

## Chapter 4: Water

### Introduction

This chapter of the RPS is concerned with fresh water. Fresh water is considered within the RPS in three parts – water quality, water quantity, and management of the beds of lakes and rivers. Consideration of water quality and water quantity includes both surface water and groundwater. Each part of this chapter outlines the significant resource management issues for water in the region, and the objectives, policies and methods to address those issues, all with the aim of sustainably managing the water resources of the Southland region. Management of water in the coastal marine area is addressed in Chapter 7: Coast, and the majority of issues relating to wetlands are addressed in Chapter 6: Biodiversity, of the RPS. However, the water quality and water quantity provisions of Chapter 4: Water are relevant to wetlands, as are the river and lake bed provisions where wetlands are located in the beds of lakes and rivers. Other chapters in the RPS also address issues that relate to, or influence fresh water, such as Chapter 5: Rural Land/Soils, Chapter 8: Natural Hazards, Chapter 13: Solid Waste, Chapter 16: Energy and Chapter 17: Urban. This chapter should be read in association with these other chapters. It is also important to refer to Chapter 3: Tangata Whenua, which sets out the resource management provisions to resolve the resource management issues of significance to Ngāi Tahu as tangata whenua of the Southland Region.

To tangata whenua, water is a taonga for which they hold the kaitiaki responsibility to ensure it is passed on to future generations in as good as, if not better, condition than it was received by the current generation. Ngāi Tahu's particular cultural, spiritual, historical and traditional associations with a number of water bodies are recognised under Statutory Acknowledgements pursuant to the Ngāi Tahu Claims Settlement Act 1998. In addition, under the Customary Fishing Regulations 1998, mātaihai reserves can be established on traditional fishing grounds for the purpose of recognising and providing for customary management practices and food gathering. A freshwater mātaihai reserve is in place on the Mataura River above, at and below, the Mataura Falls.

To resource users such as industry, the agricultural sector and local communities, water sustains their social, economic and cultural wellbeing. To the whole regional community, water represents a significant recreational and natural asset that has intrinsic values just through its existence.

There are four major river catchments in Southland – the Waiau, Aparima, Ōreti and Mataura catchments, which cover 54% of the land area of the region. Numerous smaller catchments cover the balance of the region, in the Fiordland and Rakiura National Parks, the lower Southland Plains and the Catlins. It is also important to recognise the importance of high altitude lands as a source of water for Southland.

Two Water Conservation Orders apply in the region – the Water Conservation (Mataura River) Order 1997 and the Water Conservation (Oreti River) Order 2008. Both identify features or values of the rivers that are considered to be outstanding. A consent authority is not to grant a resource consent if it would be contrary to any restriction contained in a water conservation order, and shall not grant a resource consent unless the provisions of a water conservation order can remain without change or variation. When granting a consent, conditions are to be imposed to ensure that the provisions of water conservation orders are maintained. The objectives and policies in this RPS have been written to be consistent with the two water conservation orders that exist in the region.

The National Policy Statement for Freshwater Management 2014 (NPS-FM) sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within water quantity and quality limits. This RPS must give effect to

the NPS-FM, as well as any other relevant National Policy Statements. The approach taken by the RPS is to specify that water quality will be maintained as a bottom line and then put in place a process for setting freshwater objectives in accordance with the NPS-FM. This RPS seeks to maintain water quality, as a minimum. The setting of freshwater objectives will identify areas where water quality needs to be improved. This approach recognises that Southland's freshwater is very closely connected to coastal water with estuaries at the bottom of each main stem river. The New Zealand Coastal Policy Statement 2010 (NZCPS) sets a similar standard to that adopted in this RPS, which is to require coastal water quality to be maintained as a minimum.

## **Part A: Water Quality**

Managing water quality remains a challenge within Southland. In the past, point source discharges directly to the region's rivers and streams have been the source of much of the contamination. While point source discharges continue to add some contamination to surface water, non-point source discharges are now the bigger issue. The second generation RPS will seek to address these in a way that recognises the complexity of managing these discharges, and provide a variety of methods to work in partnership with the community to work towards maintaining and improving water quality in Southland.

A general trend throughout the region for surface water is that quality decreases from the headwaters to lower catchment areas. While groundwater quality is generally good, in 2012 22% of defined aquifer zones had groundwater nitrate levels that showed evidence of significant land use impacts.

In rivers and streams where both nitrogen and phosphorus levels are high there is an increased risk of excessive algae growth during summer low flows. Monitoring over the last ten years has demonstrated a trend of steadily increasing levels of nitrogen in many waterways, particularly in the areas where more intensive land use is occurring. Water temperatures generally increase in lower catchment areas. Changes in water quality can affect downstream environments such as estuaries and coastal lagoons. These types of changes lead to ecosystem health decreases, reflecting the influence of increasing land use intensification and the effects of point source and non-point source discharges. Water quality can also be affected to such an extent that it is considered unsafe to swim and undertake other contact recreation activities, due to elevated bacteria levels.

A number of human activities cause adverse effects on water quality in Southland. Many of the activities result in nutrient leakage from land to surface and groundwater. Activities affecting water quality can include:

- direct discharges of contaminants (including industrial, municipal and agricultural wastes) to surface water and to land;
- intensive farming – particularly dairy and deer farming, and winter grazing of forage crops;
- stock access to waterways;
- flood and drainage works in river and stream beds;
- gravel extraction and quarrying adjacent to river beds;
- land development leading to increased discharges of sediment and stormwater to local surface waterways.

Further to this, Southland contains nationally significant deposits of coal, lignite and gas. Development of these resources has the potential to have significant adverse effects on water quality as well.

Extraction of large quantities of water can also reduce levels and flows of water in rivers and streams with consequent effects on water quality as the volume of water available to dilute contaminants decreases. While management of flows and levels in surface waterbodies can assist management of water quality, it should not be relied on, and direct causes of contamination and decreasing water quality should be addressed.

Where possible, an effects based approach is the preferred approach to managing water quality. However, where it is known that land use activities are causing non-point source discharges that are affecting water quality and which need to be managed, it is appropriate to focus on managing the activities themselves.

**Table 2: Overview of Water Quality provisions**

<b>Issues</b>	<b>Objectives</b>	<b>Policies</b>	<b>Methods</b>
<b>Issue WQUAL.1</b>	<b>Objective WQUAL.1</b> Water quality goals	<b>Policy WQUAL.1</b> Overall management of water quality	<b>Methods WQUAL.1 – 16</b>
		<b>Policy WQUAL.2</b> All waterbodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.3</b> Wetlands and outstanding freshwater bodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.4</b> Awarua Wetland	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.5</b> Improve catchment water quality	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.6</b> Water in natural state	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.7</b> Social, economic and cultural benefits	<b>Methods WQUAL. 1, 2, 4 - 16</b>
		<b>Policy WQUAL.8</b> Preference for discharge to land	<b>Methods WQUAL.1, 4, 8, 16</b>
		<b>Policy WQUAL.9</b> Untreated human and animal wastes	<b>Methods WQUAL.1, 2, 4, 5, 7, 8, 10 - 16</b>
		<b>Policy WQUAL.10</b> Siting and operation	<b>Methods WQUAL.1, 4, 5, 8, 10, 11, 13 - 16</b>
		<b>Policy WQUAL.11</b> Sources of community water supplies	<b>Methods WQUAL.1, 2, 5, 6, 11, 12, 14 - 16</b>
	<b>Policy WQUAL.12</b> Integrated management	<b>Methods WQUAL.1, 4 - 16</b>	
	<b>Objective WQUAL.2</b> Lowland water bodies	<b>Policy WQUAL.1</b> Overall management of water quality	<b>Methods WQUAL.1 – 16</b>

Issues	Objectives	Policies	Methods
		<b>Policy WQUAL.2</b> All waterbodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.3</b> Wetlands and outstanding freshwater bodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.4</b> Awarua Wetland	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.5</b> Improve catchment water quality	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.6</b> Water in natural state	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.7</b> Social, economic and cultural benefits	<b>Methods WQUAL. 1, 2, 4 - 16</b>
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		<b>Policy WQUAL.10</b> Siting and operation	<b>Methods WQUAL.1, 4, 5, 8, 10, 11, 13 – 16</b>
		<b>Policy WQUAL.11</b> Sources of community water supplies	<b>Methods WQUAL.1, 2, 5, 6, 11 - 12, 14 - 16</b>
		<b>Policy WQUAL.12</b> Integrated management	<b>Methods WQUAL.1, 4 - 16</b>
<b>Issue WQUAL.2</b>	<b>Objective WQUAL.1</b> Water quality goals	<b>Policy WQUAL.1</b> Overall management of water quality	<b>Methods WQUAL.1 – 16</b>
		<b>Policy WQUAL.2</b> All waterbodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.3</b>	<b>Methods WQUAL.1 - 16</b>

Issues	Objectives	Policies	Methods
		Wetlands and outstanding freshwater bodies	
		<b>Policy WQUAL.4</b> Awarua Wetland	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.5</b> Improve catchment water quality	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.6</b> Water in natural state	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.7</b> Social, economic and cultural benefits	<b>Methods WQUAL. 1, 2, 4 - 16</b>
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		<b>Policy WQUAL.9</b> Untreated human and animal wastes	<b>Methods WQUAL.1, 2, 4, 5, 7, 8, 10 - 16</b>
		<b>Policy WQUAL.11</b> Sources of community water supplies	<b>Methods WQUAL.1, 2, 5, 6, 11, 12, 14 - 16</b>
		<b>Policy WQUAL.12</b> Integrated management	<b>Methods WQUAL.1, 4 - 16</b>
	<b>Objective WQUAL.2</b> Lowland water bodies	<b>Policy WQUAL.1</b> Overall management of water quality	<b>Methods WQUAL.1 – 16</b>
		<b>Policy WQUAL.2</b> All waterbodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.3</b> Wetlands and outstanding freshwater bodies	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.4</b> Awarua Wetland	<b>Methods WQUAL.1 - 16</b>
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		<b>Policy WQUAL.6</b>	<b>Methods WQUAL.1 -7, 9 - 16</b>

