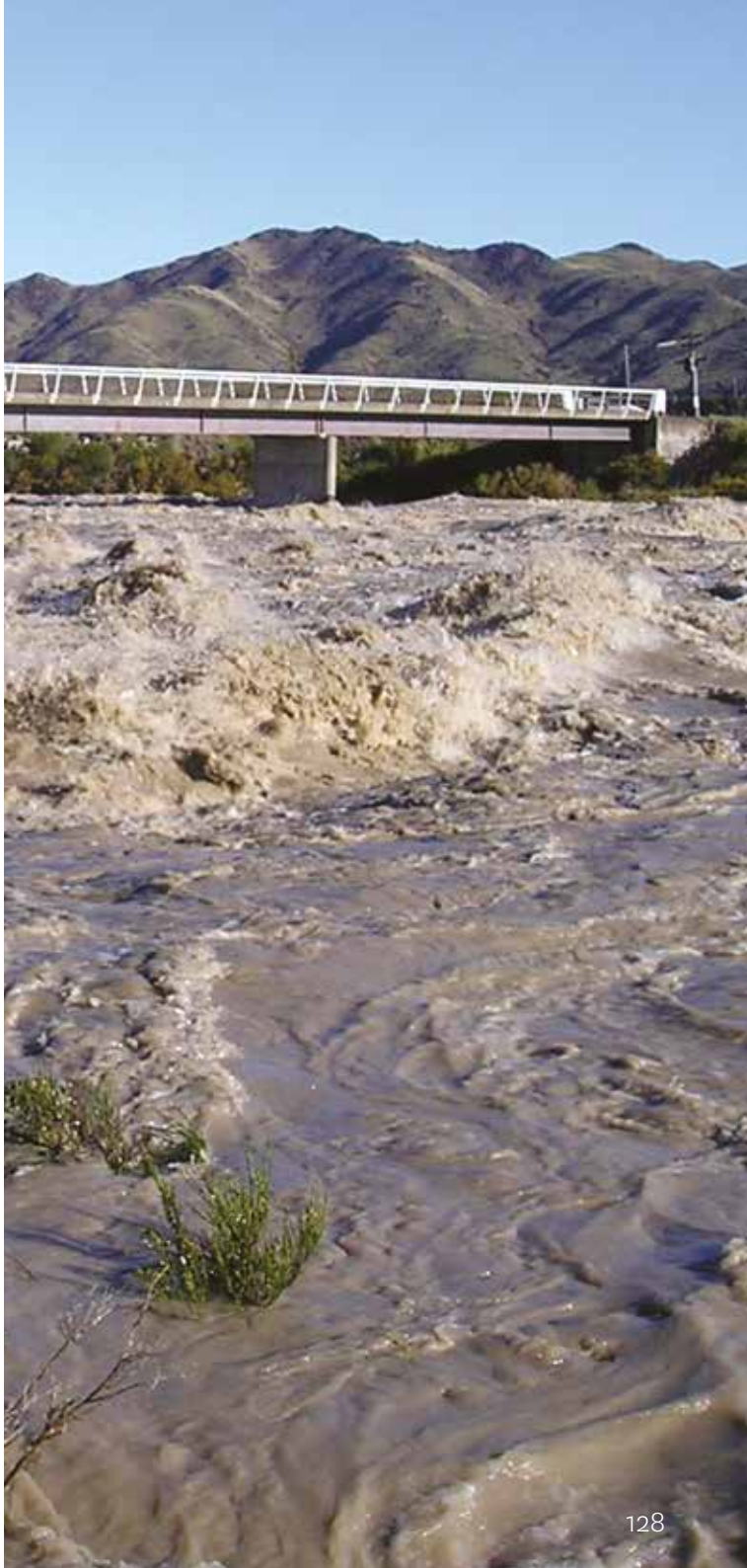
As of 2012, Ministry for the Environment guidance for local authorities is to plan for the effects of 0.5m sea level rise out to the year 2100 and to assess the effects of 0.8m sea level rise. It is acknowledged that these figures may change over time. As of 2012, guidance on temperature increase is that there is a potential for two degrees temperature rise by 2090.

ISSUE 11.1.6 – INTEGRATED MANAGEMENT OF, AND PREPAREDNESS FOR, NATURAL HAZARDS

Integrated management of natural hazards requires a high level of cooperation, between agencies and organisations, to achieve the appropriate integration of management of Canterbury's wide range of natural hazards.

Explanation

Integrated management of natural hazards involves the collection and evaluation of a wide range of information regarding the natural processes likely to give rise to natural hazards, the application of the appropriate planning methods to avoid or minimise losses from natural hazards, and the organisation required to address the residual risk associated with the wide range of natural hazard events. While the Canterbury Regional Council is the lead agency, territorial authorities also have a major role in the integrated management of natural hazards. Local government is also heavily reliant on other agencies, such as the Crown Research Institutes, for specialist information with respect to risk when developing land use controls, the Department of Conservation in terms of managing risks within the land it administers, and the Ministry of Civil Defence and Emergency Management, the New Zealand Police, the New Zealand Fire Service and the New Zealand Defence Forces with respect to dealing with a serious natural hazard event.



11.2 OBJECTIVES

Objective 11.2.1 – Avoid new subdivision, use and development of land that increases risks associated with natural hazards

New subdivision, use and development of land which increases the risk of natural hazards to people, property and infrastructure is avoided or, where avoidance is not possible, mitigation measures minimise such risks.

The following policies implement this objective:

Policies 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.5, 11.3.6, and 11.3.8

Principal reasons and explanation

When natural events occur they can cause adverse effects on the social, economic and cultural well-being of people and communities. Infrastructure and property may be damaged, economic and cultural activity can be disrupted and human health can be put at risk. Such events can also have flow-on effects on the natural environment. For example, a flood may result in sewage being inadvertently discharged into a waterway.

The objective seeks that risks from natural hazards are avoided in the first instance and otherwise mitigated. Avoiding these impacts involves ensuring that development does not occur in high hazard risk areas. In lower risk areas and where development may be otherwise appropriate in high hazard risk areas (where avoidance is not possible), mitigation measures may provide an alternate means of achieving the overall objective. Appropriate mitigation works in these areas should result in the avoidance of significant adverse effects of natural hazards, whilst themselves having minimal adverse effects on the surrounding environment. Some infrastructure may have to be located in hazard prone areas. If the potential effects of natural hazards on the continued operation of the infrastructure cannot be avoided, they should be mitigated. Where development exists already, mitigation measures can sometimes be put in place to lessen, but generally not totally avoid, the impacts of natural events.

Objective 11.2.2 – Adverse effects from hazard mitigation are avoided or mitigated

Adverse effects on people, property, infrastructure and the environment resulting from methods used to manage natural hazards are avoided or, where avoidance is not possible, mitigated.

The following policies implement this objective:

Policies 11.3.6 and 11.3.7

Principal reasons and explanation

Methods used to mitigate the adverse effects of natural hazards on the developed environment, such as raised floor levels, stop-banks, retaining walls or vegetation planting, may result in adverse effects on the environment and on other values that contribute to the well-being of people and the community, including cultural well-being.

The objective seeks that such effects are avoided in the first instance, or otherwise mitigated. Avoiding these adverse effects will often require avoiding the need for such works to take place. Mitigation of adverse effects will need to take place where avoidance is not possible.

Objective 11.2.3 – Climate change and natural hazards

The effects of climate change, and its influence on sea levels and the frequency and severity of natural hazards, are recognised and provided for.

The following policy implements this objective:

Policy 11.3.8

Principal reasons and explanation

Climate change is likely to result in sea-level rise and an increase in the frequency and severity of natural hazards such as floods, extreme hot weather events and drought. Planning needs to recognise the likely impacts of climate change on existing development and communities, and when considering new development. It also needs to respond to climate change projections must occur in order to ensure that communities are resilient and can continue to provide for their social, economic and cultural well-being into the future.

Objective 11.2.4 – Effective integration of the management of, and preparedness for, natural hazards

The level of cooperation between agencies and organisations necessary to achieve integrated management of Canterbury's natural hazards, and preparedness for natural hazards is maintained or enhanced.

The following policy implements this objective:

Policy 11.3.9

Principal reasons and explanation

The Canterbury Regional Council plays a pivotal role in natural hazard risk assessment and helping to develop district plan frameworks for land-use controls to manage natural hazards. The information required to ensure the timely and effective response to natural hazard events also needs to be readily available to the people working across the region to minimise losses. While some of this information is highly sophisticated and based on extensive computer modelling, local knowledge of past natural hazard events also has an important part to play. This means that the integrated management of natural hazards both at regional and local level is dynamic, and that there is a need for ongoing cooperation between a wide range of organisations and individuals including statutory bodies, non-governmental organisations and Ngāi Tahu.

Policy 11.3.1 – Avoidance of inappropriate development in high hazard areas

To avoid new subdivision, use and development (except as provided for in Policy 11.3.4) of land in high hazard areas, unless the subdivision, use or development:

(1) is not likely to result in loss of life or serious injuries in the event of a natural hazard occurrence; and

(2) is not likely to suffer significant damage or loss in the event of a natural hazard occurrence; and

(3) is not likely to require new or upgraded hazard mitigation works to mitigate or avoid the natural hazard; and

(4) is not likely to exacerbate the effects of the natural hazard; or

(5) is proposed to be located in an area zoned or identified in a district plan or Chapter 6 of the CRPS for urban residential, industrial or commercial use, at the date of notification of the CRPS, in which case the effects of the natural hazard must be mitigated.

This policy implements the following objective:

Objective 11.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans, to avoid new subdivision, use and development that do not meet the criteria set out in Policy 11.3.1 clauses (1) to (5), within areas subject to coastal erosion within the next 100 years, and in the beds of lakes and rivers.

(2) Provide information it holds on historical and design events to define high hazard areas.

(3) Make available upon request, any information about natural hazards that it holds.

(4) Identify areas subject to coastal erosion through the provisions of its Regional Plans.

Should:

(5) Develop guidelines and strategies on appropriate new development within high hazard areas.

Territorial authorities:

Will:

(6) Set out objectives and policies, and may include methods in district plans, to avoid new subdivision, use and development that does not meet the criteria set out in Policy 11.3.1 clauses (1) to (5) for known high hazard areas excluding those areas subject to coastal erosion within the next 100 years and within the beds of lakes and rivers.

Should:

(7) Promote the use of guidelines developed pursuant to Method 11.3.1(5) to guide the design and assessment of new development.

Local authorities:

Will:

(8) Work together to investigate and define potential high hazard areas where information is uncertain or insufficient.

Principal reasons and explanation

Policy 11.3.1 seeks to achieve the principle of avoiding the potential effects of natural hazards in high hazard areas in the first instance. A definition of high hazard areas is provided in the definitions section.

"High hazard areas" are:

1. *flood hazard areas subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to 1, or where depths are greater than 1 metre, in a 0.2% AEP flood event;*
2. *land subject to coastal erosion over the next 100 years; and*
3. *land subject to sea water inundation (excluding tsunami) over the next 100 years.*

When determining high hazard areas, projections on the effects of climate change will be taken into account.

Development of land for most residential, industrial or commercial purposes is not sustainable in high hazard areas where natural events are most likely to occur. However, the policy acknowledges that, while potentially still adversely affected by natural hazard events, there may be some development that is appropriate in high hazard areas. Development that meets the criteria (1) to (4) will generally be low-intensity use such as forestry, farming, or recreational parks. These uses are less likely to suffer significant damage, loss of life or require significant public expenditure on infrastructure remediation due to damage from a natural hazard event.

Critical infrastructure is addressed in Policy 11.3.4. Critical infrastructure is infrastructure that is necessary for ensuring the resilience of communities to the effects of natural hazard events, for example, key bridges.

Flooding occurs frequently throughout Canterbury and can result in major damage to property and risk to life. International research and observations have shown that critical flood depths and velocities will damage structures and harm people. For example, in water that is not moving, flood depths greater than about 1 metre pose a threat to life. When water is moving, the velocity can increase the risk to life and property. Depth and velocity combined can result in significant risk to life and damage to property.

Areas subject to inundation, where the depth or velocity of flood water is not likely to be sufficient to pose a significant risk to life are addressed in Policy 11.3.2.

Coastal erosion is a major issue in parts of Canterbury. New development such as residential, commercial and industrial activity is not sustainable in areas subject to erosion over the next 100 years.

Sea water inundation has occurred, and will continue to occur, in many coastal areas of Canterbury. Sea water inundation can occur due to a number of different factors, including coastal erosion and storm-surge. Many activities are not sustainable in these areas and should be avoided.

The policy also indicates that it is inappropriate to develop areas that would require significant new hazard mitigation works such as stop-banks or seawalls, as such development is unsustainable.

Policy 11.3.2 – Avoid development in areas subject to inundation

In areas not subject to Policy 11.3.1 that are subject to inundation by a 0.5% AEP flood event; any new subdivision, use and development (excluding critical infrastructure) shall be avoided unless there is no increased risk to life, and the subdivision, use or development:

(1) is of a type that is not likely to suffer material damage in an inundation event; or

(2) is ancillary or incidental to the main development; or

(3) meets all of the following criteria:

(a) new buildings have an appropriate floor level above the 0.5% AEP design flood level; and

(b) hazardous substances will not be inundated during a 0.5% AEP flood event.

provided that a higher standard of management of inundation hazard events may be adopted where local catchment conditions warrant (as determined by a cost/benefit assessment.)

When determining areas subject to inundation, climate change projections including sea level rise are to be taken into account.

This policy implements the following objective:

Objective 11.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Provide information it holds on historical and design flood events to assist territorial authorities in determining areas subject to 0.5% AEP flood events.

(2) Make available, upon request, any information regarding natural hazards that it holds.

(3) Provide guidance about appropriate floor levels to manage the adverse effects of flood events.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to avoid new subdivision, use and development of land in known areas subject to inundation by a 0.5% AEP flood event, other than in the circumstances determined in Policy 11.3.2 clauses (1) to (3).

(5) Ensure that flooding hazards are assessed before any new areas are zoned or identified, in a district plan, in ways that enable intensification of use, or where development is likely to cause adverse effects.

(6) Where there is a known flooding risk, include provision in their district plans that require a 0.5% AEP flood event to be determined, and its effects assessed, prior to new subdivision, use or development of land taking place. Where the territorial authority has adopted a standard less frequent than a 0.5% AEP flood event, the expected flow and effects of that less frequent AEP flood event will be determined.

Local Authorities:

Should:

(7) Develop and implement flood plain management strategies.

Principal reasons and explanation

Flooding is the most common natural hazard in the Canterbury Region. Since the early days of settlement, floodwaters have inundated some farm land and urban areas, destroying crops, affecting livestock and damaging or destroying property. Floods may also result in contamination of water, particularly where facilities such as sewage treatment plants or effluent storage are inundated, and this is a particular concern to Ngāi Tahu. Development on floodplains can increase flood hazards.

Although inappropriate subdivision, use and development of land is to be avoided in high hazard areas (Policy 11.3.1), this policy acknowledges that new subdivision, development and use of land can still occur in inundation areas where the specified criteria are met.

Like Policy 11.3.1, Policy 11.3.2 also acknowledges that new land uses that are unlikely to suffer material damage to land or property (for example rural activities and recreational parks), and which do not result in increased risk to life, will probably be acceptable in areas subject to flooding in a 0.5% AEP flood event. In addition, ancillary buildings, including small additions to existing buildings, and development incidental to an existing use are acceptable where there is no increased risk to life. For clarity, any new development or change in use that may result in an increased risk to life falls within this policy. Where the new use or development is of a type that may suffer material damage in a natural hazard event and is not ancillary or incidental to the main building(s) or use, then it may still be acceptable if the floor levels are elevated above the likely flood water level of a 0.5% AEP flood event. Critical infrastructure is excluded from this policy because it is covered in Policy 11.3.4.

When floodwaters enter buildings, flood damage costs increase considerably. The minimum standard under the Building Act, based on a 2% AEP flood event (a 1 in 50 chance of such a flood in any given year), is judged to be too low by experts. In Canterbury, where floodwaters in general can spread out over large areas, the difference in flood level between events of various magnitudes is relatively small. For example, on the Levels Plains north of Timaru and on other similar floodplains, the difference in depth of a 1% AEP flood event and an 0.2% AEP flood event is expected to be 300–400 mm or less in areas clear of any swales or depressions.

This difference is similar to other floodplains in Canterbury. Therefore, the cost of constructing new buildings at a higher level, resulting in a much lower likelihood of flood damages, is relatively low. Economic analysis shows that there is a positive net benefit to elevating new buildings to both 0.5% and 0.2% AEP flood levels. Most territorial authorities in Canterbury have adopted higher than Building Act minimum floor level controls in their district plans, based on 0.5% or 0.2% AEP flood events. Standards higher than that specified in this policy shall continue to apply, at the discretion of territorial authorities.

***AEP = annual exceedence probability.** A 1% AEP flood means that there is a 1 in 100 chance that a flood of this size will happen in any given year, or a 1 in 10 chance in a ten year period. A 0.5% AEP flood means that there is a 1 in 200 chance that a flood of this size will happen in any given year or a 1 in 20 chance in a 10 year period.*

It is intended that the policy, including clauses (1) to (3) will apply to all development irrespective of the existence of stop-banks. Although stop-banks can offer some protection from flood events, they do not eliminate the risk of inundation in the event of a flood. A stop-bank is likely to be overtopped or breached by a flood event exceeding the level that it is designed to mitigate, but it can also be breached in smaller flood events, resulting in the inundation of areas behind the stop-bank.

Policy 11.3.3 – Earthquake hazards

New subdivision, use and development of land on or close to an active earthquake fault trace, or in areas susceptible to liquefaction and lateral spreading, shall be managed in order to avoid or mitigate the adverse effects of fault rupture, liquefaction and lateral spreading.

This policy implements the following objective:

Objective 11.2.1.

Methods

The Canterbury Regional Council:

Will:

(1) Assist territorial authorities to delineate fault avoidance zones along known active fault traces.

(2) Assist territorial authorities to delineate areas susceptible to liquefaction and lateral spreading.

(3) Make available, upon request, any information that it holds about natural hazards.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to manage new subdivision, use and development of land in areas on or adjacent to a known active earthquake fault trace.

(5) Set out objectives and policies, and may include methods in district plans to manage new subdivision, use and development of land in areas known to be potentially susceptible to liquefaction and lateral spreading.

(6) Ensure that the risk of earthquake fault rupture, liquefaction and lateral spreading hazards are assessed before any new areas are zoned or identified, in a district plan, in ways that enable intensification of use, or where development is likely to be damaged and/or cause adverse effects on the environment.

Should:

(7) Supply information to the Regional Council captured at time of subdivision in relation to active earthquake fault trace, areas susceptible to liquefaction and lateral spreading.

Principal reasons and explanation

Active earthquake faults are defined as those faults in the earth's crust that have moved in the past and are likely to move again in the future, generating earthquakes. If an earthquake is large and shallow (generally greater than magnitude 6.5 and shallower than 40 km deep) the displacement on the fault may reach the ground surface, permanently offsetting the ground both horizontally and vertically by up to several metres along the fault trace, as seen with the Greendale Fault that generated the 2010 magnitude 7.1 Canterbury earthquake. Fault rupture at the ground surface tends to occur repeatedly at about the same place in subsequent earthquakes. Therefore, where there is a known fault trace, the location of likely future fault rupture can be predicted with some degree of confidence within a relatively narrow corridor either side the fault trace. Because of this, and because most active fault traces in Canterbury are in sparsely populated mountainous areas, fault rupture hazard is relatively simple to avoid compared with other natural hazards.

Active fault traces, and the areas immediately adjacent to them, should be avoided at the time of subdivision or development of an area. However, in some cases, the level of activity of the fault is low enough that the risk to residential development is acceptable. This policy promotes a risk-based approach whereby zones of fault rupture hazard are identified within which site-specific investigations are required, and development within those zones is managed according to the nature of faulting, the activity of the fault (how often it is thought to move) and the type of building proposed for the site.

Liquefaction can occur in saturated, loose sandy or silty soil below the water table, when earthquake shaking causes the loose soil to compact and water pressure to build up within it. This in turn causes the soil to lose its strength and to behave more like a liquid than a solid. Water may be ejected to the ground surface, carrying silt and sand with it, causing subsidence of the ground, which can damage structures both on and below the ground, such as buildings and buried pipes. Lateral spreading occurs when liquefied soil moves sideways, often towards watercourses. This often causes cracks in the ground parallel to the watercourse and consequent damage to structures across the cracks. Most of the damage, to residential houses and infrastructure such as sewerage, during the 2010 Canterbury earthquake was caused by ground damage due to liquefaction and lateral spreading, rather than ground shaking. The worst damage was in areas of lateral spreading near rivers and streams. This was again the case in the 2011 Canterbury earthquake, with much more wide-spread liquefaction.

General areas that are likely to be susceptible to liquefaction and lateral spreading during earthquake shaking – areas of young sandy and silty soils with a high water table - can be relatively easily determined. However, within these areas the likelihood of liquefaction occurring in any one earthquake can vary greatly, so site specific investigations are required to determine the level of susceptibility.

Liquefaction damage can be mitigated by either reducing the likelihood of liquefaction by treating the ground through a variety of methods, or by using stronger building foundations or piles that so that buildings can withstand ground subsidence and can be more easily repaired after an earthquake. Lateral spreading damage is more difficult to mitigate, but can include stone columns to limit lateral movement. Mitigation measures can be costly, and avoidance may be the best option in areas where the liquefaction or lateral spread hazard is high and mitigation measures are uneconomic.

This policy promotes a risk-based approach whereby zones of fault rupture, liquefaction and lateral spreading hazard are identified within which site-specific investigations are required. Development within those zones is then managed according to the nature of faulting and the activity of the fault (how often it is thought to move) or the likelihood of liquefaction or lateral spreading, as well as the type of development proposed for the site and possible mitigation options.

Positioning a building away from an active earthquake fault trace, or avoiding or mitigating liquefaction and lateral spreading will only reduce the risk of damage to buildings from permanent displacement of, and damage to, the ground underneath the building. This policy does not address other earthquake hazards such as ground shaking, landslides or tsunamis.

Policy 11.3.4 – Critical infrastructure

New critical infrastructure will be located outside high hazard areas unless there is no reasonable alternative. In relation to all areas, critical infrastructure must be designed to maintain, as far as practicable, its integrity and function during natural hazard events.

This policy implements the following objective:

Objective 11.2.1.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to ensure that new critical infrastructure is located outside high hazard areas, unless there is no reasonable alternative.

(2) Provide information it holds on historic and design events to define high hazard areas.

(3) Make available, upon request, any information that it holds about natural hazards.

Should:

(4) Encourage that, where located in high hazard areas, critical infrastructure will be able to be maintained and reinstated (if necessary) in reasonable time.

Territorial authorities:

Will:

(5) Set out objectives and policies, and may include methods in district plans to ensure that new critical infrastructure is located outside known high hazard areas, unless there is no reasonable alternative.

Should:

(6) Where critical infrastructure is located in high hazard areas, encourage the provider to ensure that it will be able to be maintained and reinstated, if necessary, within a reasonable timeframe.

(7) Ensure the potential effects of natural hazards are taken into account in the development of any new critical infrastructure.

Principal reasons and explanation

The policy seeks to ensure that critical infrastructure is not placed as a matter of course in areas subject to significant natural hazard exposure. If the infrastructure is critical, it should not be exposed to such hazard events. However, the policy also recognises that there may be extenuating factors, such as availability of land, engineering problems, cost factors, or structure type (i.e. bridges are usually placed in areas subject to flooding), that mean there is no option but to locate the critical infrastructure within a high hazard area. Where such locations are the only option, the infrastructure must be designed to ensure the network maintains its ability to function during a natural hazard event. By its very nature, critical infrastructure provides a service which must be able to be immediately reinstated in the event of a failure.

Policy 11.3.5 – General risk management approach

For natural hazards and/or areas not addressed by policies 11.3.1, 11.3.2, and 11.3.3, subdivision, use or development of land shall be avoided if the risk from natural hazards is unacceptable. When determining whether risk is unacceptable, the following matters will be considered:

(1) the likelihood of the natural hazard event; and

(2) the potential consequence of the natural hazard event for: people and communities, property and infrastructure and the environment, and the emergency response organisations.

Where there is uncertainty in the likelihood or consequences of a natural hazard event, the local authority shall adopt a precautionary approach.

Formal risk management techniques should be used, such as the Risk Management Standard (AS/NZS ISO 31000:2009) or the Structural Design Action Standard (AS/NZS 1170.0:2002).

This policy implements the following objective:

Objective 11.2.1.

Methods

The Canterbury Regional Council:

Will:

(1) Provide information that it holds on historic and design events to assist in determining the likelihood and potential consequence of natural hazards.

(2) Make available upon request, any information that it holds about natural hazards.

Territorial authorities:

Will:

(3) Ensure that natural hazards are assessed before any new areas are zoned or identified in a district plan, in ways that enable intensification of use, or where development is likely to cause adverse effects.

(4) Set out objectives and policies, and may include methods in district plans to ensure that subdivision, use or development of land will be avoided if the risk from natural hazards is unacceptable.

(5) Set out objectives and policies, and may include methods in district plans to ensure that where subdivision, use or development occurs in an area where there is residual risk from natural hazards, appropriate mitigation is required to manage that risk.

Should:

(6) Request applicants for privately initiated plan changes or resource consents, where relevant, to provide baseline information or fund investigation on risks or impacts of natural hazards such as flooding, land instability, coastal hazards or active faults at a local scale, in order that the environmental effects of the proposal or change can be adequately assessed at an appropriate level of detail. This may include working with the Canterbury Regional Council to gather information.

Principal reasons and explanation

Policy 11.3.5 is intended to enable local authorities to deal with areas and natural hazards not explicitly covered in Policies 11.3.1, 11.3.2 and 11.3.3, but where there are still risks. It acknowledges that there are areas within the region where natural hazards exist, but the likelihood of a hazard event occurring is not high enough to warrant avoidance of further development (for example tsunamis), or the extent of the likely area affected is uncertain or very localised (for example landslips). In these instances, development should be considered on a site-specific, or development-specific, case-by-case basis.

Proposed mitigation measures, for example landslide drainage, building design or evacuation plans, should be taken into account when considering the likelihood and potential consequences of a natural hazard event.

The policy sets out a risk-based approach that considers both the likelihood of a hazard event and the potential consequences of that hazard event on a proposed development. It recognises that some buildings or developments are more important than others and that the consequences of damage are greater for some buildings or developments than for others.

Risks to a development can be assessed qualitatively using risk analysis matrices, as given in the Risk Management – Principles and Guidelines (AS/NZS ISO 31000:2009). Alternatively, risk can be assessed quantitatively using the Structural Design Action Standard (AS/NZS 1170.0:2002), such that normal buildings or developments should be safe in a 0.2% AEP flood event, but that larger structures such as schools or rest homes should be safe in a 0.1% AEP flood event, and emergency facilities should be safe in a 0.04% AEP flood event. For example, an area of coast may be exposed to large but infrequent tsunamis. The likelihood of a tsunami may be around 0.1% AEP, low enough that residential development in the area is acceptable, but high enough that the risk created by placing a school or rest home in the area is unacceptable and should be avoided.

Policy 11.3.6 – Role of natural features

The role of natural topograhic (or geographic) and vegetation features which assist in avoiding or mitigating natural hazards should be recognised and the features maintained, protected and restored, where appropriate.

This policy implements the following objectives:

Objective 11.2.1 and Objective 11.2.2

Methods

Local authorities:

Will:

(1) When setting out objectives, policies or methods in their regional and district plans, recognise the role of natural features in providing mitigation for the adverse effects of natural hazards and provide for the maintenance and protection of those features where appropriate.

(2) Work with stakeholders; including Ngāi Tahu as tāngata whenua and landowners to encourage and promote the maintenance and enhancement of natural features that assist in the avoidance or mitigation of the effects of natural hazards.

Principal reasons and explanation

Many existing natural features such as beaches, sand dunes, wetlands, riparian vegetation and vegetative cover help to avoid or mitigate natural hazards. For example, coastal dunes and natural ponding areas help avoid or mitigate the effects of storm surges and flooding, while the retention or planting of vegetative cover in upper catchments and the protection of wetlands may reduce flood risks, river bank erosion and channel instability. It is recognised that the location and effect of natural features may change over time (e.g. coastal dunes may migrate inland). Wetlands may reduce flood risks, river bank erosion and channel instability.

Policy 11.3.7 — Physical mitigation works

New physical works to mitigate natural hazards will be acceptable only where:

(1) the natural hazard risk cannot reasonably be avoided; and

(2) any adverse effects of those works on the natural and built environment and on the cultural values of Ngāi Tahu, are avoided, remedied or mitigated.

Alternatives to physical works, such as the relocation, removal or abandonment of existing structures should be considered.

Where physical mitigation works or structures are developed or maintained by local authorities, impediments to accessing those structures for maintenance purposes will be avoided.

This policy implements the following objectives:

Objective 11.2.1 and Objective 11.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to provide for access to physical mitigation works or structures where appropriate.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans to avoid impediments to accessing community owned mitigation structures for maintenance purposes.

Local authorities:

Will:

(3) Set out objectives and policies, and may include methods in regional and district plans to ensure new hazard mitigation works will only be undertaken in accordance with the provisions of Policy 11.3.7.

(4) Use iwi management plans and engage with Ngāi Tahu as tāngata whenua and papatipu rūnanga to assist when determining actual or potential adverse effects of hazard mitigation works.

Principal reasons and explanation

Policy 11.3.7 reinforces the natural hazard management hierarchy approach taken in this chapter, which promotes avoidance over reliance on structural mitigation works. Implicit within the policy is the notion that those structural works should not cause or increase the likelihood of adverse effects arising from hazard events. It recognises that structural works can have significant effects on the environment and on social and cultural values and can increase hazard risk in downstream or adjacent areas. Furthermore, it recognises that reliance on structural measures can, over time, increase the consequences of a natural hazard event if the structural measures fail.

The policy does, however, provide for structural mitigation works subject to specified criteria. Where structural mitigation works have been provided or are maintained by a local authority as a community asset, it is important that the local authority is able to access that structure for maintenance purposes. For example, access to and along stop-banks for maintenance is necessary to reduce the risk of flood water "breaking out" due to stop-bank failure. Access may be impeded by positioning structures such as buildings or fences so that they abut the mitigation structure.

Policy 11.3.8 – Climate change

When considering natural hazards, and in determining if new subdivison, use or development is appropriate and sustainable in relation to the potential risks from natural hazard events, local authorities shall have particular regard to the effects of climate change.

This policy implements the following objectives:

Objective 11.2.1 and Objective 11.2.3

Methods

Local authorities:

Will:

(1) When setting out objectives, policies or methods in regional and district plans, take into account the current projections on the effects of climate change.

Principal reasons and explanation

Climate change must be considered in order to facilitate medium to long-term planning and management strategies that will be useful and remain relevant.

Climate change is predicted to intensify current rainfall patterns in Canterbury so that dry areas become drier and wet areas become wetter, and to increase storm frequency and intensity. Climate change is also predicted to result in a rise in sea level and consequent coastal erosion and inundation. Salt water intrusion into aquifers and estuaries may also occur as climate change results in changes to sea level and coastal hydrology.

As understanding increases, more is known about the potential changes that will occur including the extent of global temperature changes and the effects of those changes. Projections for temperature increase and its consequential effects vary. The Ministry for the Environment provides guidance on projected changes for New Zealand.

Policy 11.3.9 – Integrated management of, and preparedness for, natural hazards

To undertake natural hazard management and preparedness for natural hazard events in a coordinated and integrated manner by ensuring that the lead agencies have particular regard to:

(1) the investigation and identification of natural hazards;

(2) the analysis and mapping of the consequential effects of the natural hazards identified;

(3) the effects of climate change and resulting sea level rise;

(4) the setting of standards and guidelines for organisations involved in civil defence and emergency management;

(5) the development and communication of strategies to promote and build community resilience; and

(6) any other matters necessary to ensure the integrated management of natural hazards in the Canterbury region.

This policy implements the following objective:

Objective 11.2.4

Methods

The Canterbury Regional Council:

Should:

(1) As the coordinating agency, work in partnership with territorial authorities, Te Rūnanga o Ngāi Tahu, papatipu rūnanga, Crown Research Institutes and other partner organisations to address the matters relating to natural hazards identified in Policy 11.3.9 (1) to (6).

(2) Coordinate action in respect of natural hazards which extend across local and regional boundaries, and working with other regional councils.

(3) Coordinate the gathering and availability of natural hazard information across the region. This information should be made available to territorial authorities, Te Rūnanga o Ngāi Tahu, and the general public. Information held will include data on: flooding, tsunami, earthquake and coastal hazards, including the effects of sea level rise and climate change.

(4) Assist territorial authorities in planning for natural hazards.

Territorial authorities:

Should:

(5) Work with the Canterbury Regional Council, other partner organisations and members of their communities to address the matters relating to natural hazards identified in Policy 11.3.9 (1) to (6) which are of particular relevance to the areas for which each is responsible.

Local authorities:

Will:

(6) Work with emergency response organisations and critical infrastructure providers, to prepare and implement emergency readiness plans pursuant to the Civil Defence Emergency Management Act 2002.

Should:

(7) Raise public awareness of natural hazards, including provision and publicising of information about what natural hazards exist in various localities and what people can do to be prepared.

(8) Initiate, coordinate and promote activities that assist communities to build resilience to the effects of natural hazards

(9) Assist vulnerable communities to adapt to the consequences of natural hazards, including those that are likely to be adversely affected by climate change and resultant sea level rise.

Principal reasons and explanation

The policy sets out the range of matters that key agencies and organisations involved with the management of natural hazards should address in order to achieve the integrated management of natural hazards in the region. The collection and evaluation of information regarding natural hazards forms the basis for the development of planning controls to avoid or mitigate natural hazards. Natural hazards are dynamic, and as the understanding of the probable impacts of climate change increases it is likely that changes to the way in which some natural hazards are currently addressed will change.

Irrespective of the extent of the precautionary measures taken to avoid losses associated with natural hazards, there is also a residual risk to be addressed, such as the breaching of stop-banks when flood flows are below design capacity, or as a result of liquefaction and/or earthquake damage. Canterbury's Civil Defence Emergency Management Group has a leading role in planning for natural hazard events, and is supported by local government and the wider community, in preparing and implementing emergency readiness plans. Members of the New Zealand Police, the New Zealand Fire Service, Canterbury District Health Board and the New Zealand Defence Forces are also likely to be involved with emergencies managed under the Civil Defence Emergency Management Act 2002, as are local volunteers such as members of the Red Cross or the Salvation Army.

To enable these people to come together at short notice to deal with emergency situations, it is necessary for them to have extensive training and to adopt formal procedures for cooperation. It is the role of the lead agencies to establish the protocols and provide the training opportunities so that all involved will be able to deal with the problems encountered in a natural hazard event.

There will be occasions when those involved with planning for natural hazard events are not able to answer all the calls for help that they receive. Members of the community must also be able to play their part by being prepared, so that they can as far as possible, look after themselves. Community resilience is important in the face of natural hazard events as, by coming together, people living in a locality will be able to help each other manage under difficult conditions. Resilience is also important to aid a rapid recovery from the impact of a natural hazard event, both from a material and psychological perspective. Some communities are likely to be more resilient than others, and those involved with the integrated management of natural hazards have a responsibility to identify beforehand those communities least likely to be able to cope with a natural hazard event.

11.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Inappropriate development, such as residential or industrial development, is not located in areas where natural hazards are most likely to occur.

(2) Where development must occur in areas subject to natural hazards, the potential adverse effects of those natural hazards are mitigated or managed by appropriate design and placement of structures and facilities.

(3) Communities are increasingly resilient to natural hazard events.

(4) Hazard mitigation works do not adversely affect the environment.

CHAPTER 12
LANDSCAPE

Introduction

Landscape is an integral component of the environment. It reflects the influence of environmental processes and human activity over time. Canterbury's landscape varies significantly, including the rugged main divide ranges with its intermontane basins; downlands and foothills; the expansive Canterbury plains created by river shingle deposition from braided river systems; the volcanic features of Banks Peninsula; and remnant limestone formations from marine deposits. Many of these areas have been through significant change over the period of human settlement in Canterbury.

Landscape can be considered as:

"The physical and characteristic products of the interaction between human societies and culture with the natural environment. They can be considered to be spatial areas where place specific elements and processes reflect a particular natural and cultural history. This unique combination of attributes may be expressed visually or in terms of meaning and spirituality. Because the underlying human and natural processes are subject to change and evolution, landscapes are dynamic systems."

Allan Rackham - Banks Peninsula Landscape Study (2007)

Landscape is relevant to a number of provisions in Part 2 – Purpose and principles of the Resource Management Act 1991(RMA). Section 6 requires, as a matter of national importance, for all persons exercising functions under the RMA, to recognise and provide for

(1) the protection of outstanding natural features and landscapes from inappropriate, subdivision, use and development; and

(2) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, lakes and rivers and their margins from inappropriate subdivision, use and development.

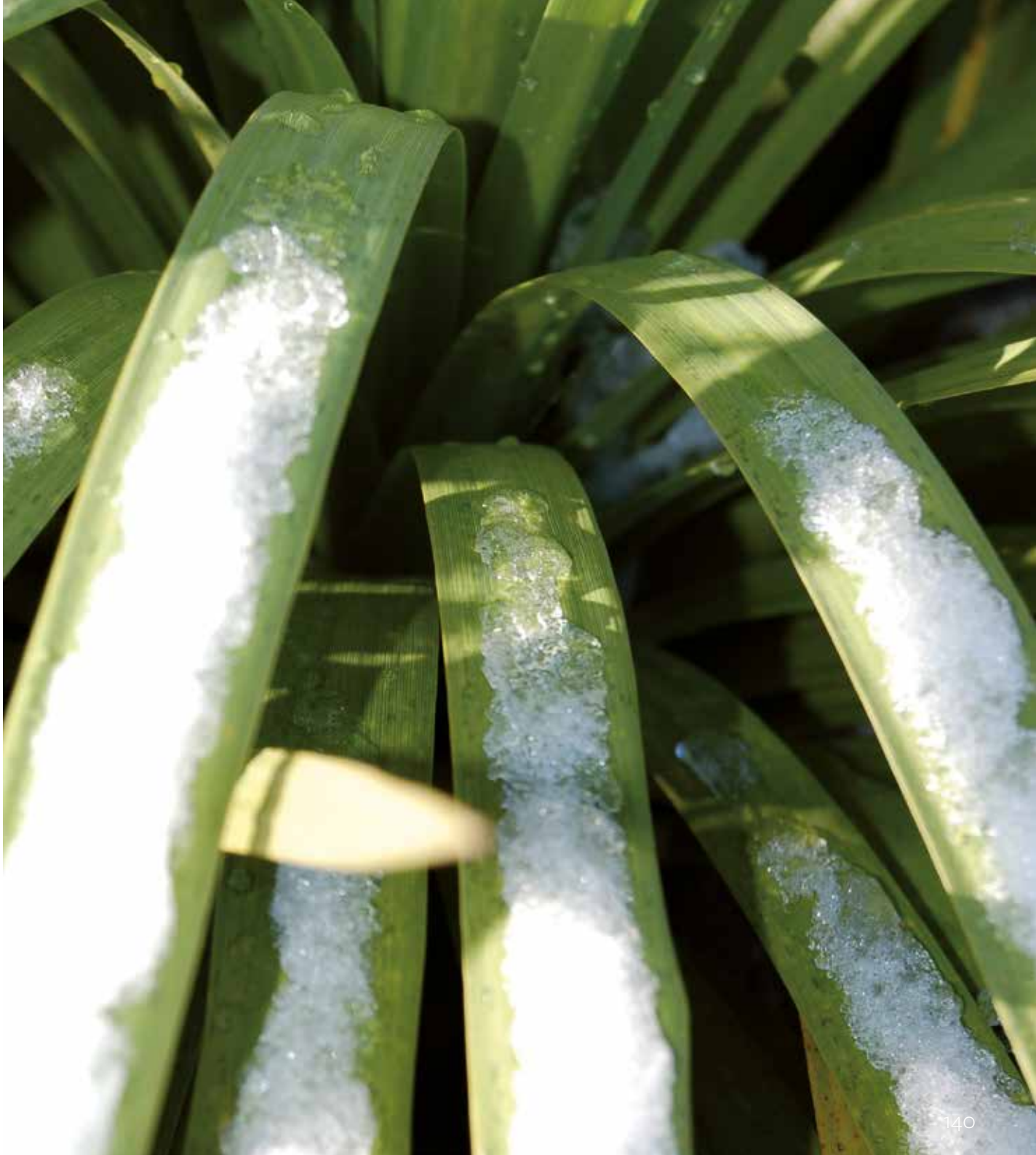
The RMA also provides for the maintenance and enhancement of amenity values. Sections 6, 7, and 8

also recognise the need to protect the relationship of Māori and their culture and traditions with their ancestral land, water and sites. They require that particular regard is given to kaitiakitanga and that the principles of the Treaty of Waitangi are taken into account when exercising functions under the RMA. Acknowledgement of the unique relationship of Ngāi Tahu with the Canterbury landscape and features is necessary. This relationship is reflected in tribal history and the contemporary identity of Ngāi Tahu, hapū and whānau.