Issues	Objectives	Policies	Methods
		Water in natural state	
		<b>Policy WQUAL.7</b> Social, economic and cultural benefits	<b>Methods WQUAL. 1, 2, 4 - 16</b>
		<b>Policy WQUAL.8</b> Preference for discharge to land	<b>Methods WQUAL.1, 4, 8, 16</b>
		<b>Policy WQUAL.9</b> Untreated human and animal wastes	<b>Methods WQUAL.1, 2, 4, 5, 7, 8, 10 - 16</b>
		<b>Policy WQUAL.11</b> Sources of community water supplies	<b>Methods WQUAL.1, 2, 5, 6, 11, 12, 14 - 16</b>
		<b>Policy WQUAL.12</b> Integrated management	<b>Methods WQUAL.1, 4 - 16</b>
	<b>Objective WQUAL.3</b> Water in natural state	<b>Policy WQUAL.6</b> Water in Natural State	<b>Methods WQUAL.1 -7, 9 - 16</b>
<b>Issue WQUAL.3</b>	<b>Objective WQUAL.1</b> Water quality goals	<b>Policy WQUAL.1</b> Overall management of water quality	<b>Methods WQUAL.1 - 16</b>
		<b>Policy WQUAL.5</b> Improve catchment water quality	<b>Methods WQUAL.1 -7, 9 - 16</b>
		<b>Policy WQUAL.14</b> Information gathering	<b>Methods WQUAL.1 - 3, 5, 6, 10, 12 - 16</b>

## 4.1 ISSUES

### Issue WQUAL.1

Good water quality and use of the assimilative capacity of water contribute to the social, economic and cultural wellbeing of Southland people and communities, but current and past discharges of contaminants, and land use and development are affecting the quality of Southland's surface and groundwater. Effects vary across the region and over time but are particularly apparent in lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands. Such discharges of contaminants, and land use and development can result in:

- microbiological contamination of waterways reducing recreation, cultural values, in particular tangata whenua cultural values, and drinking water quality;
- excessive nutrients causing nuisance algae and loss of drinking water quality, and affecting fisheries, ecosystems and natural character;
- sediment affecting fisheries, ecosystems and natural character.

### Issue WQUAL.2

The effects of non-point source discharges on water quality in Southland are a significant and complex issue to manage.

### Issue WQUAL.3

Further information on the state of some water resources and on the effects of land use and development on water quality is needed for informed decision making.

## 4.2 OBJECTIVES

### Objective WQUAL.1 – Water quality goals

Water quality in the region:

- (a) safeguards the life-supporting capacity of water and related ecosystems;
- (b) safeguards the health of people and communities;
- (c) is maintained, or improved in accordance with freshwater objectives formulated under the National Policy Statement for Freshwater Management 2014;
- (d) is managed to meet the reasonably foreseeable social, economic and cultural needs of future generations.

### *Explanation/Principal Reasons*

Objective WQUAL.1 sets out the overall framework for the management of water quality in Southland. It recognises that water quality has a significant effect on the life-supporting capacity of water and related ecosystems, and that safeguarding life-supporting capacity is required by the Act. It also requires that the health of people and communities is safeguarded in accordance with the NPS-FM.

In some areas in Southland, water quality is degraded. The situation has worsened with respect to some contaminants in some waterways and has improved for other contaminants since the last RPS became operative. Objective WQUAL.1 therefore sets an ambitious goal to maintain water quality, or improve it in accordance with freshwater objectives formulated in accordance with the NPS-FM. This recognises that freshwater objectives may vary across the region. Objective WQUAL.1 recognises that water quality affects how people use water and recognises the importance of safeguarding, maintaining and improving water quality to provide for the needs of future generations. The objective also recognises that people make use of water to provide for their social, economic and cultural wellbeing, and that this should be recognised in its management.

Water quality and water quantity are closely linked. Objective WQUAN.1 therefore includes reference to maintaining flows and levels for water quality purposes in order to provide a link to Objective WQUAL.1.

#### **Objective WQUAL.2 – Lowland water bodies**

Halt the decline, and improve water quality in lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands in accordance with freshwater objectives formulated in accordance with the National Policy Statement for Freshwater Management 2014.

#### ***Explanation/Principal Reasons***

Surface water bodies throughout Southland have been classified by Southland Regional Council based on the River Environment Classification system developed by NIWA, adapted for specific Southland circumstances. Lowland water bodies are generally those found on the central plains and coastal areas, where the source rises at low elevations (below 400 metres above sea level). Lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands typically have lower water quality because land uses within their catchments tend to be more intensive and the lower elevation of the source means that all parts of the catchment are affected.

While point source discharges to land and water are or have been managed through resource consent conditions and a series of plan changes to the Regional Water Plan for Southland (Water Plan), the cumulative effects of land use can cause water quality issues in lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands. Objective WQUAL.2 aims to address Issue WQUAL.1 and avoid continued decline in the water quality of lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands. A whole of catchment approach will need to be taken to management of water quality in lowland water bodies, to recognise the effects of activities throughout the catchment on water quality. Depending on the water quality issue and its causes in any given catchment, improvements in water quality may take some time to be realised.

#### **Objective WQUAL.3 – Water in natural state**

Maintain the quality of water where it is in its natural state.

#### ***Explanation/Principal Reasons***

The objective provides specific recognition of those areas where water quality is in its natural state. Within these areas the overall water quality is of a high standard and is generally low in nutrients, as it is largely unmodified or unaffected by point and non-point discharges.

## **4.3 POLICIES**

#### **Policy WQUAL.1 – Overall management of water quality**

- (a) Identify values of surface water, groundwater, and water in coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands, and formulate freshwater objectives in accordance with the National Policy Statement for Freshwater Management 2014; and
- (b) Manage discharges and land use activities to maintain or improve water quality to ensure freshwater objectives in freshwater management units are met.

### ***Explanation/Principal Reasons***

Policy WQUAL.1 outlines the overall framework for managing water quality within Southland. The policy recognises that waterbodies in the region each have specific values (including cultural values, particularly tangata whenua cultural values), which vary depending on factors such as waterbody type (for example, lowland soft bedded streams versus rocky mountain streams), location (for example, headwaters or lower catchment areas), existing ecosystems and human uses. It is necessary to identify those values to set the basis on which water quality can be managed. Statutory Acknowledgements will also be relevant considerations. The aim for water quality should be to formulate freshwater objectives that recognise agreed community values associated with a particular water body, including the instream values most likely to be present in that water body.

Policy WQUAL.1 also sets out that the approach to water quality in the region will be to manage discharges and land use activities to maintain water quality or improve it so that freshwater objectives are met.

### **Policy WQUAL.2 – All waterbodies**

Maintain or improve water quality, having particular regard to the following contaminants:

- (a) nitrogen;
- (b) phosphorus;
- (c) sediment;
- (d) microbiological contaminants.

### ***Explanation/Principal Reasons***

The major contaminants of concern in relation to water quality in Southland are those listed in Policy WQUAL.2, which arise from both point-source and non-point source discharges. Point-source discharges of contaminants, such as those from wastewater treatment plants, industrial sites and production land contribute to levels of nitrogen, phosphorus, sediment and microorganisms in surface water and groundwater. Non-point source discharges from land use activities contribute contaminants to groundwater, and contaminated groundwater can then affect surface water quality. Method WQUAL.1 provides for timeframes for improvements to meet freshwater objectives.

Managing activities that give rise to these contaminants will assist the Southland Regional Council to meet Objectives WQUAL.1 and WQUAL.2. Without this management it will not be possible to maintain water quality throughout the region. Depending on the water quality issue and its causes in any given catchment, improvements in water quality may take some time to be realised.

Policy WQUAL.2 lists the priority contaminants that need to be addressed. Additional contaminants may also need to be focused on in some areas.

### **Policy WQUAL.3 – Wetlands and outstanding freshwater bodies**

Identify and protect the significant values of wetlands and outstanding freshwater bodies.

### ***Explanation/Principal Reasons***

Policy WQUAL.1 sets out the approach to managing water quality in the region through the formulation of freshwater objectives in accordance with the NPS-FM. Policy WQUAL.3 highlights that as part of this process, the significant values of wetlands and outstanding freshwater bodies will need to be identified and protected.

Wetlands form a significant part of the ecological character of Southland, and have an important role in maintaining water quality. Several of Southland's wetlands are of international or national significance, for example, the Waituna wetlands and the Te Anau string bogs.

The NPS-FM specifies that outstanding freshwater bodies are those water bodies identified in a regional policy statement or regional plan as having outstanding values, including ecological, landscape, recreational and spiritual values.

#### **Policy WQUAL.4 – Awarua Wetland**

Enhance the water quality of the Awarua Wetland by ensuring that discharges of contaminants and land use activities both individually and on a cumulative basis have no more than minor adverse effects on the significant characteristics and water quality of the Awarua Wetland.

#### ***Explanation/Principal Reasons***

This policy sets the overall threshold for managing activities within the Awarua Wetland. Awarua Wetland is recognised for its international significance under the Convention on Wetlands of International Importance (also known as the Ramsar Convention) and is currently degraded as a result of deteriorating water quality. In order to protect the values of this wetland water quality should be enhanced. This will occur through the FMU process under the NPS-FM. The Ramsar Convention designation includes a map and geographic coordinates specifying the boundary of the Awarua Wetland.

#### **Policy WQUAL.5 – Improve catchment water quality**

Improve water quality by:

- (a) identifying water bodies that are not meeting freshwater objectives, including identifying priority freshwater management units;
- (b) specifying targets to improve water quality within those water bodies within defined timeframes;
- (c) implementing management frameworks to meet the targets taking into account;
  - (i) the values supported by the water body/ies;
  - (ii) national or legislative standards and requirements;
  - (iii) the benefits and costs associated with achieving improvement in water quality.

#### ***Explanation/Principal Reasons***

Policy WQUAL.1 directs that discharges and land use activities are to be managed to ensure freshwater objectives are met. In order to achieve improvements in water quality to a point where freshwater objectives can be met it may, however, be necessary to undertake more specific management of activities in some catchments. More specific management actions will generally be necessary where water quality is significantly degraded and there is a more urgent need to improve it. For these catchments or waterbodies a timeframe should also be set by which measureable improvements in water quality will be achieved. Timeframes are necessary in order to provide certainty that degraded water quality will be addressed. Improvements in water quality may take some time to be realised depending on the water quality issue and its causes in any given catchment.

#### **Policy WQUAL.6 – Water in natural state**

To manage discharges and land use activities to maintain the quality of water and the associated values where it is in its natural state.