Because landscape management is often a source of resource-use conflict, and has significant cross boundary issues, it is a significant resource management issue for the region and requires integrated management by both territorial and regional councils. This chapter identifies the landscape issues for the region, along with objectives, policies and methods.

The Canterbury Regional Policy Statement (CRPS) is concerned primarily with outstanding natural features and landscapes in the Canterbury region. The CRPS also provides support for the management and identification of other landscapes that may warrant protection or management for other reasons such as maintaining natural character, historic and cultural heritage or amenity. Landscape values contribute to social well-being by providing a sense of place and identity in New Zealand, and to our economic well-being through tourism.

The chapter recognises broad landscape patterns distinctive in a regional context, and recognises that greater detail is mapped at district and regional plan level, with site-specific landscape assessments occurring as a result of management methods implemented through those plans, where appropriate. In this context, the CRPS acts as a signal or flag that a particular landscape contains values of importance to the region. The CRPS provides guidance by identifying the values of the particular landscape type that are of importance to its outstanding status. The objectives and policies of this chapter are therefore primarily concerned with landscape values and their protection and/or maintenance rather than listing potential threats, which may be unknown, or prescribing particular outcomes.



12.1 ISSUES

ISSUE 12.1.1 – DEVELOPMENT CAN ADVERSELY AFFECT LANDSCAPES

Subdivision, use and development can result in modification or loss of landscape values, potentially adversely affecting the integrity of outstanding natural features and landscapes, and other important landscapes.

Explanation

Landscape change can occur at a range of scales and timeframes and may be site-specific or broad-scale, or can be incremental and potentially cumulative. Emphasis is placed on the protection of outstanding natural features and landscapes within a regional context, however it is also recognised that the management of other landscapes is important. Other important landscapes can include areas of high natural character in the coastal environment, historic cultural and historic heritage landscapes, and amenity landscapes.

Issues arise where the effects of subdivision, use or development result in the loss or degradation of the values which are fundamental or integral to a landscape or feature being considered outstanding or important. This can be controversial where the landscape concerned is characteristic of, or unique to, the Canterbury region. As economic activity is often based on the development of natural and physical resources, it can be challenging to progress economic well-being without impacting on the landscape. Additionally, sometimes activities need to be located within outstanding or important natural landscapes. Such activities include structures associated with the electricity network, and the state highway network. Judgments are therefore required to determine appropriate development in a landscape and how best to facilitate integrated or sustainable management options. Options may involve the management of landscape change or protection of landscape values through both regulatory and non-regulatory methods.

In this context, it is very important to have identified those particular values which have led to the identification of a landscape as outstanding or important. The understanding of those values, in turn, provides a basis upon which to develop specific, rather than broad-brush management methods, which are relevant to the particular values under consideration.

ISSUE 12.2.2 – INCONSISTENT IDENTIFICATION AND MANAGEMENT

Inconsistent identification and management of outstanding natural features and landscapes across the Canterbury region may result in the variable achievement of their protection from inappropriate subdivision, use and development. There is also potential for discrepancies in the protection of values which cross local authority boundaries.

Explanation

The Canterbury Regional Council and territorial authorities have undertaken a number of detailed landscape studies. These studies have been undertaken at different times and at varying levels of analysis. Over time, landscape assessment methodology has evolved. As a result, there has been some variation in landscape management across the Canterbury region. This has resulted in some differences in how landscape types with the same values have been managed with some areas subject to greater levels of control than others. It is recognised that some variation reflects local issues of importance to the community and what constitutes appropriate or inappropriate development. It is not expected that district councils will adopt exactly the same types of management methods.

It is also acknowledged that there is considerable variation in landscape types across the Canterbury region, for example the coast, high country, mountains, plains and basins. Variation in management will therefore also reflect the different nature of, and issues within, outstanding natural landscapes.

12.2 OBJECTIVES

Objective 12.2.1 – Identification and protection of outstanding natural features and landscapes

Outstanding natural features and landscapes within the Canterbury region are identified and their values are specifically recognised and protected from inappropriate subdivision, use, and development.

The following policies implement this objective:

Policy 12.3.1, Policy 12.3.2, Policy 12.3.4, Policy 12.3.5

Principal reasons and explanation

The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development is a matter of national importance under Section 6(b) of the RMA. Landscape is an integral element of the environment and potential land-use effects on landscape values require an integrated management response. Changes in landscape can also affect the relationship of Ngāi Tahu with ancestral land, sites and wāhi tapu.

Landscape is multi-dimensional and includes natural science, legibility, aesthetic, shared and recognised, transient, heritage and tāngata whenua values. These values can also overlap with the statutory considerations in Section 6(a) of the RMA, concerned with natural character, Section 6(c), significant areas of indigenous vegetation and significant habitats of indigenous fauna, Section 6(f), historic heritage and Section 8 in relation to the principles of the Treaty of Waitangi. Accordingly, it is important that there is some clarity as to which values within a landscape contribute to its status as outstanding.

It is important to acknowledge that landscape-related management methods are not intended to be prohibitive with respect to all land-use change. As part of sustainable management, land-use, and thereby landscape change, may occur. The focus should be on what is appropriate development in relation to the values that make a landscape outstanding. As such, there will be instances where certain types or scales of development, are inappropriate.

Objective 12.2.2 – Identification and management of other landscapes

The identification and management of other important landscapes that are not outstanding natural landscapes.

Other important landscapes may include:

(1) natural character

(2) amenity

(3) historic and cultural heritage

The following policies implement this objective:

Policy 12.3.2, Policy 13.3.3

Principal reasons and explanation

Protection of outstanding natural features and landscapes is a matter of national importance. Other landscapes may also be important at a regional, district or local level. Methods for managing the values of those landscapes may include protecting them.

The RMA recognises that the coastal environment, wetlands, and lakes and rivers are precious and finite resources, and that the preservation of the natural character of these areas and their protection from inappropriate subdivision, use and development is important. Many of these areas are modified, so areas with high natural character are consequently more important. Areas of high natural character in the coastal environment are addressed by this chapter and Chapter 8 – The coastal environment. Historic and cultural heritage landscapes are addressed by this chapter and Chapter 13 – Historic heritage.

Natural character and / or historic cultural landscapes or historic heritage landscapes need to be identified and managed because they are matters of national importance and may warrant protection from inappropriate subdivision, use and development.

It may also be appropriate that territorial authorities' district plans provide for varying degrees of amenity landscapes with associated landscape controls. These might seek, for example the protection of views or the maintenance of a particular identified matter of amenity which is important or significant for the local community.

Objective 12.2.3 – Consistency of assessment and management

Ensure consistency of assessment and promote consistency of management of outstanding natural features and landscapes across the Canterbury region.

The following policies implement this objective:

Policy 12.3.4

Principal reasons and explanation

Landscape assessments have taken place over the Canterbury region for a number of years, with understanding of landscapes evolving, and varying degrees of funding and assessment. The objective seeks that future studies, or refinements to existing studies, follow a consistent methodology for assessment.

Consistency of assessment methodology is important to the Canterbury region, particularly where outstanding natural landscapes or features cross local authority boundaries. Although a uniform managemeent framework is not expected, widely varying methods of management in adjacent districts or regions have the potential to create different outcomes for the same outstanding natural landscape area. In addition to this, it may create inequities for landowners and resources users across local authority boundaries.

Policy 12.3.1 – Identification of outstanding natural features and landscapes

To identify the outstanding natural features and landscapes for the Canterbury region, while:

(1) recognising that the values set out in Appendix 4 indicate the outstanding natural features and landscapes for Canterbury, at a regional scale; and

(2) enabling the specific boundaries of outstanding natural features and landscapes, for inclusion in plans, to be determined through detailed assessments which address the assessment matters set out in Policy 12.3.4(1).

This policy implements the following objectives:

Objective 12.2.1, Objective 12.2.3

Methods

The Canterbury Regional Council:

Will:

(1) Make available any information about outstanding natural features and landscapes that it holds.

Territorial authorities:

Will:

(2) Set out objectives, policies and methods, including maps, to identify outstanding natural features and landscapes in district plans:

(a) at the time of a relevant district plan review, change or replacement; or

(b) within 7 years of the CRPS becoming operative;

whichever is sooner.

Should:

(3) Request applicants for privately initiated plan changes or resource consents, where relevant, to provide appropriate assessments as to whether the site is located within, or near, an outstanding natural feature or landscape; its associated values; and any actual or potential effects on those areas.

Local authorities:

Will:

(4) Work collaboratively to map outstanding natural features and landscapes, while:

(a) having particular regard to the values set out in Appendix 4, relevant district landscape studies, and the matters to be considered in such assessments as set out in Policy 12.3.4,

(b) considering the findings of the Canterbury Regional Landscape Study Review 2010,

(c) providing reasoning as to why areas are, or are not, considered to be outstanding natural features or landscapes in relation to the assessment matters under Policy 12.3.4 and the values in Appendix 4.

(d) have regard to any geopreservation sites when considering the location of outstanding natural features.

(5) Engage with Ngāi Tahu as tāngata whenua to identify the values of cultural significance associated with outstanding natural features and landscapes as part of detailed assessments. This process will be assisted by iwi management plans.

Should:

(6) Undertake changes to regional plans at the same time as changes to district plans where appropriate, following the detailed analysis of landscapes referred to in Method 12.3.1 (4) above to ensure consistency of identification. Such plan changes should be heard jointly.

Principal reasons and explanation

The Canterbury region has a number of different landscape types, which in turn have different landscape values. It is important that the provisions of regional and district plans acknowledge the values which contribute to a particular landscape's importance and provide for management mechanisms which are relevant to the values concerned, such as zoning, overlays or specific matters for assessment.

As part of the preparation of the CRPS, the Canterbury Regional Landscape Study Review 2010 was undertaken to identify the values of outstanding natural features and landscapes at a broad regional level addressing the matters set out in Policy 12.3.4. These values are set out in Appendix 4. The understanding of those values provides a basis upon which to develop specific management mechanisms, which are relevant to the particular values under consideration.

Due to the broadness and scale of the Canterbury Regional Landscape Study Review 2010, and its geomorphological basis, the boundaries of the outstanding natural features and landscapes are not fixed on the ground. Accordingly, it is acknowledged that it is appropriate for local authorities to undertake detailed, collaborative studies at the appropriate scale and context for each district, to ensure that outstanding natural features and landscapes are identified in both district and regional plans. These will need to go through consultation processes with landowners and resource users.

In addition, landscape assessments undertaken for site-specific developments or plan changes will also occur at a more detailed level, particularly where no detailed mapping is available in district or regional plans. The values identified in Appendix 4 will assist with identifying where those areas are likely to be located.

Policy 12.3.2 – Management methods for outstanding natural features and landscapes

To ensure management methods in relation to subdivision, use or development, seek to achieve protection of outstanding natural features and landscapes from inappropriate subdivision, use and development.

This policy implements the following objectives

Objective 12.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives, policies or methods in relevant regional plans and protect outstand natural features and landscapes from inappropriate subdivision, use and development, and to manage use and development, and its potential effects on the values of outstanding natural features and landscapes.

Territorial authorities:

Will:

(2) Set out objectives, policies or methods in district plans to avoid, remedy or mitigate adverse effects of subdivision, use and development of land on the values of outstanding natural features and landscapes and protect them from inappropriate subdivision, use and development, and in particular;

  (a) will continue to enable activities that maintain the integrity of landforms and their associated landscape values; and

  (b) may achieve protection through methods such as zoning, overlays or land purchase; and

  (c) may include provisions that provide for covenanting, pest management, revegetation, or other mechanisms as appropriate to the values concerned.

Should:

(3) Engage with the public, landowners and resource users when undertaking detailed identification of outstanding natural features and landscapes.

Local authorities:

May:

(4) Where it is appropriate, include provisions for areas located adjacent to or in near proximity to an outstanding natural feature or landscape in order to protect the values associated within that outstanding natural feature or landscape from inappropriate subdivision, use and development.

Principal reasons and explanation

The policy provides a link between the values of outstanding natural features and landscapes, and management methods. Protection of outstanding natural features and landscapes from inappropriate subdivision, use and development is achieved by maintaining or enhancing the values of those landscapes. Management methods that achieve maintenance or enhancement of landscape values in relation to outstanding natural features or landscapes will also assist with determining inappropriate development for those areas. Determination of what is appropriate development in relation to outstanding natural features and landscapes will often require consideration through a consent process, requiring a wide assessment of relevant factors.

The Canterbury region has a number of different landscape types, which in turn have different landscape values. It is important that the provisions of regional and district plans acknowledge the values which contribute to a particular landscape's importance and provide for management methods which are relevant to the values concerned, such as zoning, overlays or specific matters for assessment.

Identification of an outstanding natural feature or landscape is not a prohibition on land-use change. In particular, it is recognised that the outcome sought is protection from inappropriate subdivision, use and development. Outstanding natural landscape and features are an integral component of the environment and should be considered as part of sustainable management. In addition, it is acknowledged that some landscape values may not be adversely affected by land-use activities due to their scale or location.

While some areas may be mapped as outstanding natural features and landscapes in regional or district plans, specific zone or rule provisions may already appropriately manage the

effects of activities on the values of those areas. Where the values are not protected from inappropriate subdivision, use and development, or patterns of inappropriate development are being established, changes to district and/or regional plans may be necessary.

It is acknowledged that some activities, such as pastoral farming, have enabled landscape values, such as legibility of the underlying landform, to be maintained. Some landscapes values also occur at a very large geographic scale, such as Banks Peninsula or the intermontane basins, and it is appropriate that working landscapes within these large-scale features are maintained to ensure that the community continues to provide for its economic and social well-being. It is also possible for areas to be used and developed within landscapes associated with large geomorphic features, without adversely affecting the integrity of these landforms and their associated landscape values. In addition, the type of development, including whether the development constitutes a nationally significant matter or is reliant on a specific natural resource that is only available in some areas will be relevant considerations for determining what constitutes appropriate or inappropriate development.

A range of options may exist for the effective management of outstanding natural features and landscapes, for example pest control, purchase of reserve land, or private land covenanting. The policy seeks to achieve Objective 12.2.1 through the maintenance of those values from inappropriate subdivision, use and development which have contributed to a locality being an outstanding natural feature or landscape. Where enhancement of a landscape value is promoted or possible, such as natural science or amenity values as a consequence of re-vegetation, this is also supported by the policy. Restoration of biodiversity can enhance tāngata whenua values and the relationship of Ngāi Tahu with a particular outstanding natural feature or landscape, as has happened with Castle Hill (Kura Tawhiti).

Policy 12.3.3 – Identification and management of other important landscapes

Identifying and managing other important landscapes that are not outstanding natural landscapes, for natural character, historic cultural, historic heritage and amenity purposes.

This policy implements the following objectives

Objective 12.2.2, Objective 13.2.2

Methods

Local authorities:

May:

(1) Set out, objectives, policies or methods that provide for the appropriate management of other important landscapes, including for their natural character, historic cultural or historic heritage values, and amenity values. Where these landscapes warrant such management, this may include the protection of such landscapes from inappropriate subdivision, use and development.

Principal reasons and explanation

Landscape management is not limited to outstanding natural features or landscapes. The RMA also requires consideration of other types of landscapes and landscape values, while understanding that the level of protection afforded to other important landscapes may be less than those of outstanding natural features. This might include matters such as:

- the preservation of natural character in the coastal environment, and its protection from inappropriate subdivision, use and development, which is a matter of national importance under Section 6(a)
- the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, which is a matter of national importance under Section 6(e)
- the protection of historic heritage from inappropriate subdivision, use and development, which is a matter of national importance under Section 6(f)
- the identification and management of amenity landscapes which are important to local communities; whereby the maintenance and enhancement of amenity values is another matter to be had particular regard to under Section 7(c).

These other landscapes are natural and physical resources of the region that contribute to its identity, and may require specific management to maintain those values. Many territorial authorities include management methods to achieve environmental outcomes consistent with these statutory provisions.

In relation to natural landscapes, reference should also be made to Chapter 7 – Freshwater and Chapter 8 – The coastal environment. Historic cultural and historic heritage landscapes are also managed under Policy 13.3.3.

Policy 12.3.4 – Consistency of identification and management of outstanding natural features and outstanding natural landscapes

Seek to achieve regional consistency in the identification of outstanding natural features and landscape areas and values by:

(1) considering the following assessment matters which address biophysical, sensory and associative values when assessing landscapes in the Canterbury region:

- **(a) Natural science values**
- **(b) Legibility values**
- **(c) Aesthetic values**
- **(d) Transient values**
- **(e) Tāngata whenua values**
- **(f) Shared and recognised values**
- **(g) Historic values**

(2) requiring methods for landscape management to be developed and considered, having regard to the management methods in adjoining districts or regions, and the extent to which these may, in combination, protect outstanding natural features and landscapes.

This policy implements the following objectives

Objective 12.2.1, Objective 12.2.2

Methods

The Canterbury Regional Council:

Will:

(1) When identifying and assessing outstanding natural landscapes and features, include and apply the assessment matters in Policy 12.3.4 at the time of regional plan reviews, council-initiated, or privately requested plan changes, as well as in the assessment of

resource consent applications which involve landscape management considerations for outstanding natural landscapes and features.

Territorial authorities:

Will:

(2) When identifying and assessing outstanding natural landscapes and features, include and apply the assessment matters in Policy 12.3.4 at the time of district plan reviews, council-initiated, or privately requested plan changes, as well as in the assessment of resource consent applications which involve landscape management considerations for outstanding natural landscapes and features.

Principal reasons and explanation

The policy seeks to achieve consistent assessment processes, and consideration of adjoining district and regional planning methods. It provides an assessment framework for outstanding natural landscape identification. These include:

(1) Natural Science values – the geological, topographical, ecological and dynamic components of the landscape

(2) Legibility (expressiveness) values – how obviously the landscape demonstrates the formative processes leading to its creation

(3) Aesthetic values – including memorability and naturalness

(4) Transient values – occasional presence of wildlife, or its values at certain times of the day or of the year

(5) Tāngata whenua values

(6) Shared and recognised values

(7) Historic values

These values or assessment matters can be grouped; those that are part of the natural environment – biophysical values; those that are a result of life experiences involving culture and history – associative values; and those that are a result of what we can see – sensory values.

As landscape is the visual manifestation of geological processes, landforms and their legibility are a significant factor in people's understanding and appreciation of a particular landscape. Landforms can occur at a range of scales, from discrete bays or headlands to the full length of the Southern Alps/Kā Tiritiri o te Moana. They do not always begin and end within regional or district boundaries and more rarely within property boundaries. Although a uniform management framework is not expected, widely varying methods of management in adjacent districts or regions have the potential to create different outcomes for the same outstanding natural landscape area. In addition to this, it may create inequities for landowners and resource users across local authority boundaries. It is therefore appropriate that landscape management is addressed as a cross-boundary issue requiring some consistency in their identification and management.

12.4

ANTICIPATED ENVIRONMENTAL RESULTS

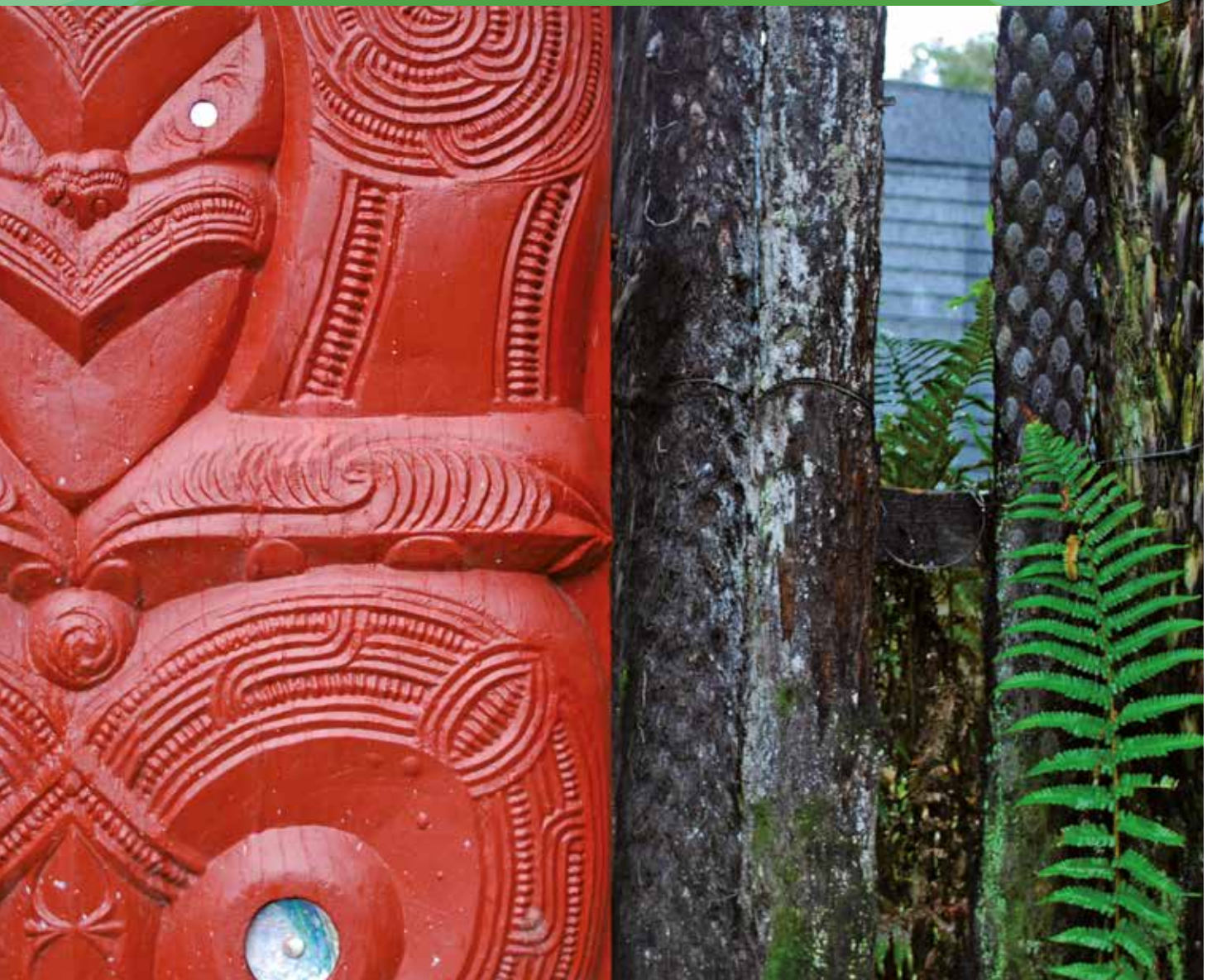
(1) The community generally agrees to a shared set of areas and values for outstanding natural features and landscapes

(2) The values of the outstanding natural features and landscapes are identified in district and regional planning documents and are protected from inappropriate development

(3) Only appropriate development is allowed to occur within outstanding natural landscapes

(4) Landscapes that are not considered to be outstanding, but still have other values, are identified in district and regional planning documents and are protected from inappropriate development.

CHAPTER 13
HISTORIC HERITAGE



Introduction

Historic heritage contributes to Canterbury's unique identity. Canterbury's various cultures each have sites and areas, both natural and modified and including areas within past and present settlements, which have particular cultural and heritage value. The contribution such sites, and their associated values, have on cultural well-being are often not recognised or appreciated until they are lost forever.

Section 6(f) of the Resource Management Act 1991 (RMA) recognises the protection of historic heritage from inappropriate subdivision, use and development as a matter of national importance, which must be recognised and provided for. The definition of Historic Heritage in Section 2 of the RMA is broad and inclusive and includes the management of the relationships and linkages of historic heritage sites, places and areas in their whole context as historic landscapes. Historic landscapes in the coastal environment are specifically recognised in Policy 17 of the New Zealand Coastal Policy Statement.

Historically, there were many Ngāi Tahu settlements in Canterbury, and as such it contains many landscapes, wāhi tapu sites and sites of cultural significance such as: the Kaikōura Peninsula, rock drawings near Timaru, Waikari and in the Waitaki Valley, Kaiapoi Pā and other historic pā and marae. Section 6(e) of the RMA recognises the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga as a matter of national importance. These relationships provide a sense of place and belonging, through tūrangawaewae. Those tribes have historically included Waitaha, Ngāti Māmoe and Ngāi Tahu.

Early European settlement of the Canterbury region has also left some significant heritage sites and areas, including buildings such as Fyffe house in Kaikōura and the Church of the Good Shepherd

at Tekapo, and areas such as the Bridle Path on the Port Hills. Additionally, areas settled by particular cultures, such as the French settlement at Akaroa, provide insight into the heritage of such cultures in New Zealand. Early settlement patterns provide good examples of rural and urban heritage, where collective historic development tells a story of the social, economic and cultural conditions of a particular era.

The diversity of heritage items, places and areas, including historic cultural and historic heritage landscapes, and the cultures and eras they represent, contribute to the regional sense of identity. The cumulative loss of these heritage items, places and areas and their values can diminish that sense of identity.

13.1 ISSUES

ISSUE 13.1.1 – LOSS OR DEGRADATION OF HISTORIC HERITAGE

Inappropriate use, development or subdivision can lead to loss or degradation of historic heritage values that make a significant contribution to a regional sense of identity.

Explanation

Historic heritage items, places and areas provide an important record of how the region became the Canterbury we live in today. Canterbury provides a rich heritage fabric, combining both early Māori settlement, stories, sites, and tradition, along with more recent post-European settlement, place based heritage, history and built development. All of these make a significant contribution to Canterbury's contemporary sense of identity. Such items, places and areas have cultural, spiritual, amenity and recreational values and, for tāngata whenua particularly, are inextricably linked to traditional values, culture and spirituality. Activities that have adverse effects on those historic items, places and areas erode those values, which once lost, may not be replaced.

In some cases, significant historic heritage items, places or areas are not identified within regional or district plans and, as such, their historic and cultural values are not adequately protected. The loss and/or degradation of significant historic heritage features results in the diminishing of an important and finite regional resource. This can adversely affect the relationship of Ngāi Tahu, as tāngata whenua, with their valued historic heritage resources. There will be some sites of significance to Ngāi Tahu that are better not being identified, as their identification could be culturally inappropriate. Addressing issues that affect such sites will need to take place on a case-by-case basis.

Following the devastating earthquakes of 2010 and 2011, a significant portion of Canterbury's historic heritage has been lost. There are now significant challenges facing local authorities and the owners of historic heritage to repair, reconstruct and seismically strengthen buildings. The on-going use, development and protection of historic heritage needs to be recognised and provided for in a way that enables appropriate economic and adaptive use of historic heritage; reducing loss and degradation of heritage values that make a significant contribution to a regional sense of identity.

ISSUE 13.1.2 – HISTORIC CULTURAL AND HISTORIC HERITAGE LANDSCAPES

Historic cultural and historic heritage landscapes can be adversely affected by inappropriate subdivision, use and development.

Explanation

Historic cultural landscapes and historic heritage landscapes have important values requiring protection from inappropriate use. Historic cultural landscapes tend to have a history of use, but their values may be tangible or intangible. While not limited to Māori, cultural landscapes can be particularly important for Ngāi Tahu due to specific cultural, traditional or historic associations. These can be an integral part of tūrangawaewae, providing an enduring association for Ngāi Tahu with their ancestral land. Historic heritage landscapes tend to be tangible, with collections of sites, items or objects that contribute to a sense of place for a particular area, or knowledge of New Zealand's history. Historic cultural and historic heritage landscape is defined in the Glossary.

The understanding of the multi-dimensional layers of landscape is constantly evolving and the biophysical and sensory components are relatively well understood. There is less understanding of the concept of historic cultural and historic heritage landscapes in New Zealand. There is little guidance for identifying cultural and historic heritage features in the context of a landscape and how to inform future management options that respect the values of these landscapes. The NZCPS requires local authorities to protect historic heritage from inappropriate subdivision, use and development by initiating assessment and management of historic heritage in the context of historic landscapes.

Guidance and understanding of historic cultural and historic heritage landscapes is necessary to ensure that the values of collective heritage are appropriately protected. If historic cultural and historic heritage landscapes are not identified, or if they are not recognised in resource management processes, then the loss of these areas will result in the gradual decline of Canterbury's identity and history.

13.2 OBJECTIVES

Objective 13.2.1 — Identification and protection of significant historic heritage

Identification and protection of significant historic heritage items, places and areas, and their particular values that contribute to Canterbury's distinctive character and sense of identity from inappropriate subdivision, use and development.

The following policies implement this objective:

Policy 13.3.1 and Policy 13.3.2.

Principal reasons and explanation

The identification and protection of significant historic heritage items, places and areas and their particular values recognises their important contribution to the regional sense of identity and is essential in providing for the social, economic and cultural well-being of the community.

This is a particularly important objective for Ngāi Tahu and their culture and traditions, and goes some way to making provisions for their relationship with ancestral lands, water, sites, wāhi tapu and other taonga.

Objective 13.2.2 – Historic cultural and historic heritage landscapes

Recognition that cultural and heritage values are often expressed in a landscape setting and to make provision for the protection of such landscapes from inappropriate subdivision, use and development.

The following policies implement this objective:

Policy 13.3.3, Policy 12.3.3

Principal reasons and explanation

Section 6 of the RMA recognises that the protection of historic heritage and of the relationship of Māori and their cultural and traditions with ancestral lands, from inappropriate subdivision use and development, are matters of national importance. Historic heritage is defined in the RMA as including sites, structures, places and areas. This definition extends to include landscapes. Policy 17 of the New Zealand Coastal Policy Statement recognises this, and seeks protection of historic heritage from inappropriate subdivision, use and development by requiring the initiation of assessments of historic heritage in the context of historic landscapes.

Landscapes can provide a setting for cultural and heritage components, related to stories, history or patterns of use. Landscape can be an influencing factor as to how cultural and historic associations have developed. The value of these areas collectively can be greater than each individual component, and may occur in either urban or rural situations. The management of the collective heritage, or cultural values in a landscape need to take into account the sensitivity of those areas to change, spatial definition, cultural importance and their contribution to the identity of people, communities or the Region.

Objective 13.2.3 Repair, reconstruction, seismic strengthening, on-going conservation and maintenance of built historic heritage

The importance of enabling the repair, reconstruction, seismic strengthening, and on-going conservation and maintenance of historic heritage and the economic costs associated with these matters is recognised.

The following policies implement this objective:

Policy 13.3.1 and Policy 13.3.4

Principal reasons and explanation

The devastating loss of the built heritage in the Canterbury earthquakes has increased the value of the remaining built heritage in the Canterbury Region. The objective seeks to recognise that there are economic costs associated with the ongoing conservation and maintenance of these remaining buildings. Some of the economic costs resulting from repair, reconstruction and seismic strengthening may be met through ensuring that appropriate development is able to occur, including sensitive adaptive re-use, while maintaining the historic values of the buildings.

Policy 13.3.1 — Recognise and provide for the protection of significant historic and cultural heritage items, places and areas

To recognise and provide for the protection of the historic and cultural heritage resource of the region from inappropriate subdivision, use and development by:

(1) identifying and assessing the significance of the historic and cultural heritage resource according to criteria based on the following matters:

- **(a) Historic**
- **(b) Cultural**
- **(c) Architectural**
- **(d) Archaeological**
- **(e) Technological**
- **(f) Scientific**
- **(g) Social**
- **(h) Spiritual**
- **(i) Traditional**
- **(j) Contextual**
- **(k) Aesthetic**

(2) work with Ngāi Tahu to identify items, places or areas of historic heritage significance to them.

(3) having regard to any relevant entry in the Historic Places Register in the process of identifying and assessing the historic heritage resource.

(4) considering historic heritage items, places or areas of significance or importance to communities in the process of identifying and assessing the historic heritage resource.

(5) recognising that knowledge about some historic heritage may be culturally sensitive and support protection of those areas through the maintenance of silent files held by local authorities.

This policy implements the following objective:

Objective 13.2.1.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional coastal plans that provide for the protection of significant historic heritage items, places or areas that meet the criteria set out in Policy 13.3.1 (1) – (4) that are located within the coastal marine area.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods that provide for the recognition and protection of significant historic heritage items, places or areas, outside of the coastal marine area, that meet the criteria set out in Policy 13.3.1 (1) – (4).

Should:

(3) Provide for the recognition and protection of historic heritage items, places or areas that are significant or important within their communities.

(4) When identifying historic sites, places or areas in district plans, have regard to sites registered in the New Zealand Archaeological Association (NZAA) Site Recording Scheme.

Local authorities:

Will:

(5) Work together and with the New Zealand Historic Places Trust and Te Rūnanga o Ngāi Tahu and papatipu rūnanga to identify and manage significant or important historic heritage items, places or areas.

(6) Use iwi management plans as one of the tools to assist in the identification of historic heritage items, places and areas of significance to Ngāi Tahu while providing cultural context and assisting in avoiding adverse effects.

Principal reasons and explanation

Policy 13.3.1 recognises and provides for the protection of those historic heritage items, places and areas of significant value to the Region. Policy 13.3.1(1)-(4) captures historic heritage items, places or areas that are of significant historical or cultural value, as they make the highest contribution to the identity of the Canterbury region.

Policy 13.3.1 (1)-(4) does not constrain territorial authorities to protection of only those historic heritage items, places or areas that meet the policy. Any protection of historic heritage items, places or areas that do not meet Policy 13.3.1(1)-(4), should be determined at the local level by territorial authorities and the communities in recognition of the contribution such items, places or areas make to the local environment.

Section 12(g) of the RMA controls the use of the coastal marine area, including the destruction, damage or disturbance of the foreshore or seabed in a manner that is likely to have an adverse effect on historic heritage. Historic heritage items, places and areas within the coastal marine area include shipwrecks, historic fixtures such as jetties or significant sites such as tauranga waka.

Policy 13.3.2 – Recognise places of cultural heritage significance to Ngāi Tahu

To recognise places of historic and cultural heritage significance to Ngāi Tahu and protect their relationship and culture and traditions with these places from the adverse effects of inappropriate subdivision, use and development.

This policy implements the following objective

Objective 13.2.1

Methods

Local authorities:

Should:

(1) Work with Te Rūnanga o Ngāi Tahu and the appropriate papatipu rūnanga to determine areas where wāhi tapu and wāhi taonga may be affected by activities.

(2) Engage with Te Rūnanga o Ngāi Tahu and the appropriate papatipu rūnanga to ensure adverse effects to culturally significant sites are avoided, remedied or mitigated.

(3) Use iwi management plans to assist in the identification of values associated with particular historic heritage items, places and areas, and identify management tools for ensuring these values are maintained.

(4) Promote, protection, appropriate access or restriction of access to historic heritage items, places and areas in accordance with tikanga māori such that the values Ngāi Tahu associate with those items, places and areas may be upheld.

Principal reasons and explanation

Sites and traditions such as wāhi tapu, wāhi taonga and mahinga kai are of cultural significance to Ngāi Tahu, and appropriate protection of these areas, traditions and their particular values should be provided for to meet the provisions of Sections 6(e), 7(a), 7(f) and 8 of the RMA.

Information regarding the exact location of wāhi tapu and wāhi taonga sites, and whether use of that land or public access to it is appropriate, should be obtained from Te Rūnanga o Ngāi Tahu or papatipu rūnanga. In some instances, papatipu rūnanga may direct enquiries regarding particular cultural heritage items, places or areas, to hapū or whānau who will have values associated to the cultural heritage item, place

or area that are different to that of the wider rūnanga. Such information will only be made publicly available with prior agreement of tāngata whenua. In order to protect values, information regarding some cultural heritage items, places or areas may be withheld, or held on "silent files".

For clarity, Policy 13.3.1 addresses the recognition and provision for protection of physical historic heritage items, places and areas, while Policy 13.3.2 addresses the protection of cultural values and relationships with those items, places and areas.

Policy 13.3.3 – Historic cultural and historic heritage landscapes

Significant historic cultural and historic heritage landscapes are to be protected from inappropriate subdivision, use and development. When determining the significance of values of historic cultural or historic heritage landscapes, the following matters will be considered:

(1) Heritage fabric

(2) Time depth

(3) Natural science value

(4) Tāngata whenua value

(5) Cultural diversity

(6) Legibility and evidential value

(7) Shared and recognised value

(8) Aesthetic value

(9) Historic or cultural importance

In relation to their management, and determining the appropriateness of scale, form and location of development in these areas, the following matters will be considered:

(a) Cultural sensitivity of the proposal

(b) Integrity or intactness of the landscape, items, features or linkages

(d) Vulnerability to change or modification

(e) Recognition of boundaries

(f) Opportunities for maintaining values

This policy implements the following objectives

Objective 13.2.2, Objective 12.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Advocate for the assessment and protection of heritage and cultural landscapes across the Canterbury region.

(2) Advocate to territorial authorities, landowners and developers, and consult and engage with the Historic Places Trust, Ngāi Tahu as tāngata whenua, the Department of Conservation and other relevant interest groups concerned with cultural heritage and cultural landscapes.

Local authorities:

Will:

(3) Include objectives, policies or methods to manage the effects of subdivision, use and development on cultural and heritage landscapes, in regional and district plans.

(4) Initiate, as appropriate, assessment and management of historic cultural and historic heritage landscapes, with the coastal environment as a priority, for inclusion in plans.

Should:

(5) Engage with Ngāi Tahu as tāngata whenua, including but not limited to recognising iwi management plans, when determining the cultural importance of landscapes.

Principal reasons and explanation

Policy 13.3.3 recognises the relationship between landscape and the context it provides for heritage features, in particular the vulnerability of those landscapes to change. The matters within Policy 13.3.3 are intended to provide guidance in the assessment of historic cultural and historic heritage landscapes, and in the management of those areas. Historic heritage landscapes tend to be tangible collections of items, while historic cultural landscapes are often value based, and less tanglible. Such areas may contain buildings, features or associations that span the period of human settlement in New Zealand. These can be of particular value to Ngāi Tahu as tāngata whenua, as they are integral to the concept of tūrangawaewae, or a sense of connection to the land. The relative value of historic cultural and historic heritage landscapes needs to be addressed on a case-by-case basis using the matters outlined in the policy. It is only historic landscapes that have significant values that need protection. It is not intended that the policy captures vast cultural landscape areas such as the Canterbury Plains, but rather just elements of those areas which contain the most significant historic heritage and cultural value.

Cross-reference should also be made to Chapter 12 which addresses Landscape.

The guiding matters for identification of historic cultural and historic heritage landscapes are explained as follows:

(1) Heritage fabric – A historic cultural or historic heritage landscape will display relationships, webs, spaces, nodes, networks, features and/or activities and will not be simply a collection of historically unrelated items and places.

(2) Time depth – The presence of era layers – links, overlays, eradication. This is an expression of a particular era, or many eras and the variety and linkages between these eras that are present in a landscape.

(3) Natural science value – an expression of the ways in which the natural values of a landscape (geological, topographical, ecological and dynamic components of the landscape) have translated into the cultural landscape and influenced human actions, beliefs and traditions.

(4) Tāngata whenua value - Cultural and spiritual heritage values for Ngāi Tahu, as tāngata whenua.

(5) Cultural diversity - How the landscape expresses the presence of cultural/ racial variety in a variety of layers (tāngata whenua, pakeha/European, Chinese, Pacific Islands, other) and whether and how these layers are linked or otherwise related to each other.

(6) Legibility and evidential values - How the landscape clearly expresses past cultural processes, strong historic connotations and evokes a distinctive sense of place; and/ or how factual and recorded knowledge (archival, statutory, archaeological and ethnographic), oral and anecdotal history, folklore and other methods of historic tradition provide evidence for the physical presence of intact layers, remnant layers or traces.

(7) Shared and recognised value - Includes social, symbolic and political values, and the relationship of the current generation with the heritage environment, its traditions and stories.

(8) Aesthetic value - Cultural patterns, processes and elements and their coherence, memorability, and community perceptions.

(9) Historic or cultural importance - Representativeness, rarity, and distinctiveness of character - how strongly the heritage expresses culture(s) values, presence and development

Appropriate subdivision, use and development within a historic cultural or historic heritage landscape will achieve recognition and protection of the historic heritage or historic cultural values. The guiding matters provided in Policy 13.3.3 will assist in dertermining the appropriate scale, form and location for development in these areas.

Policy 13.3.4 Appropriate management of historic buildings

Recognise and provide for the social, economic and cultural well-being of people and communities by enabling appropriate repair, rebuilding, upgrading, seismic strengthening and adaptive re-use of historic buildings and their surrounds in a manner that is sensitive to their historic values.