***Explanation/Principal Reasons***

This policy works within the overall framework of Policy WQUAL.1 and explicitly recognises the existing values associated with areas where the water quality is in its natural state. The policy recognises that this existing high water quality is to be maintained.

**Policy WQUAL.7 – Social, economic and cultural benefits**

Recognise the social, economic and cultural benefits that may be derived from the use, development or protection of water resources.

***Explanation/Principal Reasons***

The use, development or protection of water resources can result in social, economic and cultural benefits at local, regional and national levels. It is important to recognise these potential benefits when managing water.

**Policy WQUAL.8 – Preference for discharge to land**

Prefer discharges of contaminants to land over discharges of contaminants to water, where:

- (a) a discharge to land is practicable;
- (b) the adverse effects associated with a discharge to land are less than a discharge to water.

***Explanation/Principal Reasons***

There are benefits from discharging contaminants to land rather than water. It avoids direct discharge of contaminants to surface water bodies, and enables natural processes (such as filtration, absorption and plant uptake) to reduce overall contaminant loads. Policy WQUAL.8 is a further development of policies contained within the previous RPS, with a definite preference now expressed for discharges to land. The policy recognises that a discharge to land may not always be practicable and that there are some situations where a discharge to water may be a more suitable option.

**Policy WQUAL.9 – Untreated human and animal wastes**

Avoid the direct discharge of sewage, wastewater, industrial and trade waste and agricultural effluent to water unless these discharges have undergone treatment.

***Explanation/Principal Reasons***

Discharges of untreated human and animal wastes to water can significantly raise the level of microbial contamination and increase the risk of disease if the water is used for drinking or contact recreation. Furthermore, such discharges are culturally offensive to many people, particularly tāngata whenua. Treatment methods are available, as are alternative disposal methods, such as discharge to land. This policy clearly indicates that discharge directly to water from any source, including from boats, is not acceptable.

**Policy WQUAL.10 – Siting and operation**

Manage the siting and operation of activities that result in point source discharges of contaminants to land to ensure that adverse effects on groundwater, surface water and coastal water quality are avoided, remedied or mitigated.

***Explanation/Principal Reasons***

Siting and operation of activities may in part be dictated by the location of the resource to be developed. Management of the operations to avoid, remedy or mitigate the effects of the activity provides the mechanism to achieve appropriate water quality for the relevant water body.

### **Policy WQUAL.11 – Sources of community water supplies**

Avoid, as far as practicable, remedy or mitigate the risks that the adverse effects of land use activities and discharges of contaminants have on the sources of community water supplies.

#### ***Explanation/Principal Reasons***

Community water supplies are a value of surface water and groundwater that needs to be recognised in order to ensure that the needs of existing and future generations can be met, as sought by Objective WQUAL.1. Land use activities and discharges of contaminants can pose risks to the water quality of sources of community water supplies, and therefore risks to the supplies themselves. The Southland Regional Council is conscious of the need to manage risks to the sources of community water supplies. Effects of land use activities and discharges of contaminants can be recognised by local authorities through consideration of resource consent applications, and when developing new plan provisions. Method WQUAL.15(b) outlines further ways in which the risks can be managed. The National Environmental Standard for Sources of Human Drinking Water 2008 also provides protection to sources of water for community supplies.

### **Policy WQUAL.12 – Integrated management**

Integrate the management of land use, water quality, water quantity, coast and air, and the use, development and protection of resources wherever possible to achieve the freshwater objectives formulated in accordance with Policy WQUAL.1.

#### ***Explanation/Principal Reasons***

Integrated management offers an opportunity to address in a more co-ordinated way the various activities occurring within surface water or groundwater catchment areas on land, water, coast and air and their effects on water quality. The policy has been adopted to give effect to Objective WQUAL.1.

### **Policy WQUAL.13 – Information gathering**

Continue to improve knowledge and understanding of water resources, and the relationship of land use activities with water quality values in water bodies, in Southland to promote the sustainable management of water.

#### ***Explanation/Principal Reasons***

The Southland Regional Council has been monitoring water quality in the region for a number of years, but changing resource use and the emergence of new water quality issues mean there is always a need to improve the information available to decision makers, resource users and the community.

## **4.4 METHODS**

### **The Southland Regional Council will:**

#### **Method WQUAL.1 – Regional plans**

Establish and maintain provisions in regional plans in accordance with the National Policy Statement for Freshwater Management 2014 that:

- (a) identify freshwater management units;
- (b) identify compulsory, national and regional values for each unit for which water quality is to be managed;
- (c) establish freshwater objectives, based on the identified values;
- (d) set limits or targets to allow the freshwater objectives to be met;

- (e) manage land use activities and discharges of contaminants to stay within limits and meet targets;
- (f) determine timeframes and appropriate methods for the improvement of degraded freshwater management units;
- (g) in implementing the matters outlined in (a) to (f) above, the Southland Regional Council will work with tangata whenua, the community, territorial authorities, industry, stakeholders and the agricultural sector.

#### **Method WQUAL.2 – Research and investigations**

Undertake research and investigations:

- (a) to maintain an up to date understanding of the values that surface and groundwater in the region can support;
- (b) into the effects of land use on water quality and the effectiveness, efficiency and costs of different mitigation options.

#### **Method WQUAL.3 – Monitoring**

Monitor surface and groundwater quality and ecosystem health in order to assess whether water quality is being maintained and/or improved.

#### **Method WQUAL.4 – Consents**

Use consent conditions on discharge permits to manage the contaminants that can be discharged.

#### **Method WQUAL.5 – Information and advice**

Provide information and advice to territorial authorities, consent holders and the community on good management practices to reduce the effects of land use on water quality.

#### **Method WQUAL.6 – Land use effects on water quality**

- (a)
  - (i) Analyse the region-wide evaluation of the state, trends and pressures on water quality;
  - (ii) Prepare a timetable for setting freshwater objectives and water quality limits (or water quality targets where water quality limits are not met) for all freshwater management units in the region, including the identification of priority units that require specific or immediate management through a regional plan process;
  - (iii) Establish a regional policy framework to avoid over-allocation, or where over-allocation has occurred to specify targets and methods to meet these targets within defined timeframes. The framework shall address the priority freshwater management units in the first instance and all others according to the timetable identified in (a)(ii) above;
- (b) For priority freshwater management units, according to the timetable defined above, develop a policy framework that includes:
  - (i) setting fresh water quality limits (or water quality targets where water quality limits are not being met);
  - (ii) determining the best approach to avoiding over-allocation;
  - (iii) where over-allocation has occurred and water quality targets are set, providing timeframes by which those targets are to be met;
  - (iv) regular reporting on changes in water quality over the life of the Regional Policy Statement;
- (c) In implementing the matters outlined in (a) and (b) above, the Southland Regional Council will work with tangata whenua, the community, territorial authorities, industry, stakeholders and the agricultural sector.

**Method WQUAL.7 – Management of activities that affect water quality**

- (a) Using the region-wide evaluation prepared under Method 6(a)(i) above, identify activities that require a review of the existing policy framework to address their effects on water quality.
- (b) Initiate a series of plan changes as required to the Regional Water Plan for Southland to address activities identified in (a), including by reducing losses to water of nitrogen, phosphorus, sediment and microbiological contaminants.

**Method WQUAL.8 – Discharges to land**

When preparing regional plans and in considering resource consent applications, consider whether discharges of contaminants to land are practicable as opposed to discharges to water.

**Method WQUAL.9 – Land use rules**

Consider the use of regional rules, including permitted activity rules, to manage land use and/or land use change where the cumulative effects of non-point source discharges are a significant contributor to decreases in water quality.

**Method WQUAL.10 – Collaboration**

Work collaboratively with tangata whenua, the community, territorial authorities, industry, stakeholders and the agricultural sector to ensure discharges are appropriately sited and managed.

**Method WQUAL.11 – Integrated management**

When preparing regional plans and in considering resource consent applications, consider the interrelationships between water quality, water quantity and land use activities, and wherever possible, develop integrated planning frameworks.

**Method WQUAL.12 – Good management practice**

Provide information and advice to the community on land management practices that will assist to maintain or improve water quality, and align this advice with industry resources and programmes where appropriate.

**Territorial authorities will:****Method WQUAL.13 – District plans**

Establish and maintain provisions in district plans to manage the effects of subdivision, use and development on water quality, including by, but not limited to:

- (a) controlling the location, density, design and standard of land use and development, including by developing subdivision and design standards to guide high quality land development and guide resource management decisions that avoid or mitigate adverse effects;
- (b) promoting land use, development and management practices that maintain or improve water quality;
- (c) ensuring that urban development cannot occur without the appropriate infrastructure capacity to support it;
- (d) encouraging urban growth within urban areas of Southland that have existing infrastructure capacity where possible.

**Local authorities will be encouraged to:****Method WQUAL.14 – Good management practice**

Work in partnership with landowners and other organisations to promote good management practices that maintain or improve water quality.

#### **Method WQUAL.15 – Collaboration**

- (a) Collaborate to manage the effects of land use on water quality through:
  - (i) developing complementary district and regional plan provisions;
  - (ii) regular liaison and sharing information on water quality matters of common interest;
  - (iii) presenting joint information to the community about water quality issues and their management;
- (b) Work collaboratively to:
  - (i) undertake research and investigations into the identification and management of groundwater protection zones for sources of community water supplies;
  - (ii) identify and implement complementary plan provisions or other mechanisms to manage the risks that land use activities could have on the sources of community water supplies;
- (c) Work collaboratively with each other, the community, industry and the agricultural sector to develop codes of practice and programmes to improve water quality.

#### **Method WQUAL.16 – Other methods**

Collaborate with other local authorities, tangata whenua, the community, industry, stakeholders and the agricultural sector to investigate additional methods that may be used to implement the policies of this chapter of the RPS.

#### ***Explanation/Principal Reasons***

Under Section 30 of the Act, the Southland Regional Council has responsibility for controlling the discharge of contaminants into or onto land, air or water and discharges of water into water. The Southland Regional Council also has the responsibility for controlling the use of land for the purpose of maintaining or enhancing the quality of water in water bodies. The 2005 amendments to the Act gave the Southland Regional Council further new responsibilities for establishing rules in regional plans to allocate the capacity of water to assimilate a discharge of a contaminant (if appropriate). The NPS-FM contains further requirements for regional councils to maintain or improve the overall quality of fresh water within their regions.