This policy implements the following objectives

Objective 13.2.1, Objective 13.2.3

Methods

Territorial authorities

Will:

(1) Set out objectives and policies, and may include methods that enable appropriate repair, rebuilding, upgrading, seismic strengthening and adaptive re-use of historic buildings in a manner that is sensitive to their historic values.

Principal reasons and explanations

Providing for adaptive re-use of historic buildings can enable the social, economic and cultural well-being of people and communities and ensure that historic heritage is conserved and maintained for use and enjoyment by both current and future generations. This policy recognises the direct relationship between social, cultural and economic wellbeing and the ability to repair, reconstruct, seismic strengthen, conserve and maintain historic buildings, while being sensitive to the historic values of the buildings and their surrounds. Economics will often be a factor as to how quickly or easily re-use can be achieved, and will need to be considered on a case-by-case basis.

13.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Historic heritage items, places, areas, and landscapes will be protected from the adverse effects of inappropriate use, subdivision or development of land and resources.

(2) Values associated with sites of historical or cultural significance to Ngāi Tahu will be protected from the adverse effects of inappropriate use, subdivision or development of land and resources.

CHAPTER 14
AIR QUALITY

Introduction

Most of the Canterbury region generally has good air quality most of the time. Safeguarding the life-supporting capacity and/or mauri of air is important for promoting the sustainable use of this natural resource.

Many activities that contribute to Canterbury's social and economic well-being, can also be sources of air pollution that can adversely affect the environment, and the health and well-being of people. Sources of air pollution such as home heating, industries, rural land management practices and the use of motor vehicles can result in significant air quality issues if standards of air quality are breached. This can result in significant public health problems and nuisance effects such as those associated with changes in visibility, odour, dust, smoke and agrichemical spray-drift.

The two principal regional air quality considerations in Canterbury are:

(1) low or reduced ambient air quality, principally associated with discharges to air from combustion processes associated with home heating and industry.

(2) localised effects on air quality within the vicinity of a discharge to air, including odour and dust nuisance, particularly from industrial and trade processes, outdoor burning, small- and large-scale fuel burning devices, transport, rural activities and waste management processes.

Air is significant to tāngata whenua because of the relationship of air to other resources such as water and flora and fauna, and its life-supporting capacity. To tāngata whenua air is a taonga. It is important that the physical, amenity, aesthetic and life-supporting qualities of the taonga are maintained.

The global air quality issues associated with the reduction in the ozone layer and human contributions to climate change are also important. These issues are addressed by central government including through the Ozone Layer Protection Act 1996 and its climate change strategies and policies. The Canterbury Regional Council is required to focus on the consequences of climate change, not the discharge into air of greenhouse gases.

14.1 ISSUES

ISSUE 14.1.1 — HEALTH AND NUISANCE EFFECTS OF LOW AMBIENT AIR QUALITY

Existing and potential health and nuisance effects of low ambient air quality in the urban and settled areas of Canterbury, particularly PM_{10} ambient air quality in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

Explanation

Ambient air quality is the quality of the surrounding air, outside of buildings. It is measured as an average level over a specified period, or periods, within an identified geographic area.

Ambient air pollution comes from multiple sources. The contaminant that is the primary target of statutory planning controls in Canterbury is PM_{10} - tiny particles that are so small (10 micrometres or about one-fifth the diameter of a human hair) they are suspended in the air. There is evidence that the much smaller $PM_{2.5}$ particles also need to be managed as they can penetrate further into the lungs. Other contaminants that can affect ambient air quality include carbon monoxide, sulphur dioxide, nitrogen oxides, benzene, benzo(a)pyrene and polycyclic aromatic hydrocarbons (PAHs).

A number of towns in Canterbury have serious wintertime ambient air quality problems. The principal source of PM_{10} ambient air pollution is from the combustion of solid fuel such as wood and coal for home heating. Emissions from industrial and commercial sources also contribute to the concentrations of PM_{10}. Although motor vehicles also emit PM_{10}, in Canterbury the existing contribution from this source is generally small. Emissions from industrial, commercial and motor vehicle sources will become proportionally more significant as emissions from home heating sources reduce, although motor vehicle contributions will likely remain relatively small.

ISSUE 14.1.2 – LOCALISED ADVERSE EFFECTS OF DISCHARGES TO AIR

Localised health and nuisance effects on social, cultural and amenity values, and adverse effects on natural and physical resources, caused by discharges of contaminants into air, including:

(1) The contaminants from combustion processes, in particular generated from:
   (a) domestic (small scale) fuel burning devices
   (b) industrial (large scale) fuel burning devices
   (c) motor vehicles
   (d) outdoor burning.

(2) Odours generated from waste treatment and disposal, agricultural activities and industrial or trade processes and premises.

(3) Dust from abrasive blasting, quarrying, unsealed yards, construction, agricultural activities, land disturbance, and bulk material storage, handling and processing.

(4) Chemical spray drifting beyond targeted areas or species.

(5) The discharge of any other contaminants from industrial or trade processes and industrial or trade premises.

Explanation

Many air quality management issues relate to localised adverse effects of discharges, rather than effects on ambient air quality. Localised adverse effects are those which occur in open air within the vicinity of a discharge where the contaminated air has not reasonably mixed with ambient air and/or there is a specific adverse effect attributable to that discharge. A localised adverse effect from a discharge to air is readily identifiable as an effect relating to activities and processes which discharge smoke, odour, dust, agrichemical sprays and other contaminants. If not appropriately managed, the products of localised combustion and/or contaminants being discharged to the air can result in localised adverse effects on human health and well-being and result in significant nuisance effects on people's enjoyment of their living and working environment. However, in some areas such as rural areas, amenity value can be expected to be different from urban areas as a result of standard farming practices and are a recognised component of the rural environment.

Activities which discharge to air, and the resulting health and safety considerations within workplaces, are often managed by other industry focused legislation, regulations and standards. These include controls on hazardous substances and new organisms, relating to occupational safety and health, and New Zealand standards like those pertaining to agrichemical spraying. These industry related controls often assist in managing discharges to air. However, they do not directly control the adverse environmental effects of discharges, which are the focus of this issue.

14.2 OBJECTIVES

Objective 14.2.1 — Maintain or improve ambient air quality

Maintain or improve ambient air quality so that it is not a danger to people's health and safety, and reduce the nuisance effects of low ambient air quality.

The following policies implement this objective:

Policy 14.3.1, Policy 14.3.2

Principal reasons and explanation

Our air must be safe to breathe. For Ngāi Tahu, air is a taonga. People and communities should not have to live with the unhealthy and unpleasant effects of low ambient air quality. Canterbury generally has good ambient air quality, with the exception of a number of urban areas that have low PM_{10} ambient air quality. PM_{10} is so small that it travels deep into people's lungs, causing respiratory difficulties and resulting in health problems.

Central government has the role of setting standards for vehicle emissions, however local and regional authorities can create patterns of urban form that reduce reliance on motor vehicle use, reduce trip distances and encourage greater modal choice, such as walking, cycling and public transport. These can indirectly contribute to reductions in motor vehicle emissions.

Objective 14.2.2 — localised adverse effects of discharges on air quality

Enable the discharges of contaminants into air provided there are no significant localised adverse effects on social, cultural and amenity values, flora and fauna, and other natural and physical resources.

The following policies implement this objective:

Policy 14.3.3, Policy 14.3.4, Policy 14.3.5

Principal reasons and explanation

Under Section 15 of the Resource Management Act 1991 (RMA) there is no automatic right to discharge contaminants to air from an industrial or trade premise, and such activities have to be enabled either via an air discharge permit or via a rule in a regional plan or other regulation. Restrictions also apply in relation to contravening national environmental standards and rules in regional plans. Many industries that are important to the social and economic wellbeing of the community involve discharges to air. While the ability to discharge needs to be provided for, it is important that these discharges do not cause significant adverse effects on people and other values.

Most air management issues relate to the localised effects of discharges on the environment and generally involve smoke, odour, dust, agrichemical spray and other contaminants. These can cause significant, health, nuisance and amenity effects. Where there are localised adverse effects from discharges, an appropriate response to avoid, remedy or mitigate those effects needs to be found.

The objective also recognises that good air quality is of significance to tāngata whenua. To tāngata whenua, air is a taonga. Certain types of discharges such as those from crematoria and hospitals can be culturally offensive, especially if such discharges occur in close proximity to cultural facilities or sites of significance.

14.3 POLICIES

Policy 14.3.1 – Maintain and improve ambient air quality

In relation to ambient air quality:

(1) To set standards to maintain ambient air quality in Canterbury based on concentrations of contaminants that cause adverse health effects and nuisance effects.

(2) Where existing ambient air quality is higher than required by the standards set, to only allow the discharge of contaminants into air where the adverse effects of the discharge on ambient air quality are minor.

(3) To give priority to ensuring that PM_{10} ambient air quality improvements are achieved in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

This policy implements the following objective:

Objective 14.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives, policies and methods in regional plans to control the discharge to air of contaminants, including setting standards that at least achieve the requirements of any national environmental standards or resource management regulations promulgated by central government.

(2) In consultation with industry, Ngāi Tahu as tāngata whenua, territorial authorities and other interested parties, develop a framework for managing industry offsets in terms of the National Environmental Standard for Air Quality, and if appropriate, initiate a plan change.

Should:

(3) Engage with territorial authorities, Ngāi Tahu as tāngata whenua, interested parties and the community about how to maintain or improve ambient air quality.

(4) As appropriate, provide financial assistance and incentives in areas with low ambient air quality in order to meet the ambient air quality standards.

Principal reasons and explanation

Ambient air quality can affect entire communities. Maintaining or improving ambient air quality is therefore important to achieving the health and well-being of communities. Ambient air quality standards need to recognise this. Maintaining ambient air quality will require the control of discharges to air as well as implementation of other measures.

Ambient air quality standards are currently specified within the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 . The operative Canterbury Natural Resources Regional Plan also specifies standards in relation to the control of air discharges, and activities that result in air discharges.

Canterbury generally meets all of these specified ambient air quality standards with the exception of a number of urban areas that do not currently meet the PM_{10} ambient air quality standard. Where communities currently enjoy high ambient air quality, generally this should be protected by ensuring air is not used as a significant pollution sink.

The urban areas that are known to not currently meet the ambient air quality standards are Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate. Significant progress has been made to resolve the ambient air quality issue at these locations. Comprehensive PM_{10} reduction strategies are being implemented for Rangiora, Kaiapoi, Christchurch and Ashburton. These strategies include regional plan regulation of discharges to air and, where it is still appropriate, incentives for households to change the way homes are heated. An incentive package is also being implemented in Timaru. It is predicted that the PM_{10} ambient air quality issues in Geraldine and Waimate will be resolved by households progressively upgrading their home heating device.

Policy 14.3.2 — Emissions from the use of solid and liquid based fuels

To promote measures, including the transfer to cleaner technology and fuel sources, that reduce the adverse effect on ambient air quality from the use of solid and liquid based fuels.

This policy implements the following objective

Objective 14.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives, policies and methods in regional plans, or under any deemed regional plan under Section 369(11) of the RMA, to

(a) control the discharge to air of contaminants from home heating resulting from the use of small-scale fuel burning devices, particularly those devices which burn solid fuel.

(b) control the discharge to air of contaminants from commercial, industrial and institutional activities, including the use of large-scale fuel burning devices.

(c) encourage and enable the transfer to cleaner energy sources

Should:

(2) Engage with industry, transport authorities, territorial authorities, Ngāi Tahu as tāngata whenua, interested parties and the community to reduce emissions from the use of solid and liquid based fuels, including where appropriate to replace the use of carbon-based fuel with non-carbon based fuels, and improve performance and efficiency of energy use.

(3) Through the Canterbury Regional Land Transport Strategy:

(a) promote and implement strategies to reduce motor vehicle transport demand, especially with respect to single occupant private motor vehicle trips and motor vehicles powered by unsustainable fuels.

(b) promote and favour transport infrastructure projects which significantly reduce trip generation and lengths.

(c) support and implement programmes that make passenger transport services more effective and attractive.

(d) support and implement programmes that encourage the use of walking, cycling, and other alternative forms of transport.

(e) support and implement programmes that reduce emissions from transport services required for freight movement.

Territorial authorities:

Will:

(4) Set out objectives and policies, and may include methods in district plans to ensure that the design of new subdivisions, built developments and urban areas:

(a) allow for and promote walking, cycling, and where appropriate passenger transport in urban design.

(b) encourage patterns and forms of urban settlement and infrastructure which decrease production of motor vehicle emissions.

Principal reasons and explanation

Policy 14.3.2 addresses health effects and nuisance effects resulting from pollutants in ambient air.

The sources of ambient air pollution in Canterbury are from the combustion of solid and liquid fuel such as wood, coal and oil for domestic heating, commercial, industrial and institutional purposes, and to power motor vehicles.

Discharges from burning wood and coal for domestic heating include suspended particulate (including smoke) and sulphur and nitrogen oxides. Similar contaminants are discharged when wood and coal is burnt as part of commercial, industrial and institutional processes. There is further potential in the region for the use of cleaner renewable fuels which utilise wood pellets, firewood, fire logs and wood chips in residential, commercial and industrial wood burners. Efficient technology and burning of these renewable fuel sources can assist with reducing fine particulate matter when replacing older combustion technology. The use of gas and electricity has the greatest benefit in improving ambient air quality as they cause little or no emissions of PM_{10}.

Emissions from motor vehicles include suspended particulate, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrocarbons, sulphur dioxide and products of incomplete combustion.

Emissions from the combustion of solid and liquid based fuels are of concern because levels of suspended particulate exceed acceptable standards in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate.

The purpose of Policy 14.3.2 is to safeguard and improve ambient air quality through a reduction in the total quantity of emissions.

In Rangiora, Kaiapoi, Christchurch, Ashburton and Timaru significant programmes are in place to encourage people to use cleaner forms of home heating. To date, these programmes have resulted in thousands of households changing the way homes are heated, successfully reducing the emission of contaminants which adversely affect ambient air quality.

Policy 14.3.3 — Avoid, remedy or mitigate localised adverse effects on air quality

To set standards, conditions and terms for discharges of contaminants into the air to avoid, remedy or mitigate localised adverse effects on air quality.

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.

Should:

(2) Engage with Ngāi Tahu as tāngata whenua, including by recognising iwi management plans, when determining localised adverse effects on cultural values.

Principal reasons and explanation

Localised adverse effects are those effects on air quality that occur in the vicinity of the contaminant discharge.

A large number of discharges occur as a result of everyday commercial activities in Canterbury. Many discharges may be acceptable if procedures or methods are followed which avoid localised adverse effects on people, flora and fauna, cultural values and natural and physical resources.

Policy 14.3.4 — Agrichemical spray drift

To avoid adverse effects of agrichemical sprays drifting beyond property boundaries or onto non-targeted properties and to avoid contamination of water.

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.

Should:

(2) Engage with territorial authorities, Ngāi Tahu as tāngata whenua, industry, interested parties and the community to identify and promote practices that help avoid agrichemical spray-drift occuring.

(3) Engage with community and industry groups to identify and promote best practicable options regarding the spray application of agrichemicals.

(4) Support industry led-guidelines, codes of practices and environmental accords where these would lead to the achievement of the objectives of the Regional Policy Statement.

Principal reasons and explanation

The Canterbury region includes many rural areas used for horticulture, pastoral farming, cropping and forestry. The spray application of agrichemicals to control plant and insect pests and manage fungal disease is a recognised, common and accepted practice provided the agrichemicals are properly applied. Where this does not occur, spray drift can cause odour nuisance, health effects, or damage to non-target flora and fauna.

Unintended effects of chemical sprays which drift across property boundaries or into water may be avoided by proper operating practices by users of agrichemical sprays. Unintended chemical sprays entering water is of particular concern to Ngāi Tahu as tāngata whenua.

Policy 14.3.5 – Relationship between discharges to air and sensitive land-uses

In relation to the proximity of discharges to air and sensitive land-uses:

(1) To avoid encroachment of new development on existing activities discharging to air where the new development is sensitive to those discharges, unless any reverse sensitivity effects of the new development can be avoided or mitigated.

(2) Existing activities that require resource consents to discharge contaminants into air, particularly where reverse sensitivity is an issue, are to adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment.

(3) New activities which require resource consents to discharge contaminants into air are to locate away from sensitive land uses and receiving environments unless adverse effects of the discharge can be avoided or mitigated.

This policy implements the following objective

Objective 14.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to control the discharge to air of contaminants.

(2) Engage with Ngāi Tahu as tāngata whenua, including by recognising Iwi management plans, when determining culturally sensitive receiving environments for inclusion in regional plans.

Should:

(3) Engage with territorial authorities, interested parties and the community to manage the relationship between discharges to air and sensitive land-uses.

(4) Where appropriate, under Section 128 of the RMA, serve notice on consent holders of its intention to review the conditions of consent to establish that the best practicable options are being adopted to avoid or mitigate any adverse effects on the environment.

(5) Collect information identifying existing consented activities discharging contaminants to air that have adopted best practicable options and make this available to territorial authorities.

Territorial authorities:

Will:

(6) Set out objectives and policies, and may include methods in district plans to ensure that:

(a) Activities discharging contaminants to air are appropriately located.

(b) Provision is made to protect established activities discharging contaminants to air from adverse reverse sensitivity effects resulting from encroachment by sensitive land-uses if the established activity has adopted the best practicable option to prevent or minimise any actual or likely adverse effects.

Principal reasons and explanation

The concept of reverse sensitivity describes the situation where an existing activity has deliberately located away from land uses that may be sensitive to the discharge, but is subsequently encroached on, resulting in pressure for that activity to cease or change the way it operates. Examples include residential areas encroaching on activites that produce odour, for example airports or certain industries.

Sensitive land uses, receiving environments or developments which are vulnerable to adverse effects from the discharge of contaminants into air include residential dwellings, sites or places of cultural significance, educational and cultural facilities, hospitals, shops, other similar public buildings, and vulnerable flora and fauna.

Many adverse effects can be avoided if new activities discharging contaminants are not located near existing sensitive land uses and receiving environments, or conversely, if sensitive activities (such as dwellings, health facilities and schools) are not placed near existing areas or activities where contaminants are likely to be discharged (such as industrial zones). However, it may be possible for adverse effects to be avoided or mitigated by other means.

Situations can, and have, arise where the receiving environment of existing discharges to air changes, resulting in it being more sensitive to the adverse effects of those discharges. The discharger should adopt the best practicable option to control the adverse effects of the discharge in order to reduce reverse sensitivity effects, thereby limiting the potential impact on the dischargers continued operation and ongoing viability.

The best practicable option to prevent or minimise adverse effects from the discharge, as defined in Section 2 of the RMA, is the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:

(1) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects.

(2) The financial implications and the effects on the environment, of that option compared with other options.

(3) The current state of technical knowledge and the likelihood that the option can be successfully applied.

Odour, spray drift, dust or other emissions which adversely affect people who unwittingly expose themselves to risks of contamination need to be avoided, or mitigated. Air quality in a place of work that is affected by discharges from that workplace is covered by occupational health and safety legislation.

14.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Ambient and local air quality will meet national environmental standards for CO, NO_2, SO_2 and O_3 concentrations.

(2) Ambient air quality will improve in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate to meet the national environmental standards for PM_{10} concentrations.

(3) Homes in Rangiora, Kaiapoi, Christchurch, Ashburton, Timaru, Geraldine and Waimate, will convert to cleaner forms of heating.

(4) There is a decrease in the number of complaints regarding localised effects from discharges to air.

(5) Incompatible discharges to air and land-uses will be appropriately separated.

CHAPTER 15
SOILS

Introduction

Because of the large areal extent of Canterbury soils suited to agriculture and forestry, they are vital both productively and economically to the well being of Canterbury and New Zealand. Much of the agricultural and forestry production from the region is exported and generates significant earnings for the regional and national economy. Sustaining the productive capacity of the region's soils is vital, and ensuring its good management is of regional significance. Soils are also a fundamental part of all land based ecosystems. Some soils have intrinsic values, especially those that have never been disturbed, while for indigenous ecosystems, their health is dependent on protection of the soils they occur on, for example, peat and forest soils and those supporting dry grasslands.

Induced soil erosion and the loss of soil qualities are the resource management issues addressed in this chapter. Induced soil erosion is erosion in excess of natural rates that can be attributed to the actions or activities of people. Common causes of induced erosion are vegetation removal, over-grazing (by stock or animal pests), excessive burning or cultivation and earthworks.

Soil erosion can occur naturally or be induced by human activity. Natural soil erosion is a fundamental part of the geological processes which shape the land. The eroding scree slopes of Canterbury's mountain areas and the eroded gravels making up the beds of Canterbury's braided rivers are significant features in the Canterbury landscape. The soils of parts of Banks Peninsula consist of loess from the Canterbury plains. Some indigenous ecosystems need ongoing natural erosion to maintain them.

Soil quality is a measure of productive potential. Some poorer soils, however, are suited to growing certain crops, for example grapes, and can be made productive provided inputs, such as irrigation, overcome the soil limitations. There are large natural variations in soil quality across the region. Indicators of soil quality include levels of contaminants,

soil structure, levels of key elements such as nitrogen, and biological factors such as the types of bacteria present. The loss of soil quality can occur through activities such as intensive cropping, or the compaction of soil through over-cultivation or pugging by livestock. However, some farming practices can improve soil quality, for example through the addition of nutrients and improvements in soil structure achieved through increased organic matter in the soil. Application of water and nutrients in combination can increase biological activity, water-holding capacity, and productive potential of the soil. Water-holding capacity is a function of particle size distribution and porosity, and of the organic component of the soil, and is a component of soil quality.

Soil versatility is an expression used to describe the land use capability of soils. A highly versatile soil has few limitations for use, that is it will be suitable for primary production with few inputs such as additional water or nutrients. Less versatile soil will need more inputs to achieve similar production, or will simply be unsuitable for agriculture or forestry. In the Canterbury Regional Policy Statement, versatile soils are those soils that are classified as Land Use Capability I or II in the New Zealand Land Resource Inventory.

More frequent droughts and extreme weather (rainfall) events as a result of global climate change may place greater natural stresses on Canterbury's soil resources. Climatic and economic changes will undoubtedly bring about changes in the way Canterbury's soil resources are used and managed.

Soil that is already contaminated by hazardous substances is addressed in Chapter 17 - Contaminated Land. Land-uses causing soil and sediment run-off into water bodies and coastal water, and adversely affecting the quality of that water, are addressed in Chapter 7 - Fresh Water. Chapter 7 also addresses the contamination of water from soil run-off and nutrients from stock or cultivation leaching into groundwater through soil, when the absorption capacity of the soil is exceeded.

Chapter 5 - Land-use and Infrastructure, addresses land development that reduces the rural primary productive base of Canterbury, including such development foreclosing the ability to use important rural resources such as the most versatile soils, or limiting or curtailing rural productive activities due to soil coverage, soil compaction, soil contamination or soil removal. The chapter also has a policy on wilding tree spread which can affect vegetative cover and soil retention.

Chapter 6 - Recovery and Rebuilding of Greater Christchurch, addresses sporadic or unplanned development in and around Christchurch which can affect the productive potential of versatile soils and associated rural industries.

Chapter 9 - Ecosystems and Indigenous Biodiversity, addresses ecosystems generally including those in soils.

15.1 ISSUES

ISSUE 15.1.1 – SOIL DEGRADATION

Degradation in the quality, life-supporting capacity and or mauri of soils as a result of land-uses and discharges of contaminants to land can limit the productive capability of the land and reduce its ability to provide for the social, cultural, environmental and economic well-being of Canterbury's people and communities.

Explanation

The quality, life-supporting capacity and/or mauri of soil is determined by its structure, the nutrients within it, the soil organic matter, its water-holding capacity, and the presence of contaminants. Such qualities also determine the versatility of soil and enable economic benefits from the soil. However, some land-use practices and discharges may degrade soil over time, or limit opportunity to use the soil for primary productive purposes. They include excessive grazing by farm animals or pests, soil compaction, urban and other developments on versatile soils, and soil contamination, for example, from residues left from the use of some chemicals.

Good farm management practices generally have positive effects on soil quality. Appropriate application of nutrients and water frequently lead to increased biological activity, improved soil structure, greater water storage capacity and increased soil carbon/soil organic matter. However, some land-uses, such as residential development, or uses that lead to contamination of soil may limit opportunities to use versatile soils, or other agricultural land for primary productive purposes. There is a need to match land-use with land-use capability. Versatile soils are a finite resource that enable highly efficient primary production, so it is desireable to ensure that resource is available for that use. Other soils may be too poor to be used for production and may be more suited to residential development.

Safeguarding the life-supporting capacity and/or mauri or health of the soil promotes the sustainable management of the soil resource and its associated ecosystems, productivity, and the social, cultural, environmental and economic values that depend on good soil.

The capability of soils to support cultural use is interpreted by Ngāi Tahu as a physical indicator of the mauri or health of soil. Healthy soil supports the cultural use of land by Ngāi Tahu, who value and require the maintenance of the mauri or good health of the land.

ISSUE 15.1.2 – INDUCED SOIL EROSION

Induced soil erosion as a result of land-uses can limit the productive capability of the land, and can have adverse effects on other values.

Explanation

As well as the loss of the soil itself, induced soil erosion can lead to dust problems and contamination, including the contamination of water bodies with excessive nutrients and sediment. Avoiding soil erosion promotes the sustainable management of the soil resource and its associated ecosystems, its productivity, and the social, cultural, environmental and economic values that depend on good soil. Soil erosion can put wāhi tapu and wāhi taonga at risk through the unearthing of kōiwi tāngata and wāhi taonga (artefacts).

Factors contributing to induced soil erosion include:

(1) Loss of vegetative cover on sloping land, particularly in hill and high country areas, caused by clearance of vegetation

(2) Loss of vegetative cover on sloping land, particularly in hill and high country areas, by over-grazing by stock and/or pest animals, especially where drought conditions limit available grazing

(3) Cultivation, where it is badly managed, especially

where a fine tilth is developed and/or sloping land is tilled. Creation of a fine tilth increases the risk of wind erosion. This is of particular concern on the plains and downs, and especially in cropping areas where a high proportion of the land is cultivated each year

(4) Earthworks that reduce slope stability, for example, the inappropriate or indiscriminate cutting of tracks on hill country.

However, some land uses can have positive impacts on soil erosion. For example, some irrigated systems can reduce erosion risk by increasing vegetative cover.

Surface erosion risks in Canterbury hill and high country are variable depending on the percentage of bare ground and soil type. Factors such as average temperature, winter rainfall, the presence or absence of rabbits and other pests, and the application or not of seed and fertiliser all help determine the amount of bare ground at risk from erosion.

The area of land used for dairy farming increased almost threefold between 1995 and 2009. The amount of land protected from wind erosion by shelterbelts has been reduced by these changes in land-use, although at the same time the area of irrigated pasture has increased which potentially reduces soil erosion.

15.2 OBJECTIVES

Objective 15.2.1 – Maintenance of soil quality

Maintenance and improvement of the quality of Canterbury's soil to safeguard their mauri, their life supporting capacity, their health and their productive capacity.

The following policies implement this objective:

Policy 15.3.1, Policy 5.3.1, Policy 5.3.2 and Policy 5.3.11

Principal reasons and explanation

The objective seeks to maintain, and where practicable and desirable, improve soil quality to safeguard its mauri, its life-supporting capacity and/or mauri, and its productive capacity. The maintenance of the quality, life-supporting capacity and/or mauri or health of soils is fundamental to the sustainable management of those soils. For example, the loss of the natural mineral component of soil is effectively irreversible given its very slow rate of formation.

Soil quality includes the depth of the mineral fraction, its structure, nutrients, organic matter, water-holding capacity, presence or absence of contaminants, its suitability for cultural uses, and its versatility for intensive pastoral or cropping agricultural use. Soil quality can be improved through practices such as the addition of fertiliser, organic matter and water, but should be done so in a way that minimises nutrient run-off and leaching.

Objective 15.2.2 – Prevention of soil erosion

Prevention of new significant induced soil erosion, and the reduction of significant existing induced erosion.

The following policy implements this objective:

Policy 15.3.2.

Principal reasons and explanation

Loss of soil through induced erosion reduces the mauri, life supporting capacity, or health of the land. Silt deposition in gravel streams and lakes smothers gravels that are the habitat of the indigenous invertebrates that provide food for fish and birds. Silt also contributes phosphates to rivers, which in turn accelerates growth of aquatic weeds which can adversely affect aquatic ecosystems. Coastal waters can also be affected by silt deposition. This impacts on cultural and recreational values of affected water bodies and is one of the major influences on water quality degradation in Canterbury.

Dust from wind erosion as a result of soil disturbance can also have adverse effects on production on other land and on air quality, affecting people's health and well-being. The shoreline erosion caused by wave action from hydro-electricity lakes that existed in 2012 is not considered to be significant in the context of this objective.

15.3 POLICIES

Policy 15.3.1 – Avoid remedy or mitigate soil degradation

In relation to soil:

(1) to ensure that land-uses and land management practices avoid significant long-term adverse effects on soil quality, and to remedy or mitigate significant soil degradation where it has occurred, or is occurring; and

(2) to promote land-use practices that maintain and improve soil quality.

This policy implements the following objectives:

Objective 15.2.1, Objective 5.2.1 and Objective 18.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to ensure that land-uses avoid significant long-term adverse effects on soil quality, and to remedy or mitigate soil degradation where it has occurred, or is occurring.

Should:

(2) In collaboration with land users identify Canterbury's important areas of soil that require management of their development through land use changes, including urbanisation, to preserve or enhance their primary production capacity.

(3) Identify areas that are at risk of accumulation of hazardous substances in soil, undertake monitoring programmes as appropriate, and assist in implementing appropriate management changes, based on monitored rates and levels of persistent hazardous substance accumulation.

(4) Work with industry, central government, Ngāi Tahu as tāngata whenua and other appropriate organisations to advocate for, and assist in, the setting of appropriate thresholds for accumulation of persistent hazardous substances to avoid adverse effects on soil ecosystems,

production potential and cultural values.

(5) Advocate to central government and industry for the identification of persistent hazardous substances whose effects in the soil are likely to be widespread and/or cumulative.

Territorial authorities:

Will:

(6) Set out objectives and policies, and may include methods in district plans that help ensure land use activities and land management practices do not cause significant long term adverse effects on soil quality.

Local authorities:

Will:

(7) Identify Ngāi Tahu cultural values in relation to soil, for inclusion in regional plans, through engagement with Ngāi Tahu, and through relevant iwi management plans.

Should:

(8) Promote land-use practices that maintain and improve soil quality, prevent excessive discharge of substances that persist in soils and employ best practice techniques to reduce the accumulation of hazardous substances in soil. This should include supporting programmes of education, information and assistance for land-users and working with research, farming and other organisations.

(9) Take actions to avoid significant long-term adverse effects on soil quality from land-use and to remedy or mitigate soil degradation, where it has occurred, in undertaking their operations and activities.

Principal reasons and explanation

A secure foundation for the long term supply of food for domestic and export markets requires the productive capacity of soils to be maintained. It is the combination of all elements of soil quality, including its versatility, that determines the productive capacity of soil. Significant long-term effects are effects that cannot be reversed within a generation, i.e. within 25 years.

Soil compaction at deeper levels, such as that associated with repeated passage of heavy machinery over moist soils, is an example of an adverse effect on soil structure. Harvesting from the land, whether of crops or forests directly, or though pastoral animals, depletes the soil of nutrients. Nutrient depletion occurs when the rate of nutrient removal is faster than the rate at which available nutrients are replenished naturally, or by the addition of fertiliser or other material.

The loss of key soil quality factors can be difficult to rectify, and if not corrected, degradation may continue, often resulting in land being exposed to soil erosion. Introduced animal pests, such as rabbits and wallabies, can contribute directly to land degradation by depleting vegetative cover and reducing productive land-use options. The Biosecurity Act 1993 is aimed at eradication or control of unwanted plant and animal pests, and has powers that are complementary to those under the Resource Management Act 1991 (RMA).

The accumulation of persistent substances in soil poses many management problems. It is difficult to put regulatory controls in place to prevent this sort of contamination, because there is often no effect, or a less than minor adverse environmental effect, until a threshold is met. Once that threshold has been met, it is often too late to remedy or mitigate the contamination, particularly if it occurs over a wide area.

Examples of this sort of contamination are the discharges of substances contained within fertilisers and other products, which are intended to improve the productive potential of land, the long-term discharges of industrial trade wastes to land, or the use of persistent substances in manufacturing processes where those substances are not properly contained. The concentrations of hazardous substances may reach a point where the productive potential of the land becomes significantly reduced.

The risks associated with this type of contamination are significant. The productive potential of land could be severely limited, export opportunities lost, and the region's economy may be affected. Additionally, there are risks to stock and human health, to soil health and the functioning of key soil processes. The cultural values attached to the land and its resources may also be affected. Once soil is contaminated, it becomes an issue addressed in Chapter 17 - Contaminated Land.

The protection of soil quality is not absolute. There will be situations where soil will be degraded as a result of land-uses and where it is not necessarily appropriate to foreclose a development option purely for soil conservation or soil quality reasons, such as in existing urban locations, or when alternative areas or options are not available.

Policy 15.3.2 – Avoid and remedy significant induced soil erosion

To avoid significant new induced soil erosion resulting from the use of land and as far as practicable remedy or mitigate significant induced soil erosion where it has occurred. Particular focus is to be given to the desirability of maintaining vegetative cover on non-arable land

This policy implements the following objective:

Objective 15.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to manage the use of land to avoid new significant loss or erosion of soil, and as far as practicable remedy or mitigate significant induced soil erosion where it has occurred.

Should:

(2) Identify soil erosion issues and risks associated with land development on the basis of land types throughout the region.

This identification should assist in prioritising efforts to address erosion by identifying:

(a) the degree to which erosion is occurring at a rate greater than it would under natural vegetation, and

(b) the source areas of sediment that adversely impacts downstream or downslope environments

Territorial authorities:

Should:

(3) Consider including standards in a district plan that remove the requirement for a resource consent from the territorial authority for land development activities, if a resource consent is granted by the Canterbury Regional Council for the same purpose

(4) Set out objectives and policies, and may include methods in district plans, to control the development of land to avoid soil loss or erosion in accordance with this policy and any district plan soil discharge requirements arising from Chapter 7 - Fresh Water.

This may include requiring land development that causes soil erosion to have effective sediment monitoring and retention measures, where there is potential for sediment run-off, and for earthworks to be designed and programmed so as to minimise the extent of exposed soil at any time.

Local authorities:

Will:

(5) Identify Ngāi Tahu cultural values in relation to soil for inclusion in regional and district plans, through engagement with Ngāi Tahu, and at least in part, through relevant iwi management plans.

Should:

(6) Promote land-use practices that avoid soil erosion by supporting programmes of education, information and assistance for land-users and by working with research, farming and other organisations. Particular attention should be given to the need to maintain vegetative cover where soil is vulnerable to erosion.

(7) Take actions to prevent land-uses from causing soil erosion and to remedy or mitigate soil erosion where it has occurred, in undertaking their own operations and activities.

(8) In conjunction with land users cooperate to develop methods including protocols to manage earthworks and sediment generation, including the delineation of responsibilities on a district by district basis.

Principal reasons and explanation

Soil erosion reduces the life-supporting capacity and/or mauri of the land, thereby reducing the ability of future generations to meet their needs. Even land with the poorest soil has some life-supporting capacity and/or mauri as long as the soil remains firmly in one place. However, even land with the best soil loses some of its life-supporting capacity and/or mauri if it is eroded. Nutrient and water inputs are also closely linked to improvements in soil quality.

Induced soil erosion can develop slowly over time as a result of land degradation. Over time, plant vigour falls, and the soil becomes exposed to the elements. Induced soil erosion may come abruptly with vegetation clearance or with mechanical disturbance.

The most important factor in preventing induced soil erosion is a healthy indigenous or introduced vegetative cover with a low percentage of bare soil. Vegetation clearance exposes the soil and increases the risk of erosion. Animal pests, such as rabbits and wallabies, can contribute directly to soil erosion by depleting the vegetative cover. This process of soil/land degradation can occur because of declining soil quality/soil fertility as a result of insufficient nutrients and water. Fertiliser and water are vital in maintaining/enhancing soil quality.

Hieracium species, particularly *H. pilosella* or mouse eared hawkweed, are introduced plants now widely found throughout the high country and in the most degraded areas can be the dominant vegetation cover. The two factors most frequently cited as causing this are the invasive capabilities of hieracium and the effects of burning and overgrazing causing land degradation. Yet hieracium is also found in undisturbed and relatively undisturbed areas. As a consequence there is no universal consensus amongst researchers and stakeholders that either factor adequately explains the success of hieracium. There is widespread acceptance that maintaining vegetation cover and shading is a key factor in limiting the occurrence of *H. pilosella*.

Canterbury Regional Council's 2007 Erosion and Sediment Control Guideline is an example of advice about how to reduce sediment run-off from temporary land-disturbance and vegetation removal activities. Examples of appropriate land-use practices consistent with avoiding soil erosion are found in some iwi management plans.

15.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) The quality, life-supporting capacity and/or mauri of Canterbury's soils and their health and capability of providing for the social, cultural, environmental and economic well-being of Canterbury's people and communities will be maintained or improved.

(2) Significant induced soil erosion will be avoided or reduced.

CHAPTER 16
ENERGY

Introduction

The purpose of this chapter is to recognise resource management issues regarding energy within the region, and provide policy guidance for addressing those issues that are not addressed elsewhere in the Canterbury Regional Policy Statement. It is recognised that significant energy issues relating to supply, affordability and emissions are addressed primarily at the national and international level.

Energy is a critical factor in enabling the community to provide for their well-being, health and safety. Canterbury's economy depends on access to a reliable supply of energy. Energy is an essential resource for the transport, agricultural, industrial, commercial and residential sectors. Energy is used to generate electricity, as a solid fuel source for heating and cooling and as a liquid fuel primarily in the transport sector with specific associated resource management issues.

Demand for energy from all sectors is expected to continue to grow into the future, which raises issues and challenges to the region as it addresses not only its growing energy demand and a move towards improved energy efficiency, but also its role in delivering energy which extends beyond Canterbury.

The contribution of renewable electricity generation is of national significance and plays a vital role in meeting increasing energy demand, and that significance is to be recognised and provided for. The benefits of renewable generation at all scales can avoid, reduce or displace greenhouse gas emissions, and also increase security of supply. Scale and location of renewable energy projects are often important factors when considering their appropriateness, as they tend to locate close to natural energy sources, which can create conflicts with cultural, ecological and landscape values.

The current diversity of energy generation in Canterbury is limited. Canterbury is a significant producer of hydro-electricity. The eight hydro stations on the Waitaki River system produce a significant proportion of the nation's electricity. However, overall Canterbury is a net importer of energy. In 2006, 57% of the region's energy use was in the transport sector with the majority of that

energy coming from imported oil fuels. In total in 2006, 68% of Canterbury's energy consumption was fossil fuels (i.e. oil, gas and coal), the majority of which are imported into the region. Canterbury also has significant wind energy resources.

While access to energy is vital to the social, cultural and economic well-being of the region, adverse effects from the generation, distribution and use of energy can occur and must be considered alongside the positive effects. Generation facilities may cause adverse effects, through modification of natural resources such as water or ecosystems, or by impacting on important values associated with landscapes or recreation. The distribution of energy can result in detraction of landscape values, or in the case of transport fuels, can pollute land and water if fuels are handled incorrectly. The use of energy can also cause adverse effects, for example the use of energy in the transport sector may adversely affect local air quality.

Making better use of energy can result in a range of efficiency benefits and can reduce demands on energy resources and thereby delay the need for investment in new energy supplies and infrastructure. It can also improve energy security by reducing the possibility of demands exceeding the supply of energy.

Technology for the generation, distribution and use of energy is evolving. This new technology may have an important role in promoting sustainable energy development and use. As finite resources, such as oil, become scarce and more expensive, development of new technologies for producing energy from renewable sources will be necessary to enable continued economic growth. Improvements in technology could also ensure that energy production does not come at the cost of significant adverse effects to the environment. Technology will also make our use of energy more efficient as better manufacturing processes reduce the amount of "embodied energy" in our products and those products in turn are able to perform the same functions with lower energy input.

Local government policy statements and plans have a critical role in terms of providing recognition of the outcomes sought at a regional and local scale by the community, and acknowledging a wider national interrelationship and interdependence in terms of energy generation, management and transmission.

Local government is able to plan for energy-efficient urban and rural development, and is able to facilitate energy production and distribution, including transport, while managing adverse effects on the environment. Finally, local government is able to provide for energy infrastructure by enabling ongoing operation and maintenance and managing reverse sensitivity effects, while also managing the adverse effects of this infrastructure on the environment. Through information and incentives, local government can encourage businesses, householders and institutions to adopt energy efficiency practices and to install small and community scale energy producing technology such as photovoltaic cells and wind turbines. Such measures would assist communities to be resilient in the face of physical disruption or rapid price changes.

There are issues that may be best addressed by central government, including energy pricing, preparation for oil supply shortages, legislating for energy efficiency (e.g. banning the sale of inefficient electrical appliances) and setting standards for the control of emissions from the production of energy. Central government also must address issues of national significance as they arise and also has the power to "call in" resource consent applications for large-scale or nationally significant energy production and distribution infrastructure projects. Government initiatives influence the approach in relation to energy within Canterbury, such as the National Policy Statement on Electricity Transmission, and the National Policy Statement for Renewable Electricity Generation. The CRPS provides the regional approach to give effect to both of these national policy statements. The Government's target is for 90% of New Zealand's electricity generation to be from renewable energy resources by 2025. In order to meet this target it will be necessary to increase the output capacity of renewable electricity generation within New Zealand through the development of new renewable electricity generation activities. While seeking to improve energy efficiency is important this will not address the necessary demand for electricity. The development and use of renewable electricity generation facilities face a number of barriers that include the difficulty in securing access to natural resources as well as functional, operational and technical factors that constrain the location, layout, design and generation potential of renewable energy facilities.

The adverse environmental effects of renewable electricity generation facilities can also be a barrier, if they are not appropriately managed.

There are international conventions and agreements in place that also affect the way in which we manage energy production and use. Most notably, agreements to reduce the quantity of green house gas emissions into the atmosphere, and these are likely to lead to significant changes in the way we generate electricity and in the way we look to solve transport problems into the future.

While transport and energy are inextricably linked, the energy issues surrounding transport energy are best resolved through land-use planning and as such, Chapter 5 - Land-use and Infrastructure and Chapter 6 – Recovery and Rebuilding of Greater Christchurch address transport efficiency. The protection of energy supply is also an important consideration in land use planning decisions, with Chapter 5 of the RPS having the strategic integration of land-use and regionally significant infrastructure in the wider region as a focus.

Energy has implications for water, landscapes, the coastal environment, biodiversity and heritage. Water is a resource harnessed to generate electricity. Landscapes are altered by generation and transmission and transport infrastructure. The coastal environment may be subject to adverse effects similar to those that occur in landscapes. The coastal environment is emerging as a potential source of electricity generation, and may also be subject to oil prospecting in the future. Biodiversity can be affected by energy generation and distribution activities, while the use of energy can have flow-on effects, such as discharges of gasses to air, that may be harmful to biodiversity. Energy use and access to energy sources have helped to shape our cultural heritage, affecting the position of transport routes, the placement of settlements and creating some heritage features such as historic dams. Works for the generation and distribution of energy, including transport may also adversely affect the heritage values of areas such as wāhi tapu. These issues are addressed through the provisions of both Chapter 16 and other chapters as relevant. If there is a perceived conflict between competing policies, the provisions of all the applicable chapters will be evaluated and applied on a case-by-case basis.

16.1 ISSUES

ISSUE 16.1.1 – EFFICIENCY OF ENERGY CONSUMPTION

Inefficient energy consumption places pressure on infrastructure to meet demand which can cause adverse effects on the environment.

Explanation

Energy can be used inefficiently for many reasons. These include:

(1) Subdivision land use and development not lending itself to efficient transport

(2) Insufficient incentive to use energy efficiently

(3) Lack of awareness about costs of inefficient use

(4) Changing to efficient use may require significant investment of capital, while the cost of inefficient use seems nominal

(5) Traditionally ingrained practice – for example, New Zealand houses have traditionally been built with little consideration of energy-efficiency.

Inefficient use of energy in one area, or by individuals can seem insignificant. Collectively however, the inefficient use of energy has significant costs. More energy must be produced and then distributed.

ISSUE 16.1.2 – MAINTAINING AND INCREASING THE SECURITY OF SUPPLY

There is a need to reduce risk in relation to the secure supply of energy, as energy is vital to enabling people and the community to provide for their social, cultural and economic well-being and their health and safety.

Explanation

Energy is relied upon in every aspect of daily life and is a basic requirement to life, providing transport, shelter, warmth and sustenance. When energy supply is disrupted, people are unable to continue living in a normal way. For example, fuel shortages may affect the ability for people to be able to travel to work or school, while electricity cuts may result in people being unable to cook meals.

The ability of existing generation infrastructure, whether renewable or non-renewable, to operate at capacity depends largely on access to resources which can include water, wind, wood, or fossil-based fuels. In Canterbury, access to fresh water and potentially wind is a significant resource requirement for is a major constraint to existing and new electricity infrastructure, particularly as there are competing uses and values associated with fresh water, including agricultural irrigation and cultural activities and values important to Ngāi Tahu (e.g. mahinga kai, maintenance of mauri). In addition, existing energy generation and transmission infrastructure may be insufficient and/or lack sufficient diversity to provide for the current and future energy needs of the region, or a wider contribution in meeting energy demands that extend beyond Canterbury.

There are significant undeveloped renewable resources in Canterbury particularly hydro and wind, all of which, including small and community scale generation have a role to play in improving security of supply.

In regard to solid and liquid energy sources, there is potential to increase the use of renewable fuels through utilising bio-energy, both wood energy and biofuels. The direct use of renewable energy resources for heating and the use of renewable liquid resources for transport fuels are also addressed in Chapter 14 Air Quality.

Bulk fuel distribution and storage is also a regionally significant component of the regional and national energy supply network. It is important that the supply network, including bulk storage is recognised in terms wellbeing, health and safety benefits, particular where sensitive activities would otherwise constrain the ability to develop, operate, maintain and upgrade this network.

With competition for resources such as water, and a desire (or legislative requirement) to protect natural environments and landscapes, opportunities for new renewable generation facilities can be limited. As adverse effects cannot always be avoided, remedied or mitigated, the effects of development on renewable electricity generation activities need to be managed.

The ability of network operators to transmit energy to consumers is dependent on their ability to maintain upgrade and develop the network infrastructure. Reverse sensitivity, adverse effects on resources and amenity values are all constraints to the network operator's ability to develop, operate, maintain and upgrade the network. The ability to develop, operate, maintain and upgrade the transmission network has been recognised as a matter of national significance in a national policy statement.

ISSUE 16.1.3 – ADVERSE ENVIRONMENTAL EFFECTS OF THE PRODUCTION, DISTRIBUTION AND USE OF ENERGY

The production, distribution and use of energy can cause significant adverse effects on the environment, including people and communities.

Explanation

The production, distribution and use of energy can cause adverse effects on the environment, including the social, economic and cultural well-being of people and communities.

Electricity generation may result in land being flooded for hydro lakes. The distribution of energy through transmission line networks, or extraction of mineral fuels such as coal or oil can have adverse effects on landscapes. The use of carbon-based fuels in the transport sector or for residential heating (wood or coal fires) can create localised problems such as degradation of local air quality. Ensuring that the end-use of energy is efficient can minimise these effects.

Electricity generation can affect the relationship that Ngāi Tahu has with resources, including wāhi tapu, wāhi taonga and ancestral lands and water. The adverse effects on the relationship of Ngāi Tahu with resources can occur due to access to resources being limited, loss of mauri of the resources, or activities taking place that conflict with tikanga Māori. In particular, the damming of rivers affects the mauri and the mahinga kai resources associated with those rivers and ultimately, the ability for Ngāi Tahu as tāngata whenua to act effectively as kaitiaki.

ISSUE 16.1.4 – BALANCING CONFLICTS CREATED BY THE EFFECTS OF RENEWABLE ELECTRICITY GENERATION WITH THE BENEFITS OF RENEWABLE ENERGY

The benefits of renewable electricity generation, at any scale, are of significance in terms of providing for increasing regional electricity demands, as well as a wider contribution to meeting electricity demands that extend beyond Canterbury. However, renewable electricity projects tend to be located close to natural electricity sources; this can create conflicts with a wide range of biophysical and community held values and raise issues of scale and location.

Explanation

The benefits from any renewable electricity generation proposal, or existing renewable electricity source, can range from large, significant contributions, to small incremental gains, but they are all cumulative. New renewable generation capacity could contribute to the New Zealand Energy Strategy target, and to increasing the diversity of supply.

There are also practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities. Typically, the generation of renewable electricity is dependent on natural energy sources that might in some circumstances be located in areas with significant natural character, significant amenity values, historic heritage, outstanding natural features and landscapes, significant indigenous vegetation, significant habitats of indigenous fauna and cultural values. In some circumstances adverse effects associated with the development, operation, maintenance and upgrading of renewable electricity generation and associated infrastructure on those resources cannot be practicably avoided, and should therefore be remedied or mitigated.

This tension between the benefits of renewable electricity and the associated effects from its development, is a significant issue for renewable development in Canterbury.

16.2 OBJECTIVES

Objective 16.2.1 – Efficient use of energy

Development is located and designed to enable the efficient use of energy, including:

(1) maintaining an urban form that shortens trip distances

(2) planning for efficient transport, including freight

(3) encouraging energy-efficient urban design principles

(4) reduction of energy waste

(5) avoiding impacts on the ability to operate energy infrastructure efficiently.

The following policies implement this objective:

5.3.1, 5.3.2, 5.3.3, 5.3.8, and Chapter 6 – Recovery and Rebuilding of Greater Christchurch generally

Principal reasons and explanation

The use of energy can be made more efficient if development is designed and located to reduce the need to commute over significant distances, and services are closer to the population base. Transport planning can encourage more efficient options such as public passenger transport or efficient freight transport (for example, transport of freight by rail and sea may be more efficient than transporting by road). Energy-efficient urban design principles, such as orientating and placing housing so that solar gain is maximised, provide long-term energy efficiency. Reducing the amount of waste generated (including energy waste) reduces unnecessary energy input. Waste reduction measures can be included in design and development, for example by encouraging or requiring new buildings to install energy efficient measures or systems. Inefficiencies can also occur through transmission loss such as where the location and scale of generation (or supply) does not match areas of demand. Inappropriate development can affect the ability to operate electricity transmission infrastructure at its full capacity and this should be avoided to minimise the need for new infrastructure. This objective will be implemented through the provisions of Chapter 5 – Land-use and infrastructure, Chapter 6 – Recovery and Rebuilding of Greater Christchurch, and Chapter 19 – Waste minimisation and management.

Objective 16.2.2 – Promote a diverse and secure supply of energy

Reliable and resilient generation and supply of energy for the region, and wider contributions beyond Canterbury, with a particular emphasis on renewable energy, which:

(1) provides for the appropriate use of the region's renewable resources to generate energy;

(2) reduces dependency on fossil fuels;

(3) improves the efficient end-use of energy;

(4) minimises transmission losses;

(5) is diverse in the location, type and scale of renewable energy development.

(6) Recognises the locational constraints in the development of renewable electricity generation activities; and

(a) avoids any adverse effects on significant natural and physical resources and cultural values or where this is not practicable, remedies or mitigates; and

(b) appropriately controls other adverse effects on the environment.

The following policies implement this objective:

Policy 5.3.1, Policy 5.3.2, Policy 5.3.3, Policy 5.3.8, Policy 6.3.1, Policy 6.3.2, Policy 6.3.3, Policy 6.3.5, Policy 16.3.2, Policy 16.3.3, Policy 16.3.4 and Policy 16.3.5

Principal reasons and explanation

Canterbury is one of the fastest growing regions in New Zealand. To fuel this growth, energy is used in many areas including transport, agriculture, the power industry, manufacturing, domestic and business use. Regional growth also puts pressure on the networks that supply the region's growing energy demands. Canterbury's electricity usage is generally higher than the New Zealand average, with a typical summer time peak demand in rural areas and winter time peak demand in urban areas.

To accommodate such growth, the Canterbury region needs an energy system that is reliable and resilient. The region contains a very good, but narrow source of renewable energy supply, based around hydro electricity generation. Canterbury is a significant contributor to New Zealand's hydro electricity generation and distribution infrastructure. Generators range in scale from the largest being the Waitaki Hydro Electric Power Scheme (HEPS) substantial schemes such as the Coleridge HEPS, to moderate operations such as Highbank and Opuha, and a number of smaller hydro schemes associated with irrigation schemes.

Maximising the ability to appropriately harness the region's renewable resources, such as wind, water and bio-matter to provide energy for the Canterbury community, will ensure there is a suitable supply of energy into the future. Using the region's resources within Canterbury will ensure that the community is more self reliant, depending less on imported energy.

Diversity in type, location and scale of energy development means that electricity, transport fuels, and other energy should come from a range of sources and via a range of distribution networks. This diversity will ensure that problems with energy infrastructure are easier to overcome than they would be if energy supply was dependant on one source.

As explained under Issue 16.1.1 above, efficient use of energy may result in reduction of the need to generate or provide more energy. Efficient use of energy may contribute to existing infrastructure having sufficient capacity to meet future demand.

There are a number of practical barriers to the further diversification of renewable energy sources within Canterbury including, the nature and location of the renewable energy source, and access to supporting infrastructure. Accordingly, it is acknowledged that any renewable energy generation proposal, or expansion of existing renewable energy sources may result in substantial adverse effects on the environment which could be impractical to avoid. The amenity values of nearby communities may also be impacted. There is a need to carefully balance the benefits associated with renewable energy electricity generation projects with the actual and potential adverse effects on the environment. Even though they may have potential adverse effects,

there is also a need to recognise and provide for the benefits of renewable electricity generation as a matter of national significance.

Policy 16.3.1 – Efficient use of energy

To promote the efficient end-use of energy.

This policy implements the following objectives:

Objective 16.2.1 and Objective 16.2.2.

Methods

The Canterbury Regional Council:

Should:

(1) Advocate energy conservation and efficient energy use through the development and implementation of the Regional Energy Strategy, Regional Land Transport Strategy and Canterbury Water Management Strategy.

(2) Advocate to, cooperate, coordinate and participate with central government, territorial authorities, energy conservation authorities and groups, Te Rūnanga o Ngāi Tahu and Papatipu Rūnanga and interested parties to promote:

  (a) Better understanding of energy efficiency and how this may be achieved

  (b) Use of more energy-efficient products and technologies

  (c) Implementation of energy efficiency and renewable programmes

  (d) Reductions in regional travel demand, including by reducing trip distances

  (e) Passive solar gain in developments.

(3) Encourage and provide advice for householders, institutions, businesses and other organisations, on energy efficiency initiatives, including travel management planning.

Principal reasons and explanation

Section 7 of the RMA requires that people operating under the provisions of the RMA must have particular regard to the efficiency of the end-use of energy when exercising powers and functions under the Act.

The Canterbury community is able to achieve energy savings through promoting measures which conserve energy or use it more efficiently. At a micro scale, many of the buildings in Canterbury are commonly inefficient, lacking insulation and being and difficult to heat. Sustainable building design to maximise energy efficiency (such as through design to increase solar gain, and insulation), and opportunities to utilise renewable energy (such as solar) can reduce energy consumption. At a wider community level, improvements in energy efficiency and reduction in fossil fuel use can be made by:

  (a) designing subdivision and land use that decreases travel demand;

  (b) providing public transport;

  (c) promoting the movement of freight by rail and coastal shipping; and

  (d) making walking and cycling more attractive.

Energy conservation and efficiency promotion can seek to reduce Canterbury's dependence on limited energy resources from non-sustainable sources.

Policy 16.3.2 — Small and community scale distributed renewable electricity generation

Encourage and provide for the operation maintenance and development of small and community scale distributed renewable electricity generation provided that:

(1) any adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable, remedied or mitigated; and

(2) other adverse effects on the environment are appropriately controlled.

This policy implements the following objectives:

Objective 16.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to encourage and provide for the use of small and community scale distributed renewable electricity generation.

Should:

(2) Encourage, through education and advocacy, the use of small-scale distributed renewable electricity generation.

(3) Advocate the use of small-scale distributed renewable electricity energy generation across all sectors.

(4) Consider providing incentives to encourage installation of small-scale renewable electricity generation to build levels of community resilience.

Territorial authorities:

Will:

(5) Set out objectives and policies, and may include methods in district plans to encourage and provide for the use of small and community scale distributed renewable electricity generation.

Principal reasons and explanation

Small-scale distributed renewable electricity generation provides an opportunity for the Canterbury community to become partially self-reliant for energy supply. Technologies that currently exist, which enable individuals to harness energy sources such as hydro, solar and wind, are likely to improve and become more cost-effective into the future. As demand for energy increases, self-reliance will have economic benefits for individuals and the region as a whole.

Small-scale distributed renewable electricity generation will reduce loading on existing large-scale infrastructure and may in some cases assist in avoiding adverse environmental effects by reducing the need for significant upgrade or replacement of larger-scale infrastructure. This may be effective when applied to energy-intensive heavy industry or irrigation-dependent agriculture. This is particularly relevant where land-use or proposed land-use is energy intensive and/or provision can be made for on-site energy generation with minor environmental effect or economic cost. It is also considered that in order for local-scale generation to be resilient, it should not rely on imported fuels.

Policy 16.3.3 – Benefits of renewable energy generation facilities

To recognise and provide for the local, regional and national benefits when considering proposed or existing renewable energy generation facilities, having particular regard to the following:

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

(2) maintaining or increasing the security of supply at local and regional levels, and also wider contributions beyond Canterbury; by diversifying the type and/or location of electricity generation;

(3) using renewable natural resources rather than finite resources;

(4) the reversibility of the adverse effects on the environment of some renewable electricity generation facilities;

(5) avoiding reliance on imported fuels for the purposes of generating electricity; and

(6) assisting in meeting international climate obligations.

This policy implements the following objective:

Objective 16.2.2.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans that recognise the local, regional and national benefits of a renewable energy supply, including security of supply, providing for electricity capacity, and assisting in meeting international climate obligations.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans that recognise the local, regional and national benefits of renewable energy supply, including security of supply, providing for electricity capacity, and assisting in meeting international climate obligations.

Principal reasons and explanation

Ensuring a secure supply of energy will assist the region in providing for its social, economic and cultural well-being as well as the health and safety of the Canterbury community. The policy, does not seek to provide an exhaustive list of the benefits that could arise from renewable energy generation, but does provide those matters that should be given genuine attention when considering new and existing renewable electricity generation activities. The policy and its methods are intended to recognise the importance of a secure supply of energy locally, regionally and nationally.

New generation facilities will have benefits to local areas, the Canterbury region and to New Zealand. Within local areas, benefits may include employment opportunities, the creation of recreation facilities and opportunities for environmental compensation. Regional and national benefits come from a more secure supply of energy that can service economic growth and community resilience.

Any encouragement of renewable energy sources within the region, should not seek to downplay the importance of biophysical and community held values as associated with locations that may be sought for renewable energy generation. Values such as the importance of outstanding landscape areas, and areas of significant indigenous vegetation and habitat should be considered alongside the benefits of the renewable energy source that could otherwise be generated.

Policy 16.3.4 – Reliable and resilient electricity transmission network within Canterbury

To encourage a reliable and resilient national electricity transmission network within Canterbury by:

(1) having particular regard to the local, regional and national benefits when considering operation, maintenance, upgrade or development of the electricity transmission network;

(2) avoiding subdivision, use and development including urban or semi urban development patterns, which would otherwise limit the ability of the electricity transmission network to be operated, maintained, upgraded and developed;

(3) enabling the operational, maintenance, upgrade, and development of the electricity transmission network provided that, as a result of route, site and method selection, where;

(a) The adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable, remedied or mitigated; and

(b) other adverse effects on the environment are appropriately controlled.

This policy implements the following objective:

Objective 16.2.1 and 16.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to:

(a) avoid activities on the beds of lakes and rivers that impact on the efficient functioning of the existing national electricity transmission network, including, through consultation with the operator of the national electricity transmission network, identifying appropriate buffer corridors within which it can be expected that sensitive activities will generally not be provided for; and

(b) enable the operation, maintenance, upgrade and development of the national electricity transmission network, within the beds of lakes and rivers and in the coastal marine area, while avoiding or mitigating adverse effects on the environment referred to in Policy 16.3.4(3)(a)-(b) above and appropriately controlling other adverse effects as referred to in Policy 16.3.4(3)(b).

Should:

(2) Advocate to, cooperate, coordinate and participate with territorial authorities and the national electricity transmission network operators to achieve Policy 16.3.4, including facilitation of long-term planning for investment

in transmission infrastructure and its integration with land-uses.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans that:

(a) avoid subdivision, use and development that may result in adverse reverse sensitivity effects on the electricity transmission network, including, through consultation with the operator of the national electricity transmission network, identifying appropriate buffer corridors within which it can be expected that sensitive activities will generally not be provided for; and

(b) enable the operation, maintenance, upgrade and development of the national electricity transmission network, while avoiding or mitigating adverse effects on the environment identified in Policy 16.3.4(3)(a)-(b) above and appropriately controlling other adverse effects as referred to in Policy 16.3.4(3)(b).

(4) Use iwi management plans to assist in the identification of adverse effects on ancestral lands and sites of significance to Ngāi Tahu.

Local authorities:

Should:

(5) Work together to adopt a consistent approach in relation to cross boundary issues for the electricity transmission network.

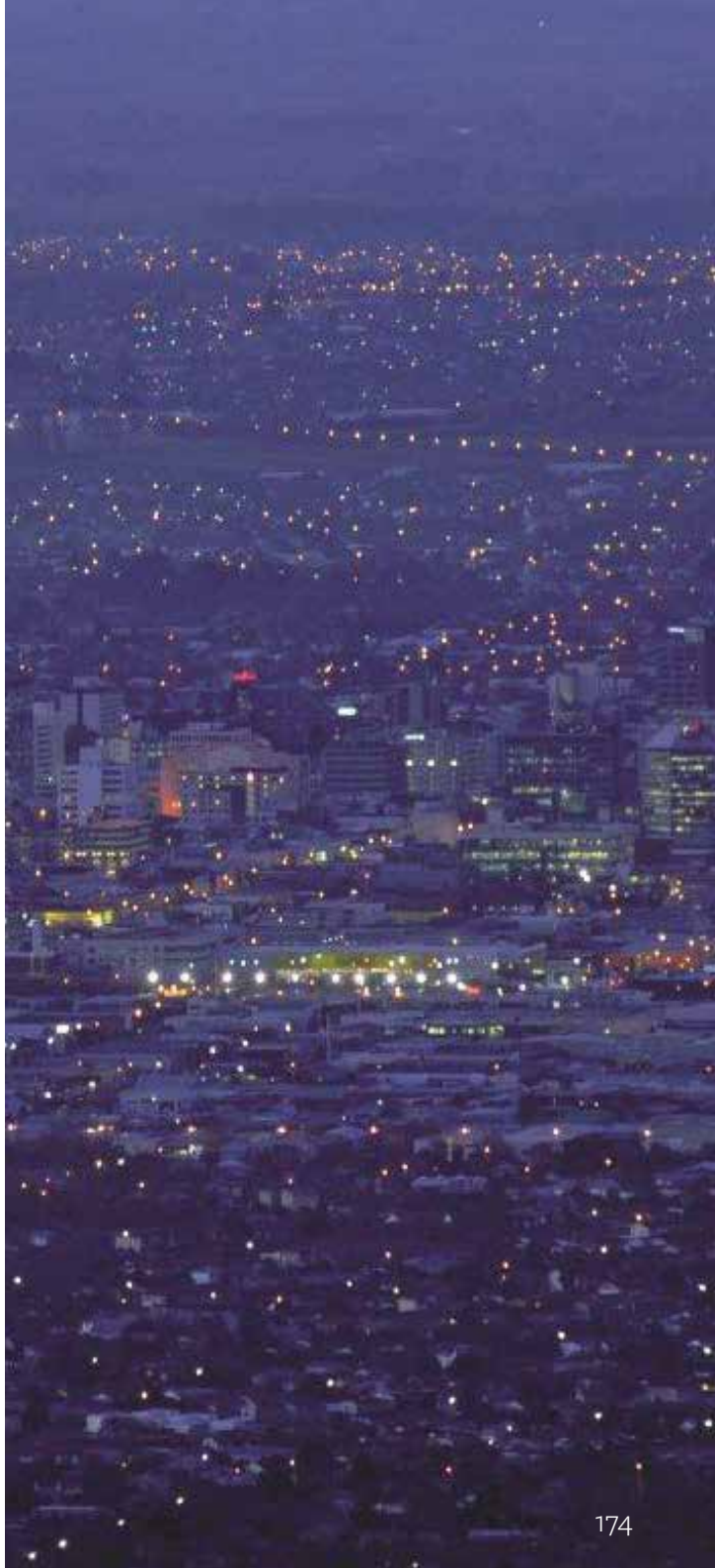
Principal reasons and explanation

The national electricity transmission network makes important contributions to the sustainable management of natural and physical resources including by enabling people's economic and social well-being, health and safety. Specifically, the benefits of the electricity transmission network include those benefits defined in Policy 1 of the National Policy Statement on Electricity Transmission.

Over time, considerable public and private investment has occurred in developing, maintaining and upgrading the electricity transmission network. It is not reasonably foreseeable that these systems will become redundant or be replaced. It is important that land-use does not adversely impact on the efficient operation and development of this network.

The National Environmental Standards for Electricity Transmission Activities provides regulations that categorise activities that relate to the operation, maintenance, upgrade, relocation or removal of existing transmission infrastructure. These regulations control the activity status for a range of activities relating to transmission infrastructure.

New electricity infrastructure associated with the electricity transmission network can have adverse effects on the environment, including areas of cultural significance to Ngāi Tahu. These adverse effects can be minimised by appropriate route, site and method selection.



Policy 16.3.5 — Efficient, reliable and resilient electricity generation within Canterbury

To recognise and provide for efficient, reliable and resilient electricity generation within Canterbury by:

(1) avoiding subdivision, use and development which limits the generation capacity from existing or consented electricity generation infrastructure to be used, upgraded or maintained;

(2) enabling the upgrade of existing, or development of new electricity generation infrastructure, with a particular emphasis on encouraging the operation, maintenance and upgrade of renewable electricity generation activities and associated infrastructure:

(a) having particular regard to the locational, functional, operational or technical constraints that result in renewable electricity generation activities being located or designed in the manner proposed;

(b) provided that, as a result of site, design and method selection:

(i) the adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable remedied, mitigated or offset; and

(ii) other adverse effects on the environment are appropriately controlled.

(3) providing for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation;

(4) maintaining the generation output and enabling the maximum electricity supply benefit to be obtained from the existing electricity generation facilities within Canterbury, where this can be achieved without resulting in additional significant adverse effects on the environment which are not fully offset or compensated.

This policy implements the following objective:

Objective 16.2.2.

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to:

(a) avoid activities on the beds of lakes and rivers, and uses and developments that impact on the generation capacity from, and/or the maintenance and upgrading of consented and existing electricity generation infrastructure; and

(b) provide for the full operation, and maintenance and/or upgrading of, existing generation infrastructure;

(c) provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for electricity generation;

(d) enable the upgrading of existing and establishment of new electricity generation infrastructure within the coastal marine area and in the beds of lakes and rivers, while avoiding, remedying or mitigating adverse effects including through the use of best practice approaches to design, construction and effect management.

Should:

(2) Advocate to, cooperate, coordinate and participate with territorial authorities and electricity generators to achieve Policy 16.3.5.

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans to:

(a) avoid land-uses that may result in adverse reverse sensitivity effects on the existing electricity generation infrastructure; and

(b) enable the upgrade of existing and establishment of new electricity generation infrastructure, while avoiding or mitigating the adverse effects referred to in Policy 16.3.5(2)(a)-(b) above and controlling other adverse effects.

(c) Provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable energy generation.

Local authorities:

Will:

(4) Use iwi management plans to assist in the identification of adverse effects on ancestral lands and sites of significance to Ngāi Tahu.

Principal reasons and explanation

Electricity generation infrastructure makes important contributions to people's economic and social well-being, health and safety.

Over time, considerable public and private investment has occurred developing, maintaining and upgrading the electricity generation infrastructure. These generation facilities, particularly the large hydroelectricity generation facilities of the Waitaki and Tekapo Power Schemes and Lake Coleridge are nationally important physical resources which should be provided for. It is not reasonably foreseeable that this infrastructure will become redundant or be replaced. It is important that land-use does not adversely impact on the efficient operation and development of the electricity generation infrastructure.

Electricity generation infrastructure can have adverse effects on the environment, including areas of cultural significance to Ngāi Tahu and the relationship that Ngāi Tahu have with resources, and particularly with water. These adverse effects can be minimised by appropriate location and design.

16.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Canterbury's energy supply will be more diverse, with a greater proportion of renewable energy supply based on using a greater variety of renewable energy sources.

(2) Canterbury's energy supply will be more secure through diverse supply and better demand management.

(3) The adverse effects of the production, distribution and use of energy will be minimised.

(4) There is greater use of small-scale distributed energy production.

(5) Energy demand is managed through appropriate design and location of development.

(6) The national electricity high-voltage network traversing Canterbury will be protected.

CHAPTER 17
CONTAMINATED LAND

Introduction

The purpose of this chapter is to identify issues associated with contamination of land and resolve the issues in relation to land that may be currently contaminated.

Discharges, accidental or otherwise, of hazardous substances that contaminate land are actually or potentially harmful to the environment. Land affected in this way may require expensive and difficult remediation to prevent adverse effects on ecosystems, water, soil and air quality and/or people's health and welfare. For example, in parts of Canterbury, past applications of the synthetic insecticide dichlorodiphenyltrichloroethane (commonly known as DDT) persist over extensive areas of soil, while elsewhere, unacceptable concentrations of contaminants are present from activities such as waste disposal and the use of timber treatment chemicals. Where these situations occur, the effects can limit the use of land, and can cause flow-on effects into the environment, such as contamination of surface and groundwater.

The RMA sets out functions for managing contaminated land for regional councils and territorial authorities. Regional councils have the function to investigate land for the purpose of identifying and monitoring contaminated land, while territorial authorities have the function to prevent or mitigate any adverse effects on the environment that may arise from the use, subdivision or development of contaminated land. The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NES) will come into effect on 1 January 2012. The NES addresses the management of contaminated land from a human health perspective. It does not address the management of contaminated land for environmental health reasons. There is potential for overlap or duplication and inconsistent management of contaminated land. It is important that territorial authorities and the Canterbury Regional Council

work in a cooperative and integrated manner in order to achieve positive environmental outcomes.

Contamination of land can also occur as an adverse effect of the use, storage, transport or disposal of hazardous substances. Provisions seeking the prevention of contamination of land can be found in Chapter 15 - Soils and Chapter 18 - Hazardous substances.

17.1 ISSUES

ISSUE 17.1.1 – ADVERSE EFFECTS OF CONTAMINATED LAND AND ITS MANAGEMENT

Contamination of land can result in actual or potential adverse effects on the environment including human health, and social, economic and cultural well-being. Management and remediation of these adverse effects may be complicated by:

(1) A lack of knowledge about the location or level of contamination present

(2) The historical nature of some land contamination and difficulties in establishing responsibility for this contamination

(3) Different recognition of, and response to, the level of risk with managing and remediation of contaminated land

Explanation

The environmental effects of contaminated land can be far reaching and persistent. The risk from contaminated land is variable and the use of the land can be a factor in increasing risk. Some activities will exacerbate the actual or potential adverse effects of contaminated land by putting people at risk or by causing contamination to spread. Other activities may assist in the mitigation of the adverse effects of contaminated land by containing the contamination and limiting human and animal access to the contamination. Contamination of land adversely affects the mauri of that land and affects significant cultural values associated with culturally sensitive sites. Land contamination alsolimits the opportunity for tāngata whenua to partake in traditional activities such as mahinga kai.

The location and full extent of land contamination in Canterbury is currently unknown. Past land-use practices may have resulted in land contamination. However, a stock-take of all past land-uses has not yet been completed in the region. Additionally, of the land where the past land-uses are known, only a very small percentage has been subjected to investigation to verify the nature and extent of contamination, or even if contamination exists at all. The consequence of this is that the risks associated with contaminated land in the region are largely unknown, and this makes management of those risks difficult.

A lack of information, difficulty accessing information, and poor integration of information can mean people are not fully informed about the land they are buying, using or developing, and appropriate controls or mitigation cannot be applied to land that poses a risk from contamination.

The management of contaminated land under the provisions of the RMA requires inter-agency cooperation. The Canterbury Regional Council has the function to identify contaminated land. This identification process is resource intensive. Limited resourcing will mean that the identification of all contaminated land will take a significant amount of time. There is limited national guidance on how local authorities should work together to avoid duplication and overlap.

There are perceived inequities regarding responsibility for historic contamination. Responsibility for remediation of contaminated land lies with the current land-owner, but often the land was contaminated by a past owner. The issue is compounded where contaminated land has been divided between multiple owners, and there is limited resourcing for the remediation of the contamination on this land.

Once a site has been identified as contaminated, perceived risks associated with that land can have consequences for the land-owner and future owners of that land. As actual risks are use-dependent (i.e. using contaminated land to grow vegetables may carry a greater risk to human health than using the same site for a car sales yard), it is possible for risks to be perceived as greater or lesser than they actually are.

Often, there are no incentives to encourage land-owners to remedy contaminated land, particularly where contaminated land is affecting the wider environment, rather than the land-owner or occupier themselves. Incentives or regulation either do not exist, or are difficult to apply or enforce.

Redevelopment of sites for economic gain provides opportunity and incentive for the remediation or mitigation of contaminated land. Excessive regulation and costs can diminish the incentive to remedy or mitigate contaminated land for redevelopment.

Finally, there may be risks associated with the remedy or mitigation of contaminated land. Remediation measures may result in the further dispersal, or mobilisation of hazardous substances, which would otherwise be restricted, thereby exacerbating the effects of the contamination.

ISSUE 17.1.2 – LAND MAY BECOME CONTAMINATED

The use, storage, transport and disposal of hazardous substances can result in localised or widespread contamination of land.

Explanation

Any use, storage, transport or disposal of hazardous substances or material containing hazardous substances, even in small quantities, has the potential to cause contamination of land.

Localised contamination can occur from the discharge of hazardous substances or materials containing hazardous substances such as industrial wastes, while widespread contamination can occur from the long-term or extensive application of substances containing heavy metals or other hazardous substances that persist in soils, as occurred with the application of DDT.

This issue is addressed in Chapter 18 - Hazardous substances.

17.2 OBJECTIVES

Objective 17.2.1 — Protection from adverse effects of contaminated land

Protection of people and the environment from both on-site and off-site adverse effects of contaminated land.

The following policies implement this objective:

Policy 17.3.1, Policy 17.3.2, Policy 17.3.3 and Policy 17.3.4

Principal reasons and explanation

Contaminated land can have adverse effects on the health, safety and well-being of the people using that land. Contaminated land may also have adverse effects on the wider environment as contaminants may be spread through water, mechanical distribution, or wind-blown soil. The life-supporting capacity and/or mauri of soil that is contaminated may be limited. These adverse effects must be managed or long-term flow-on effects can result. Consequences could include, but are not limited to:

(1) Adverse effects on human health and safety

(2) Adverse effects on ecosystems

(3) The production of food not meeting health standards or being subject to market restrictions due to the presence of contaminants, or contaminants leaching through the soil and into groundwater

(4) Contaminants leaching through the soil and into ground or surface water (a particular issue for Ngāi Tahu)

(5) Adverse effects on cultural values and activities.

17.3 POLICIES

Policy 17.3.1 — Identify potentially contaminated land

To seek to identify all land in the region that was historically, or is presently, being used for an activity that has, or could have, resulted in the contamination of that land, and where appropriate, verify the existence and nature of contamination.

This policy implements the following objectives:

Objective 17.2.1

Methods

The Canterbury Regional Council:

Should:

(1) Develop and implement strategies and codes of practice, working with key agencies including territorial authorities, Ngāi Tahu, industry and land-owners to identify all land that has historically been, or is presently used for hazardous activities or industries.

(2) Work with industry, Ngāi Tahu, territorial authorities and central government to have land, which has been identified as having been used for a hazardous activity or industry, investigated to verify the existence of, and/or levels of, contamination.

(3) Hold and maintain a register that will include the following information:

  (a) all land used (presently or historically) for a hazardous activity or industry;

  (b) land that is confirmed as being contaminated; and

  (c) land that was contaminated but has been remedied.

(4) Provide any information held on its register to territorial authorities or interested parties upon request.

(5) Seek assistance from government agencies to improve information sharing between agencies, including: industry, Ngāi Tahu, territorial authorities, regional councils and the Environmental Risk Management Authority (ERMA). This improved information sharing will assist in identifying land where hazardous activities or industries have taken place.

(6) Seek funding from central government to assist with further investigation and assessment of potentially contaminated land.

Territorial Authorities:

Should:

(7) Use the information provided by the Canterbury Regional Council from the listed land-use register to determine if land has been or is subject to a hazardous activity or industry when preparing Land Information Memoranda or prior to making a decision on a resource consent application.

Principal reasons and explanation

Section 30(1)(ca) of the RMA requires the Canterbury Regional Council to investigate land for the purpose of identifying and monitoring contaminated land. This policy seeks to identify potentially contaminated land and, where appropriate, verify the contamination. The methods broadly set out how that investigation will occur and how the information will be used. The methods reflect the importance of cooperation between agencies in the management of contaminated land.

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 "at risk" land has been identified, assessments can be made to prioritise on-site testing of soil and/or water to determine the nature or existence of contamination.

The policy states that "where appropriate" verification of the existence and nature of contamination will take place. It is intended that works to verify the existence and nature of contamination will be appropriate in instances where it has been determined there is a high risk of contamination and/or adverse effects potentially occurring as a result of contamination, where there are actual adverse effects occurring, where there has been a known spill of hazardous substances, or where a change in land use is proposed. It may also be appropriate for individuals to seek verification of existence or nature of land contamination during tenure change processes.

Policy 17.3.2 – Development of, or discharge from contaminated land

In relation to actually or potentially contaminated land, where new subdivision, use or development is proposed on that land, or where there is a discharge of the contaminant from that land:

(1) a site investigation is to be undertaken to determine the nature and extent of any contamination; and

(2) if it is found that the land is contaminated, except as provided for in Policy 17.3.3, the actual or potential adverse effects of that contamination, or discharges from the contaminated land shall be avoided, remedied or mitigated in a manner that does not lead to further significant adverse effects.

This policy implements the following objective:

Objective 17.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives, policies or methods in regional plans to require:

(a) a site investigation of any land in the coastal marine area, or within in the beds of lakes and rivers, identified as actually or potentially contaminated, prior to any new subdivision, or use of land, or new development of land that that could result in an increase in any adverse effect resulting from any contamination of the land.

(b) the avoidance, remediation or mitigation of adverse effects from the subdivision, use or development of contaminated land within the coastal marine area or in the beds of lakes and rivers.

(c) the avoidance, remediation or mitigation of adverse effects from discharges from contaminated land.

(d) that any remediation or mitigation works for contaminated land do not lead to further significant adverse effects on the environment.

(2) Provide information to assist territorial authorities in achieving their functions under Section 31(1)(b)(iia) of the RMA.

Territorial authorities:

Will:

(3) Set out objectives, policies or methods in district plans to require:

(a) a site investigation of any land identified as actually or potentially contaminated, prior to any new subdivision or use of land or new development of land that that could result in an increase in any adverse effect resulting from any contamination of the land;

(b) that any actual or potential adverse effects of contaminated land are avoided, remedied or mitigated in a manner that does not lead to further significant adverse effects on the environment; and

(c) that any remediation or mitigation works for contaminated land do not lead to further significant adverse effects on the environment.

Local authorities:

Should:

(4) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans including Te Rūnanga o Ngāi Tahu Hazardous Substances and New Organisms Policy Statement 2008, to provide guidance about the cultural values associated with contamination of land or a particular site and guidance on appropriate remediation or mitigation measures.

Principal reasons and explanation

This policy recognises that the subdivision, use or development of contaminated land offers an opportunity for the remedy or mitigation of contamination, but that a precautionary approach to these activities is necessary. It seeks to ensure that the nature and extent of contamination is identified prior to subdivision, use or development, so that the effects can be managed appropriately. The policy also seeks to ensure that the effects of discharges of contaminants from this land are appropriately managed.

In order to determine the risks of subdivision, use or development of land, the land must be investigated. Site investigations can range in complexity from a simple "desk top" study of the history of land use on the site, to a full spectrum analysis of soil and water on and around the site. The Ministry for the Environment provides guidance on how site investigations should be undertaken to appropriately identify the risks of land contamination.

Site investigations will enable landowners, developers and local authorities to determine potential adverse effects associated with the proposed subdivision use or development of contaminated land. The greater the risk of the subdivision, use or development of the contaminated land resulting in adverse effects to the environment or human health, the more information will be needed about the extent and nature of the contamination to ensure the adverse effects can be appropriately avoided, remedied or mitigated.

Adverse effects of contaminated land often do not occur until that land is developed or subdivided, as the use of land heightens the risks and effects associated with the contamination. Territorial authorities have RMA functions to prevent or mitigate these adverse effects.