Territorial authorities have the function of controlling any actual or potential effects of the use, development or protection of land, which will include any effects on water quality that may arise from the use, development or protection of land. All councils in Southland therefore have statutory responsibilities that relate to the management of water quality.

Managing water quality remains a challenge within Southland, with non-point source discharges of significant concern. A general trend through the region for surface water is that quality decreases from the headwaters to lower catchment areas. While groundwater quality is generally good, nitrate levels are elevated in many parts of Southland.

The primary means of managing the effects of discharges of contaminants on water quality will be through the Water Plan. The Southland Regional Council has developed an adaptive approach to the Water Plan, updating it as necessary to address emerging activities and water quality issues. This approach is supported by the methods of this chapter, and is particularly recognised by the method that requires a regional evaluation of degraded water bodies to be undertaken, and specific management approaches adopted for prioritised areas.

District plans prepared by the region's territorial authorities can also assist in managing water quality through setting out provisions to control effects of land use and development, such as through stormwater and on-site wastewater management.

Other methods which support the regional and district plans:

- monitoring, research and investigations to support the ongoing adaptation of management to water quality issues that arise;
- provision of information and advice to territorial authorities, consent holders and the community; and
- collaboration in the preparation of plans.

Many of the methods for implementing the WQUAL objectives and policies will involve close liaison and collaboration with the community and stakeholders, and this will be critical to their success.

Promoting land management practices that improve water quality could include such measures as provision of information and education, and assistance with implementing good management practices for different types of land uses. While lacking the enforcement powers of rules contained in plans, these types of methods can make a valuable contribution to managing water quality issues through the relationships that they build between the region's water quality stakeholders and the innovative solutions that can arise from these relationships, and through providing a robust foundation for future plan provisions.

## **Part B: Water Quantity**

Until recently, Southland was not generally considered to be water short. However, the water resource in the region is finite, and at times, as a result of climatic conditions and existing abstraction, is under stress.

Abstraction of groundwater has generally been preferred over surface water, and the majority of consents for water takes in the region are from groundwater. While abstraction of water is not large in a national context, demand for water has increased significantly since 2000, particularly for irrigation. With land intensification and the need for more efficient production to remain competitive, irrigation is increasingly being used in the region as a tool to increase reliability of production.

Compared to other regions (particularly Canterbury and Otago) the amount of irrigation in Southland is still relatively small. Water is used for irrigation in Southland to provide insurance for pasture growth against dry periods, as opposed to being for increased production (as it generally is in Canterbury). However, the groundwater resources in Southland are considerably more limited than those in other areas of the country, and groundwater takes are tending to be concentrated within relatively confined areas (for example Riversdale and Five Rivers in northern Southland). This increases the potential for adverse effects.

The major allocation of water in the region is for generation of hydro-electric power in the Waiau catchment. The flows in the lower Waiau River are significantly modified by the Manapōuri hydro-electricity generation scheme. Water is also taken for a number of community supplies, primary production activities (including irrigation) and for some major industries.

The major pressures on water quantity in Southland are:

# Chapter 11: Contaminated Land

## Introduction

Inappropriate storage, transportation and use of hazardous substances and disposal of hazardous wastes can result in contaminated land. Industrial, domestic, and rural activities have all contributed to contaminated land in Southland. Many contaminated sites are due to historic agricultural, horticultural, industrial, energy and forestry practices. In particular, contaminated sites have often resulted from the past manufacture and use of pesticides and fertilisers, production of coal and gas, mining, timber treatment, waste disposal and sheep dipping.

People, animals and the wider environment can be exposed to hazardous substances in contaminated land in a number of ways. These include direct contact with contaminated soil, swallowing food or water from contaminated environments, and breathing vapours or contaminated dust. Exposure to hazardous substances can have significant adverse effects on human health and on soil, surface water, groundwater and ecosystems. As well as endangering health, these substances can limit the use of land, cause corrosion that may threaten building structures, and reduce land value. People may be especially vulnerable to contaminated land from a change in land use. For example, land that at one time had an industrial activity occur that involved the use or disposal of hazardous substances subdividing and changing to a residential land use. Without identification or investigations of contaminated land, people may end up living, working or undertaking recreation near or on contaminated land.

Contamination is not always limited to a specific site. Hazardous substances may seep through the soil into groundwater, or be carried to nearby land and waterways in rainwater or on dust particles. Vapour and gases from contaminated land may present additional risks of explosion and odour.

Regional councils and territorial authorities are responsible for the day-to-day management of contaminated land and have specific functions under Act. Local authorities are also in charge of controlling the effects of contaminated land, and also for controlling activities that cause land to become contaminated.

Significant resources are needed to identify contaminated sites and confirm the nature and extent of any contamination present. To date, there have been limited investigations within the Southland region to find sites that may be contaminated. Therefore, it is difficult to quantify the number and risks to people or the environment from land contamination in Southland. Most of the effort to identify and register contaminated sites has focused on urban and rural sites contaminated by activities and industries on the Hazardous Activities and Industries List (HAIL) developed by the Ministry for the Environment. The HAIL sets out activities and industries that are considered likely to cause contamination from hazardous substance use, storage, or disposal.

This chapter of the RPS focuses on the significant resource management issues associated with contaminated land and the responses regarding its management.

Other chapters in the RPS address issues that relate to, or influence contaminated land, such as Chapter 12: Hazardous Substances and Chapter 13: Solid Waste. Chapter 11: Contaminated Land therefore, should be read in association with the other chapters of this policy statement.

It is also important to refer to Chapter 3: Tangata Whenua, which sets out the resource management provisions to resolve the resource management issues of significance to Ngāi Tahu as tangata whenua of the Southland Region.

**Table 11: Overview of Contaminated Land provisions**

<b>Issues</b>	<b>Objectives</b>	<b>Policies</b>	<b>Methods</b>
<b>Issue CONTAM.1</b>	<b>Objective CONTAM.1</b> Identify, investigate and manage contaminated land	<b>Policy CONTAM.1</b> Identify and prioritise land	<b>Methods CONTAM.2, 4, 5, 8</b>
		<b>Policy CONTAM.2</b> Management of contaminated land	<b>Methods CONTAM.1 - 8</b>
		<b>Policy CONTAM.3</b> Integrated management approach	<b>Methods CONTAM.2, 3, 5 - 8</b>
	<b>Objective CONTAM.2</b> Avoid, remedy or mitigate adverse effects	<b>Policy CONTAM.2</b> Management of contaminated land	<b>Methods CONTAM.1 - 8</b>
		<b>Policy CONTAM.3</b> Integrated management approach	<b>Methods CONTAM.2, 3, 5 - 8</b>

## 11.1 ISSUE

### Issue CONTAM.1

Contaminated land that has not been adequately identified, assessed or managed may contribute to increased risk to the environment (including community health).

## 11.2 OBJECTIVES

### Objective CONTAM.1 – Identify, investigate and manage contaminated land

Land affected by soil contamination is identified, investigated and managed.

#### *Explanation/Principal Reasons*

Sections 30 and 31 of the Act give regional councils and territorial authorities specific functions for managing contaminated land. Regional councils have a function to investigate land for the purposes of identifying and monitoring contaminated land. Territorial authorities have a function to prevent or mitigate any adverse effects of the development, subdivision or use of contaminated land. These functions enable local authorities to achieve sustainable management of natural and physical resources, and the purpose of the Act. Objectives CONTAM.1 and CONTAM.2 set up a management framework for Southland's local authorities to follow, to effectively carry out their functions under the Act. Policies CONTAM.1 and CONTAM.2 put into practice the framework for managing contaminated land. Policy CONTAM.3 prevents or mitigates any adverse effects through an integrated management approach.

### Objective CONTAM.2 – Avoid, remedy or mitigate adverse effects

Adverse effects on the environment (including human health) from contaminated land are avoided, remedied or mitigated.

#### *Explanation/Principal Reasons*

Contaminated land can result in adverse effects on the environment (including human health). These adverse effects are a result of the discharge of hazardous substances from a contaminated site to groundwater, surface water, soils or to air. These discharges pollute the environment and can harm people or plant and animal species. Policies CONTAM.1, CONTAM.2 and CONTAM.3 are approaches a local authority can use to avoid, remedy or mitigate the adverse effects in order to comply with environment standards, such as water quality, and achieve the purpose of the Act.

## 11.3 POLICIES

### Policy CONTAM.1 – Identify and prioritise land

Identify and prioritise for action, land within Southland that is subject to actual or potential contamination.

#### *Explanation/Principal Reasons*

Policy CONTAM.1 refers to the responsibilities of the Southland Regional Council to identify and monitor contaminated land. The lack of investigations and information about where activities that cause land contamination have occurred or are occurring, what contaminants are involved and therefore the extent of the risk to communities and the environment, exacerbates the potential or actual adverse effects from contaminated land. The HAIL, developed by the Ministry for the Environment, compiles a list of activities and industries that are considered likely to cause land

contamination resulting from hazardous substance use, storage or disposal. A Land Information Memorandum (LIM) is a report prepared by a territorial authority on request which provides a summary of property information as required to be included under the Local Government Official Information and Meetings Act 1987. A LIM provides information on the presence of hazardous contaminants which are likely to be relevant to land and is known to the respective territorial authority. The HAIL can be used for consistently reporting on site history and for identifying sites for inclusion on local government Land Use Registers and LIM reports. The Ministry for the Environment has also developed a series of Contaminated Land Management Guidelines for classifying sites on Land Use Registers according to their risk to people and the environment.

### **Policy CONTAM.2 – Management of contaminated land**

- (a) Protect human health when undertaking activities on land that is potentially, or known to be, contaminated.
- (b) Manage contaminated land to avoid, remedy or mitigate adverse effects on the environment.

#### ***Explanation/Principal Reasons***

The HAIL is intended to identify potentially contaminated land, or most situations in New Zealand where hazardous substances could cause, and in many cases have caused, land contamination. Contaminated land, by definition, has or is likely to have significant adverse environmental effects. Subdivision, use or development of land on a HAIL site and discharges from contaminated land could cause adverse effects on people or the environment if contamination is present. It is therefore appropriate to protect human health when undertaking activities on contaminated or potentially contaminated land, and manage contaminated land to avoid, remedy or mitigate adverse effects on the environment.

Part (a) of this policy refers to the responsibilities of territorial authorities under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2012 (NESCS). It applies to assessing and managing the actual or potential adverse effects of contaminants in soil on human health when undertaking subdivision, land use change, earthworks, soil sampling or removing the underground portions of any fuel storage or dispensing systems.