Policy 17.3.3 — Contaminants may remain in the land

Where land has been identified as being contaminated, contaminants should only be allowed to remain in the ground if discharges of contaminants beyond the site to air, water or land will not result in significant risk to human health or the environment.

This policy implements the following objective:

Objective 17.2.1

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives, policies or methods in regional plans to ensure the risk from contaminated land is monitored and that the land-owner is required to take remedial action if the risk to human health or the environment is significant.

Should:

(2) Monitor land subject to this policy to ensure that no significant risks to human health or the environment occur.

(3) Provide information to the public outlining the risks to health associated with contaminated land, so that such effects can be avoided.

Local authorities

Should:

(4) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans, including Te Rūnanga o Ngāi Tahu Hazardous Substances and New Organisms Policy Statement 2008, when determining the actual or potential effects of contaminants in the soil.

Principal reasons and explanation

In some instances, land that has been identified as being contaminated may have undergone remediation or mitigation measures that result in that land not posing a significant risk to the environment or to human health, under its current use. The reasons the risk to the environment and human health are considered to be not significant can include factors such as the contaminants being unable to move beyond the site to contaminate further land or water, the use of the land not exacerbating the risk of adverse effects occurring or the use of the land changing to an activity that reduces the risk of adverse effects occurring.

Policy 17.3.3 is intended to recognise that, in some instances, it is acceptable for contamination to remain in soil, while the method ensures the risk of adverse effects is monitored and action can be taken should the risk become significant.

Policy 17.3.4 — Integrated management

To promote an integrated approach to the management of contaminated land in the region.

This policy implements the following objective:

Objective 17.2.1

Methods

The Canterbury Regional Council:

Should:

(1) Hold and maintain a register containing information, on known contaminated land and land that has been subject to a hazardous activity or industry, to be gathered with the help of territorial authorities, other agencies and

stakeholders including Ngāi Tahu as tāngata whenua.

(2) Advocate the use of this register to territorial authorities for use in making planning decisions and meeting their functions under Section 31(1)(b)(iia).

(3) Seek agreement with territorial authorities regarding the use of, and access to, the register.

(4) Seek agreement with territorial authorities regarding the sharing of information relating to contaminated land.

(5) Provide information regarding risks associated with contaminated land to industry, Ngāi Tahu and other interested parties.

(6) Promote coordination between territorial authorities, central government agencies, Ngāi Tahu, appropriate health agencies, land-owners and industry with regard to the management of contaminated land.

Local authorities:

Should:

(7) Work together to consolidate information on a contaminated land register held by the Canterbury Regional Council.

(8) Support central government or industry-led guidelines, codes of practice and environmental accords where these would lead to the achievement of objectives in the Regional Policy Statement, and recognise and implement any relevant national guidelines on contaminated land.

(9) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans, including Te Rūnanga o Ngāi Tahu Hazardous Substances and New Organisms Policy Statement 2008, when exercising functions relating to the contamination of land.

Principal reasons and explanation

The RMA gives regional councils and territorial authorities separate functions for dealing with contaminated land. These responsibilities often overlap and both agencies need access to relevant information.

This policy is intended to promote an integrated approach to the holding and provision of information on contaminated and potentially contaminated land to avoid duplication.

17.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Better information will enable the Canterbury Regional Council, territorial authorities, landowners and agencies including Ngāi Tahu to avoid, remedy and mitigate the effects of contaminated land more effectively.

(2) Existing contaminated land will be remedied or managed as appropriate to avoid exacerbation or continuation of adverse environmental effects.

CHAPTER 18
HAZARDOUS SUBSTANCES

Introduction

The purpose of this chapter is to establish a policy framework for the management of hazardous substances in Canterbury, recognising that, despite risks to the environment, hazardous substances are vital to the social, cultural and economic well-being of people and communities, as well as the maintenance and enhancement of the quality of the environment. In addition, the chapter must recognise that hazardous substances are subject to controls under many statutes and agencies.

Hazardous substances are generally accepted as a part of everyday life. However, they do pose the potential for significant adverse effects if inadequately managed. Hazardous substances are used in the rural sector as an important part of agricultural and horticultural activities. They are also used in the industrial and commercial sectors, along with domestic use. Wastes generated by many activities may also contain hazardous substances.

Hazardous substances management is a complex area with a number of agencies responsible. Key legislation in relation to management of hazardous substances is included in the Resource Management Act 1991 (RMA), the Hazardous Substances and New Organisms Act 1996 (HSNO) and the Building Act 2004. HSNO provides a baseline for the operational management of hazardous substances.

STATEMENT OF LOCAL AUTHORITY RESPONSIBILITIES

Section 62 of the RMA requires a regional policy statement to state the local authority responsible, in the whole or any part of the region, for specifying the objectives, policies, and methods for the control of the use of land to prevent or mitigate the adverse effects of the storage, use, disposal or transportation of hazardous substances.

Joint responsibilities:

(1) The Canterbury Regional Council and territorial authorities will have joint responsibility for specifying the objectives, policies and methods for the control of the use of land for the purpose of preventing the adverse effects of hazardous substances entering land drainage systems.

The Canterbury Regional Council:

(2) Will have the responsibility for specifying the objectives, policies and methods for the control of the use of land for the purpose of preventing or mitigating the adverse effects of the storage, use, transport or disposal of hazardous substances on the quality of air and water.

Territorial authorities:

(3) Will, except as provided for in (2) above, have the responsibility for specifying the objectives, policies and methods for the control of the use of land for the purpose of preventing or mitigating the adverse effects of the storage, use, transport or disposal of hazardous substances on the environment.

18.1 ISSUES

ISSUE 18.1.1 – ADVERSE EFFECTS FROM HAZARDOUS SUBSTANCES

Adverse effects on the environment may arise from the storage, use, disposal, or transportation of hazardous substances.

Explanation

Adverse effects from the storage, use, disposal or transport of hazardous substances may include, but are not limited to, contamination of air, water and soil; effects on the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga; effects on ecosystems; effects on human health, and impacts on communities.

Such adverse effects may arise because of inadequate precautionary measures taken when hazardous substances are stored, used or disposed of. Spills or leaks can also occur when hazardous substances are transported, loaded, or unloaded, whether or not precautions are taken. Activities using hazardous substances as an integral part of their process, for example agricultural spraying or fertilisers, may make discharges into the environment which have unintended or cumulative adverse effects.

Where this occurs, effects can include the contamination of land, air and water, which can lead to adverse effects to human health and ecosystems. These effects can be exacerbated if they occur in a sensitive area, such as near the source of a community drinking water supply.

18.2 OBJECTIVES

Objective 18.2.1 – Avoid, remedy or mitigate adverse effects

Adverse effects on the environment from the storage, use, disposal and transportation of hazardous substances are avoided, remedied or mitigated.

The following policies implement this objective:

Policy 18.3.1, Policy 18.3.2, Policy 18.3.3, Policy 18.3.4, and Policy 18.3.5

Principal reasons and explanation

While recognising the need for people to be able to use hazardous substances, adverse effects of their storage, use, or transportation are to be avoided or mitigated, and they should be disposed of in a safe manner. Even where hazardous substances are discharged or released as an integral part of their intended purpose, adverse effects are to be avoided or mitigated.

Objective 18.2.2 — New contamination of land

To avoid contamination of land.

The following policies implement this objective:

Policy 18.3.1, Policy 18.3.2, Policy 15.3.1

Principal reasons and explanation

This objective is in response to Issue 17.1.2. Land is contaminated by hazardous substances, and so avoiding land contamination is linked to the management of hazardous substances. If land is contaminated, it may foreclose opportunities for the future use and development of that land and the soil itself. The best way to avoid the risks associated with land contamination is to avoid the land becoming contaminated in the first instance. Avoiding the future contamination of land is the most efficient way of safeguarding our land and soil resource, and our social, economic and cultural associations to these resources.

Policy 18.3.1 — Protection of sensitive areas and activities

Avoid actual or potential adverse effects, resulting from the use, storage or disposal of hazardous substances, in the following locations:

(1) High hazard areas

(2) Within a community drinking water protection zone, or within such a distance from a community drinking water supply that there is a risk of contamination of that drinking water source

(3) In areas of unconfined or semi-confined aquifer, where the depth to groundwater is such that there is a risk of contamination of that groundwater

(4) Within the coastal marine area and in the beds of lakes and rivers

(5) Within any area identified by a district or regional plan as being sensitive to the potential effects of hazardous substances, which may include, but are not limited to, areas such as wāhi tapu, urupā, institutions and residential areas.

This policy implements the following objectives:

Objective 18.2.1and Objective 18.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to avoid actual or potential effects of the use, storage, transport, or disposal of hazardous substances in the locations identified in Policy 18.3.1 (1) – (5).

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans to avoid actual or potential effects of the use, storage, transport or disposal of hazardous substances in the locations identified in Policy 18.3.1 (1) – (5).

Local authorities:

Will:

(3) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to assist in determining areas that may be sensitive to the effects of the use, storage, transport or disposal of hazardous substances.

Principal reasons and explanation

The areas identified in this policy are particularly sensitive to the effects of hazardous substances. In high hazard areas, there is a greater chance of stored or disposed hazardous substances discharging or unexpectedly spilling in the event of a natural hazard. Beds of lakes and rivers, the coastal marine area, community drinking water supplies, and community drinking water protection zones are areas where the consequences of the effects of uncontrolled hazardous substances could be significant. The consequence of the effects of uncontained hazardous substances are also significant in areas where the distance to unconfined groundwater is less than 6 metres, as the substances can enter the groundwater with little obstruction and removing the hazardous substances from the groundwater can be particularly difficult.

Sensitive land-uses or areas of particular sensitivity are more appropriately defined at a local or district level. These may include community facilities, such as schools or playing fields or areas of particular significance to Ngāi Tahu such as wāhi tapu areas. It is appropriate that territorial authorities define and protect these activities and areas in a way appropriate to their district. Iwi management plans will assist territorial authorities in identifying potentially sensitive areas, but it is noted that consultation with appropriate papatipu rūnanga will also be necessary.

In some instances, existing regionally significant infrastructure and other activities that involves the use, storage, disposal or transport of hazardous substances may have to be located in sensitive environments. In such cases, the hazardous substances should be contained in such a way to ensure that any actual or potential adverse effects are avoided.

The policy focuses on the adverse effects of the hazardous substances, rather than the substances themselves, as it may be appropriate to use, store or dispose of some hazardous substances within the areas identified, or to transport substances through such areas. Any methods should recognise that the transportation of hazardous substances is also regulated through other legislation.

Policy 18.3.2 – Avoid, remedy or mitigate adverse effects

To avoid, remedy or mitigate adverse effects on the environment, including contamination of land, air and water, associated with the storage, use, transportation or disposal of hazardous substances.

This policy implements the following objectives:

Objective 18.2.1, and Objective 18.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to avoid, remedy or mitigate adverse effects on the environment and community associated with the storage, use, transportation or disposal of hazardous substances.

Territorial authorities:

Will:

(2) Set out objectives and policies, and may include methods in district plans to avoid, remedy or mitigate adverse effects on the environment associated with the storage, use, transportation or disposal of hazardous substances.

Local authorities:

Will:

(3) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to assist in determining adverse effects on Ngāi Tahu values from the use, storage, transport or disposal of hazardous substances.

Principal reasons and explanation

Hazardous substances have the potential to cause adverse environmental effects when stored, used, transported or disposed of. These adverse effects include the contamination of land. While the likelihood of adverse effects occurring may often be low, the actual effect can be significant on the environment and communities.

Methods to achieve this policy are similar to those set out as responsibilities in the Statement of Local Authority Responsibilities section of this chapter. Responsibility is split between the Canterbury Regional Council and the territorial authorities, with both levels of authorities responsible for avoiding or minimising risks.

Disposal or use of hazardous substances can lead to the potential for contamination of land or water and needs particular control. Likewise, risk of spills can have significant impacts on health and safety. Transport of hazardous substances needs to be controlled in a manner which avoids unintentional release of hazardous substances, and reduces overall risk of adverse effects occuring.

In seeking the avoidance, remedy or mitigation of adverse effects on the environment, Policy 18.3.2 recognises the importance of the maintenance of mauri within the environment and provides for the protection of ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga of value to Ngāi Tahu. By taking iwi management plans into account, alongside consultation when developing policy, the Canterbury Regional Council and territorial authorities will gain an understanding of how mauri may be maintained.

While contamination of land may be a direct effect of the discharge of hazardous substances, once land has been contaminated, the flow-on effects of the contaminated land are an issue addressed in Chapter 17 - Contaminated land.

Policy 18.3.3 — Integration and coordination

To promote an integrated approach to hazardous substance management within the region.

This policy implements the following objective:

Objective 18.2.1

Methods

Local authorities:

Should:

(1) Work together to undertake joint consenting processes where a proposed activity requires resource consents from more than one authority.

(2) Seek to work together, and with government agencies, Ngāi Tahu, appropriate agencies and industry, to manage hazardous substances and their adverse effects.

Principal reasons and explanation

An integrated approach to the management of hazardous substances in the region will reduce duplication of work done by local authorities and other agencies. Additionally, such an approach will assist in addressing cross-boundary issues and will achieve some level of region-wide consistency in the approach to hazardous substance management.

Policy 18.3.4 — Reduction, Awareness and Promotion

To promote hazardous substances management practices that prevent or mitigate adverse effects on the environment, including practices that, wherever possible, reduce the use of hazardous substances.

This policy implements the following objective:

Objective 18.2.1

Methods

The Canterbury Regional Council:

Should:

(1) Continue to run and develop its Pollution Prevention programme.

Local authorities:

Should:

(2) Encourage and support the development of best practice guidelines led by industry or central government that promote good hazardous substance management practice and/or the reduction of the use of hazardous substances.

(3) Promote, and where possible provide for, appropriate hazardous substance collection, disposal and recycling services across the region.

(4) Advocate, through environmental education, the implementation of cleaner production processes.

(5) Encourage improvement in measures taken to prevent or mitigate adverse effects on the environment from the storage, use, transport or disposal of hazardous substances associated with established land uses, particularly during re-development of such activities.

Principal reasons and explanation

This policy promotes the concepts of cleaner production and the use of non-hazardous substitutes where their use is practicable. The policy is also intended to promote best practice in recognition of the potential benefits to the environment (including benefits to people and communities) that may be achieved. It is noted that this best practice and its benefits will address issues of particular significance to Ngāi Tahu.

This will involve manufacturers, wholesalers or retailers being encouraged to take more responsibility for the ultimate disposal, or collection for reuse, of the hazardous substances they produce or sell. Users of hazardous substances also need to be aware of the potential risks and costs of using hazardous substances and be encouraged to investigate possible alternative management practices.

Policy 18.3.5 — Emergency response

To encourage appropriate information to be made available to response agencies, including Local Authority Emergency Operations Centres, in the event of an emergency, so that adverse effects of hazardous substances may be prepared for, responded to, mitigated, and recovered from as effectively as practicably possible.

This policy implements the following objective:

Objective 18.2.1

Methods

The Canterbury Regional Council:

Should:

(1) Work with the appropriate government agencies and seek access to information held by them, particularly information regarding the location and quantity of hazardous substances held within the region.

Local authorities:

Should:

(2) Share information they hold regarding the location and quantity of hazardous substances held in the region.

(3) Develop a strategy that will determine how information regarding the location and quantity of hazardous substances in the region is to be collected, stored and used.

Principal reasons and explanation

The chances of hazardous substances entering the environment are increased during a civil defence emergency. It is important that information regarding the location and quantities of hazardous substances being stored in the region is available to those agencies responsible for the response to such events, so that risks may be identified and mitigated as a part of the response.

18.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) Adverse effects of hazardous substances will be prevented or mitigated through better management practices, including planning for the reduction of the use of hazardous substances.

(2) No sensitive areas or activities are adversely affected by accidental spills or discharges of hazardous substances.

(3) Instances of land becoming contaminated either by accidental or purposeful application of hazardous substances will be reduced.

CHAPTER 19
WASTE MINIMISATION AND MANAGEMENT

Introduction

The amount of waste being disposed of in the Canterbury Region has increased over the last decade. Key drivers in this increase are population and economic growth. Disposing of this waste is costly and uses land and resources that would otherwise be available for other purposes. Waste disposal incurs costs to communities and the environment.

While waste is managed by local authorities, under several pieces of legislation, the focus of this chapter is to set out a framework for addressing the significant waste minimisation and management issues for Canterbury under the Resource Management Act 1991 (RMA).

Wastes are any materials, from any source, which are unwanted, unvalued, and are to be discarded or discharged. Wastes can be solid, liquid or gaseous, or a combination of these.

Environmental effects of waste begin at the source, where items are produced from virgin materials. Extracting virgin materials such as metal ores, plant fibres and oil and turning them into raw materials for manufacturing, including steel, paper or plastics, is often energy-intensive and can result in damage to, and pollution of, the environments where these activities take place.

When an item enters the waste stream, the environmental effects can vary, from localised pollution of soil and water and nuisance problems such as litter and odour, to the release of ozone-depleting substances and greenhouse gases.

The resource input required to dispose of waste can also cause environmental effects. For example, in Canterbury solid wastes are commonly transported by road to landfill sites, and sewage is treated at localised treatment plants that require inputs of energy and water to operate as well as networks of pipes to transport the waste.

Under the Waste Minimisation Act 2008 (WMA), territorial authorities have the responsibility to promote effective and efficient waste management and minimisation within their districts. In the exercise of that responsibility, territorial authorities must plan for waste management and minimisation and provide for services such as waste collection operations. The WMA also provides that territorial authorities can make bylaws for the regulation of waste disposal in their districts. Services such as sewage disposal must be provided under the Health Act 1956.

The Canterbury Regional Council has functions relating to the control of the dumping and incineration of waste from ships and installations within the coastal marine area, as well as controlling discharges to air, land and water.

Avoiding waste altogether would be the best way to avoid the costs to people and the environment. However, not all waste can be avoided and further management needs to occur to ensure the environmental impacts and the costs of waste are minimised.

A hierarchy of waste management, known as the 5Rs, identifies that in the first instance waste should be reduced. Secondly, items should be reused. Where reuse is not an option, items should be recycled. Where items are not able to be recycled, resources may be recovered. When all useable resources have been recovered, the item may enter the waste stream as residual waste. This hierarchy can be applied to all waste streams.

19.1 ISSUES

ISSUE 19.1.1 – GENERATION AND DISPOSAL OF WASTE

The generation and disposal of waste contributes to the unsustainable use of natural and physical resources.

Explanation

When a product enters the waste stream, that product will often need to be replaced. In order to replace a product, the manufacturers will need to source new raw materials and often these materials will be derived from a natural resource. In many cases, the natural resources that are used to produce raw materials are finite and the processes that are undertaken to extract and process these resources cause adverse environmental effects.

Materials can enter the waste stream before their useful potential is fully realised. Many materials are disposed of, that can be reused, recycled, or have components or energy that may be recovered.

The disposal of waste requires the input of further resources and has adverse effects on the environment. Inputs include energy and transport infrastructure, labour, land and water. Adverse effects of the disposal of waste include the contamination of land, air and water, with flow-on effects to ecosystems and human health.

The environment has a limited capacity to absorb the physical effects of waste.

ISSUE 19.1.2 – INAPPROPRIATE MANAGEMENT OF WASTE

Inappropriate management of waste can result in an increase in adverse effects on the environment.

Explanation

Inappropriate waste disposal and management can have adverse effects on people and the environment, and particularly on the relationship of Ngāi Tahu and their culture and traditions with ancestral lands, water, sites, wāhi tapu and other taonga.

Waste management in the region could be more efficient and integrated. Waste management services such as recycling collection, or reticulated sewage disposal varies across the region. This can lead to inefficiencies and increased costs, both economic and environmental. The outcomes of uncoordinated management can include duplication of resource input, such as energy and infrastructure, and the proliferation of treatment and disposal sites such as landfills and sewage treatment facilities. An increase in treatment and disposal sites, or an increase in waste generated, increases the likelihood of adverse effects occurring on the environment and the social, economic and cultural well-being of people and communities.

19.2 OBJECTIVES

Objective 19.2.1 – Minimise the generation of waste

Adverse effects on the environment are avoided by minimising the generation of waste.

The following policies implement this objective:

Policy 19.3.1 and Policy 19.3.2.

Principal reasons and explanation

The most effective way of avoiding adverse effects of waste is to minimise the amount of waste generated. Reducing the amount of waste generated in the first place is key to the minimisation of waste being disposed of. The reuse and recycling of waste materials will also minimise the overall amount of waste being disposed of.

Objective 19.2.2 – Minimise adverse effects of waste

Adverse effects on the environment caused by residual waste and its management are avoided, remedied or mitigated.

The following policies implement this objective:

Policy 19.3.1, Policy 19.3.2, Policy 19.3.3 and Policy 19.3.4

Principal reasons and explanation

Where waste cannot be avoided, it is important to ensure it is managed so that the environmental impact is minimised. Management of waste includes transporting, storing, processing and disposal.

19.3 POLICIES

Policy 19.3.1 – Waste management hierarchy

To apply the principles of the 5Rs (Reduce, Reuse, Recycle, Recover, Residual waste management) hierarchy to the management of all waste streams.

This policy implements the following objectives:

Objective 19.2.1, Objective 19.2.2

Methods

The Canterbury Regional Council:

Will:

(1) Set out objectives and policies, and may include methods in regional plans to manage the disposal of residual waste through the control of disposal processes and practices.

(2) Set out objectives and policies, and may include methods in regional plans that will require consideration of the adverse waste effects with regard to discharges to land, air and water and in any land-use over which a regional plan has control.

Should:

(3) Advocate the implementation of the 5Rs principles throughout the Canterbury region.

(4) Support product stewardship programmes aimed at the reduction of waste.

(5) Advocate for and encourage the reuse of materials, particularly in industry.

Territorial authorities:

Should:

(6) Set out objectives and policies, and may include methods in district plans specifically seeking to reduce the potential waste generated as a result of the use of land.

(7) Take into account the 5Rs hierarchy when considering waste management options and plans (including, but not limited to district plans) for their districts.

Local authorities:

Will:

(8) Engage with Ngāi Tahu as tāngata whenua and use iwi management plans to assist in informing them of Ngāi Tahu values associated with the management of waste, and of methods to avoid conflict with particular values in the application of the 5Rs principles.

Principal reasons and explanation

The 5R hierarchy is an internationally recognised management model for the reduction of residual waste, and territorial authorities are required to apply the 5Rs in the day-to-day management of waste.

Much of the waste reduction work undertaken in Canterbury focuses on recycling in the first instance. Monitoring has shown that the implementation of kerbside recycling collection and other recycling initiatives have resulted in a significant amount of material being diverted from the waste stream. Despite this, the monitoring also shows an annual increase in the amount of residual waste being disposed of. This shows that effort needs to be applied at stages higher in the waste hierarchy to reduce waste in the region.

This policy explicitly states that the 5Rs is to be applied to all waste streams. The principles of the 5Rs can be applied to all waste streams. Although some wastes require specialised treatment, application of the 5Rs to such waste streams is an important consideration in reducing the overall amount of waste being generated.

It is clear that the 5Rs principles cannot be applied equally to all waste streams. For example, sewage may be reduced through the use of low-flow toilets but reusing or recycling sewage waste may not be a viable option. There are, however, opportunities to recover energy in the form of methane gas from larger sewerage plants. The management of the residual waste will need to be undertaken in a manner that avoids adverse effects on the environment. On the other hand, some wastes, such as glass bottles, could be removed entirely from the waste stream through constant reuse, such as swap-a-crate beer bottles.

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. An example of this could be specific assessment criteria for specified activities, or when considering subdivisions or new dwellings, low-flow toilets and showers could be required in all houses. This will reduce the overall amount of sewage being transported and treated in council facilities. By identifying and quantifying waste streams in industrial or commercial activities, opportunities to reduce, reuse or recycle waste may be evident. For example; a shop may mitigate adverse effects of waste by providing facilities for customers to recycle packaging from items bought at the shop. An industry may find some waste material has a market as raw material in another industry.

Finally, when preparing regional and district plans, measures which enable the minimisation of waste should be considered. For example, enabling the establishment of localised or community composting facilities would help to reduce the amount of waste disposed of in landfills.

In applying the 5Rs, significant issues to Ngāi Tahu that are associated with the management of waste (e.g. the discharge of sewage to water is abhorrent to Māori values) should be taken into account by local authorities. Iwi management plans, along with consultation, will help in identifying and resolving such issues.

It is intended that in making resource management decisions, waste and its effects will be considered and the 5Rs model will be applied in order to avoid, remedy or mitigate actual or potential effects.

Policy 19.3.2 – Reduce waste at the source

Promote a change in behaviour that will result in the reduction of waste at the source.

This policy implements the following objectives:

Objective 19.2.1, Objective 19.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Develop public education initiatives throughout Canterbury that endorse the 5Rs, with particular focus on reduction of waste through consumer choice.

(2) Advocate for stronger national guidance and incentive for reducing waste, particularly at the manufacture/ production/import stage.

Principal reasons and explanation

This policy recognises that the most efficient and effective way of minimising the adverse effects of waste is by not generating the waste in the first place.

Waste is generated when unneeded or unused items are manufactured, produced or imported; this is driven by consumer demand. This issue needs to be addressed at two levels. The first is through consumer choice. For people to make good choices, they need to be aware of the issues and the consequences of those choices. Packaging contributes to the problem. However, other factors, such as it being cheaper (or easier) to replace a product than repair it and technologies becoming obsolete and being replaced more often, adds to the amount of waste being disposed of. Secondly, the issue needs to be addressed at the manufacture, production or importation level.

Consumer waste can be significantly reduced through good manufacturing or production practices, in New Zealand or abroad (such as using recycled products, creating long-lasting products, minimising packaging). Requirements for better manufacturing practices can only viably be implemented at a national level. The Canterbury Regional Council will advocate this approach to central government.

Policy 19.3.3 – Integrated management of waste

Promote an integrated approach to waste management in the region.

This policy implements the following objective:

Objective 19.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Support territorial authorities to maintain an integrated approach to management of waste in the region.

(2) Advocate, to, and cooperate and coordinate, with territorial authorities, central government, Ngāi Tahu and industry, to achieve an integrated approach to the management of waste.

Principal reasons and explanation

Sections 30 and 31 of the RMA state that the functions of regional councils include achieving integrated management of natural and physical resources and the functions of territorial authorities include the integrated management of the effects of use, development or protection of land and associated natural and physical resources. Policy 19.3.3 assists in achieving these functions in relation to waste management.

Long-term planning for waste treatment or disposal facilities, such as land-fill areas, can be done more effectively and efficiently with the cooperation and coordination between local authorities within Canterbury and in neighbouring regions. By working together, local authorities can ensure that waste treatment and disposal facilities are located in the most appropriate area, where adverse effects are minimised, the facilities are accessable and cost-effective and the servicing needs for wider areas are met. The integrated management of these services reduces duplication of effort by local authorities and additional adverse effects within each district. Integrated management may also make some facilities or services more affordable to local authorities and their communities.

Policy 19.3.4 – Establish community waste-transfer facilities

Enable the establishment and use of appropriate community facilities and services such as waste-transfer facilities and recycling centres throughout the region.

This policy implements the following objective:

Objective 19.2.2

Methods

The Canterbury Regional Council:

Should:

(1) Encourage the use of community waste-transfer facilities and recycling centres through education and, where appropriate, enforcement action.

(2) Support Government and industry-led product stewardship programmes

Territorial authorities:

Will:

(3) Set out objectives and policies, and may include methods in district plans to enable the establishment of waste transfer facilities in appropriate locations.

Should:

(4) Encourage and promote the use of community waste transfer facilities.

Principal reasons and explanation

Waste management services in rural areas have improved in the last decade, with most rural communities having waste transfer facilities and recycling depots. Often it is not viable for Councils to provide further services such as kerbside household or commercial waste collection to smaller communities and isolated properties and in these instances it is important to provide alternatives that are easily accessible, well managed and cost effective for users.

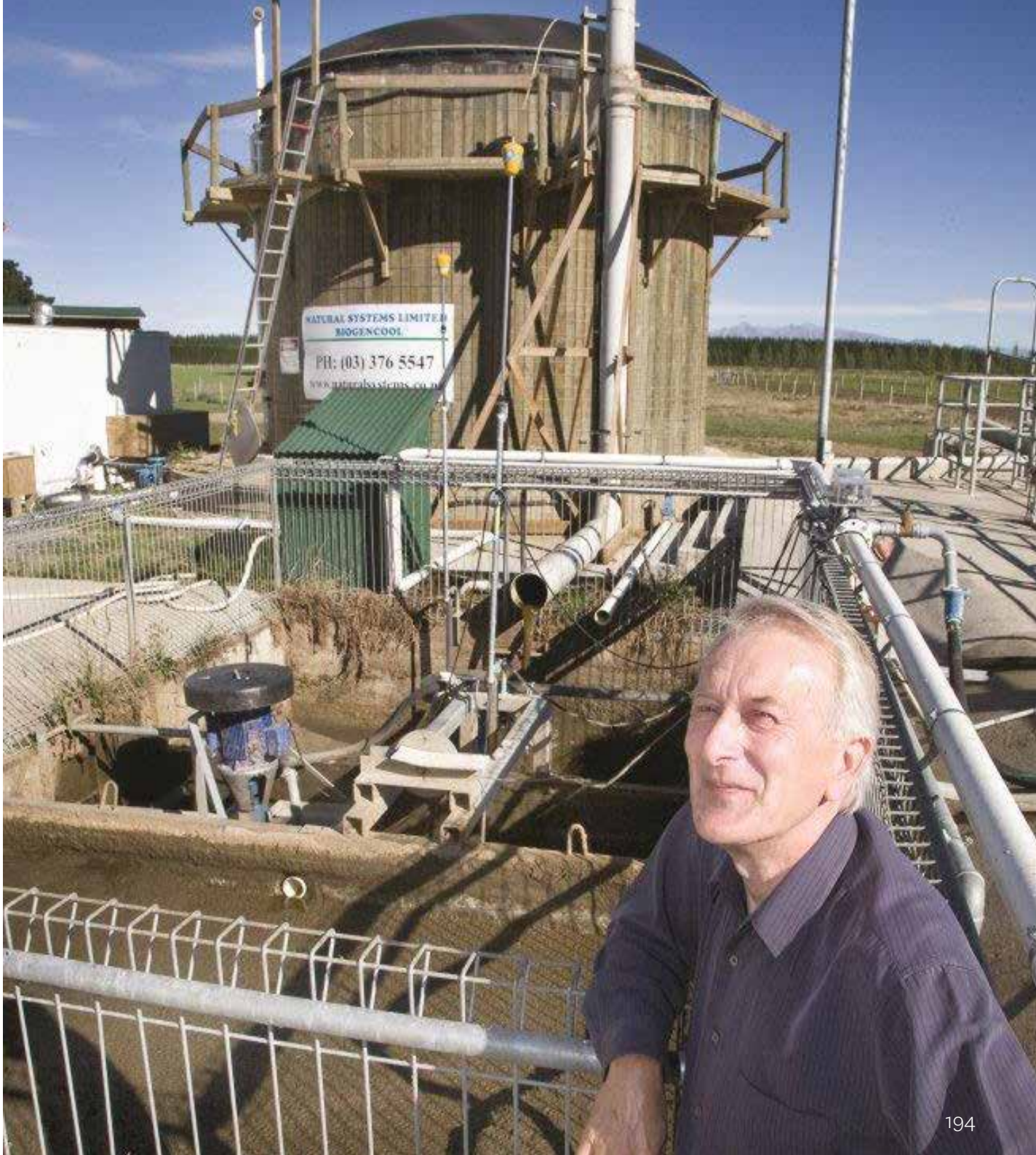
This policy is intended to encourage the use of existing community services as an alternative to using farm pits to dispose of waste in rural areas, and also the establishment of community facilities in rural communities, where none currently exist. In particular, support should be provided for product stewardship programmes such as hazardous substance collection or industry standards.

19.4

ANTICIPATED ENVIRONMENTAL RESULTS

(1) The rate of residual waste being disposed of each year drops relative to the trend at the time the Canterbury Regional Policy Statement was made operative.

(2) Waste is managed in such a way that the adverse environmental effects of residual waste are minimised.



GLOSSARY AND DEFINITIONS

This section gives definitions of key concepts in the document and includes a glossary of Māori words.

Note: Additional definitions for Greater Christchurch only are located at the end of this glossary.

DEFINITIONS	
Biodiversity	Has the same meaning as biological diversity as defined by Section 2 of the Resource Management Act 1991.
Biomass	The total dry weight of living organisms (or a particular species or group of organisms) in any given area.
Biota	A living component of any ecosystem or any given area.
Coastal environment	The extent and characteristics of the coastal environment is defined in Policy 1 of the New Zealand Coastal Policy Statement (2010).
Coastal marine area	Has the same meaning as coastal marine area as defined by Section 2 of the Resource Management Act 1991.
Community-scale irrigation, stockwater and rural drainage infrastructure	Any community scale intake, canal, pipe, drain, pumps and overflow network, including associated structures, necessary to convey and store water for enhancing primary productivity and that serves multiple properties and is centrally administered.
Critical infrastructure	Infrastructure necessary to provide services which, if interrupted, would have a serious effect on the communities within the Region or a wider population, and which would require immediate reinstatement. This includes any structures that support, protect or form part of critical infrastructure. Critical infrastructure includes: 1) regionally significant airports 2) regionally significant ports 3) gas storage and distribution facilities 4) electricity substations, networks, and distribution installations, including the electricity distribution network 5) supply and treatment of water for public supply 6) storm water and sewage disposal systems 7) telecommunications installations and networks 8) strategic road and rail networks (as defined in the Regional Land Transport Strategy) 9) petroleum storage and supply facilities 10) public healthcare institutions including hospitals and medical centres 11) fire stations, police stations, ambulance stations, emergency coordination facilities.

DEFINITIONS	
Ecological health	Refers to the condition of an ecosystem and its ability to function normally supporting the life-forms and processes naturally associated with it.
Ecosystem	A system of interacting terrestrial or aquatic living organisms within their natural and physical environment. In Section 2 of the Resource Management Act, ecosystems and their constituent parts are part of the environment and include people and communities. In Chapter 9 – Ecosystems and indigenous biodiversity, "ecosystems" are limited to natural ecosystems that do not include people and communities.
Electricity transmission network	The electricity transmission network/electricity transmission activities/assets/infrastructure/ resources/system, all being part of the national grid of transmission lines and cables (aerial, underground and undersea, including the high-voltage direct current link), stations and sub-stations and other works used to connect grid injection points and grid exit points to convey electricity throughout the North and South Islands of New Zealand
Endemic	Taxa that are naturally restricted to within a certain area.

DEFINITIONS	
Essential structures	Structures that support or form part of: (1) a maritime, road or rail transport network or service; (2) water supply, including irrigation infrastructure; (3) a telecommunications or radio-communication network; (4) an energy generation, supply or transmission facility or network; (5) a flood-protection work or facility; (6) water containment, flow or diversion infrastructure; (7) a water level or flow-measurement facility; (8) a drainage or sewerage system; or (9) the infrastructure forming parts of other network utilities. This includes any structures that support essential infrastructure.
Fenton Reserve	One of the Taerutu, Waimaiaia, Torotoroa, Te Aka Aka, Pukatahi and Te Houriri reserves established by the Ngāi Tahu Claims Settlement Act 1998. The six Fenton Reserves include 100-metre strips of rivers and lakes in Canterbury valid for up to 210 days in any calendar year (excluding any day on and from 1 May to 15 August). The reserves cover only half of the riverbed channels.
Hazardous activity or industry	An activity or industry that apprears on the Hazardous Activity and Industry List (HAIL) 2004. The HAIL is published as Schedule A in the Contaminated Land Management Guidelines - Ministry for the Environment (2004) updated September 2007.

DEFINITIONS	
High hazard area	High hazard areas are: 1. flood hazard areas subject to inundation events where the water depth (metres) x velocity (metres per second) is greater than or equal to 1, or where depths are greater than 1 metre, in a 0.2% annual exceedence probability flood event; 2. land subject to coastal erosion over the next 100 years; and 3. land subject to sea water inundation (excluding tsunami). When determining high hazard areas, projections on the effects of climate change will be taken into account.
Historic cultural and historic heritage landscapes	A landscape that has: (1) significant historic cultural value arising from a relationship or association between people and the environment, or beliefs about them; and / or (2) significant historic heritage value that forms a cohesive and collective record of the history of an area. Such a landscape may include linkages, networks and nodes that are integral to its values. Such values may be tangible or intangible.
Identified Mineral Extraction Areas	All areas specifically zoned or notated for mineral extraction within district and regional plans.
Main stem	In relation to braided rivers refers to that stem of the river which flows to the sea, and applies from the source of that stem to the sea, but excludes any tributary.

DEFINITIONS	
Margin	Land immediately adjacent to the bed of a river, wetland, lake or estuary which is likely to be affected by a high water table, flooding, fluvial erosion, or sediment deposition, and often contains distinctive vegetation. The size of the margin will vary according to local site factors but may extend to the limits demarcated by natural river terraces and constructed stop banks.
Natural lake	A lake which is formed by natural geomorphic processes, whether modified by human activity or not, and excludes any artificially made lake or pond.
Natural operating range	The maximum natural fluctuating water level of a natural lake, influenced by seasonal flooding processes.
Non-arable land	Wetlands, river beds, sand dunes, and land more than 20 degrees in slope or greater than 600 metres above mean sea level.
No net loss	In relation to indigenous biodiversity, "no net loss" means no reasonably measurable overall reduction in: (a) the diversity of indigenous species or recognised taxonomic units; and (b) indigenous species' population sizes (taking into account natural fluctuations) and long term viability; and (c) the natural range inhabited by indigenous species; and (d) the range and ecological health and functioning of assemblages of indigenous species, community types and ecosystems
Originally rare	In relation to terrestrial ecosystems, "originally" means the ecosystem type was present when Māori arrived, and still exists today. "Rare" means the total extent of each originally rare ecosystem type is less than 0.5 percent of New Zealand's total area – that is, less than 134,000 hectares. A published list of originally rare terrestrial ecosystem types has been compiled by Landcare Research and is available from that organisation.

DEFINITIONS	
Primary production	The production (but not processing) of primary products including agricultural, horticultural, pastoral, aquacultural, and forestry products and includes the use of land and auxiliary buildings for these purposes.
Regionally significant infrastructure	Regionally significant infrastructure is: (1) Strategic land transport network and arterial roads (2) Timaru Airport (3) Port of Timaru (4) Commercial maritime facilities at Kaikōura (5) Telecommunication facilities (6) National, regional and local renewable electricity generation activities of any scale (7) The electricity transmission network (8) Sewage collection, treatment and disposal networks (9) Community land drainage infrastructure (10) Community potable water systems (11) Established community-scale irrigation and stockwater infrastructure (12) Transport hubs (13) Bulk fuel supply infrastructure including terminals, wharf lines and pipelines. (14) Electricity distribution network (15) Infrastructure defined as 'strategic infrastructure' in this regional policy statement. *Note:* For the avoidance of doubt, this infrastructure is also referred to as 'infrastructure that is regionally significant'.
Renewable electricity generation	The generation of electricity from solar, wind, hydro electricity, geothermal, biomass, tidal, wave, or ocean current energy sources.

DEFINITIONS	
Renewable electricity generation activities	The construction, operation and maintenance of structures associated with renewable electricity generation. This includes small and community-scale distributed generation activities, 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.
Riparian zone	In relation to a river or lake the riparian zone is the area of land within their beds and adjacent to the beds where direct interaction occurs between aquatic and terrestrial ecosystems. The riparian zone includes the banks of a river and the margin of a lake. Wetlands and islands may also be part of the riparian zone.
Rural residential (in the Wider Region) Note this definition applies to Chapter 5 – Land use and Infrastructure	Rural Residential development means zoned residential development outside or on the fringes of urban areas which for primarily low density residential activities, ancillary activities and associated infrastructure.
Small and community scale distributed renewable electricity generation	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
Telecommunication/radio communication facilities	Includes transmitting/receiving devices such as aerials, dishes, antenna, wires, insulators, easings, tunnels and associated equipment as well as support structures, such as towers, masts and poles and ancillary equipment buildings.
Threatened species	A species facing a very high risk of extinction in the wild and includes nationally critical, nationally endangered and nationally vulnerable species as identified in the New Zealand Threat Classification Systems lists.