The NESCS does not apply to assessing and managing the actual or potential adverse effects of contaminants on other receptors, including ecology, water quality or amenity values. Those matters continue to be managed through part (b) of this policy.

Priority of management action for contaminated land should be determined by the type of contaminants involved, the degree of contamination, the availability and practicality of appropriate technology for monitoring or remediation, existing and likely future use of the site, surrounding land uses, national standards or guidelines, and the potential for adverse environmental or public health effects off-site or downstream.

### **Policy CONTAM.3 – Integrated management approach**

Promote public awareness, understanding and an integrated management approach between central government, local authorities, tangata whenua, landowners, developers and the community to the management of contaminated land.

#### ***Explanation/Principal Reasons***

Reducing (avoiding, remedying or mitigating) adverse effects from contaminated land requires all parties involved in contaminated land management to work together. Local authorities such as the territorial authorities and the Southland Regional Council can access and share information on contaminated land. Landowners and developers aware of land contamination can come forth with the

information so the contamination can be safely managed. Central government can work with all parties to develop and implement standards or guidelines for the management of contaminated land.

## **11.4 METHODS**

### **The Southland Regional Council will:**

#### **Method CONTAM.1 – Regional plans**

Establish and maintain provisions in regional plans to:

- (a) avoid, remedy or mitigate adverse effects of discharges from contaminated land on:
  - (i) water, soil or air quality, including the coastal marine area, rivers or lakes;
  - (ii) community health and safety;
  - (iii) areas, sites or items of historic or cultural sensitivity;
- (b) recognise and support the implementation of relevant national guidelines, codes of practice, and environmental accords, where these help achieve Objective CONTAM.1 and Objective CONTAM.2.

#### **Method CONTAM.2 – Identify, investigate and manage**

Work with territorial authorities, industry, landowners and the community to:

- (a) identify, investigate and manage:
  - (i) contaminated land in accordance with national standards and best practice;
  - (ii) land where activities that are known to cause actual or potential land contamination have occurred or are currently occurring;
  - (iii) the environmental effects from land identified as contaminated; and
- (b) prioritise sites for:
  - (i) management or remediation; or
  - (ii) the mitigation of actual or potential environmental effects from land contamination.

#### **Method CONTAM.3 – Information, education and assistance**

Provide technical information, expertise and/or resources to territorial authorities, industry, landowners and the community to:

- (a) help identify contaminated sites and assess contamination against national guidelines or standards;
- (b) identify and understand the actual or potential adverse effects of subdividing, using or developing contaminated land, and how those effects may be addressed;
- (c) where appropriate, assist landowners of contaminated land that is causing, or may cause significant adverse environmental effects if disturbed to remedy or mitigate the actual or potential environmental effects.

### **Territorial authorities will:**

#### **Method CONTAM.4 – District plans**

Establish and maintain provisions in district plans to:

- (a) give effect to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2012; and
- (b) recognise and support the implementation of relevant national guidelines, codes of practice, and environmental accords, where these help achieve Objective CONTAM.1 and Objective CONTAM.2.

### **Local authorities will be encouraged to:**

#### **Method CONTAM.5 – Collaboration and information sharing**

- (a) Collaborate with each other, industry, tangata whenua and the community to develop, maintain, and actively share information including an integrated contaminated land register that identifies the scale, nature, extent and location of contaminated and remediated land in the Southland region;
- (b) Use information on the register to identify land that is or may be contaminated when issuing Land Information Memoranda;
- (c) Provide technical information and expertise to land owners and occupiers to support the safe management and use of contaminated land, land remediation and mitigation of effects where appropriate; and
- (d) Take information in the register into account when making resource management decisions.

#### **Method CONTAM.6 – Strategies and protocols**

Establish strategies and agreements to:

- (a) collaborate and share information on applications for resource consent for activities that involve contaminated land;
- (b) inform plan users of provisions related to contaminated land in regional and district plans; and
- (c) work together to avoid regulatory overlaps or gaps in implementation and between planning documents, including the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2012.

#### **Method CONTAM.7 – Consultation**

Consult with tangata whenua and take into account Te Tangi a Tauria and other relevant iwi planning documents when making resource management decisions regarding the subdivision, use or development of contaminated land which may adversely affect:

- (a) the quality of land, coast, air or water;
- (b) tangata whenua values.

#### **Method CONTAM.8 – Other methods**

Collaborate with other local authorities, tangata whenua and interested stakeholders to investigate additional methods that may be used to implement the policies of this chapter of the RPS.

#### ***Explanation/Principal Reasons***

The Act requires regional councils to identify and monitor contaminated land while territorial authorities have responsibilities to prevent or mitigate adverse effects that could occur from subdividing, developing or using contaminated land. A collaborative and integrated approach is key to avoid duplication, and ensure a comprehensive approach.

The Southland Regional Council has established the Sites Associated with Hazardous Substances (SAHS) register to hold information on land that is or may be contaminated, either by past or current activities. The Ministry for the Environment has published the Hazardous Activities and Industries List (HAIL), which identifies industries and land use activities that are likely to contaminate the land they occur on. These lists form an important part of the regional approach to managing contaminated land. Identification needs to be followed by investigations to identify the type and extent of contamination, following which the effects on the environment and community can be determined, and further investigations carried out where necessary. These steps are important in managing the environmental effects of contaminated land, which can adversely affect water, air or soil quality and community wellbeing.

Identifying contaminated land should be followed by a comprehensive risk assessment, and then monitoring of the effects on environmental quality. Understanding the location, nature and extent of contamination enables local authorities to manage the effects as necessary to protect community and environmental wellbeing. It also helps to prioritise sites for further investigation. The methods seek to give effect to the NESCS. The NESCS requires territorial authorities to control the development of land affected or potentially affected by contaminants. It provides a nationally consistent set of planning controls and soil contaminant values to ensure land affected by contaminants in soil is appropriately identified and assessed before it is developed.

Territorial authorities must prepare plans consistent with both the RPS and the NESCS. Consequently, the methods encourage local authorities to work together to identify, investigate, monitor and manage contaminated land. The methods rely on a regulatory approach at district plan level to trigger full site investigations prior to changes in land use. Changes in land use, or land subdivision or development, provide opportunities to carry out investigations and risk assessments, and to remedy contamination or mitigate its effects. An integrated approach by local authorities and the community in conjunction with legislation will enable development of better practices and greater community awareness that will enable existing contaminated land to be progressively identified, investigated, monitored and remediated where appropriate, and help avoid contaminating more land or other resources.

# Chapter 15: Infrastructure/Transport

## Introduction

This chapter focuses on:

1. development which results in changes to urban, rural-residential, rural areas and land use, together with the infrastructural services which support this development;
2. the strategic integration of land use and regionally significant infrastructure across the region.

This chapter is in two parts. Part A contains provisions that apply to all types of infrastructure, including transport infrastructure. Part B contains provisions specific to transport infrastructure that are not covered by the generic provisions in Part A. In addition Chapter 16: Energy contains provisions specific to energy infrastructure that are not covered by the generic provisions in Part A.

Infrastructure can form part of national, regional or local networks. Transport infrastructure such as road, rail, airports, sea ports, and other utilities, including energy transmission and distribution networks, telecommunications, water, sewerage and storm water are significant physical resources. This infrastructure enables communities to provide for their social, economic, and cultural wellbeing and their health and safety. As stipulated in the National Policy Statement for Renewable Electricity Generation 2011 and the National Policy Statement on Electricity Transmission 2008, the benefits of renewable electricity generation, and the need to operate, maintain, develop and upgrade renewable electricity generation activities and the electricity transmission network, are matters of national significance.

Development 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 wellbeing 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.

It is also important to have consistent cross boundary jurisdictional management in addressing the adverse effects of and on lineal infrastructure corridors, particularly where infrastructure traverses site, district or regional boundaries.

The Southland Regional Council has a statutory requirement under Section 30(1)(gb) of the Act to make provision for the strategic integration of infrastructure with land use. The strategic integration of land use with regionally significant infrastructure is important for the functioning of communities 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 make provision for the development, expansion and maintenance of this infrastructure, it is also important to manage the way this occurs in order to ensure the way in which it changes the environment is appropriate.

There are opportunities to improve energy efficiency through the efficient design, location and function of development and in particular minimising energy use, promoting healthier transport options and providing for the efficient use of existing infrastructure.

Other chapters in the RPS address issues that relate to, infrastructure or transport, such as Chapter 9: Air Quality, Chapter 8: Natural Hazards, Chapter 16: Energy and Chapter 17: Urban. Therefore, Chapter 15 should be read in association with the other chapters of this policy statement.

It is also important to refer to Chapter 3: Tangata Whenua, which sets out the resource management provisions to resolve the resource management issues of significance to Ngāi Tahu as tangata whenua of the Southland Region.

## Part A: Infrastructure

Table 15: Overview of Infrastructure provisions

Issues	Objectives	Policies	Methods
Issue INF.1	Objective INF.1 Southland's infrastructure	<b>Policy INF.1</b> Regional, national and critical infrastructure	Methods INF.1 - 6
		<b>Policy INF.2</b> Infrastructure and the environment	Methods INF.1, 2, 4 - 6
		<b>Policy INF.3</b> Infrastructure protection	Methods INF.1 - 6
		<b>Policy INF.5</b> Development, subdivision and land use	Methods INF.1 - 6
		<b>Policy INF.6</b> Promoting consistent and integrated management of infrastructure across the region	Methods INF.1 – 3, 5, 6
Issue INF.2	Objective INF.1 Southland's infrastructure	<b>Policy INF.2</b> Infrastructure and the environment	Methods INF.1, 2, 4 - 6
		<b>Policy INF.4</b> Natural hazards	Methods INF.1, 2, 4 - 6
Issue INF.3	Objective INF.1 Southland's infrastructure	<b>Policy INF.1</b> Regional, national and critical infrastructure	Methods INF.1 - 6
		<b>Policy INF.2</b> Infrastructure and the environment	Methods INF.1, 2, 4 - 6
		<b>Policy INF.4</b> Natural hazards	Methods INF.1, 2, 4 - 6
		<b>Policy INF.6</b>	Methods INF.1 – 3, 5, 6

		Promoting consistent and integrated management of infrastructure across the region	
<b>Issue INF.4</b>	<b>Objective INF.1</b> Southland's infrastructure	<b>Policy INF.1</b> Regional, national and critical infrastructure	<b>Methods INF.1 - 6</b>
		<b>Policy INF.3</b> Infrastructure protection	<b>Methods INF.1 - 6</b>
		<b>Policy INF.5</b> Development, subdivision and land use	<b>Methods INF.1 - 6</b>
		<b>Policy INF.6</b> Promoting consistent and integrated management of infrastructure across the region	<b>Methods INF.1 – 3, 5, 6</b>

## 15.1 ISSUES

### Issue INF.1

Land use change and development is not always integrated with local, regional and national infrastructure and this can affect the communities' social and economic wellbeing or health and safety.

### Issue INF.2

The impact of climate change and natural hazard events are a risk to critical infrastructure.

### Issue INF.3

The provision of infrastructure and associated activities are important to enable people and communities to provide for their social, economic and cultural wellbeing, but, where not appropriately managed, can result in significant adverse effects on land use and the environment.

### Issue INF.4

Subdivision, use and development can result in adverse effects, including reverse sensitivity effects, on existing or planned infrastructure development and activities.

## 15.2 OBJECTIVE

### Objective INF.1 – Southland's infrastructure

Southland's regionally significant, nationally significant and critical infrastructure is secure, operates efficiently, and is appropriately integrated with land use activities and the environment.

#### *Explanation/Principal Reasons*

Southland's regional, national and critical infrastructure is essential to enable the wellbeing, health and safety of people and communities. Infrastructure in the wider region has the following characteristics:

1. it significantly contributes to the social, economic and cultural wellbeing of people and communities;
2. it is the subject of considerable financial investment;
3. it is unlikely to be readily replaced or duplicated;
4. it requires integrated management with other natural and physical resources.

Recognition of the importance of 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. It is also desirable to control any effects infrastructure may have on the environment.

The term 'appropriately' is used in this objective to recognise that the extent to which adverse effects may be avoided, remedied, mitigated, or where appropriate, and such measures are volunteered by the resource user, offset or compensated for, may vary depending on the particular circumstances of each particular case.

## 15.3 POLICIES

### **Policy INF.1 – Regional, national and critical infrastructure**

Recognise the benefits to be derived from, and make provision for, the development, maintenance, upgrade and ongoing operation of regionally significant, nationally significant and critical infrastructure and associated activities.

#### ***Explanation/Principal Reasons***

It is essential that provision be made for continued operation, maintenance and upgrades of new and existing critical infrastructure services, including the region's lifeline infrastructure. This should include targeted planning for future needs because robust infrastructure underpins the social, economic, cultural and environmental wellbeing of our region.

### **Policy INF.2 – Infrastructure and the environment**

Where practicable, avoid, remedy or mitigate the adverse effects of infrastructure on the environment. In determining the practicability of avoiding, remedying, or mitigating adverse effects on the environment, the following matters should be taken into account:

- (a) any functional, operational or technical constraints that require the physical infrastructure of regional or national significance to be located or designed in the manner proposed;
- (b) whether there are any reasonably practical alternative designs or locations;
- (c) whether good practice approaches in design and construction are being adopted;
- (d) where appropriate, and such measures are volunteered by a resource user, whether any significant residual adverse effects can be offset or compensated for; and
- (e) the need to give effect to the NPSET (2008) including that planning and development of the transmission system should seek to avoid adverse effects on outstanding natural landscapes, areas of high natural character and areas of high recreation value and amenity and existing sensitive activities.

#### ***Explanation/Principal Reasons***

While public infrastructure provides communities with essential services, this infrastructure should not unnecessarily detract from the environment in which it is placed. For example, the construction or maintenance of a road should not cause adverse effects on people's health from dust or on water quality from dust suppressants. This is especially important when looking to install new infrastructure. Careful consideration of all infrastructure types and possible locations should be completed to determine which option will have the least impact to the environment, and ensure that infrastructure is integrated with surrounding land use and maintained to avoid, remedy, mitigate, or where appropriate, and such measures are volunteered by the resource user, offset or compensated for adverse effects. Assessments of environmental effects should have regard to all matters of national significance, including the significance of the infrastructure activity itself.

### **Policy INF.3 – Infrastructure protection**

Protect regionally significant, nationally significant and critical infrastructure, particularly from new incompatible land uses and activities under, over or adjacent to the infrastructure.

#### ***Explanation/Principal Reasons***

Southland's significant infrastructure requires protection from land use and development changes that may result in damage to existing or planned infrastructure or reverse sensitivity issues. Existing infrastructure may also be located in coastal or sensitive environments and should be protected to allow for its maintenance and retention.

When managing new incompatible land uses and activities under, over, or adjacent to the infrastructure, local authorities shall take into account the benefits of the existing infrastructure and the constraints imposed by the technical and operational requirements of infrastructure. Local authorities shall also apply a consistent and coordinated approach to providing for the operation, maintenance and upgrade of regionally significant infrastructure and nationally significant infrastructure.

**Policy INF.4 – Natural hazards**

The risks to infrastructure from natural hazards and climate change effects are avoided, remedied, or mitigated including through design and construction.

***Explanation/Principal Reasons***

New regionally significant infrastructure and upgrades to existing regionally significant infrastructure shall be located to avoid, or designed to mitigate, known natural hazard risks and climate change effects. Planning, where possible, should consider the placement of infrastructure to avoid natural hazards because of the need for essential services to be as robust as they can be in the face of the uncertainties created by climate change.

**Policy INF.5 – Development, subdivision and land use**

Management of development, subdivision and land use shall ensure:

- (a) development does not result in adverse effects on the efficient operation, use, maintenance and development of infrastructure;
- (b) the nature, timing and sequencing of new development is coordinated with the development, funding, implementation and operation of infrastructure, as appropriate for the type of development being undertaken;
- (c) the efficient and effective functioning of infrastructure, including the ability to develop, maintain, remove, decommission and upgrade infrastructure, is retained;
- (d) a coordinated and integrated approach across regional and district boundaries, and between agencies.

***Explanation/Principal Reasons***

Subdivision, use and development activities can lead to a range of undesirable and unsustainable effects on the functioning of infrastructure. The policy seeks a coordinated and managed approach between development activities and infrastructure planning so that land use change does not result in unplanned effects on the functioning of infrastructure.

**Policy INF.6 – Promoting consistent and integrated management of infrastructure across the region**

Provide for the integrated management of the region's infrastructure by:

- (a) recognising the interconnected nature of natural and physical resources; and
- (b) promoting a collaborative and consistent approach to managing infrastructure, particularly infrastructure networks that crosses zone and/or territorial boundaries.

***Explanation/Principal Reasons***

The physical nature of infrastructure, particularly lineal infrastructure, is often relatively constant but there can be varying and inconsistent planning methods where infrastructure crosses different receiving environments, planning zones and/or jurisdictional boundaries. Agencies and organisations with resource management responsibilities should therefore adopt a collaborative approach to promote the efficient and integrated management of infrastructure and receiving environment.

## 15.4 METHODS

### The Southland Regional Council will:

#### **Method INF.1 – Regional plans**

Include objectives, policies and methods in regional plans that will:

- (a) enable the development, use, maintenance and upgrading of infrastructure, whilst ensuring the management of any associated adverse effects;
- (b) help ensure that the nature, timing and sequencing of new development is coordinated with the development, funding, implementation and operation of infrastructure, as appropriate for the type of development being undertaken;
- (c) ensure that adverse effects, including reverse sensitivity effects, of development and land use on existing and/or planned regionally and nationally significant infrastructure are avoided, remedied or mitigated by identifying:
  - (i) what activities and development may be incompatible with this infrastructure; and
  - (ii) how this infrastructure should be protected from such activities;
- (d) promote the efficient and effective use of infrastructure;
- (e) take into account the potential adverse effects of natural hazards and climate change on infrastructure;
- (f) facilitate long-term planning for investment in infrastructure and its integration with land uses.

### Territorial authorities will:

#### **Method INF.2 – District plans**

Include objectives, policies and methods in district plans that will:

- (a) enable the development, use, maintenance and upgrading of infrastructure, whilst ensuring the management of any associated adverse effects;
- (b) help ensure that the nature, timing and sequencing of new development is coordinated with the development, implementation and operation of infrastructure, as appropriate for the type of development being undertaken;
- (c) ensure that adverse effects, including reverse sensitivity effects, of development and land use on existing and/or planned regionally and nationally significant infrastructure are avoided, remedied or mitigated by identifying:
  - (i) what activities and development may be incompatible with this infrastructure; and
  - (ii) how this infrastructure should be protected from such activities;
- (d) promote the efficient and effective use of infrastructure;
- (e) take into account the potential adverse effects of natural hazards and climate change on infrastructure;
- (f) facilitate long-term planning for investment in infrastructure and its integration with land uses.

### Local authorities will be encouraged to:

#### **Method INF.3 – Consistent approach**

To the extent applicable to the district, apply a regionally consistent and coordinated approach to the development, establishment, operation, maintenance and upgrade of local, regional and national infrastructure.

#### **Method INF.4 – Monitoring**

Monitor and report the environmental effects of the development, maintenance and operation of infrastructure. The environmental effects of infrastructure on the air, land, water quality and the

coastal marine area will be monitored where appropriate. The effects of other development on the effectiveness and efficiency of infrastructure will also be monitored where appropriate.

#### **Method INF.5 – Consultation**

- (a) Consult with tangata whenua and take into account Te Tangi a Tauria and other relevant iwi planning documents when making resource management decisions regarding the use or development of land for infrastructure which may adversely affect the life supporting capacity of air, land or water, or tangata whenua cultural or spiritual values.
- (b) Consult with the owners and operators of national and regional significant infrastructure to identify an appropriate buffer area or corridor within which it can be expected that sensitive activities will generally not be provided for.

#### **Method INF.6 – Other methods**

Collaborate with other local authorities, tangata whenua and interested stakeholders to investigate additional methods that may be used to implement the policies of this chapter of the RPS.

#### ***Explanation/Principal Reasons***

The requirement to include objectives, policies and methods in regional and district plans will make provision for infrastructure while avoiding, remedying, mitigating, or where appropriate, and such measures are volunteered by the resource user, offsetting or compensating for effects arising from the establishment, maintenance and operation of that infrastructure, while providing certainty to the community.

District Plans have a role to play in infrastructure planning, determining where development goes and managing effects. District methods could include structure plans, spatial plans or zoning tools.