DEFINITIONS	
Transport hub (in the Wider Region) Note this definition applies to Chapter 5 – Land use and Infrastructure	A place where: 1. passengers are exchanged at a strategic public transit interchange; and / or 2. cargo is exchanged or stored at a regional facility, between vehicles or between transport modes. Transport hubs include operating train stations, regional or sub-regional bus interchanges, and freight hubs.
Undeveloped	Within the context of the high country, this means areas where there has been no significant ongoing or regular addition of fertiliser, cultivation, oversowing or direct drilling with introduced pasture plants.
Urban (in the Wider Region) Note this definition applies to Chapter 5 – Land use and infrastructure	A concentration of residential, commercial and/or industrial activities, having the nature of town or village which is predominantly non-agricultural or non-rural in nature.
Versatile soil	Land classified as Land Use Capability I or II in the New Zealand Land Resource Inventory.
Waste disposal sites	Are sites where solid or hazardous waste is discharged into or onto land and include municipal and other community landfills, backfilling of quarries and farm disposal sites.
Waste transfer station	A waste reception facility where waste can be sorted into components for recycling or special use or for transport to a landfill.
Wider region	Those areas of the Canterbury Region outside of the Greater Christchurch area defined on Map 1 in Chapter 5 — Development of Greater Christchurch.
Wilding trees	Self-sown exotic trees, especially applied to coniferous species.

GLOSSARY OF MĀORI WORDS – PAPAKUPU	
Ahi kā	Occupation, land rights, continued occupation, properly ahi kaa roa "long burning fires'; one of the most important elements of traditional law of Māori land tenure.
Ana	Cave, burrow, lair.
Atua	Deity, indicating categories of responsibilities in the natural world of Māori.
Hapū	Sub tribe, clan, section of a large tribe.
Iwi	Tribe.
Kaimoana	Seafood, especially shellfish.
Kaitiaki	Guardians, custodians.
Kaitiakitanga	The exercise of guardianship by the tāngata whenua of an area in accordance with tikanga māori in relation to natural and physical resources; and includes the ethic of stewardship.
Kanohi ki te kanohi	Face to face or eye to eye.
Kawa	Protocol.
Kāwanatanga	Governance, relating to the exchange of gifts enshrined in the Treaty of Waitangi.
Ki Uta Ki Tai	From the mountains to the sea.
Kōiwi tāngata	Human skeletal remains.
Kōrero pūrākau	Myths, stories.
Moriori	Indigenous people of the Chatham Islands. Located off the coast of Canterbury.
Mahinga kai	Food and places for obtaining natural foods and resources. The work (mahi), methods and cultural activities involved in obtaining foods and resources.
Mana	Integrity, respect, prestige, authority.
Manaakitanga	Support, caring and hospitality, for example as shown towards guests.
Manawhenua	Traditional/customary authority or title over land and the rights of ownership and control of usage on the land, forests rivers etc. Also the land area (and boundaries — rohe) within which such authority is held.

GLOSSARY OF MĀORI WORDS – PAPAKUPU	
Māori	People — used to distinguish the native, indigenous people of New Zealand.
Mātaitai	Traditional fishing area.
Marae	Traditional Māori open meeting ground. All important matters affecting an iwi must be discussed, and ultimately decided, in their own traditionally recognised marae.
Mauri	Life supporting capacity, spiritual essence.
Mōkihi	Raft.
Ngāi Tahu	Recognised tāngata whenua in the South Island excluding the northern part of the island.
Ngāi Tahu Whānui	The entire Ngāi Tahu tribe, including Ngāti Mamoe and Ngāi Tahu and all their hapū.
Ngāi Te Ruahikihiki	One of the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha.
Ngāi Tūāhuriri	One of the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha.
Ngāti Hurirapa	One of the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha.
Ngāti Irakehu	One of the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha.
Ngāti Kuri	One of the primary hapū of Ngāi Tahu, Ngāti Mamoe and Waitaha.
Ngāti Mamoe	One of the primary hapū of Ngāi Tahu Whānui.
Nohoanga	Temporary campsite (stopover) for seasonal gathering of food and resources — refers to traditional areas used by Ngāi Tahu as tāngata whenua in pursuit of food and other natural resources established by the Ngāi Tahu Claims Settlement Act 1998.
Pā	Fortified village.
Papakāinga	A form of housing development which occurs on multiply-owned Māori or ancestral land. Traditionally, the literal meaning of papakāinga housing is, 'a nurturing place to return to'.

GLOSSARY OF MĀORI WORDS – PAPAKUPU	
Papatipu rūnanga	Local representative groups. A Māori equivalent of local government formed to protect and defend the rangatiratanga, the tūrangawaewae, and the cultural and social values of their members. Canterbury papatipu rūnanga are outlined in the Te Rūnanga o Ngāi Tahu Act 1996.
Pounamu	Greenstone, nephrite, New Zealand jade.
Rāhui	Restriction, reservation/exclusion under tribal authority and marker warning of this. Also a statement that a resource is being actively managed.
Rangatiratanga	Chieftainship.
Rohe	Territory or boundaries of tribal groups.
Rongoā	Medicine, antidote, drug (medicinal).
Taiāpure	Local fisheries areas. They can be established over areas of special significance to tāngata whenua.
Takiwā	Area.
Taonga	Treasures possessions, material or abstract (e.g language); Māori interest in these is protected by the Treaty of Waitangi and New Zealand statute and common lore/law.
Taonga raranga	Plants which produce material highly prized for use in weaving.
Tāngata whenua	In relation to a particular area, means the iwi, or hapu that holds mana whenua over that area.
Tauranga waka	Canoe landing sites.
Te reo	Māori language.
Te Rūnanga o Ngāi Tahu	Recognised iwi authority representing the tribal collective of Ngāi Tahu Whānui – as established by the Te Rūnanga o Ngāi Tahu Act 1996.
Te Tiriti o Waitangi	The Treaty of Waitangi.

GLOSSARY OF MĀORI WORDS – PAPAKUPU	
Tikanga (māori)	Rights, customs, accepted protocol, rule, Māori traditions, lore or law, the correct Māori way.
Tipuna	Ancestors, descendents.
Te taha hinengaro	The mind.
Te taha tinana	The body.
Te taha Wairua	The spirit.
Tohu	Markers such as landmarks, mountains, mountain ranges and some trees.
Tōpuni	Derives from the traditional Ngāi Tahu custom of persons of rangatira (chiefly) status extending their mana and protection over an area or person by placing their cloak over them or it.
Tuhituhi o neherā	Rock drawing sites.
Turangawaewae	Home, sense of place, belonging, connection
Urupā	Burial place, cemetery, places where Māori bury their dead, often enclosed.
Wāhi taonga	Places of sacred or extreme importance.
Wāhi tapu	Scared places.
Wairua Māori	Māori perspective.
Waipuna	Spring of water.
Waitaha	One of the primary hapū of Ngāi Tahu Whānui.
wairua	Spirit, soul, attitude.
Waiwhakaheke tūpāpaku	Water burial sites.
Whakairo	Carve, engrave.
Whakataukī	Proverbial saying.
Whānau	Family (extended).
Whanaungatanga	Relationship, kinship.
Whānui	Large grouping.
Whenua	Land, country.

DEFINITIONS FOR GREATER CHRISTCHURCH	
Area plan	see definition of structure plan.
Brownfield	means abandoned or underutilised business land, or land no longer required by a requiring authority for a designated purpose.
Business or business activities	means land or activities that include commercial and industrial and any ancillary activity.
Central City	means the area covered by the Christchurch Central Recovery Plan.
Commercial activities	means retail, office and other commercial service activities but does not include industrial activities.
District development strategy	see definition of structure plan.
Educational facilities	means facilities used for primary, secondary or tertiary education.
Electricity transmission network	means the national grid as defined in the National Policy Statement on Electricity Transmission 2008.
Greater Christchurch	means the area shown on Map A.
Greenfield Priority Areas	means an area identified on Map A for greenfield development.
Greenfield development	means subdivision, use and/or development of land identified on Map A as a Greenfield Priority Area.
Historic heritage	has the same meaning as in s2 of the Resource Management Act, and includes historic cultural and historic heritage landscapes.
Industrial	means the manufacturing, assembly, packaging, wholesaling or storage of products or the processing of raw materials and other ancillary activities.

DEFINITIONS FOR GREATER CHRISTCHURCH	
Intensification	means an increase in the residential household yield within existing urban areas.
Key Activity Centres	Key existing and proposed commercial centres identified as focal points for employment, community activities, and the transport network; and which are suitable for more intensive mixed-use development. The following centres shown on Map A are the existing KACs within Greater Christchurch: • Papanui • Shirley • Linwood • New Brighton • Belfast • Riccarton • Halswell • Spreydon • Hornby • Kaiapoi • Rangiora • Woodend / Pegasus • Lincoln • Rolleston

DEFINITIONS FOR GREATER CHRISTCHURCH	
Net density	is the number of lots or household units per hectare (whichever is the greater). The area (ha) includes land for: • Residential purposes, including all open space and on-site parking associated with residential development; • Local roads and roading corridors, including pedestrian and cycle ways, but excluding • State Highways and major arterial roads; • Local (neighbourhood) reserves. The area (ha) excludes land that is: • Stormwater retention and treatment areas; • Geotechnically constrained (such as land subject to subsidence or inundation; • Set aside to protect significant ecological, cultural, historic heritage or landscape values; • Set aside for esplanade reserves or access strips that form part of a larger regional or sub-regional reserve network; • For local community services and retail facilities, or for schools, hospitals or other district, regional or sub-regional facilities.
Noise sensitive activities	means • Residential activities other than those in conjunction with rural activities that comply with the rules in the relevant district plan as at 23 August 2008; • Education activities including pre-school places or premises, but not including flight training, trade training or other industry related training facilities located within the Special Purpose (Airport) Zone in the Christchurch District Plan; • Travellers' accommodation except that which is designed, constructed and operated to a standard that mitigates the effects of noise on occupants; • Hospitals, healthcare facilities and any elderly persons housing or complex.

DEFINITIONS FOR GREATER CHRISTCHURCH	
Outline development plan	means a plan prepared for the development of a Greenfield Priority Area or Rural Residential Development in the manner outlined in Policy 6.3.9. It shall include maps, plans, and other descriptive and illustrative material as necessary to convey the information referred to in Policy 6.3.9.
Rural activities	means activities of a size, function, intensity or character typical of those in rural areas and includes: • Rural land use activities such as agriculture, aquaculture, horticulture and forestry. • Businesses that support rural land use activities. • Large – footprint parks, reserves, conservation parks and recreation facilities. • Residential activity on lots of 4 ha or more. • Quarrying and associated activities. • Strategic Infrastructure outside of the existing urban area and priority areas for development.
Rural residential activities	means residential units outside the identified Greenfield Priority Areas at an average density of between 1 and 2 households per hectare.
Rural residential strategy	means a strategy or plan developed for the purpose of identifying a territorial authority's approach to management of rural residential development in its district, using the special consultative procedure under the Local Government Act 2002.

DEFINITIONS FOR GREATER CHRISTCHURCH	
Strategic infrastructure	means those necessary facilities, services and installations which are of greater than local importance, and can include infrastructure that is nationally significant. The following are examples of strategic infrastructure: • Strategic transport networks • Christchurch International Airport • Rangiora Airfield • Port of Lyttelton • Bulk fuel supply infrastructure including terminals, wharf lines and pipelines • Defence facilities including Burnham Military Camp and West Melton Military Training Area • Strategic telecommunications facilities • The electricity transmission network • Other strategic network utilities
Strategic transport networks	means transport networks and operations of national or regional significance. These include the strategic road network including State Highway and major arterial roads as defined in district plans and the rail network, along with the region's core public passenger transport operations and significant regional transport hubs such as Christchurch International Airport and the Port of Lyttelton.
Structure plan; or area plan; or district development strategy	means a comprehensive development plan for a whole or part of a territorial authority administrative area that has been adopted by the territorial authority, under the Local Government Act 2002, which clearly shows the relationship between a proposed land use pattern and all infrastructure requirements.

DEFINITIONS FOR GREATER CHRISTCHURCH	
Urban activities	means activities of a size, function, intensity or character typical of those in urban areas and includes: • residential units (except rural residential activities) at a density of more than one household unit per 4 ha of site area; • Business activities, except those that fall within the definition of rural activities; • Sports fields and recreation facilities that service the urban population (but excluding activities that require a rural location); • Any other land use that is to be located within the existing urban area or new Greenfield Priority Area.
Urban form effects	means an effect on urban form and structure, including anticipated location and networks of activities, facilities and infrastructure.
Urban intensification plan	means a plan prepared for the redevelopment of an area that has been selected by a territorial authority for specific Council initiatives to promote intensification. As a minimum such plans shall identify: • The development capacity of the area proposed for intensification. • The capacity of the existing infrastructure and proposed new infrastructure. • The effect on areas with historic heritage values and special amenity. • Opportunities for giving effect to Policy 6.3.2. • How the residential density targets contained in Policy 6.3.7 will be met. • A range of transport options, including pedestrian, cycling, passenger transport, motor vehicles.

APPENDIX 1
STATUTORY ACKNOWLEDGEMENTS

Instruments from the Ngāi Tahu Claims Settlement Act 1998

The Ngāi Tahu Claims Settlement Act 1998 implements a number of settlement provisions recognising the particular cutlural, spiritual, historical and traditional associations of Ngāi Tahu with particular sites, areas and species. These provisions include the identification of taonga species and the establishment of tōpuni, statutory acknowledgements and nohoanga sites, with the purpose of improving the effectiveness of Ngāi Tahu participation in resource management. Figure 1 shows the areas in Canterbury affected by the Ngāi Tahu Claims Settlement Act 1998.

It is important to recognise that there are other sites of significance to Ngāi Tahu, particularly at a local level, including those held on silent files[1]. Indigenous biodiversity is also very important to Ngāi Tahu, and indigenous species that are not included in the Settlement Act are still taonga.

(a) Statutory acknowledgements

Statutory Acknowledgements recognise Ngāi Tahu mana in relation to a range of sites and areas in the South Island. They provide for the recognition of this mana to be reflected in the management of those areas through RMA processes.

The Statutory Acknowledgements and definitions of the areas in the Canterbury region and how they affect the resource management process are set out in Schedules 14 to 77 of the Settlement Act.

Pursuant to Section 220 of the Settlement Act, Local and Territorial Authorities within the Ngāi Tahu claim area must attach to all Regional Policy Statements and Regional and District Plans, information recording all statutory acknowledgements affecting statutory areas covered wholly or partly by such Policy Statements or Plans, either by providing the information in full or by way of reference to the appropriate part of the Settlement Act. This appendix provides this information in full.

1 Silent files as identified in Te Maire Tau (et al.). 1990 Te Whakatau Kaupapa identifies the general location of wāhi tapu or other special sites without disclosing their precise location.

(b) Tōpuni

Tōpuni are landscape features of special importance or value to Ngāi Tahu. They place an 'overlay' of Ngāi Tahu values on specific pieces of land managed by the Department of Conservation and ensure that Ngāi Tahu values are recognised, acknowledged and provided for.

A list of Tōpuni sites in the Canterbury region and a description of the values associated with them are in Schedules 80 to 93 of the Settlement Act.

(c) Nohoanga

Nohoanga are temporary campsites to facilitate customary fishing and gathering of other resources. The Ngāi Tahu Settlement provides for 72 such sites.

Sites over which Nohoanga Entitlements are to be granted in the Canterbury region are set out in Schedule 95 of the Settlement Act.

(d) Taonga species management

Within the Settlement Act (Section 288), the Crown recognises the special association of Ngāi Tahu with certain bird, plant and marine mammal species. The aim is to improve Ngāi Tahu involvement in the management of these species through increased consultative requirements with Ngāi Tahu. A list of taonga species is provided in Schedule 97 of the Settlement Act.

Statutory Acknowledgement Areas

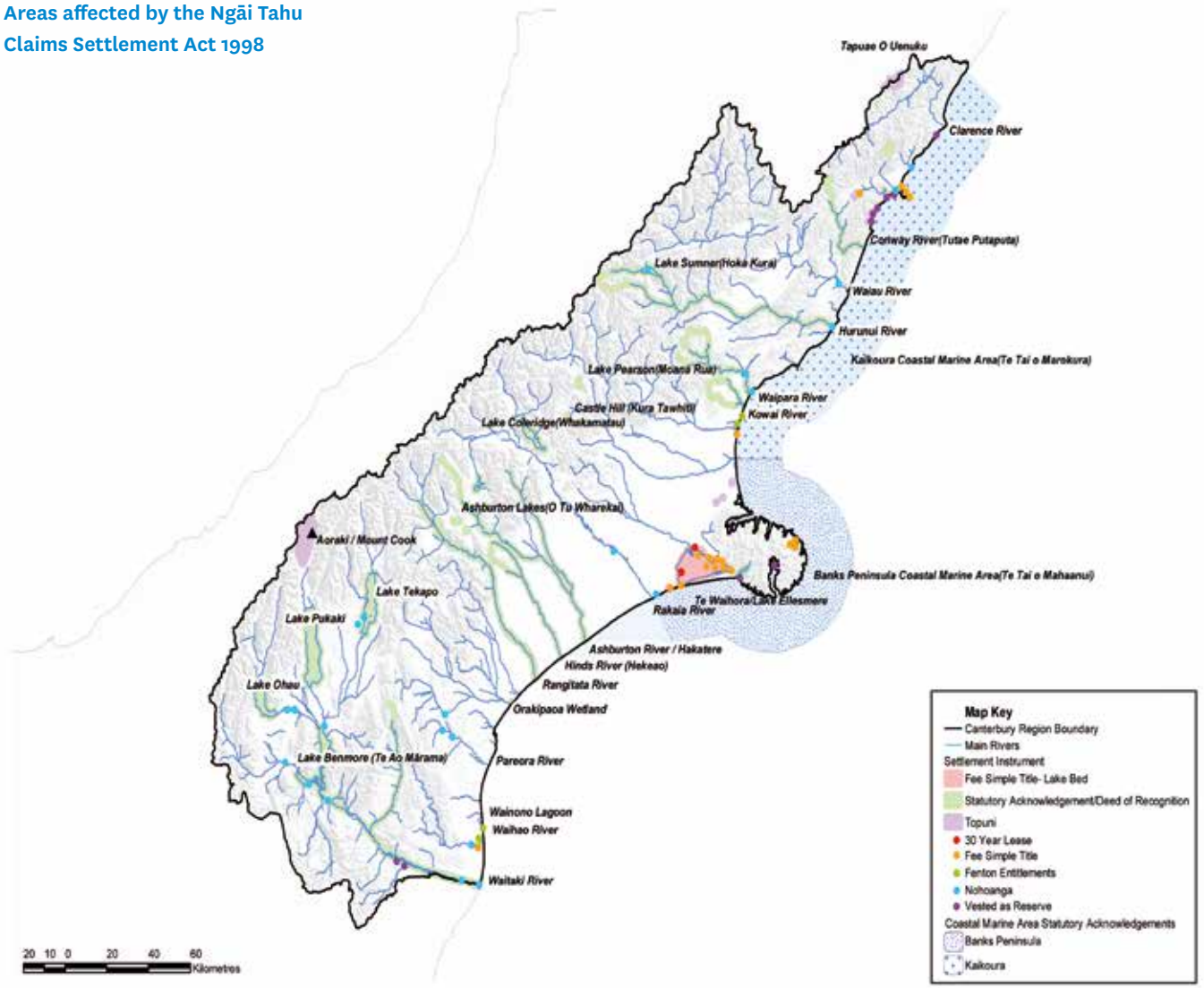
What are statutory acknowledgements?

A statutory acknowledgment is an acknowledgement by the Crown of the special relationship of Ngāi Tahu with identifiable areas. Namely the particular cultural, spiritual, historical and traditional association of Ngāi Tahu with those areas (known as statutory areas).

The statutory areas within the Canterbury region are identified on Figure 1 and described below.

Figure 1

Areas affected by the Ngāi Tahu Claims Settlement Act 1998



What are the purposes of statutory acknowledgements?

The purposes of Statutory Acknowledgements are:

(a) to ensure that the particular association of Ngāi Tahu with certain significant area in the South Island are identified and that Te Rūnanga o Ngāi Tahu is informed when a proposal may affect one of these areas.

(b) to improve the implementation of Resource Management Act 1991 processes, in particular by requiring consent authorities to have regard to statutory acknowledgements when making decision on the identification of affected parties.

Who may be affected by statutory acknowledgements?

You may be affected by a statutory acknowledgment if you are applying for resource consent for an activity that is within, adjacent to, or directly impacting on a statutory area.

What happens when you apply?

If you are applying for resource consent for an activity within, adjacent to, or directly impacting on a statutory area:

(a) The local authority must send a summary of your resource consent application to Te Rūnanga o Ngāi Tahu, and

(b) The local authority must have regard to the statutory acknowledgement in going through the decision-making process on whether Te Rūnanga o Ngāi Tahu is an affected party in relation to the resource consent application.

How can statutory acknowledgements be used in submissions?

How statutory acknowledgements can be used in submission is set out in section 211 of the Ngāi Tahu Claims Settlement Act 1998. Pursuant to section 211:

Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui may cite the relevant statutory acknowledgement in submission to, and in proceedings before a consent authority or the Environment Court concerning activities within, adjacent to, or impacting directly on a statutory area as evidence of Ngāi Tahu's association with the statutory area.

The content of the association, as recorded in a statutory acknowledgement, is not by virtue of the statutory acknowledgment binding as deemed fact upon consent authorities, the Environment Court, parties to proceedings before those bodies, or any other person able to participate in those proceedings, but the statutory acknowledgement may be taken into account by them.

Neither Te Rūnanga o Ngāi Tahu nor any member of Ngāi Tahu Whānui is precluded from stating that Ngāi Tahu has any association with the statutory area not described in the relevant statutory acknowledgment, nor does the content or existence of the statutory acknowledgement derogate from any such statement.

Purpose of statutory acknowledgements

Pursuant to section 215, and without limiting section 216-219 of the Ngāi Tahu Claims Settlement Act 1998 the purposes of statutory acknowledgements are:

(a) to require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu, as required by regulations made pursuant to section 207; and

(b) to require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to the statutory acknowledgements in relation to the statutory areas, as provided in section 208 to 210; and

(c) to empower the Minister of the Crown responsible for management of the statutory areas, or the Commissioner of Crown Lands, as the case may be, to enter into deeds of recognition, as provided in section 212; and

(d) to enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite statutory acknowledgments as evidence of the association of Ngāi Tahu to the statutory areas, as provided in section 211.

Limitations on effect of statutory acknowledgements

(a) these statutory acknowledgements do not affect, and are not to be taken into account in, the exercise of power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under the statute, regulation, or bylaw, may give any greater or lesser weight to Ngā Tahu's association with these areas (as described in the statutory acknowledgments) that that person or entity would give under the relevant statute, regulation, or bylaw, if these statutory acknowledgement did not exist.

Except as expressly provided in this Act, these statutory acknowledgements do not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided for in this Act, these statutory acknowledgements do not, of themselves, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to these statutory acknowledgement areas.

Coastal marine area statutory acknowledgements

There are also two statutory acknowledgments within the Canterbury Region in the Coastal Marine Area. These are Te Tai o Marokura (Kaikōura Coastal Marine Area) and Te Tai o Mahaanui (Banks Peninsula Coastal Marine Area).

STATUTORY ACKNOWLEDGEMENT FOR UERAU (MOUNT UWERAU) *From Schedule 67 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the area known as Uerau (Mount Uwerau), as shown on Allocation Plan MS 101 (S.O. 7318).

Ngāi Tahu association with Uerau

The name Uwerau should properly be spelt Uerau, which is the name of an important Ngāi Tahu tūpuna (ancestor) with Ngāti Mamoe descent lines. In particular, those descent lines lead down to Tura, a principal tūpuna for Ngāti Mamoe, Ngāti Wairaki and Rapuwai all of which are constituents of the iwi known today as Ngāi Tahu. For Ngāi Tahu, such placing of tūpuna names on significant landscape features serves as a reminder of tribal identity and solidarity, and continuity

between generations, and documents events that have shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

As with all principal maunga (mountains), Uerau is imbued with the spiritual elements of Raki and Papa, in tradition and practice regarded as an important link to the primeval parents. Like the rest of the mountains in this region, Uerau is closely connected with the Arai Te Uru tradition, which tells that many of the mountains of the Southern Alps and Kaikōura Ranges are the manifestations of the survivors of the Arai Te Uru waka (canoe) which foundered at Moeraki, on the north Otago coast.

This area was used by Ngāi Tahu as a mahinga kai (food gathering place) where birds, particularly titi (muttonbirds) were harvested. The tūpuna had considerable knowledge of such places for gathering kai and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

There are a number of urupā (burial places) in this area unique to the descendants of Tura. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The Kāti Kuri hapū of Ngāi Tahu has manawhenua (tribal authority over land) and carries the responsibilities of kaitiaki in relation to the area. The hapū is represented by the tribal structure, Te Rūnanga o Ngāi Tahu.

The mauri of Uerau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the land.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Uerau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Uerau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Uerau as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Uerau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Uerau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Uerau.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Uerau.

STATUTORY ACKNOWLEDGEMENT FOR MOANA RUA (LAKE PEARSON) *From Schedule 43 — refer to sections 205 and 206 Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the wetland known as Moana Rua (Lake Pearson), the location of which is shown on Allocation Plan MD 51 (S.O. 19840).

Ngāi Tahu association with Moana Rua

The wetland area known to Pākehā as Lake Pearson is known to Ngāi Tahu as Moana Rua. The area falls along the route across the main divide which is now known as Arthur's Pass. The area was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the area.

This area was primarily used as a mahinga kai by Canterbury Ngāi Tahu, with weka, kākāpō and tuna (eels) being the main foods taken. The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Several urupā are recorded in this immediate area. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Moana Rua represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Moana Rua, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Moana Rua or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Moana Rua as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Moana Rua (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Moana Rua.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Moana Rua.

STATUTORY ACKNOWLEDGEMENT FOR WAIREWA (LAKE FORSYTH) *From Schedule 71 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory Area

The statutory area to which this statutory acknowledgement applies is the lake known as Wairewa (Lake Forsyth), the location of which is shown on Allocation Plan MD 45 (S.O. 19839).

Ngāi Tahu Association with Wairewa

Wairewa is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Wairewa.

There are place names connected with Wairewa which evoke earlier histories. One example is the mountain which Wairewa lies in the lee of, 'Te Upoko o Tahu Mataa'. This name refers to the Ngāi Tahu ancestor Tahu Mataa, who lived and fought in Hawkes Bay. Like many other lakes, Wairewa was occupied by a taniwha called Tu Te Rakiwhānoa, whose origins stem back to the creation traditions.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The local hapū of this region is Ngāti Irakehu. Irakehu was the descendant of Mako, the Ngāi Tuhaitara chief who took Banks Peninsula with his cohort, Moki. Tradition has it that both Moki and Mako are buried near Wairewa. Poutakai and Ōtūngākau are two principal urupā associated with Wairewa. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

Wairewa has been used by the descendants of Rakaihautu ever since it was formed. It is famous for the tuna (eels) that it holds and which migrate out to the sea in the autumn months. Ngāi Tahu gather here annually to take the tuna.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Wairewa represents the essence that binds the physical and spiritual elements of all things together,

generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Wairewa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Wairewa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Wairewa as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw;

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Wairewa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Wairewa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Wairewa.

STATUTORY ACKNOWLEDGEMENT FOR ŌRAKIPAOA WETLAND *From Schedule 49 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the wetland known as Ōrakipaoa, the location of which is shown on Allocation Plan MD 54 (S.O. 19842).

Ngāi Tahu association with Ōrakipaoa

The creation of the Ōrakipaoa wetlands is associated with Tū Te Rakiwhānoa and his shaping of the island to make it habitable for humans. Ōrakipaoa was created as Tū Te Rakiwhānoa arranged the debris from the Waka o Aoraki while forming the harbours and plains and heaping up mountains of the interior.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

One of the first explorers recorded in the area was Rakaihouia, son of Rakaihautu, who was given the task of exploring the east coast of the South Island for suitable harbours, settlement sites and food resources. Rakaihouia met up with Rakaihautu at Waihao, just to the south of Ōrakipaoa, as Rakaihautu returned overland from Murihiku. From the time of Rakaihouia, the area was occupied in succession by Waitaha, Ngāti Mamoe and Ngāi Tahu, who established a number of settlements and pā at Ōrakipaoa.

The old pā site of Te Waiaruati was occupied as a strong defensive position during the time of Te Rauparaha and earlier periods. The kāinga of Te Rehe was on an island (Harakeke Tautoro) which was once surrounded by extensive swamplands, through which ran numerous creeks and waterways. Other pit and settlements within the Ōrakipaoa wetland complex include Ōrāhui and Hawea.

As well as being an area of permanent occupation, Ōrakipaoa formed part of numerous trails. Trails followed river valleys into the interior, as the populous settlements in the area required regular excursions to gather mahinga kai and other resources from further afield. Ōrakipaoa was also a tauranga waka and one of the stopping-off places for those travelling between Te Taumutu and Ōtākou.

The tūpuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the trails. The wetlands were an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands.

Mahinga kai resources were gathered from Ōrakipaoa over many generations. A wide range of mahinga kai was found within the complex, including coastal and estuarine as well as freshwater resources. The area was renowned for its eeling and bird hunting. Other fisheries for which the area was known included inaka (whitebait) and wet fish, minnows, the now-extinct grayling, giant kōkopu, flounder, mullet, and small fish known as panako, pipiki and paraki. The complex was also a source of ti kouka (cabbage tree).

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the wetlands, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable

utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ōrakipaoa represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ōrakipaoa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Ōrakipaoa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Ōrakipaoa as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Ōrakipaoa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ōrakipaoa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ōrakipaoa.

STATUTORY ACKNOWLEDGEMENT FOR TŪTAE PUTAPUTA (CONWAY RIVER) *From Schedule 65 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

This river, and the mahinga kai which it provided, fell under the mana of the Ngāti Wairaki chief Rakatuarua until Ngāi Tahu gained manawhenua (tribal authority over the area) by way of the Ngāti Kurī hapū.

The resources of the river once supported a nearby pā built by the Ngāti Mamoe leader, Tukiauau. Tukiauau eventually abandoned this pā for another site just south of Dunedin.

There are numerous urupā and wāhi tapu associated with the river, particularly in the vicinity of the pa, Pariwhakatau. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Tūtae Putaputa represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Tūtae Putaputa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Tūtae Putaputa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Tūtae Putaputa as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Tūtae Putaputa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Tūtae Putaputa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Tūtae Putaputa.

STATUTORY ACKNOWLEDGEMENT FOR HOKA KURA (LAKE SUMNER) *From Schedule 20 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Hoka Kura (Lake Sumner), the location of which is shown on Allocation Plan MD 127 (S.O. 19854).

Ngāi Tahu association with Hoka Kura

Hoka Kura is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Hoka Kura. The origins of the name Hoka Kura have now been lost, although it is likely that it refers to one of the descendants of Rakaihautu.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Hoka Kura was used as a mahinga kai by North Canterbury Ngāi Tahu. The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mahinga kai values of the lake were particularly important to Ngāi Tahu parties travelling to Te Tai Poutini (the West Coast). The lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

There are a number of urupā and wāhi tapu in this region. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Hoka Kura represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Hoka Kura, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Hoka Kura or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Hoka Kura as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Hoka Kura (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Hoka Kura.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Hoka Kura.

STATUTORY ACKNOWLEDGEMENT FOR HURUNUI RIVER *From Schedule 21 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hurunui, the location of which is shown on Allocation Plan MD 112 (S.O. 19848).

Ngāi Tahu association with the Hurunui River

The Hurunui River once provided an important mahinga kai resource for Ngāi Tahu, although those resources are now in a modified and depleted condition. Traditionally, the river was particularly known for its tuna (eel) and inaka (whitebait).

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Hurunui, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Nohoanga (settlements) were located at points along the length of this river, with some wāhi tapu located near the mouth. Wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of the Hurunui represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are -

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hurunui River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hurunui River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hurunui River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hurunui River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hurunui River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hurunui River.

STATUTORY ACKNOWLEDGEMENT FOR WAIPARA RIVER *From Schedule 74 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

Tradition tells of the duel between two famous rangatira (chiefs) which happened in this area. Tūtewaimate, a Ngāti Mamoe rangatira from Rakaia, found that the northward trade route that he sent his goods along was being disrupted by Moko, a rangatira of the Ngāti Kuri hapū of Ngāi Tahu who had been acting as a bandit along the route. Tūtewaimate went to confront Moko, who lived in a cave at Waipara, but found him sleeping. Tūtewaimate allowed Moko to awake before attacking him. Tūtewaimate's sense of fair play cost him his life and is recalled in a tribal proverb.

For Ngāi Tahu, such histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped Ngāi Tahu as an iwi.

There are a number of Ngāti Wairaki, Ngāti Mamoe and Ngāi Tahu urupā and wāhi tapu along the river and associated coastline. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The river and associated coastline was also a significant mahinga kai, with kai moana, particularly pāua, being taken at the mouth. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of the Waipara River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Waipara River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Waipara River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Waipara River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw;

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Waipara River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Waipara River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Waipara River.

STATUTORY ACKNOWLEDGEMENT FOR KŌWAI RIVER *From Schedule 26 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Kōwai, the location of which is shown on Allocation Plan MD 114 (S.O. 19850).

Ngāi Tahu association with the Kōwai River

The Kōwai River once provided an important mahinga kai resource for North Canterbury Ngāi Tahu. Traditionally, the river was known for its tuna (eel) and inaka (whitebait), although those resources have now been depleted.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Nohoanga (settlements) were located at points along the length of this river, with some wāhi tapu located near the mouth. Wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of the Kōwai River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Kōwai River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Kōwai River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Kōwai River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Kōwai River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Kōwai River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Kōwai River.

STATUTORY ACKNOWLEDGEMENT FOR WHAKAMATAU (LAKE COLERIDGE) *From Schedule 76 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Whakamatau (Lake Coleridge), the location of which is shown on Allocation Plan MD 128 (S.O. 19855).

Ngāi Tahu association with Whakamatau

Whakamatau is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaitiautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Whakamatau.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

This lake was occupied by the Ngāti Tū Te Piriraki hapū. Tū Te Piriraki was the son of Tū Te Kawa, a Ngāti Mamoe chief who held manawhenua in this region. When Tū Te Kawa died, his family, including Tū Te Piriraki, married into the senior Ngāi Tahu families. Such strategic marriages between hapū strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the lake.

Whakamatau was a notable mahinga kai where tuna (eel) and water fowl were taken. The kiore (polynesian rat) was also taken in this region. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Whakamatau was an integral part of a network of trails linking North Canterbury and Te Tai Poutini (the West Coast) which were used by the tūpuna in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

As a result of the area's history as a settlement site and part of a trail, there are many urupā associated with the lake. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Whakamatau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only. purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakamatau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Whakamatau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Whakamatau as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association Whakamatau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakamatau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakamatau.

STATUTORY ACKNOWLEDGEMENT FOR HAKATERE (ASHBURTON RIVER) *From Schedule 17 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hakatere (Ashburton River), the location of which is shown on Allocation Plan MD 116 (S.O. 19852).

Ngāi Tahu association with the Hakatere

The Hakatere was a major mahinga kai for Canterbury Ngāi Tahu. The main foods taken from the river were tuna (eels), inaka (whitebait) and the giant kōkopu. Rats, weka, kiwi and waterfowl such as pūtakitaki (paradise duck) were also hunted along the river.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of the Hakatere represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hakatere, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hakatere or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hakatere as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hakatere (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hakatere.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hakatere.

STATUTORY ACKNOWLEDGEMENT FOR RANGITATA RIVER *From Schedule 55 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Rangitata, the location of which is shown on Allocation Plan MD 115 (S.O. 19851).

Ngāi Tahu association with the Rangitata River

The Rangitata was a major mahinga kai for Canterbury Ngāi Tahu. Weka and other forest birds were the main foods taken from the inland reaches of the Rangitata. Tutu berries were also taken along the waterway.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The river was sometimes used by Ngāi Tahu parties from Canterbury as part of a trail to Te Tai Poutini (the West Coast). The tūpuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The river was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The mauri of the Rangitata represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Rangitata River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Rangitata River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Rangitata River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Rangitata River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Rangitata River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Rangitata River.

STATUTORY ACKNOWLEDGEMENT FOR Ō TŪ WHAREKAI (ASHBURTON LAKES) *From Schedule 46 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the wetland known as Ō Tū Wharekai (Ashburton Lakes), the location of which is shown on Allocation Plan MD 53 (S.O. 19841).

Ngāi Tahu association with Ō Tū Wharekai

The creation of the Ō Tū Wharekai wetlands is associated with Tū Te Rakiwhanoa and his shaping of Te Wai Pounamu (the South Island) to make it habitable for humans. The Ō Tū Wharekai complex was created as Tū Te Rakiwhanoa arranged the debris in the Waka o Aoraki while forming the harbours and plains and heaping up mountains of the interior.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name Ō Tū Wharekai actually relates to the part of the complex known as the Māori Lakes. The other lakes and wetlands which make up the complex also have their own names.

Important nohoanga (settlements) associated with seasonal mahinga kai gathering and travel to and through this area included: Tūtaewera, Hatere, Uhi, Matakou, Kirihonuhonu, Ōtautari, Punataka, Te Kiakia, and Tamatakou.

The complex was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau bonding. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands. Mahinga kai resources taken from the area included: tuna (eels), weka, kākā, kererū, tūi, pūkeko and other waterfowl, aruhe, kiore, kauru, matai and pōkākā.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the wetlands, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ō Tū Wharekai represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ō Tū Wharekai, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Ō Tū Wharekai or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Ō Tū Wharekai as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Ō Tū Wharekai (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ō Tū Wharekai.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ō Tū Wharekai.

STATUTORY ACKNOWLEDGEMENT FOR HEKEAO (HINDS RIVER) *From Schedule 19 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hekeao (Hinds River), the location of which is shown on Allocation Plan MD 117 (S.O. 19853).

Ngāi Tahu association with the Hekeao

Hekeao and Tokara (the two branches of the Hinds River) traditionally supported a number of nohoanga (settlements), including Hekeao, Kakaho, Koroki, Te Mihi, Pakutahi, Karipo, Pūrākaunui, Rukuhia and Tokara. As a result of this history of occupations, there are a number of urupā associated with the river. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The river was an important mahinga kai, known particularly as a source of tuna (eel) and kanakana (lamprey). The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Hekeao and Tokara represent the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hekeao, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hekeao or the Commissioner of Crown Lands,

as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hekeao as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hekeao (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hekeao.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hekeao.

STATUTORY ACKNOWLEDGEMENT FOR TAKAPO (LAKE TEKAPO) *From Schedule 57 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Takapo (Lake Tekapo), the location of which is shown on Allocation Plan MD 34 (S.O. 19836).

Ngāi Tahu association with Takapo

Takapo is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Takapo.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Takapo was often occupied by Ngāi Tahu and, like most lakes, there are traditions of a taniwha connected with it. Tradition has it that the tohunga Te Maiharoa is the only person to have swum the lake and escaped the taniwha. This story is told to demonstrate that the mana of Te Maiharoa was greater than that of the taniwha of the lake.

As a result of this history of occupation, there are a number of urupā associated with the lake. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

Takapo served as a mahinga kai for South Canterbury Ngāi Tahu. Waterfowl and eel were the main foods taken from this lake. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Takapo represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Takapo, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Takapo or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Takapo as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's

association to Takapo (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Takapo.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Takapo.

STATUTORY ACKNOWLEDGEMENT FOR LAKE PŪKAKI *From Schedule 34 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Pūkaki, the location of which is shown on Allocation Plan MD 35 (S.O. 19837).

Ngāi Tahu association with Lake Pūkaki

Pūkaki is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Pūkaki.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Pūkaki is referred to in Ngāi Tahu tradition as the basin that captures the tears of Aoraki: a reference to the melt waters that flow from Aoraki into the lake in the spring time.

As well as its association with Aoraki, Pūkaki is also a mahinga kai, noted particularly for its water fowl. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Pūkaki represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Pūkaki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Lake Pūkaki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Pūkaki as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Pūkaki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Pūkaki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Pūkaki.

STATUTORY ACKNOWLEDGEMENT FOR WHAKARUKUMOANA (LAKE MCGREGOR) *From Schedule 77 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Whakarukumoana (Lake McGregor), the location of which is shown on Allocation Plan MD 120 (S.O. 19856).

Ngāi Tahu association with Whakarukumoana

Whakarukumoana is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New

Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Whakarukumoana.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Draining into Takapo (Lake Tekapo) via Te Waiātekāmana, Whakarukumoana forms a part of the network of waterways and land-based mahinga kai in this part of the interior. This area was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau bonding. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

The lake was very productive, although the indigenous fishery has now been depleted. The warmer shallows are important habitats for tuna (eels) and indigenous fish which prefer such conditions. This rain-fed lake is a habitat for upland bully, common bully, long-finned eel and galaxids as well as introduced trout.

Waterfowl, including a range of duck species, crested grebe and weka (formerly) are another important mahinga kai associated with the lake. Flora gathered from land adjoining the lake included matagouri, taramea, tutu, tataraheka, manuka, snowgrass, and raupo. The succulent kiore (polynesian rat) was once an important food resource, as was the moa.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Whakarukumoana represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakarukumoana, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Whakarukumoana or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Whakarukumoana as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Whakarukumoana (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakarukumoana.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakarukumoana.

STATUTORY ACKNOWLEDGEMENT FOR LAKE ŌHAU *From Schedule 32 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Ōhau, the location of which is shown on Allocation Plan MD 36 (S.O. 19838).

Ngāi Tahu association with Lake Ōhau

Ōhau is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Ōhau. It is probable that the name 'Ōhau' comes from one of the descendants of Rakaihautu, Hau.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Potmamu and Ngāi Tahu as an iwi.

Ōhau was traditionally occupied by the descendants of Te Rakitauhope and was the site of several battles between Ngāi Tahu and Ngāti Mamoe. Later, it supported Te Maiharoa and his followers in the 1870s when they took occupation of land in the interior in protest against the Crown's failure to honour the 1848 Canterbury Purchase.

As a result of this history of occupation, there are a number of urupā and wāhi tapu associated with the lake. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

Ōhau was an important mahinga kai, and part of a wider mahinga kai trail that ran from Lake Pūkaki to the coast. The main foods taken in this area were weka, forest and water fowl and freshwater fish such as tuna (eel) and kōkopu.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ōhau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Ōhau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Lake Ōhau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Ōhau as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Ōhau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Ōhau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Ōhau.

STATUTORY ACKNOWLEDGEMENT FOR HAKATARAMEA RIVER *From Schedule 16 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hakataramea the location of which is shown on allocation Plan MD 119 (S.O. 24724).

Ngāi Tahu association with the Hakataramea River

The creation of the Hakataramea relates in time to Te Waka o Aoraki, and the further shaping of the island by Tū Te Rakiwhanoa and his assistants, including Marokura who stocked the waterways and Kahukura, who stocked the forests. For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name 'Hakataramea' refers to the taramea plant from which a prized perfume was extracted. The name reflects the fact that taramea once grew in abundance in the vicinity of the river, and was easily accessed.

As well as being a mahinga kai in its own right, the Hakataramea was also an alternative route to the Aoraki region, forming part of the network of waterways and land-based mahinga kai in this part of the interior. This area was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau interaction. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Hakataramea was a noted and popular indigenous fishery, offering tuna (eel), kanakana (lamprey), kōkopu, waikoura (freshwater crayfish) and waikakahi (freshwater mussel). Other mahinga kai taken from the Hakataramea included weka, ti kouka (cabbage tree) and taramea (spaniard grass). The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering

kai and other taonga, ways in which to use the resources of the Hakataramea, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

These mahinga kai resources supported both semi-permanent and seasonal occupations, including a kāinga called Te Wai-tohi near the confluence of the Hakataramea and Waitaki rivers. The surviving rock art remnants and rock shelters are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

Because of the long history of use of the river as both a highway and a mahinga kai, supporting permanent and temporary occupation, there are a number of urupā, wāhi tapu and wāhi taonga associated with the river. These are all places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are a particular focus for whānau traditions.

The mauri of the Hakataramea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hakataramea River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hakataramea River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hakataramea River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hakataramea River (as described in his statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hakataramea River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hakataramea River.

STATUTORY ACKNOWLEDGEMENT FOR TE AO MĀRAMA (LAKE BENMORE) *From Schedule 59 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Te Ao Mārama (Lake Benmore), the location of which is shown on Allocation Plan MD 130 (S.O. 19857 (Canterbury Land District) and SO 24748 (Otago Land District)).

Ngāi Tahu association with Te Ao Mārama

While the man-made Te Ao Mārama is obviously a comparatively recent creation on the landscape, it overlays the path of the Waitaki River, which is very significant to Ngāi Tahu as the pathway of the waters from Aoraki to the sea. Ngāi Tahu Whānui always recognise and pay respects to Waitaki as a significant element of their being and identity - a creation of the atua (gods), further moulded by Tū Te Rakiwhānoa and his assistants, one of whom was Marokura who stocked the waterways.

In addition, the lake now covers areas which have been very important in Ngāi Tahu history. The Ahuriri arm of the lake was the site of Te Ao Mārama, the nohoanga that Te Maiharoa was evicted from by the constabulary in the late 1800s. It is in memory of this that the lake is now referred to by the same name. A number of other nohoanga existed in the area the lake now covers, and these were among the 170 which one record lists as existing in the Waitaki basin. One of these was at Sailors Cutting, and was known as Te Whakapiri a Te Kaiokai.

Many wāhi tapu and wāhi taonga were also drowned by Te Ao Mārama, including a number of rock art sites, while others still survive. Urupā associated with the nohoanga in the area also lie under the lake. These are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

An important and productive fishery exists in the lake, with the Haldane and Ahuriri arms once rich in long-finned eels,

although in more recent times the fishery has been depleted. Freshwater mussels (waikākahi) are also available in the Ahuriri shallows. Excellent stands of raupō grow on the edge of the lake, adjacent to the deep water. This hardy plant, which was traditionally used for kai and in the making of mōkihi (a type of waka, or canoe, used on inland waterways) is not affected by the heavy frosts of the area or cattle grazing. The Ahuriri arm was also an important waterfowl and weka habitat.

Strategic marriages between hapū strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the area. These whakapapa rights and relationships still apply to the lake itself.

The area which the lake now covers was once a major route from coast to coast: to Hawea and Wanaka via the Lindis pass, and to the West Coast via Ōkuru or Haast Pass. There was also a trail via the Lindis through into the Central Otago summer resorts, mahinga kai and pounamu resources. Trails linked to seasonal resource gathering lead into the Ōhau, Pūkaki and Takapo, Alexandrina and Whakarukumoana catchments. These were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and waterways.

Wai-para-hoanga meaning literally 'water of grinding stone dirt' is a descriptive name for the water that once flowed unhindered in the Waitaki, sourced from Pūkaki, Takapo and Ōhau, and ultimately from Aoraki itself. Notwithstanding more recent man-made changes to the landscape and waterways, the mauri of Te Ao Mārama represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Ao Mārama, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Te Ao Mārama or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Te Ao Mārama as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Te Ao Mārama (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Ao Mārama.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Ao Mārama.

STATUTORY ACKNOWLEDGEMENT FOR MAHI TIKUMU (LAKE AVIEMORE) *From Schedule 37 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Mahi Tikumu (Lake Aviemore), the location of which is shown on Allocation Plan MD 492 (S.O. 19907 (Canterbury Land District) and SO 24731 (Otago Land District)).

Ngāi Tahu association with Mahi Tikumu

While the man-made Mahi Tikumu is obviously a comparatively recent creation on the landscape, it overlays the path of the Waitaki River, which is very significant to Ngāi Tahu as the pathway of the waters from Aoraki to the sea. Ngāi Tahu Whānui always recognise and pay respects to Waitaki as a significant element of their being and identity, a creation of the atua (gods), further moulded by Tū Te Rakiwhānoa and his assistants, one of whom was Marokura who stocked the waterways.

In addition, the lake now covers areas which have been very important in Ngāi Tahu history. A number of nohoanga existed along the former river basin, among the 170 which one record lists as existing in the Waitaki basin.

Many wāhi tapu and wāhi taonga were also drowned by Mahi Tikumu, including a number of rock art sites. Other areas of the lake's catchment are awaiting survey for rock art. Urupā associated with the nohoanga in the area also lie under the lake. These are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

An important and productive tuna (eel) fishery existed in the lake, although in more recent times the customary fishery has become depleted. Freshwater mussels (waikākahi) are also available in the shallows. Excellent stands of raupō grow on the edge of the lake, adjacent to the deep water. This hardy plant, which was traditionally used for kai and in the making of mōkihi (a type of waka, or canoe, used on inland waterways) is not affected by the heavy frosts of the area or cattle grazing.

The area which the lake now covers was once a major route from coast to coast: to Hawea and Wanaka via the Lindis pass, and to the West Coast via Ōkuru or Haast Pass. There was also a trail via the Lindis through into the Central Otago summer resorts, mahinga kai and pounamu resources. Trails linked to seasonal resource gathering lead into the Ōhau, Pūkaki and Takapo, Alexandrina and Whakarukumoana catchments.

The area covered by the lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and waterways.

Wai-para-hoanga, meaning literally 'water of grinding stone dirt' is a descriptive name for the water that once flowed unhindered in the Waitaki, sourced from Pūkaki, Takapo and Ōhau, and ultimately from Aoraki itself.

Notwithstanding more recent man-made changes to the landscape and waterways, the mauri of Mahi Tikumu represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Mahi Tikumu, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Mahi Tikumu or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Mahi Tikumu as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Mahi Tikumu (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Mahi Tikumu.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Mahi Tikumu.

STATUTORY ACKNOWLEDGEMENT FOR PUNATARAKAO WETLAND *From Schedule 54 – refer to sections 205 and 206 of the Ngāi Tahu claim Settlement Act 1998.*

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Wetland known as Punatarakao, the location of which is shown on Allocation Plan MD 137 (SO 19858).

Preamble

Under section 206, the Crown acknowledges Te Rūnanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Punatarakao, as set out below.

Ngāi Tahu Association with Punatarakao

The Punatarakao wetland near the mouth of the Waihao river was a noted mahinga kai and traditional Ngāi Tahu occupation site. One of the principal traditions relating to the area tells that it is guarded by the taniwha, Tu Te Rakiwhanoa, who was said to appear as a sign of death.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Punatarakao was the site of a Ngāi Tahu village, and was also famous for its Whare Wananga, where tohunga went to learn. As a result of this history of occupation, there are a number of urupā and wāhi tapu in the area. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

It was the mahinga kai of the Punatarakao wetland area which made it attractive as an occupation site. The tūpuna had considerable knowledge of whakapapa, traditional trails and

tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the area, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Punatarakao represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Punatarakao, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);

(c) To empower the Minister responsible for management of Punatarakao or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Punatarakao as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Punatarakao (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Punatarakao.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Punatarakao

STATUTORY ACKNOWLEDGEMENT FOR WAITAKI RIVER *From Schedule 72 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Waitaki, the location of which is shown on Allocation Plan MD 118 (S.O. 24723).

Ngāi Tahu association with the Waitaki

The name Waitaki (a South Island variant of the name Waitangi which is found throughout the North Island) is a common place name throughout Polynesia. Although the specific tradition behind the name has been lost in this case, it literally means 'the waterway of tears', and the Waitaki is often referred to in whaikōrero (oratory) as representing the tears of Aoraki which spill into Lake Pūkaki and eventually make their way south along the river to the coast. This image is captured in the whakatauāki: 'Ko Waitaki te awa, kā roimata na Aoraki i riringi' ('Waitaki is the river, the tears spilled by Aoraki').

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The Ngāi Tahu association with the Waitaki extends back to the first human habitation of Te Wai Pounamu. As such, the river is an essential element of the identity of Ngāi Tahu as an iwi. A moa butchery site at the mouth of the river is one of the oldest recorded settlement sites in the South Island and other sites further up the river are also extremely ancient.

The Waitaki was a traditional route to the mahinga kai resources of inland North Otago and the once bush-clad Waitaki Valley. The use of mōkihi (river craft constructed from raupō, or reeds), to carry the spoils of hunting expeditions down the river is particularly associated with the Waitaki, one of the few places where the construction and navigation of these vessels is still practised to this day.

The river also led to the central lakes district - itself a rich source of mahinga kai - and from there across the Southern Alps to the treasured pounamu resource of Te Tai Poutini (the West Coast). The river served as a major highway for such travels from both North Otago and South Canterbury.

Thus, there were numerous tauranga waka (or landing places) on the river. The tūpuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The Waitaki was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

In 1877, the leader Te Maiharoa, a descendant of Te Rakaihautu, led his people up the Waitaki to establish a settlement at Te Ao Mārama (near modern-day Omarama), to demonstrate his assertion that the interior had not been sold

by Ngāi Tahu, and therefore still belonged to the iwi. Although the settlement was eventually broken up by the constabulary, and the people forced to retreat back down the river, the episode is a significant one in the long history of Te Kerēme (the Ngāi Tahu Claim).

As well as acting as a route to the inland mahinga kai sources, the river itself provided many forms of kai for those living near it or travelling on it. The Waitaki was, and still is, noted for its indigenous fisheries, including tuna (eel), inaka, kōkopu and kōaro species (whitebait), kanakana (lamprey) and waikōura (freshwater crayfish); with aua (yellow-eyed mullet) and mōhoao (black flounder) being found at the mouth. Many of these species are diadromous (migrating between sea and freshwater to spawn).

The extensive wetland areas formerly associated with the river once provided important spawning, rearing and feeding grounds for all of these species and were among the richest mahinga kai areas on the river. Although many of these species have now been depleted, the Waitaki remains a nationally important fishery.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Waitaki, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The Waitaki Valley holds one the country's major collections of rock art, and the river itself seems to have acted as a form of cultural barrier in rock art design. The surviving rock art remnants are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

Because of the long history of use of the river as both a highway and a mahinga kai, supporting permanent and temporary nohoanga (occupation sites), there are numerous urupā, wāhi tapu and wāhi taonga associated with the river. These are all places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are a particular focus for whānau traditions.

The mauri of the Waitaki River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Waitaki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Waitaki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Waitaki as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Waitaki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Waitaki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Waitaki.

STATUTORY ACKNOWLEDGEMENT FOR AORAKI/MOUNT COOK *From Schedule 14 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the area known as Aoraki/Mount Cook located in Kā Tiritiri o te Moana (the Southern Alps/Kā Tiritiri o te Moana), as shown on Allocation Plan MS 1 (S.O. 19831).

Ngāi Tahu association with Aoraki

In the beginning there was no Te Wai Pounamu or Aotearoa. The waters of Kiwa rolled over the place now occupied by the South Island, the North Island and Stewart Island. No sign of land existed.

Before Raki (the Sky Father) wedded Papatūānuku (the Earth Mother), each of them already had children by other unions. After the marriage, some of the Sky Children came down to greet their father's new wife and some even married Earth Daughters.

Among the celestial visitors were four sons of Raki who were named Aoraki (Cloud in the Sky), Rakiroa (Long Raki), Rakirua (Raki the Second), and Rārakiroa (Long Unbroken Line). They came down in a canoe which was known as Te Waka o Aoraki. They cruised around Papatūānuku who lay as one body in a huge continent known as Hawaiiki.

Then, keen to explore, the voyagers set out to sea, but no matter how far they travelled, they could not find land. They decided to return to their celestial home but the karakia (incantation) which should have lifted the waka (canoe) back to the heavens failed and their craft ran aground on a hidden reef, turning to stone and earth in the process.

The waka listed and settled with the west side much higher out of the water than the east. Thus the whole waka formed the South Island, hence the name: Te Waka o Aoraki. Aoraki and his brothers clambered onto the high side and were turned to stone. They are still there today. Aoraki is the mountain known to Pākehā as Mount Cook, and his brothers are the next highest peaks near him. The present day shape of the South Island owes much to the subsequent deeds of Tū Te Rakiwhānoa, who took on the job of shaping the land to make it fit for human habitation.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The meltwaters that flow from Aoraki are sacred. On special occasions of cultural moment, the blessings of Aoraki are sought through taking of small amounts of its special waters, back to other parts of the island for use in ceremonial occasions.

The mauri of Aoraki represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the mountain.

The saying 'He kapua kei runga i Aoraki, whakarewa whakarewa' ('The cloud that floats aloft Aoraki, for ever fly, stay aloft') refers to the cloud that often surrounds Aoraki. Aoraki does not always 'come out' for visitors to see, just as a great chief is not always giving audience, or is on 'show'. It is for Aoraki to choose when to emerge from his cloak of mist, a power and influence that is beyond mortals, symbolising the mana of Aoraki.

To Ngāi Tahu, Aoraki represents the most sacred of ancestors, from whom Ngāi Tahu descend and who provides the iwi with its sense of communal identity, solidarity, and purpose. It follows that the ancestor embodied in the mountain remains the physical manifestation of Aoraki, the link between the supernatural and the natural world. The tapu associated with Aoraki is a significant dimension of the tribal value, and is the source of the power over life and death which the mountain possesses.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Aoraki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Aoraki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Aoraki as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Aoraki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Aoraki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Aoraki.

STATUTORY ACKNOWLEDGEMENT FOR KURA TĀWHITI (CASTLE HILL) *From Schedule 27 — refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998*

Statutory area

The statutory area to which this statutory acknowledgement applies is the area known as Kura Tāwhiti (Castle Hill Conservation Area), as shown on Allocation Plan MS 14 (S.O. 19832).

Ngāi Tahu association with Kura Tāwhiti

Kura Tāwhiti (Castle Hill) is located between the Torlesse and Craigieburn Ranges, in the Broken River catchment. The name Kura Tāwhiti literally means 'the treasure from a distant land', and is an allusion to the kūmara, an important food once cultivated in this region. However, Kura Tāwhiti was also the name of one of the tūpuna (ancestors) who was aboard the Arai Te Uru canoe when it sank off Matakaea (Shag Point) in North Otago.

Kura Tāwhiti was one of the mountains claimed by the Ngāi Tahu ancestor, Tane Tiki. Tane Tiki claimed this mountain range for his daughter Hine Mihi because he wanted the feathers from the kākāpō taken in this area to make a cloak for her.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events

which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

This region was a well-used mahinga kai for Kaiapoi Ngāi Tahu. The main food taken from this mountain range was the kiore (polynesian rat). Other foods taken included tuna (eel), kākāpō, weka and kiwi.

The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of Kura Tāwhiti, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Kura Tāwhiti was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the area.

A particular taonga of Kura Tāwhiti are the ancient rock art remnants found on the rock outcrops. These outcrops provided vital shelters from the elements for the people in their travels, and they left their artworks behind as a record of their lives and beliefs. The combination of this long association with the rock outcrops, and the significance of the art on them, gives rise to their tapu status for Ngāi Tahu.

The mauri of Kura Tāwhiti represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Kura Tāwhiti, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Kura Tāwhiti or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Kura Tāwhiti as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Kura Tāwhiti (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Kura Tāwhiti.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Kura Tāwhiti.

STATUTORY ACKNOWLEDGEMENT FOR TE TAI MAROKURA (Kaikōura COASTAL MARINE AREA)

From Schedule 100, refer to Sections 205, 312, and 313 of the Ngāi Tahu Claims Settlement Act 1998.

Statutory Area

The area to which this statutory acknowledgement applies is Te Tai o Marokura (the Kaikōura Coastal Marine Area), the Coastal Marine Area of the Kaikōura constituency of the former Nelson Marlborough region, as shown on SO 14497, Marlborough Land District, extended northwards (but not eastwards) to the Takiwa of Ngāi Tahu Whānui, such boundary determined in the same manner as for the northern boundary of the Ngāi Tahu Claim Area, as shown on Allocation Plan NT 505 (S.O. 19901).

Ngāi Tahu Association with Te Tai o Marokura

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Ka Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tu Te Rakiwhanoa, who took on the job of making the island suitable for human habitation.

For Ngāi Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The Kaikōura Coastline took its name from Tama Ki Te Rangi, an early explorer in the time of Tamatea Pokaiwhenua, who decided to explore the South Island. On his way from the North Island, Tama ki Te Rangi stopped in the area now known as Kaikōura and ate some of the crayfish that populate the area over an open fire. From Tama Ki Te Rangi's feast on

crayfish, the area was named, Te Ahi Kaikōura a Tama ki Te Rangi—the fires where Tama Ki Te Rangi ate crayfish.

Because of its attractiveness as a place to establish permanent settlements, including pa (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngati Mamoe and Ngāi Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of the Ngāi Tahu Whānui. Battle sites, urupa and landscape features bearing the names of tupuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualifies and became the headquarters for a succession of rangatira and their followers.

One of the leading sites in Kaikōura in pre-contact times was Takahaka marae, which is still occupied by Ngāi Tahu. From the time the Ngāi Tahu leader Maru Kaitatea took Takahaka Pa for Ngāi Tahu occupation, the site acted as a staging site for Ngāi Tahu migrations further south. Other pa in the area included Pariwhakatau, Mikonui, Oaro and Kahutara. Place names along the coast, such as the gardens of Tamanuhiri and the Waikoau River, record Ngāi Tahu history and point to the landscape features which were significant to people for a range of reasons.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapu located at permanent or semi-permanent settlements along the coast, with an intricate network of mahinga kai (food gathering) rights and networks that relied to a large extent on coastal resources.

As well as the crayfish for which the area is famous, the whole of the Kaikōura area offered a bounty of mahinga kai including a range of kaimoana (sea food); sea fishing; eeling and harvesting of other freshwater fish in lagoons and rivers; marine mammals (providing whale meat and seal pups); waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources including harakeke (flax), fern and ti root.

A particular feature of the Ngāi Tahu relationship with the Kaikōura coastal area is the special connection with the whales which frequent the area. This relationship has its basis in tradition. The well-known rangatira (chief) and brave warrior of the Kati Kuri hapu of Ngāi Tahu, Te Rakaitauneke, was said to have a kaitiaki whale, named Mata mata, who dwelt in the sea opposite Te Rakaitauneke's home in Tahuna Torea (Goose Bay). Mata mata's sole duty and purpose in life was to do Te Rakaitauneke's bidding, to serve all his needs and to guard him against harm. Everywhere Te Rakaitauneke went, Mata mata went too. When Te Rakaiteuneke went to Takahanga, Mata mata could be seen blowing outside the garden of memories, as close to shore as he could possibly get. Te Rakaitauneke's love for Mata mata was as great as the whale's love for him.

After Te Rakaitauneke's death, Mata mata was not seen along the Kaikōura coast for some time, and it was rumoured that he had gone away and died of sorrow at the loss of his master. There were those, however, who remembered Te Rakaitauneke's prediction that after his death Mata mata would only return when one of his descendants was facing imminent danger or death. There are many stories since that time of a Mata mata appearing to foretell the death of one of Te Rakaitauneke's descendants. It is also said that many of the descendants of Te Rakaitauneke, when faced with peril on the high seas, have been saved by the timely intervention of a whale.

The Kaikōura coast was also a major highway and trade route, particularly in areas where travel by land was difficult. Travel by sea between settlements and hapu was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plying the waters continuously. Hence tauranga waka (landing places) occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource and rimurapa (bull kelp), with the sea trail linked to a land trail or mahinga kai resource. The tupuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast.

Numerous urupa are being exposed or eroded at various times along much of the coast. Water burial sites on the coast, known as waiwhakaheketupapaku, are also spiritually important and linked with important sites on the land. Places where kaitāngata (the eating of those defeated in battle) occurred are also wahi tapu. Urupa are the resting places of Ngāi Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the coastal area.

STATUTORY ACKNOWLEDGEMENT FOR TE TAI O MAHAANUI (SELWYN — BANKS PENINSULA COASTAL MARINE AREA) *From Schedule 101, refer to Sections 205, 312, and 313 of the Ngāi Tahu Claims Settlement Act 1998.*

Statutory Area

The statutory area to which this statutory acknowledgement applies is Te Tai o Mahaanui (Selwyn - Banks Peninsula Coastal Marine Area), the Coastal Marine Area of the Selwyn - Banks Peninsula constituency of the Canterbury region, as shown on SO Plan 19407, Canterbury Land District as shown on Allocation Plan NT 505 (S.O. 19901).

Ngāi Tahu Association with Te Tai o Mahaanui

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Ka Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tu Te Rakiwhanoa, who took on the job of making the island suitable for human habitation.

The naming of various features along the coastline reflects the succession of explorers and iwi (tribes) who travelled around the coastline at various times. The first of these was Maui, who fished up the North Island, and is said to have circumnavigated Te Wai Pounamu. In some accounts the island is called Te Waka a Maui in recognition of his discovery of the new lands, with Rakiura (Stewart Island) being Te Puka a

Maui (Maui's anchor stone). A number of coastal place names are attributed to Maui, particularly on the southern coast.

There are a number of traditions relating to Te Tai o Mahaanui. One of the most famous bays on the Peninsula is Akaroa, the name being a southern variation of the word 'Whangaroa'. The name refers to the size of the harbour. As with all other places in the South Island, Akaroa placenames recall the histories and traditions of the three tribes which now make up Ngāi Tahu Whānui: Waitaha, Ngati Mamoe and Ngāi Tahu.

Waitaha traditions tell that after Rakaihautu had dug the southern lakes with his ko (a tool similar to a spade)—Tuwhakaroria—he and his son, Rokohouia, returned to Canterbury with their people. On the return, Rakaihautu buried his ko (a tool similar to a spade) on a hill overlooking the Akaroa harbour. That hill was called Tuhiraki (Bossu). Rakaihautu remained in this region for the rest of his life.

For Ngāi Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Because of its attractiveness as a place to establish permanent settlements, including pa (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngati Mamoe and Ngāi Tahu in succession, who through conflict and alliance, have merged in the whakapapa (genealogy) of Ngāi Tahu Whānui. Battle sites, urupa and landscape features bearing the names of tupuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualities and became the headquarters for a succession of rangatira and their followers.

Ngāi Tahu connections to Akaroa came after the settling of Kaiapoi Pa in North Canterbury. Akaroa harbour was soon allocated to a number of chiefs by Turakautahi of Kaiapoi. One chief, Te Ruahikihiki, settled at Whakamoa near the Akaroa Heads at the south east end of the harbour. Te Ruahikihiki fell in love with the elder sister of his wife, Hikaiti. As it was customary at that time for chiefs to have several wives, Te Ruahikihiki took the elder sister, Te Ao Taurewa, as his wife.

Hikaiti fell into a deep depression and resolved to kill herself. She arose early in the morning, combed her hair and wrapped her cloak tightly around herself. She went to the edge of the cliff where she wept and greeted the land and the people of her tribe. With her acknowledgements made, she cast herself over the cliff where she was killed on the rocks. The body remained inside the cloak she had wrapped around herself. This place became known as Te Tarere a Hikaiti (the place where Hikaiti leapt). After a long period of lamentation, Te Ruahikihiki and his people moved to the south end of Banks Peninsula to Te Waihora (Lake Ellesmere).

Another one of the senior chiefs within the Akaroa harbour was Te Ake whose hapu was Ngāi Tuhaitara. Otokotoko was claimed by Te Ake when he staked his tokotoko (staff) at that end of the bay. Te Ake's daughter, Hine Ao, is now represented as a taniwha that dwells with another taniwha, Te Rangiorahina, in a rua (hole) off Opukutahi Reserve in the Akaroa Harbour. Hine Ao now carries the name Te Wahine Marukore. These taniwha act as (kaitiaki) guardians for local fisherman.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapu located at permanent or semi-permanent settlements along the coast, with a intricate network of mahinga kai (food gathering) rights and networks that relied to a large extent on coastal resources.

The whole of the coastal area offered a bounty of mahinga kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources, including harakeke (flax), fern and ti root.

The coast was also a major, highway and trade route, particularly in areas where travel by land was difficult. Travel by sea between settlements and hapu was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plug the waters continuously. Hence tauranga waka occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource, rimurapa (bull kelp) with the sea trail linked to a land trail or mahinga kai resource. The tupuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whanau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast.

Numerous urupa are being exposed or eroded at various times along much of the coast. Water burial sites on the coast, known as waiwhakaheketupapaku, are also spiritually important and linked with important sites on the land. Places where kaitāngata (the eating of those defeated in battle) occurred are also wahi tapu. Urupa are the resting places of Ngāi Tahu tupuna and, as such, are the focus for whanau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the coastal area.

APPENDIX 2

MATTERS TO BE ADDRESSED IN COMPREHENSIVE MANAGEMENT PLANS FOR INTEGRATED SOLUTIONS TO FRESH WATER MANAGEMENT – CHAPTER 7, POLICY 7.3.9

To comply with the requirements for integrated solutions to water management in accordance with Chapter 7, Policy 7.3.9 a regional plan for water in the catchment or catchment(s) covered, must address all of the following matters:

1. Identify the catchment(s) coved by the integrated solution.
2. Establish an environmental flow and water allocation regime for each surface water and groundwater body in that catchment that is or may be used for abstraction; and
3. Identify any water bodies in the catchment(s) which may not be used for abstraction.
4. Establish a minimum water quality standard for every surface water body in the catchment(s), and all groundwater systems;
5. Identify the activities which will be managed to ensure minimum water quality standards are maintained; and
6. Identify any water bodies which do not meet the minimum water quality standard set, and the actions which will be taken over what timeframe to improve the water quality to the minimum standard set in the regional plan.
7. Identify the natural character values of the fresh water bodies in the catchment(s) including:
   (a) Any fresh water bodies which have degraded natural character values which need to be enhanced and the actions that will be taken to enhance those values and over what time period; and
   (b) Any fresh water body and its riparian zones where natural character values may be modified to enable water harvest and storage activities to occur, and any mitigation measures required.
8. Identify and provide for existing and any foreseeable needs for water supplies for community drinking water, stockwater or municipal supplies.
9. Provide for the restoration or enhancement of degraded fresh water bodies and associated Ngāi Tahu and community values.
10. Indentify the recreational, aesthetic, wilderness, amenity and other community values associated with fresh water bodies in the catchment(s):
11. Any controls required on activities to maintain those values; and
12. Any areas where these values can be enhanced as part of managing water in the catchment(s) or mitigating effects of water harvest or storage proposals.
13. Identify any areas and activities which require improved efficiency in water allocation or use and the steps to be taken to improve efficiency over time.
14. Identify the areas of the catchment(s) which are irrigated now and from what sources; and
15. Identify additional areas which could be irrigated as part for any harvest or storage scheme or other irrigation proposal, and conditions required around the development of irrigation in these areas to achieve the purpose of the Resource Management Act 1991 (RMA).
16. Allocate water to activities or areas in the catchment(s), where the allocation of water is necessary to achieve the purpose of the RMA.
17. Identify any other conditions under which any further take or use of water for abstraction in the catchment(s) should proceed.

APPENDIX 3

CRITERIA FOR DETERMINING SIGNIFICANT INDIGENOUS VEGETATION AND SIGNIFICANT HABITAT OF INDIGENOUS BIODIVERSITY

Representativeness

1. Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.
2. Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district.

Rarity/Distinctiveness

3. Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, or freshwater environment.
4. Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.
5. The site contains indigenous vegetation or an indigenous species at its distribution limit within Canterbury Region or nationally.
6. Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.

Diversity and Pattern

7. Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.

Ecological Context

8. Vegetation or habitat of indigenous fauna that provides or contributes to an important ecological linkage or network, or provides an important buffering function.
9. A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.
10. Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.

APPENDIX 4

CANTERBURY'S OUTSTANDING NATURAL FEATURES AND LANDSCAPES AT A REGIONAL SCALE

Inland and Seaward Kaikōuras — Kaikōura District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Kaikōura Downlands and Foothills	The Inland Kaikōuras include the peaks of Tapuae-o-Uenuku, Mt Alarm and Mitre Peak which are exceptional mountain peaks. The Seaward Kaikōura Range particularly Manakau, are highly visible from State Highway 1, Kaikōura township, much of the Kaikōura Coast and Kaikōura Peninsula. Extensive areas of coastal broadleaf forest are located on the seaward slopes of the range. The Clarence River system is a spectacular landscape feature. The Clarence River Valley has huge gorges, dramatic waterfalls and stark cliffs. The limestone ridge running through the valley is an interesting geological feature. Puhi Puhi Valley and Mount Alexander have interesting landforms and important vegetation remnants. This area provides an important link in the outstanding compressed sequence from high mountain peaks to ocean trench.	**Natural Science:** Important habitat for a range of flora and fauna. **Legibility:** Highly legible geological features include The Puhi Puhi syncline, Mt Alexander limestone upfold and the limestone ridges along Clarence River Valley and the Clarence Fault. **Aesthetic:** Seaward Range is a landmark of the region and the proximity of these mountains to the coast is highly memorable. **Transient:** Snow capped peaks **Tāngata whenua:** These ranges are important for tāngata whenua. **Shared and Recognised:** The ranges are featured in many tourist brochures, postcards and paintings. The Clarence River is a very popular rafting river and Tapuae-o-Uenuku is an icon for many climbers, rafters, and trampers.	Areas of exceptional aesthetic, very high natural science, legibility, tāngata whenua values and high shared and recognised landscape values.	Area includes the Ka Whata Tu o Rakihouia Conservation Park (88, 065 ha). Uerau (Mount Uwerau) and Tapuae-o-Unuku are acknowledged in the Ngāi Tahu Claims Settlement Act (1998).
Molesworth — Hurunui District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	Molesworth Station is a remote area, surrounded by snow-capped peaks, beautiful river valleys, extensive tussock lands, and pasture. It is a working farm as well as a reserve managed by the Department of Conservation. This is a spectacular landscape of extremes, with searing summer heat and drought alongside bitter snowy winters. As New Zealand's largest farm park, Molesworth Station holds a special place in history.	**Natural Science:** Molesworth is an area of national ecological significance. Supports one of New Zealand's most diverse lizard faunas. New Zealand falcon, banded dotterel and black-fronted tern are among threatened bird species found here. Several species of large giant wetas and speargrass weevils are found here.Lake Tennyson provides important lake, wetland and kettle hole-bog habitats. **Legibility:** Legible landscape features include terminal and lateral moraines, glacial outwash plains, hanging valleys and waterfalls, cirque basins, tarns and arêtes. **Aesthetic:** The Molesworth Station is one of Canterbury's/ Marlborough's iconic high country landscapes containing memorable landscape elements, such as bare scree slopes, rugged mountain tops, valleys with unmodified rivers and cultural features. The area maintains a high level of visual coherence. **Transient:** The Molesworth endures continental climates of extremes with hot summers and harsh winters. **Tāngata Whenua:** An early inland routes through the area were used by Māori for food gathering and access between the west coast and the east coast. Travelers recorded finds of Māori artefacts on his run at remote Lake Guyon. **Shared and Recognised:** Molesworth Station is a New Zealand icon. Recreation values of the area, include tramping, four wheel driving, hunting, fishing, rafting, camping and biking. The area is celebrated for the remote experiences it provides and is the inspiration for many artists and writers. **Historic:** Strong heritage associated with pastoral far ming. Acheron cob accommodation house was among a string of dwellings placed to service travellers through the area. Both the Molesworth roads were built to enable the construction and maintenance of power lines, the Hanmer-Rainbow Road in the 1950s and the Acheron Road in the late 1960s.	Areas of exceptional shared and recognised, very high natural science,aesthetic, historic and high legibility landscape values.	The Molesworth Station is now managed by the Department of Conservation.

Lake Sumner Area and Lewis Pass — Hurunui and Selwyn District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	The Lake Sumner and Lewis Pass area (including the Upper Clarence, Waiau and Hurunui Rivers) is a landscape of mountains with bush clad slopes and clear mountain lakes and rivers. This ONL contains the headwaters of three major North Canterbury Rivers, the Hurunui, Waiau and the Clarence. This area is highly accessible due to State Highway (SH7) which passes through this landscape. Here, the landscape is dominated by legible landscape features such as glaciated valleys, glacial moraine deposits, streams, wetlands, lakes, and high altitude tarns. The Lake Sumner Conservation Park has the richest forest bird diversity in Canterbury. Lake Sumner (Hoka Kura), Loch Katrine, Lake Taylor and Lake Sheppard are among a group of remote high country lakes located in this landscape. These remote high country lakes are set amongst beech-clad mountains, wide rivers and hot springs.	**Natural Science:** Significant cover of relatively unmodified red beech forest which supports rich bird life. Braided riverbeds with several important endemic bird species. **Legibility:** Numerous important geopreservation sites, such as the Hope fault near the Lewis Pass area and the Awatere fault near Lake Tennyson, which nationally significant to earth science. **Aesthetic:** The lakes, large river valleys and enclosing forested mountain ranges are spectacular. This landscape is highly intact with few signs of human modification. T**ransient:** In the winter months snow covered mountain peaks contrast with the green forested slopes below. **Tāngata Whenua:** Lake Sumner is an important mahinga kai area, and part of the trails utlised by Māori to access parts of the South Island. **Shared and Recognised:** Recreation opportunities include fishing, boating, canoeing, waterfowl shooting, four-wheel driving, camping and walking. The Lewis Pass Highway (SH7) runs through this landscape connecting the Canterbury and Buller Regions, which allows high numbers of visitors to experience the beech forest on short walks. Large areas of DOC managed land provide easily accessible recreation opportunities. **Historic:** Early explorers investigated this area and passes for their suitability to establish a railway line to the West Coast.	Areas of very high natural science, aesthetic and tāngata whenua values. The area also has high shared and recognised and legibility values.	The Lake Sumner Forest Park, Hurunui Mainland Island and the St James Station managed by the Department of Conservation is within this ONL/F. Lake Sumner is acknowledged in the Ngāi Tahu Claims Settlement Act (1998).
Arthur's Pass National Park — Selwyn District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
High Rainfall Divide	The Arthur's Pass National Park is in the heart of the Southern Alps/Kā Tiritiri o te Moana and is managed by the Department of Conservation. This was the first national park in New Zealand and is home to spectacular mountains with large scree slopes, steep gorges and wide braided rivers. Small glacier remnants remain around Mt Rolleston and the head of the Waimakariri Valley (these are the northern most glaciers in the South Island). The floors of the main valleys are covered with post-glacial gravels, especially many large fans. State Highway 73 and the adjacent railway runs through the middle of the national park.	**Natural Science:** Arthur's Pass National Park has significant conservation values. The variety of alpine habitats, such as shrub lands, tussock, herb/fell fields and tarns form a diverse mosaic, protected by the conservation status of the area. The beech forest, in particular in the Hawdon Valley, is of ecological significance. The endangered great spotted Kiwi can be found in the park. **Legibility:** Arthur's Pass is the northern extent of permanent glaciation in the Alps. This alpine environment clearly shows the glacial, fluvial and erosional processes that formed it. The major erosive impact of an earthquake in 1929 has caused a large landslide, which took away half a peak in the Edwards Valley it is now called Falling Mountain. **Aesthetic:** Spectacular alpine landscape with high diversity. Impressive peaks, bush clad mountains, pristine mountainous streams and braided rivers form a vivid landscape of high visual quality. **Transient:** The seasonal change of the mountainous landscape, as well as dramatic weather changes and cloud formations are key ephemeral values. The rivers rise quickly after rainfall and are important values of the park. The presence of keas adds to the experience of the area. **Tāngata Whenua:** Arthur's and Browning Passes were both early trading routes used by Māori. **Shared and Recognised:** Arthur's Pass area is an easily accessible recreation area close to the State Highway. Many tourists stop to visit the mountains, rivers and waterfalls of the National Park. The large alpine national park, is recognised for both its recreation and ecological values. Many paintings and photographs have been produced showing the mountains and rivers of the area. **Historic:** Māori told early European explorers of the location of Arthur's Pass as a potential crossing of the Southern Alps/Kā Tiritiri o te Moana. Historic railway and road connections.	Areas of exceptional natural science, aesthetic, and shared and recognised values and its high tāngata whenua, legibility and historic landscape values.	Arthur's Pass National Park is managed by the Department of Conservation

The Waimakariri Basin — Selwyn District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	The Waimakariri Basin is visually contained by majestic mountains including the high ranges in Arthur's Pass National Park. The basin is littered with legible landscape features that are highly expressive of their glacial and fluvial formation. These features include moraines, roches moutonnees, hanging valleys, terraces and fans. State Highway 73 traverses the basin and is a major transit route connecting the west and east coasts of the South Island. The Tranz Alpine railway also passes through the basin.	**Natural Science:** Many of the lakes within the basin are important habitats for numerous birds and fish species. The Upper Waimakariri River provides exceptional habitat qualities and a number of 'significant' wetlands can be found within the basin. Extensive areas of red tussock grassland and intact shrub lands are notable from an ecological perspective. **Legibility:** Legible features include moraines, roches moutonnees, hanging valleys, lakes, terraces and fans. Numerous geopreservation sites are located within the basin. **Aesthetic:** Dramatic and spectacular landscape of pristine lakes, rivers and majestic mountains. Waimakariri River is an exceptional example of a braided river system. Sinuous patterning is both highly expressive and attractive. The upper Waimakariri River Valley is largely intact and displays a high level of coherence. **Transient:** Braided rivers are an evolving landscape feature. Snow capped peaks enclose the basin in the winter months. **Tāngata Whenua:** Part of a network of trails used by tāngata whenua to access the resources and trade between the coasts. **Shared and Recognised:** This is a striking landscape, which has a combination of memorable elements, such as the braided river, lakes and mountain ranges. Landscape offers significant recreational opportunities including many tracks, lakes and caves. Highly accessible landscape with important road and rail links. **Historic:** The basin was home to early high country runs and has historic farming associations.	Areas of very high natural science, legibility, aesthetic, tāngata whenua, shared and recognised and high historic landscape values.	