The methods will protect infrastructure which is a regionally significant resource, which is unlikely to be easily replaced or duplicated. This infrastructure is significant in terms of the contribution that it makes to the social, economic and cultural wellbeing of people and communities of the wider region, and protection of it is ensuring the effects on this environment, which would arise from replacement, are avoided.

It is not always possible to “internalise” all adverse effects on the environment when developing or operating infrastructure e.g. airports, and in some cases the infrastructure influences the quality of the surrounding environment.

Methods which require the identification of natural hazards and the requirement to identify the extent to which proposals will avoid, remedy or mitigate effects will ensure the development of infrastructure development minimises the risks arising from natural hazards.

## Part B: Transport

Table 16: Overview of Transport provisions

Issues	Objectives	Policies	Methods
Issue TRAN.1	Objective TRAN.1 Transport and land use	Policy TRAN.1 Transport decision making	Methods TRAN.2, 4, 6, 8
		Policy TRAN.2 Strategic planning	Methods TRAN.2, 4, 6, 8
		Policy TRAN.3 Integration of existing and future transport infrastructure	Methods TRAN.1 - 4, 6 - 8
Issue TRAN.2	Objective TRAN.1 Transport and land use	Policy TRAN.4 Protection of health and environmental values	Methods TRAN.1, 3, 5 - 8
Issue TRAN.3	Objective TRAN.1 Transport and land use	Policy TRAN.2 Strategic planning	Methods TRAN.2, 4, 6, 8
		Policy TRAN.3 Integration of existing and future transport infrastructure	Methods TRAN.1 - 4, 6 - 8
Issue TRAN.4	Objective TRAN.1 Transport and land use	Policy TRAN.2 Strategic planning	Methods TRAN.2, 4, 6, 8
		Policy TRAN.3 Integration of existing and future transport infrastructure	Methods TRAN.1 - 4, 6 - 8

## 15.5 ISSUES

### Issue TRAN.1

Ineffective integration of land use and transport networks can have adverse effects on the safety, efficiency, effectiveness and accessibility of Southland's transport infrastructure.

### Issue TRAN.2

Transport corridors and related transport movements can give rise to adverse public health and environmental effects.

### Issue TRAN.3

Regional pressures on Southland's transport infrastructure including demographic changes, increased freight projections, tourism demand and land use change.

### Issue TRAN.4

There are limited transportation options available to address changes in technology and demographics in Southland.

## 15.6 OBJECTIVE

### Objective TRAN.1 – Transport and land use

Development of transport infrastructure and land use take place in an integrated and planned manner which:

- (a) integrates transport planning with land use;
- (b) protects the function, safety, efficiency and effectiveness of the transport system;
- (c) minimises potential for reverse sensitivity issues to arise from changing land uses;
- (d) provides for positive social, recreational, cultural and economic outcomes;
- (e) minimises the potential for adverse public health and environmental effects;
- (f) enhances accessibility and connectivity, maximising transport choice for users of the transport system.

### *Explanation/Principal Reasons*

Land use and transport 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 controlled. If the strategic integration between land use and transport infrastructure does not occur, this may result in:

- (a) constraints on the use and development of transport infrastructure;
- (b) the untimely, inefficient and costly provision of transport infrastructure;
- (c) transport infrastructure unnecessarily adversely affecting the surrounding land uses;
- (d) adverse effects on the environment caused by the lack of, or unsuitable provision of appropriate infrastructure;
- (e) limited accessibility and lack of transport choice to promote efficient transport systems.

## 15.7 POLICIES

### **Policy TRAN.1 – Transport decision making**

Strategic decision making processes relating to the transportation network shall be undertaken in a collaborative manner between local authorities, key stakeholders, and the community.

#### ***Explanation/Principal Reasons***

There are a number of statutory and non-statutory processes, plans and strategies which influence land use and transport planning. A collaborative approach in the development and management of these processes and documents will be required to ensure land use changes are planned and delivered in an integrated manner. Local authorities will therefore be directed to ensure the community and key stakeholders (such as other local authorities, road controlling authorities, infrastructure providers, affected landowners, the transport industry, and tangata whenua) are provided with the opportunity for strategic involvement in transport decision-making processes.

### **Policy TRAN.2 – Strategic planning**

Develop and maintain, in collaboration with local authorities, key stakeholders and the community, a strategic transportation network plan or other appropriate strategic transport planning tool, for Southland that provides for existing and future transport requirements.

#### ***Explanation/Principal Reasons***

The function of the individual road types needs to be planned for, and their use protected from, inappropriate development. A strategic network plan will:

- (a) guide adjacent land use by ensuring development is appropriate to the transport infrastructure available;
- (b) recognise the limitations that may be placed on maintenance and/or use of the transport network from restrictions on the supply of oil or increases in the supply cost of oil and fuel;
- (c) recognise the importance of transport infrastructure in the region's lifeline recovery planning;
- (d) promote opportunities to improve transport energy efficiency.

### **Policy TRAN.3 – Integration of existing and future transport infrastructure**

Integrate land use planning with transport infrastructure planning and make provision for future transportation requirements.

#### ***Explanation/Principal Reasons***

Integrated planning will ensure the safe, efficient and effective use of the existing transport infrastructure is maintained and allow for future transport infrastructure needs where these can be determined. Measures are required to prevent development along the transport routes radiating from human settlements (ribbon development), avoid the need for additional access points to strategically important roads, and to provide or maintain buffer zones between development and existing transport infrastructure, so as to prevent reverse sensitivity issues arising.

### **Policy TRAN.4 – Protection of health and environmental values**

Manage transport activities to avoid, remedy or mitigate adverse effects on public health and environmental values.

#### ***Explanation/Principal Reasons***

Public health can be affected by such issues as noise, emissions, vibration and dust resulting from transport activities. Poorly designed or constructed infrastructure can cause road safety issues potentially leading to injuries or fatalities. Other environmental effects can result from waste discharges from stock trucks, campervans and other vehicles; dust resulting from vehicle movements;

increased greenhouse gas levels in the atmosphere associated with vehicle emissions; and stormwater discharges from the road surface, vehicles and road maintenance, and earthworks activities.

## **15.8 METHODS**

### **The Southland Regional Council will:**

#### **Method TRAN.1 – Regional plans and strategies**

Having regard to the Strategic Transportation Network Plan or other appropriate strategic transport planning tool, include objectives, policies and methods in regional plans which, to the extent applicable, protects national and regional transportation infrastructure from inappropriate development and activities by:

- (a) making provision for the establishment, operation and maintenance of multi modal transportation infrastructure appropriate to the level and type of development anticipated;
- (b) protecting public health and environmental values from inappropriate discharges of contaminants to air, water and land during the operation, development and maintenance of transportation infrastructure;
- (c) promoting improved energy efficiency in the transport sector;
- (d) promoting implementation of the Regional Road Safety Strategy.

#### **Method TRAN.2 – Strategic transportation network plan**

Develop and maintain a strategic transportation network plan, in conjunction with territorial authorities, which will:

- (a) identify the existing strategic land transport network and transport facilities (air, land and sea);
- (b) identify future upgrade and development needs to efficiently service current and planned future land and transport use and mode patterns;
- (c) identify opportunities for integrated land use and transport planning.

### **Territorial authorities will:**

#### **Method TRAN.3 – District plans**

Include objectives, policies and methods in district plans which:

- (a) identify existing and proposed strategic transport infrastructure;
- (b) make provision for the establishment and continuing operation and maintenance of transport infrastructure;
- (c) avoid, remedy or mitigate the adverse effects, including reverse sensitivity, on transport infrastructure arising from subdivision, use and development of land;
- (d) ensure the safe and efficient operation of the transport network is not adversely affected by subdivision, land use and development;
- (e) avoid, remedy or mitigate the adverse effects of transport infrastructure and associated activities on the environment;
- (f) make provision for development which enables all transport modes to be well connected and provides for public transport, walking and cycling;
- (g) ensure public health and environmental values are considered;
- (h) promote the use of energy efficient transport modes and technologies.

### **Local authorities will be encouraged to:**

#### **Method TRAN.4 – Regional Land Transport Strategy**

Identify the strategic land transport network in the Southland Regional Land Transport Strategy.

#### **Method TRAN.5 – Promotion and information**

Promote, inform and encourage the farming industry and transport operators to adopt good practices, including the avoidance of stock effluent being deposited on roads during transportation.

#### **Method TRAN.6 – Collaboration**

Work collaboratively with road controlling authorities, infrastructure providers, the Southern District Health Board, contractors, affected landowners, and tangata whenua during transport decision-making processes and when developing strategic transportation documents. This will provide the opportunity for strategic input and integrated planning and decision making. It will also provide the opportunity to investigate and adopt good practice methods for the construction, maintenance and improvement of roads and other infrastructure which will avoid, remedy or mitigate effects on the environment e.g. the investigation of alternative dust suppressants for gravel roads. Participation from the Southern District Health Board should also ensure consideration of a health in all policies (HiAP) approach can be included in relevant decision-making processes.

#### **Method TRAN.7 – Monitoring**

Monitor and report the environmental effects of infrastructure, development, maintenance and operation. The environmental effects of infrastructure on the air, land, water quality and the coastal marine area will be monitored where appropriate. The effects of other developments on the effectiveness and efficiency of infrastructure will also be monitored where appropriate.

#### **Method TRAN.8 – Other methods**

Collaborate with other local authorities, tangata whenua and interested stakeholders to investigate additional methods that may be used to implement the policies of this chapter of the RPS.

#### ***Explanation/Principal Reasons***

The requirement to include objectives, policies and methods in regional and district plans will make provision for transport infrastructure while avoiding, remedying and mitigating effects arising from the establishment, maintenance and operation of that infrastructure, while providing certainty to the community.

It is not always possible to “internalise” all adverse effects on the environment when developing or operating infrastructure e.g. airports, and in some cases the infrastructure influences the quality of the surrounding environment. Development of a Strategic Transportation Plan, through a collaborative process, will contribute to sustainable management of the physical resource and integrated management of the surrounding environment in terms of the nature, development and form is desirable to reduce incompatibility and conflicts.

Methods which require development patterns to provide for all modes of transport be well connected, and provides for public transport, walking and cycling will enable over time, a reduction in the reliance on cars for journeys and enable attractive environments in which to live, work and play.