Castle Hill/Kura Tawhiti — Selwyn District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
High Country Limestone	Castle Hill is nestled between the Craigieburn and Torlesse Ranges and is a landscape littered with distinctive limestone outcrops. The limestone creates fascinating forms and shapes which are individual and extraordinary.	**Natural Science:** Important habitat for rare and specialist limestone plant species. Contains some of the rarest and most endangered plants in Canterbury. Scientific reserve established to protect the Castle Hill Buttercup (Ranunculus crithmifolius). Important area for some bird species, such as the New Zealand Falcon. **Legibility:** Limestone outcrops at Castle Hill are eroded remnants of marine rock layers that once covered a much wider area. Area contains many nationally significant geopreservation sites. **Aesthetic:** Outcrops form a unique limestone landscape with distinctive formations of high scenic value. Area provides aesthetic values that can be experienced at a variety of distances and scales. **Transient:** The outcrops create distinctive shadow patterns at various times of the day. **Tāngata Whenua:** Castle Hill/Kura Tawhiti has Tōpuni Status. Stories and legends link tāngata whenua with this landscape. **Shared and Recognised:** Climbers, families, scientists and travellers have always been drawn to this easily accessible, attractive landscape. Limestone outcrops are considered by climbers to offer some of the best 'bouldering' in New Zealand. Cave Stream Reserve contains an accessible cave which is an important attraction. **Historic:** Early European travellers named the area Castle Hill after the grand limestone rock battlements found in this area.	Very high legibility, aesthetic, shared and recognised, Tāngata whenua and high natural science landscape values.	Kura Tawhiti Conservation Reserve.

Torlesse Range — Selwyn District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Front Range	The Torlesse Range is the most striking of the frontal ranges that boarder the Canterbury Plains.The range stands boldly up above the plains and marks the eastern edge of the main ranges of the Southern Alps/Kā Tiritiri o te Moana. Its jagged craggy skyline, which includes 'The Gap', is an iconic Canterbury landmark and is clearly visible from the plains particularly when travelling west along SH 73. The often snow-covered rugged peaks provide contrast to the Plains below and form the major skyline for views from the east.	**Natural Science:** Large parts of the Torlesse Range are managed by the Department of Conservation. Wide spread areas of indigenous vegetation. The tussocklands in this area are in particularly good condition. **Legibility:** Extensive greywacke scree slopes and distinctive rocky outcrops found along the summits and ridges. **Aesthetic:** The dissected, steep Torlesse Range forms the impressive backdrop to Christchurch and the Canterbury Plains. The view gained from State Highway 73 when travelling west across the Canterbury Plains is one of the memorable impressions of the front ranges. The coherent front range landscape does not display significant signs of built modification. **Transient:** Snow capped peaks are clearly visible from the plains. **Tāngata Whenua:** The area has significance to tāngata whenua. The range was an integral part of a network of trails utilised by tāngata whenua to access to mahinga kai and greenstone resources of the West Coast. **Shared and Recognised:** The distinctive landforms of the range, steep shingle slides, rocky ridges and forested slopes form the background for many paintings of the Canterbury Plains landscape. **Historic:** Charles Torlesse, was the first European to climb the slopes of the range. Historic sites in the area include the old pack track used by the Porter brothers, Avoca Homestead and the Mt Torlesse Coal Mines.	Areas of high aesthetic, historic and tāngata whenua values also has moderate to high natural science, legibility, transient and shared and recognised landscape values	The range forms part of the Korowai/ Tussocklands Conservation Park managed by the Department of Conservation.

Upper Rakaia Valley — Selwyn and Ashburton District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	The Upper Rakaia River Valley ONL includes the Mathias, Wilberforce and Harper Rivers, and the Craigieburn and Arrowsmith Ranges.The upper Rakaia valley and surrounding mountain ranges form a massive landscape, full of drama and foreboding. This is a remote landscape which is largely inaccessible aside from the many tracks which are popular for hunters, trampers and skiers.	**Natural Science:** The mountainous headwaters of this river have special wilderness character, an expansive and vast valley setting and landscape features that are of a high degree of naturalness. The upper river valleys and parts of the Lake Coleridge Basin contain significant wetland areas. Largely weed free. Large parts within Department of Conservation management. The beech gap in the upper Rakaia/ Rangitata area is a notable characteristic of Central Canterbury. Significant stands of native Cedar trees (Libocedrus bidwillii) are found in the headwaters and tributaries of the Wilberforce River (Rakaia River tributary). The headwaters and tributaries of the Upper Rakaia include the Arrowsmith Range and the ice plateaus of the Adams Wilderness Area. **Legibility:** The extensive river terraces and large tributary fans are highly legible landscape features expressive of their formation. The extensive braided patterning of the rivers is highly expressive and is a dynamic legible landscape feature. There are numerous geopreservation sites, which include excellent examples of relict glacial features, as well as landslide features, such as Goldney Hill rock avalanche deposit near Lake Coleridge. **Aesthetic:** The Upper Rakaia River is an exceptional example of a braided river system. It is an iconic landscape feature – its sinuous patterning is both highly expressive and attractive. The majestic mountains of the Arrowsmith, Jollie and Butler Ranges form impressive backdrops to the braided river valleys. **Transient:** The braided patterning of the Rakaia River is a highly expressive and constantly evolving landscape feature. **Tāngata Whenua:** A part of a network of mahinga kai and resource gathering trails which tāngata whenua developed to link the East and West Coast of New Zealand. **Shared and Recognised:** The Rakaia River, its braids, terraces and mountainous headwaters are one of the quintessential landscapes of Canterbury. It has inspired numerous artists and writers. Exceptional panoramic views of both the surrounding mountains and river plains are experienced from within the Upper Rakaia valley. These views are an integral and widely celebrated image of the Canterbury High Country Landscape. Landscape provides for a wide array of recreational opportunities. In particular Lake Coleridge and the Craigieburn Range are very popular. The Arrowsmith Range provides key remote Canterbury tramping and climbing opportunities. **Historic:** Historical features include Lake Ida Ice Rink. History of pastoral high country settlement and early explorers.	Areas of exceptional natural science, very high legibility, aesthetic and high tāngata whenua, shared and recognised and historic landscape values.	Rakaia River is protected by a National Water Conservation Order (1988).

Upper Rangitata Valley — Ashburton and Timaru Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	The Upper Rangitata River Valley encompasses the rugged mountain country, tussocklands, beech forest and sparkling clear rivers and lakes between the Rakaia and Rangitata rivers. The screes on the embracing valley-sides are exceptional in scale and age. The sense of wilderness and space is remarkable and the area has a particular place in high country literature.	**Natural Science:** Largely weed free. The mountainous headwaters of this river have a special wilderness character, an expansive and vast valley setting and landscape features that are of a high degree of naturalness. Large parts managed by the Department of Conservation. The beech gap in the upper Rakaia/ Rangitata area is a notable characteristic of central Canterbury. The headwaters and tributaries of the Upper Rangitata include the Garden of Eden/ Allah ice plateaus, which are part of the Adams Wilderness Area. **Legibility:** The extensive river terraces in the river valleys are highly legible features, representative of the powerful erosive processes of the rivers which flow through them. The extensive braided patterning of these rivers is a highly expressive and dynamic landscape feature. The Rangitata Gorge links the more remote upper valley with the cultivated Canterbury Plains. **Aesthetic:** The Upper Rangitata is an exceptional example of a braided river system. Its sinuous patterning is both highly expressive and attractive. **Transient:** The braided patterning of the rivers within this landscape type is a highly expressive and constantly evolving landscape feature. **Tāngata Whenua:** Part of a network of mahinga kai and resource gathering trails which tāngata whenua developed to link the East and West Coast of New Zealand. **Shared and Recognised:** The inter-montane ranges, vast river valleys and basins are one of the quintessential landscapes of Canterbury. These high country landscapes have inspired numerous artists and writers for generations to express their impressions in paint, poetry and prose. Exceptional panoramic views of both the surrounding mountains and river outwash plains are experienced within the Upper Rakaia and Rangitata valleys. These views are an integral and widely celebrated image of the Canterbury High Country Landscape. Area supports an array of recreational opportunities. **Historic:** Early explorers John Acland, Charles Tripp and Thomas Potts established early stations in the area, such as Mesopotamia. Historical features include the Mt Harper Ice Rink (1931-32) which was possibly the first ever purpose built public skating rink in the southern hemisphere.	Areas of very high natural science, legibility and aesthetic values, and high tāngata whenua, shared and recognised and historic landscape values	The Rangitata River is protected by a National Water Conservation Order (2006)

Lake Heron and Ashburton Lakes — Ashburton District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges	The Heron, Clearwater, Ashburton Lakes landscape is very different and smaller in scale from the other high country basins.The landscape clearly reflects geological processes, lakes and wetlands are a feature of the basin. Lake Heron is an exceptionally beautiful lake with clear water, a variety of marginal vegetation and varied shoreline. There are strong visual relationships with the Arrowsmith and Taylor Ranges.	**Natural Science:** The lakes provide some of the largest areas of habitat for water birds in New Zealand, and support approximately 30% of indigenous New Zealand species. Some 40,000 birds can be present at any one time and include species such as the endemic wrybill, black-fronted tern and black-billed gull. The wetlands in the area are of exceptional ecological value. **Legibility:** Most of the landscape is formed in glacial till and outwash. Numerous geopreservation sites can be found in the Ashburton Lakes Basin, including the Balmacaan middle Triassic faunas found on the Harper Range and the Ashburton River rock avalanche splash. **Aesthetic:** The stunning backdrop of high glaciated peaks and broad caved out basins and valleys form an impressive landscape with uninterrupted long distance views. The largely unmodified lakes add a recognisable visual quality to the basin landscape. The basins retains a high degree of intactness and aesthetic coherence. **Transient:** The wildlife values of the area are exceptional. The presence of birds is the key transient value to be experienced around the lakes. **Tāngata Whenua:** The area was part of a seasonal trail for mahinga kai and resource gathering. **Shared and Recognised:** The lakes are very popular recreation areas, with camp grounds bustling in summer time. The Department of Conservation managed lakes support fishing, and water sport activities. **Historic:** Large high country stations such as Mesopotamia were established between Lake Heron and the Rangitata. Traces of this early pastoral settlement still remain in the landscape with the development of homesteads, farm buildings, sheep yards, pack bullock and dray tracks, mustering huts, shelterbelts and fences.	Areas of exceptional natural science and very high legibility, aesthetic, tāngata whenua and shared and recognised, and moderate to high historic landscape values	Large areas are under Department of Conservation management. The Ashburton Lakes Area (O Tu Whareakai) is acknowledged in the Ngāi Tahu Claims Settlement Act (1998).

Mt Somers — Ashburton District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Front Range	Mt Somers has remarkable geological features including striking volcanic lava columns which rise spectacularly to create towering pillars and overhangs. The mountain is clearly visible from the Canterbury Plains, standing boldly up above the plains and marking the eastern edge of the main ranges of the Southern Alps/Kā Tiritiri o te Moana.	**Natural Science:** The lava columns around the north face of Mt Somers are of geological interest. **Legibility:** Distinctive and accessible outcrops of volcanic rock. Many geological features, including impressive lava columns, silica sands and coal deposits. **Aesthetic:** Mt Somers is a distinctive part of the front ranges, rising sharply from the plains. **Tāngata Whenua:** No permanent sites of occupancy are documented, but primitive drawings in rock shelters on Mount Somers are evidence of early Māori visitors. **Shared and Recognised:** Recreation values of Mt Somers walkway, which is a popular multi day walk for families. The rock faces are a unique rock climbing area. **Historic:** The Mt Somers area has a rich history of mining, coal and lime quarrying operations.	High legibility and historic values and moderate to high natural science, tāngata whenua and shared and recognised landscape values.	Large parts are managed by the Department of Conservation

Mt Peel and Four Peaks Range — Timaru and Mackenzie Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Downlands and Foothills Front Range	Peel Forest was made a scenic reserve in 1911. Since then this extensive indigenous podocarp and hardwood forest has become a valuable recreation area. Peel Forest and The Four Peaks have a relatively unmodified vegetation sequence from the sub-alpine areas around the peak of Mount Peel to the lowland podocarp forest found on the lower slopes. The Four Peaks Range forms an important landmark when viewed from the southern part of the Canterbury Plains. The Orari Gorge is an important landscape feature.	**Natural Science:** Significant areas of indigenous podocarp and hardwood forest can be found on the slopes of Mt Peel. This remnant forest is of particular value due to its diversity and size. **Legibility:** The Orari Gorge is a good example of a river gorge cut through mountainous terrain. **Aesthetic:** The Four Peaks Range is an important landmark of the southern part of the region, where the front ranges meet the Mackenzie Basin. These distinctive peaks form the backdrop when viewed from to the Timaru Plains. **Tāngata Whenua:** Numerous Māori legends are associated with both the Four Peaks Range and Mt Peel. Shared and Recognised Values: Peel Forest is an accessible recreation area.	Areas of high natural science, as well as its moderate to high aesthetic, tāngata whenua and shared and recognised landscape values.	

Two Thumb, Hall and Gammack Ranges — Timaru and Mackenzie Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges High Rainfall Divide Front Range	These semi arid and dissected mountains boarder the Mackenzie Basin. As such the natural landform and land cover patterns, uninterrupted skylines, the simplicity of vegetation cover and the subtle colours of the mountain sides are all important characteristics of these ranges.	**Natural Science:** Plant community habitats include alpine fellfields, herbfields, tussock lands, shrub lands and wetlands. Most forest has been burned for grazing. Many specialised scree plants, such as herbs and lichens. The invertebrate fauna of the valleys and surrounding mountain ranges reflects the mosaic of habitat types present in the area. Generally very low weed infestation. **Legibility:** Large parts of the range slopes are covered with hummocky lateral moraine, deposited by successive glacial advances. Icescraped valley walls, moraine deposits, and extensive areas of stream fan advancement and of stream down-cutting following the gradual retreat of the glaciers clearly show the landscape's formative processes. Extensive, mobile scree slopes are characteristic features of these mountain ranges. Erosive forces are clearly continuing to shape this landscape. **Aesthetic:** Provide the backdrop to the Mackenzie Basin. This backdrop is an important element of the aesthetic values of these basin landscapes and to views beyond to the ice-capped mountains of Aoraki/Mt Cook National Park. The area's inherent landscape values lie in the dominance of tussocklands, rock and scree slopes. The remote Phantom Valley displays high scenic value and impressive high country character. **Transient:** In the winter months these dry hills are often snow covered. This creates an interesting contrast with the smooth basins and lakes below. **Shared and Recognised:** The area provides multiple opportunities for recreation, primarily in a mountain setting providing front-country, backcountry and remote experiences. Recreational activities include skiing (Mount Dobson and Round Hill ski fields), ski-touring, climbing, tramping, hunting, mountain biking and fishing. **Historic:** Large, early high country runs were established in this area. However, few historic resources remain in the landscape.	Areas of high aesthetic and natural science values and also areas with moderate to high legibility, transient and shared and recognised landscape values.	

Mackenzie Basin — Mackenzie, Waitaki and Waimate Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges Semi Arid Mountain Ranges	The Waitaki and Mackenzie basins are vast, open landscapes surrounded by mountain ranges which include Aoraki / Mount Cook, Mt Sefton, Mt Tasman and the Southern Alps/ Kā Tiritiri o te Moana. The braided Tekapo, Pukaki, Ohau and Ahuriri Rivers and their associated river terraces pass through these basins. The lakes are dominant features of the open grassland landscape of the basin. These lakes and their basin setting are highly expressive of their formative processes. Many legible landscape features including moraines, roches moutonnees, hanging valleys and terraces are found in the basin. The openness of the vast basin landscape and expansive views of the encompassing mountains ranges are spectacular and are widely celebrated. Landscape qualities vary across an area of this size, which contains land use modification and man-made features. The Waitaki Hydro Electric Power Scheme with its long standing history and distinctive features, including lakes, dams and canals, forms part of this large-scale landscape. The hydro lakes including Lake Tekapo and Pukaki are subject to active management to facilitate hydro-electricity generation as part of the Waitaki Hydro Electric Power Scheme.	**Natural Science:** The upper river valleys (such as the Godley and Tasman) are largely weed free and have a high degree of naturalness. These river valleys support an array of unique and threatened native birds. Kettleholes in the basin floors are an important habitat. Numerous Department of Conservation managed reserves, including scientific reserves are in the basin and valleys (linking with Aoraki/Mt Cook National Park). Elevation and the orographic effect of the main divide enable particularly clear views of the night sky, which has resulted in the location of the Mt John Observatory in the Mackenzie Basin. **Legibility:** Highly legible features such as moraines, roches moutonnees, hanging valleys, terraces and fans. 'Kame terraces' near Lake Pukaki are alluvial terraces formed by streams that flowed along the margins of large glaciers. Numerous geopreservation sites are located within the basin. The Clay Cliffs are one of New Zealand's best examples of 'badlands' erosion, where steep-sided canyons are cut into easily erodible sediments. The sediments have been uplifted and tilted by movements on the Ostler Fault. **Aesthetic:** The vast basin, large river valleys and enclosing mountain ranges form a dramatic and spectacular landscape. While some parts of the basin have been substantially modified by residential, hydro and agricultural development, the basin as a whole retains its openness and largely coherent character. Despite the landcover modifications induced by historic farming practices, the area maintains a high level of visual coherence. The Golden Tussock-layden slopes which surround the basin have high aesthetic values. Impressive views up the wide U-shaped valleys to the snow and ice covered peaks of the Alps are experienced from the basin. Pukaki and Tekapo reflect a striking milky-blue colour in sunlight. They form an integral part of one of the most memorable landscapes in the country. **Transient:** Snow coats the ranges and basin floors during much of the winter months. The distinctive turquoise colour of the lakes in sunny conditions is spectacular. Nowhere else in the country can the effects of 'norwester' weather patterns and the rainfall gradient from west to east be as vividly experienced as in the Mackenzie Basin. **Tāngata Whenua:** The Mackenzie Basin lakes (Tekapo, Pukaki and Ohau) are all referred to in the legend of "Nga Puna Wai Karikari o Rakaihautu" which describes how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu.Māori used the lakes in this area for mahinga kai. These lakes are part of a wider mahinga kai trail that ran from Lake Pukaki down the original path of Waitaki River to the coast. **Shared and Recognised:** Iconic South Island landscape. Inspiration for numerous artists and writers. The lakes and the basin are tourist icons. National importance for tourism and recreation. Lake Ruataniwha near Twizel has been developed as a national rowing venue. Lake Ruataniwha near Twizel, which has been developed as part of the Waitaki Hydro Electric Power Scheme, has been developed as a national rowing venue. **Historic:** Historic features include homesteads, farm buildings, sheep yards, pack bullock & dray tracks, mustering huts, shelterbelts and fences. The Mackenzie Basin is named after the first European to discover the area, James Mackenzie. Mackenzie, convicted of sheep stealing, has a monument commemorating his capture.	Areas of exceptional legibility, aesthetic, transient, shared and recognised, very high natural science and high tāngata whenua and historic landscape values	Lakes Tekapo, Pukaki, Benmore and Ohau are acknowledged in the Ngāi Tahu Claims Settlement Act (1998).

Aoraki/Mt Cook National Park — Mackenzie District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
High Rainfall Divide	Encompassing a total of 70,111 ha, the Aoraki/Mt Cook National Park forms a key part of Te Waipounamu — South Westland World Heritage Area. This is an exceptional landscape of ice tipped mountains, rocky outcrops, silty lakes and glaciers. It has the highest peaks and largest glaciers in New Zealand. At 3,754 metres, Aoraki/Mt Cook is the country's highest mountain which lies amidst the many, spectacular, snow capped peaks of the Southern Alps/Kā Tiritiri o te Moana.	**Natural Science:** Aoraki/Mt Cook National Park is of exceptional conservation value.The alpine snow-meadows of Aoraki/Mt Cook are of high importance. **Legibility:** The Southern Alps/Ka Tiritiri o te Moana are highly expressive of their formation. The extensive glaciers, such as the Tasman, Hooker and Mueller glaciers, and their terminal lakes and moraines, are unique within the country. The area contains some of the best examples of glacial landscapes in the world. **Aesthetic:** The Southern Alps/Ka Tiritiri o te Moana form the backbone of the South Island. This area contains the highest peaks with magnificent ice caps. The landscape is one of the most memorable in the country. Its landscape quality has not been compromised by human modification. The impressive and spectacular mountains are visible throughout most of Canterbury and form the distant backdrop to a vast number of views. **Transient:** Dramatic weather changes and cloud formations are key ephemeral values of this landscape. The constant process of geomorphological change makes this landscape unpredictable and foreboding. **Tāngata Whenua:** The mountains are seen as ancestors by tāngata whenua. Aoraki/Mount Cook is of special significance to Ngāi Tahu. **Shared and Recognised:** Aoraki/Mount Cook is the highest peak in New Zealand and is the most well known. Numerous paintings and postcards have been produced showing Aoraki/Mt Cook. It is a New Zealand icon. Aoraki/Mount Cook Village is the focus of tourism activity and attracts large numbers of international visitors. Unique recreational values, which include scenic flights and renowned climbing opportunities. Early mountaineers from all over the world explored this part of the Southern Alps/Kā Tiritiri o te Moana. **Historic:** European immigrants and visitors alike have come to the Aoraki/Mt Cook area from the earliest times of settlement. Many stories have been told by explorers and mountaineers, in their attempts to record first ascends and name peaks. Visitors have been attracted to the Hermitage Hotel from the early days.	Exceptional natural science, legibility, aesthetic, transient, tāngata whenua, shared and recognised and historic landscape values.	Aoraki/Mt Cook National Park managed by the Department of Conservation and is part of Te Waipounamu — South Westland World Heritage Area. Aoraki/Mt Cook has Tōpuni status (Ngāi Tahu Claims Settlement Act 1998)

Hopkins and Dobson Valleys — Mackenzie and Waitaki Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges High Rainfall Divide	This landscape is a part of the Te Waipounamu South Westland World Heritage Area and this is a remote, grand and wild landscape. The largely unmodified beech forest cover on the mountain slopes of the valley is spectacular.	**Natural Science:** Significant wetland habitat in the valleys and delta above Lake Ohau. The Dobson and Hopkins Valleys, which are relatively unmodified, provide habitat of national significance, not well represented elsewhere in the country (large size, diverse microhabitats and water bird faunas, and contain viable populations of almost all species typical of the habitat type). The mountainous headwaters and tributaries of the Ahuriri and Hopkins Rivers have a high degree of naturalness. The slopes of these valleys and tributaries contain significant areas of largely unmodified mountain beech forest. Unlike many mid- and low- altitude rivers, these upper rivers are notable for their unmodified flow regimes and the lack of extensive invasion by introduced plants such as broom, gorse, and willow. **Legibility:** Both valleys are exceptional examples of long, alpine, braided river valleys. **Aesthetic:** The remote, wide, expansive and grand river valleys are spectacular landscapes. View to the high snow-capped peaks contrast with the forested slopes and tussock covered river valleys. The valleys display striking mountain landscape characteristics, such as clear rivers meandering through tussock and grass covered terraces and fans backed by steep, rugged, rocky slopes with forested gullies. This spectacular glacial landscape shows few signs of human activity, apart from small huts and occasional fencing on the valley floor. **Transient:** The proximity to the divide and straight shape of the valleys allow for views to the distinctive cloud rolling over from the west during 'norwest' storms. **Shared and Recognised:** Valued for hunting, fishing, four wheel driving, tramping and climbing opportunities. Closer to Lake Ohau the area is popular for sightseeing, skiing and a range of other activities.	Areas of very high natural science, aesthetic landscape values and high legibility, shared and recognised and moderate to high transient landscape values.	Part of the Waipounamu South Westland World Heritage Area.
Lindis and Ahuriri — Waitaki District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Intermontane Basins and Ranges High Rainfall Divide	The Ahuriri River Valley is a single, contained, tussock grassland valley, in the Waitaki Basin. State Highway 8 (Lindis Pass) is a well used and recognised transit route which traverses through the tussock lands from the Ahuriri River to the summit of the Lindis Pass.	**Natural Science:** River valleys and wetlands in this area provide outstanding habitat for many species. The mountainous headwaters of the Ahuriri River have a high degree of naturalness and are largely weed free. Beech forest slopes adjacent to the Ahuriri River have high natural science value. The large area of tall tussock grassland in the Lindis Pass area is ecologically significant. **Legibility:** The extensive river terracing and braided river bed are highly legible features. **Aesthetic:** The Ahuriri River Valley is a dramatic and spectacular landscape. Has a special, wild character, an expansive and vast valley setting. The coherent appearance of the Lindis Pass slopes with its extensive tussock cover is symbolic of this memorable landscape. **Transient:** The braided Ahuriri River is a highly expressive and constantly evolving landscape feature. The movement of tussocks in the wind is one of the characteristic features of the Lindis. **Shared and Recognised:** The Lindis Pass (SH8) important connection to Otago region. The Lindis Pass area is an 'iconic' New Zealand landscape. Inspiration for many artists and authors alike. **Historic:** Part of Canterbury's high country landscape with a rich history of pastoral farming.	Exceptional aesthetic and shared and recognised landscape values and high natural science, legibility and transient values.	The Ahuriri River is protected by a National Water Conservation Order (1990). Ahuriri Conservation Park (DOC) is included in this ONF/L area.

Hawkdun and St Marys Ranges (Oteake)Conservation Park) — Waitaki District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Semi Arid Mountain Ranges	The Hawkdun and St Marys Ranges lie to the south of the Waitaki River and form part of the mountainous border between the Canterbury and Otago region. This area marks the transition between the typical greywacke of the Canterbury region and the distinctive schist found throughout the Otago region.	**Natural Science:** The whole of the mountain tops in this area remain relatively unmodified and support many plant communities including alpine fell fields, herb fields, tussock lands and shrub lands. In the Otago Regional Landscape Study (1998) two large areas of significant natural areas with high value examples of mountain land plant communities and habitats have been identified in the Hawkdun and Ida Ranges. These areas cross over into the Canterbury region. **Legibility:** The mountain ranges in this ONF/L clearly express the dynamic natural processes of erosion and mountain formation. There are several geo-preservation sites located in this ONF/L including the Hawkdun Cirque; the Vulcan and Hawkdun Faults; Tunnel Hill and the Kohurau patterned ground. Their significance ranges from regionally to nationally important. The summit plateaus of the ranges are uplifted remnants of an ancient land surface **Aesthetic:** The Hawkdun Ranges, which form the boundary between Canterbury and Otago, are one of New Zealand's iconic high country landscape features. Despite the landcover modifications induced by historic farming practices, the area maintains a high level of visual coherence. Parts of the mountain ranges in the ONF/L provide the backdrop to the Mackenzie Basin and Waitaki Valley and the openness and extensive views to these ranges are characteristic for this landscape. The clarity and simplicity of form in these mountain ranges is impressive. The bold, smooth landforms overlaid with scree form uniform, distinctive ridges and summit plateaus and the rocky schist outcrops found near the Otago boundary are a distinctive feature of these ranges, which only occur in the southernmost part of Canterbury. **Transient:** The ranges within this ONF/L endure climatic extremes with hot summers and harsh winters. The views from these snow covered peaks down to the basin and its distinctive turquoise coloured lakes is spectacular. In low evening and morning light, long shadows accentuate the ridgelines, rock outcrops and the fine grassland textures. **Tāngata Whenua:** Danseys Pass and the Hawkdun ranges are important landscapes for tāngata whenua. **Shared and Recognised:** The area offers multiple opportunities for recreation providing remote experiences. Recreational activities provided in the Oteake Conservation Park include tramping, hunting, mountain biking, backcountry skiing, 4WD touring and horse trekking. **Historic:** The area has a strong heritage associated with pastoral farming, and a long history of gold mining, paticulary in the area around Guffies Creek and its catchments. The Mount Buster field is one of New Zealand's highest gold workings where the remnant pinnacles and outcrops that were created by hydraulic sluicing create are unique and dramatic landscape features. Danseys Pass, named after a large run holder William Dansey, formed an important connection between the Maniototo Plains and the Waitaki Valley when the Kyeburn River dredging and gold diggings were in use. While the landscape tells a story of furious activity, the only substantial building remaining is the Danseys Pass Coach Inn built in 1862.	Very high aesthetic, historic and transient landscape values and high natural science, shared and recognised and legibility landscape values.	Area contains the Oteake Conservation Park (DOC).

Kaikōura Peninsula and Coast — Kaikōura District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains Coastal Limestone Hills	The Kaikōura coastline, where the bush clad and mountainous slopes meet a rocky shore, is dramatic. State Highway 1 and the main railway line, which connect the Canterbury and Marlborough regions, wrap around this coast and are major scenic routes. Rolling hill country stretches alongside the coast. This rolling hill country is characterised by a patchwork of pattern of fields over green pastoral rolling hills and fertile lowland plains. This visual connection between the coast and the mountains in close proximity is a unique characteristic of this landscape. The Kaikōura Peninsula is a spectacular landform which protrudes sharply out from the coast. This is a landscape with spectacular legible rock platforms, which supports an abundance of wildlife.	**Natural Science:** The rocky and rugged Kaikōura coast and peninsula support a wide array of wildlife and many notable seal colonies. The northern section of the Kaikōura coastal hills has many Department of Conservation managed reserves with substantial areas of indigenous vegetation. **Legibility Values:** Shore platforms around Kaikōura Peninsula expose folded limestone layers. Several levels of marine terraces are preserved on the peninsula and nearby. **Aesthetic:** The rugged coastline and the peninsula are highly visible from the State Highway and have significant aesthetic values. Rocky shelves, stony beaches and limestone cliffs are attractive features of these landscapes. The close proximity of high peaks, steep slopes and the coast, as found along the northern part of the Seaward Kaikōura Range, is unique in the region and the South Island's East Coast. This mountain to sea linkage forms a highly attractive landscape when viewed from the coast and sea. **Transient:** Many seal colonies are found along the coast and peninsula. The abundance of wildlife present along the coast is a key feature. The landscapes of the mountains and the coast have high transient values. The snow covered peaks of the mountains are visible within close proximity to Kaikōura and the main state highway. **Tāngata Whenua:** The Kaikōura coast and peninsula are important mahinga kai areas. Coastal area was used by Māori during their travels north and south. Legend has it that Maui used the peninsula as a foothold to brace himself when he fished the North Island out of the sea. Many archaeological sites are located along the coast. Long association with the peninsula and evidence of this, such as pā sites, can be seen in the landscape today. **Shared and Recognised:** Important area for New Zealand domestic and international tourism. The entire coastal area is of high recreation and scenic value. **Historic:** The peninsula and coast have many significant archaeological sites associated with the historic whaling industry.	Very high natural science, legibility, shared and recognised, transient, aesthetic, tāngata whenua and historic landscape values	

Weka Pass — Hurunui District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Downlands and Foothills	The limestone outcrops of Weka Pass are highly legible landforms. The limestone outcrops are highly visible due to their proximity to State Highway 7, and have been affectionately named over many generations.	**Natural Science:** Important habitat for indigenous flora, in particular specialist limestone species. A number of internationally and regionally significant geopreservation sites. **Legibility:** Limestone outcrops are distinctive features, formed by weathering of folded and uplifted layers of marine rock. **Aesthetic:** The limestone outcrops have high aesthetic value. **Tāngata Whenua:** Concentration of Māori rock art sites and rock shelters. **Shared and Recognised:** Impressive views of these limestone outcrops can be obtained from State Highway 7, which is a major transit route. **Historic:** Historic features include the Weka Pass Railway. Pyramid Swamp is a nationally important archaeological site where moa bones were first discovered in 1938.	High aesthetic, tāngata whenua and legibility landscape values and also moderate to high shared and recognised and historic values.	

Motunau Island — Hurunui District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains	Motunau Island, with its distinctive flat top, lies 1.2 kilometres off the North Canterbury coast, south of NapeNape. It is the only major island located off the Canterbury coast.	**Natural Science:** Internationally important breeding colony for seabirds. Including the New Zealand white faced storm petrel, little blue penguins and the endemic white-flippered penguin/korora. The Island is free of introduced mammals. Three species of lizard including the regionally uncommon Leiolopsima lineocellatum are found on the island. Rocky shore platforms are used as a haul out area for fur seals/kekeno. This is the only off shore island in the Canterbury Region. **Legibility:** The island is an eroded remnant of the Motunau coastal plain, an uplifted wave-cut shore platform that flanks the adjacent coast. **Aesthetic:** Motunau Island has attractive sharp cliffs and a distinctive flat top. **Transient:** The richness of wildlife found on this island provides transient values, which can only be experienced in few places in New Zealand. **Historic:** Archaeological site. Island was once a whaling station.	Exceptional natural science and very high transient values	Island is a nature reserve (Department of Conservation).
Lower Waimakariri River and Gorge — Selwyn, Christchurch City and Waimakriri Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains	The Waimakariri River, extends across the Canterbury plains from its headwaters in the Southern Alps/Kā Tiritiri o te Moana to Brooklands Lagoon at the coast. The sinuous braided pattern of the Waimakariri River bed, which traverses through the patchwork of the plains landscape, is an iconic Canterbury landscape.	**Natural Science:** The river bed provides significant habitat for migratory fish species and indigenous birds. The Brooklands spit contains an important sequence of dune and interdune wetland communities. The lagoon provides a breeding habitat, wintering site and a feeding stop for many migrating bird species. **Legibility:** The major braided rivers of the Canterbury Plains are the best examples of their kind in New Zealand. The Waimakariri gorge is a highly legible landscape feature. **Aesthetic:** Sinuous braided patterning contrasts with the geometric patchwork of the plains. Visual/ physical connection from mountains to sea. **Transient:** The braided river systems are dynamic and constantly changing through flood events. **Tāngata Whenua:** The large braided rivers of Canterbury were part of a network of trails which linked the east and West Coast of the South Island. The Waimakariri River and Brooklands Lagoon were important mahinga kai and resource gathering areas for tāngata whenua. **Shared and Recognised:** Braided rivers are important elements of the Canterbury landscape. Sinuous braided pattern of the rivers has been recognised as distinctive and has inspired both literature and art. The wider river and lagoon area provide for many recreational activities, including jet boating, kayaking, rafting, fishing, and hunting and informal recreation. **Historic:** Extensive history of settlement along its river banks. Establishing bridges across the Canterbury rivers, in paticular the Waimakariri, and controlling the hazard from flooding were one of the key endeavours of early settlers.	High aesthetic, legibility, tāngata whenua, shared and recognised and moderate to high transient and natural science landscape values.	

Peninsula and Port Hills — Christchurch City and Selwyn Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Banks Peninsula	Banks Peninsula consists of the eroded remnants of two overlapping and long extinct volcanoes – the 'Lyttelton Volcano' and the 'Akaroa Volcano'. The Peninsula is a landscape which is highly expressive of its geological formation. This is a landscape of harbours, rocky cliffs and headlands. The Port Hills provide a significant backdrop to the City of Christchurch when viewed from areas of the Canterbury Plains. This rocky skyline is important as a contrast to the city and its lowland surrounds.	**Natural Science:** Very good examples of volcanic features in the world are found on the peninsula. Small fragmented pockets of native vegetation remain. There are reserves managed by the Department of Conservation, QEII Trust and the Banks Peninsula Conservation Trust. The peninsula supports a range of native invertebrates, lizards and bird communities. The coastline is of national significance for marine conservation. A marine reserve is located in Flea Bay and the Banks Peninsula Marine Mammal Sanctuary extends around the Banks Peninsula marine area to protect the endangered Hector's dolphin. **Legibility:** Banks Peninsula and Port Hills are highly expressive of their geological formation. Numerous volcanic features are found within this landscape. Several internationally important geo-preservation sites are located on the peninsula. The crater rims of the two ancient volcanoes are highly legible. **Aesthetic:** Prominent ridges and rocky coastline are key features of high aesthetic value. Contrast between the rugged 'wild' coast and the cultural landscape of the bays and harbours. The Port Hills provide a significant backdrop to the Canterbury Plains. **Transient:** Higher parts of Banks Peninsula and the Port Hills are snow covered in the winter months. Presence of wildlife dependent on the changing seasons. **Tāngata Whenua:** Tāngata whenua have a long spiritual and physical association with the peninsula landscape. Ripapa Island in Lyttelton Harbour/Whakaraupō has Tōpuni status. Many settlements, including pā, were established on the peninsula. Peninsula coast is an important mahinga kai area. **Shared and Recognised:** Banks Peninsula and Port Hills are valued landscapes by tourists and locals. Important recreational activities. Many paintings reflect the high aesthetic value of the peninsula. **Historic:** An important area historicallty for both Māori and Pakeha. Several settlements such as Akaroa and Little River have strong heritage values.	Areas of exceptional legibility, very high aesthetic and shared and recognised, tāngata whenua and historic landscape values, high natural science and moderate to high transient values.	Te Tai o Mahaanui (Banks Peninsula coastal area) is acknowledged in the Ngāi Tahu Claims Settlement Act 1998.

Lake Ellesmere/Te Waihora and Kaitorete Spit — Christchurch City and Selwyn Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains	Lake Ellesmere/Te Waihora is a large, shallow brackish coastal lake which is located immediately south of Banks Peninsula. It is Canterbury's largest and New Zealand's fifth largest lake – covering an area of about 20,000 ha — with approximately 75 kilometres of shoreline. The lake is one of the last major wetlands left on the Canterbury Plains. The lake is bounded on its eastern edge by Kaitorete Spit. Kaitorete Spit is considered to be of national importance by geomorphologists and is the largest landform of its kind in New Zealand.	**Natural Science:** Significant habitat for a range of indigenous flora and fauna. Many notable rare plants along the lake shore. Kaitorete Spit is the largest landform of its kind in New Zealand with indigenous specialised plants along the shore. **Legibility:** Lake Ellesmere was formerly a large bay, now enclosed by Kaitorete Spit, a barrier of beach gravel swept northward from the rivers and coastal cliffs further south. Gravel ridges parallel to the present-day coast are highly legible at Birdlings Flat. The barrier is continuing to grow, and has enclosed Lake Forsyth (Wairewa) in the last 150 years. Geomorphologists consider Kaitorete Spit to be of national importance. **Transient:** Seasonal changes are reflected by the changes in the wildlife that are present on the lake. **Tāngata Whenua:** Great significance to tāngata whenua. Highly valued for mahinga kai.	Exceptional natural science, tāngata whenua, very high transient and high legibility landscape values.	National Water Conservation Order (1990) for Lake Ellesmere/ Te Waihora.

Lower Rakaia River and Gorge — Selwyn and Ashburton Districts				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains	The Rakaia River, extends across the Canterbury plains from its headwaters in the Southern Alps/Kā Tiritiri o te Moana to the sea. The Rakaia River is characterised by its distinctive, extensive and constantly-evolving braiding patterning. As it traverses the plains, extensive terracing is as wide as 2 kilometres in places. The Rakaia Gorge is an impressive landscape with its highly legible sequence of grassed terrace flats.	**Natural Science:** The Rakaia River provides significant habitat for many fish species and indigenous braided river birds. **Legibility:** The major braided rivers of the Canterbury Plains are the best examples of their kind in New Zealand. The Rakaia gorge and adjacent river terraces are highly legible landscape features. **Aesthetic:** Sinuous braided patterning set against the patchwork of the plains. Views through to the Southern Alps/Kā Tiritiri o te Moana behind. **Transient:** The braided river systems are dynamic and are constantly changing in flood events. **Tāngata Whenua:** The large braided rivers of the plains were a part of a network of trails which linked the East and West Coast of the South Island. The Rakaia River is an important mahinga kai and resource gathering area for tāngata whenua. **Shared and Recognised:** Braided rivers are an important element of the Canterbury landscape. Sinuous braided pattern of the rivers has been recognised as distinctive and has inspired both literature and art. The river provides for many recreational activities, including jet boating, kayaking, rafting, fishing and hunting. **Historic:** Extensive history of rural settlement along its river banks. For generations the Rakaia River has been an important water resource in the region, in particular for irrigation.	High natural science, legibility, shared and recognised and aesthetic landscape values. This landscape is also of great importance to tāngata whenua.	Rakaia River National Water Conservation Order (1988).
Wainono Lagoon — Waimate District				
Landscape Type(s)	**Landscape Description**	**Key ONF/L Values**	**Evaluation**	**Additional Info**
Low Altitude Plains	The Wainono Lagoon (near the coast at Waimate) is a complex interaction of groundwater, lagoon inflows and outflows, river flows, and coastal processes. The natural mouth of the Waihao River is artificially maintained at the coast by the Waihao Box. The Wainono Lagoon is the second largest wetland on the Canterbury Plains.	**Natural Science:** Significant habitat for many important wildlife species, including waterfowl, migratory birds, coastal birds and native fish. Supports many threatened bird species including the wrybill / ngutupare, royal spoonbill and white heron/kotuku. **Legibility:** Wainono Lagoon is a former bay on the coastline, now enclosed by a gravel barrier formed from material eroded from the seaward edge of the Waitaki Plains. Wainono Lagoon is like a small version of Lake Ellesmere. **Tāngata Whenua:** Important mahinga kai area for tāngata whenua.	Exceptional natural science, very high transient and high tāngata whenua landscape values.	International importance under the RAMSAR Wetland Convention.

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