## Chapter 17: Urban

### Introduction

Tangata whenua tattooed the first patterns of settlement onto Southland soils, initially occupying sites on a temporary basis to take advantage of the region's natural resources.<sup>40</sup> Later settlement followed a similar pattern, and today's urban areas reflect the priorities of past generations, as well as, functioning as contemporary centres of population, culture and economic activity.

The Southland region is predominantly rural, with 85% of all non-conservation land being occupied by farms. The main urban area is Invercargill, but there are also a number of smaller townships including Gore, Maitai, Winton, Riverton/Aparima, Bluff and Te Anau.

A percentage change in the regional population of less than one percent is predicted over the next 20 years.<sup>41</sup> Particular areas of Southland such as Riverton/Aparima and Te Anau are currently experiencing growth pressures, whereas in other areas, the population is declining or remains static.

There is a need to create and maintain sustainable urban environments that function well, provide a safe, healthy and stimulating environment, housing choice, transport options and accessible services and transport. However, development can result in a range of negative effects, including a loss of local identity, social problems or health issues.

This chapter, along with the other chapters in the RPS, such as Chapter 4: Water, Chapter 5: Rural Land/Soils, Chapter 8: Natural Hazards and Chapter 15: Infrastructure/Transport seeks to promote sustainable development of Southland's urban areas.

It is also important to refer to Chapter 3: Tangata Whenua, which sets out the resource management provisions to resolve the resource management issues of significance to Ngāi Tahu as tangata whenua of the Southland Region.

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<sup>40</sup> Jacomb, C., Walter, R., and Jennings, C. (2010) *Review of the Archaeology of Foveaux Strait, New Zealand*, University of Otago, Dunedin. P. 51

<sup>41</sup> Galvin, Vince (24 February 2010). Subnational Population Projections 2006 (base) – 2031 update. Statistics New Zealand. [http://www.statistics.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/SubnationalPopulationProjections\\_HOTP2031.aspx](http://www.statistics.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationProjections_HOTP2031.aspx), viewed 14.11.2011.

**Table 17: Overview of Urban provisions**

<b>Issues</b>	<b>Objectives</b>	<b>Policies</b>	<b>Methods</b>
<b>Issue URB.1</b>	<b>Objective URB.1</b> Urban development	<b>Policy URB.1</b> Adverse environmental effects	<b>Methods URB.1 - 7</b>
		<b>Policy URB.2</b> Urban development	<b>Methods URB.1 - 7</b>
		<b>Policy URB.3</b> Urban intensification	<b>Methods URB.2, 3, 5 - 7</b>
		<b>Policy URB.5</b> Land use activities	<b>Methods URB.2, 4 - 7</b>
		<b>Policy URB.6</b> Provide for housing choice	<b>Methods URB.2 - 7</b>
<b>Issue URB.2</b>	<b>Objective URB.1</b> Urban development	<b>Policy URB.2</b> Urban development	<b>Methods URB.1 - 7</b>
<b>Issue URB.3</b>	<b>Objective URB.1</b> Urban development	<b>Policy URB.1</b> Adverse environmental effects	<b>Methods URB.1 - 7</b>
		<b>Policy URB.2</b> Urban development	<b>Methods URB.1 - 7</b>
		<b>Policy URB.3</b> Urban intensification	<b>Methods URB.2, 3, 5 - 7</b>
		<b>Policy URB.4</b> High quality urban design	<b>Methods URB.2 - 7</b>
		<b>Policy URB.5</b> Land use activities	<b>Methods URB.2, 4 - 7</b>
		<b>Policy URB.6</b> Provide for housing choice	<b>Methods URB.2 - 7</b>

## 17.1 ISSUES

### Issue URB.1

The use and development of urban areas is critical to Southland's social, economic and cultural wellbeing. However, sporadic and uncoordinated urban growth and development in Southland can result in a loss of high value soils, create inefficiencies in the transportation network, create demand for the provision of additional infrastructure or upgrading of existing infrastructure, create reverse sensitivity effects, and can impact on soil, indigenous biodiversity, amenity values, cultural values and water quality.

### Issue URB.2

Population change and patterns of urban development have caused some urban areas to experience population decline which can result in high costs to maintain infrastructure that is underutilised, and a decline in amenity values.

### Issue URB.3

Urban areas in Southland which develop in ways that do not recognise the principles of high quality urban design are likely to be less cohesive, can experience reduced amenity and cultural values and can fail to provide for a range of transportation modes.

## 17.2 OBJECTIVE

### Objective URB.1 – Urban development

Urban (including industrial) development occurs in an integrated, sustainable and well-planned manner which provides for positive environmental, social, economic and cultural outcomes.

#### *Explanation/Principal Reasons*

Sustainable, integrated and well-planned urban development:

- maintains and enhances indigenous biodiversity, character, amenity and cultural values of Southland's urban areas;
- provides potable water supply;
- integrates with existing transport infrastructure;
- provides for alternative modes of transport;
- provides sufficient land based treatment of sewage and stormwater prior to any discharges to water;
- promotes live-work-play opportunities;
- retains high value soils for productive land uses;
- avoids, remedies or mitigates adverse effects on soil and water quality;
- avoids, remedies or mitigates significant adverse effects from natural hazard events; and
- avoids, remedies or mitigates reverse sensitivity effects.

Well-planned urban environments enhance the quality of life for residents. They can also allow for greater choice of housing, better transport options and access to services, create vibrant, safe and cohesive town centres and enhance business activities.

## 17.3 POLICIES

### **Policy URB.1 – Adverse environmental effects**

The adverse effects of urban development on the environment should be avoided, remedied or mitigated.

#### ***Explanation/Principal Reasons***

The infrastructure and built environment that supports and encompasses an urban area, along with the activities carried out within urban areas, can have a number of adverse effects on the environment. These effects include, but are not limited to, reverse sensitivity, air pollution, stormwater pollution, land contamination, reduced amenity values, overloaded infrastructure, social and health effects, loss of biodiversity and loss of natural character. However, urban environments can and should be designed to avoid, remedy or mitigate adverse effects.

### **Policy URB.2 – Urban development**

Manage urban growth and development in ways that:

- (a) support existing urban areas;
- (b) promote development and/or redevelopment of existing urban areas ahead of greenfield development;
- (c) promote urban growth and development within areas that have existing infrastructure capacity;
- (d) promote the progressive upgrading of infrastructure and improvement of the quality of sewage and stormwater discharges;
- (e) provide potable water supply;
- (f) plan ahead for the expansion of urban areas;
- (g) promote compact urban form; and
- (h) promote appropriate site and building orientation that supports the principles of optimum energy efficiency and solar energy gain.

#### ***Explanation/Principal Reasons***

Some areas of Southland are facing population decline and, as a result, a decrease in amenity. Managing urban development to focus it in existing areas and avoid the development of greenfield sites will help direct economic activity into existing areas to retain and/or improve amenity. Controlling greenfield development will also help maintain rural and natural environments, inclusive of their associated resources.

Many areas in Southland have existing infrastructure with surplus capacity. It is economically efficient to optimise the use of this infrastructure by promoting growth in these areas before allowing development in areas where new infrastructure will be required.

Planning ahead for the expansion of urban areas helps ensure the sustainable integration of areas while providing for compact urban form, instead of allowing development to occur on an ad-hoc basis.

### **Policy URB.3 – Urban intensification**

Encourage opportunities for urban intensification and redevelopment within Southland's existing urban areas.

#### ***Explanation/Principal Reasons***

Opportunities exist to intensify land use or redevelop land within Southland's existing urban areas. Exploiting such opportunities can provide for a compact urban form, which is more likely to support public transport, reduce travel distances, increase foot traffic in the central business district to support local services and businesses and so, revitalise the urban areas. However, the retention of local character is important and any intensification initiatives should promote the maintenance and enhancement of

amenity values and quality of life. It is also important that existing infrastructure can service the development or be upgraded as required.

**Policy URB.4 – High quality urban design**

Encourage high quality urban design.

***Explanation/Principal Reasons***

Promotion of high quality urban design can enhance urban amenity and the quality of the environment, have positive effects on public health and reduce adverse environmental effects. Well designed urban development can also provide for the cultural wellbeing of people and communities.

**Policy URB.5 – Land use activities**

Make provision for a range of land use activities within urban areas.

***Explanation/Principal Reasons***

This policy will help ensure there is sufficient land available to provide for all types of development required within an urban area to support community wellbeing and economic growth and development. Making provision for a range of land use activities (i.e. residential, employment/commercial, utilities and recreational) within an urban area will help encourage balanced urban development and promote live-work-play opportunities. Benefits include but are not limited to:

- a reduction in travel and associated adverse effects (i.e. air pollution and pressure on infrastructure);
- improved public health from greater opportunities to employ active transport modes, such as walking and cycling;
- improved public health and wellbeing as a result of better access to public parks and areas that provide opportunities for recreation; and
- greater certainty that certain areas are not vulnerable to crime as a result of being largely unoccupied at certain times of the day.

However, to retain amenity for residential properties, it is important to consider the adverse effects of having commercial and industrial activities adjacent to these areas.

**Policy URB.6 – Provide for housing choice**

Provide for housing choice, both in terms of type and lot sizes, within urban areas.

***Explanation/Principal Reasons***

To support the wellbeing of the community, housing should be able to accommodate the specific needs of the occupiers. These needs may relate to income, age, health, family size/structure, cultural needs, and special needs. Making provision for a range of accommodation types on differing lot sizes will help occupants to find a property best suited to their needs.

## 17.4 METHODS

### Southland Regional Council will:

#### **Method URB.1 – Regional plans**

Establish and maintain provisions in regional plans to recognise urban growth while managing the natural and physical environment and protecting:

- (a) regionally and nationally significant infrastructure;
- (b) outstanding natural features and landscapes;
- (c) the quantity and quality of water in groundwater aquifers and surface water bodies;
- (d) indigenous biodiversity;
- (e) people and property from unacceptable risk from natural hazards and the potential adverse effects associated with climate change;
- (f) the relationship between tangata whenua and their ancestral lands, water, sites, wāhi tapu and other taonga.

### Territorial authorities will:

#### **Method URB.2 – District plans**

- (a) Establish and maintain provisions in district plans to manage urban growth while managing the natural and physical environment and protecting:
  - (i) regionally and nationally significant infrastructure;
  - (ii) outstanding natural features and landscapes;
  - (iii) the quantity and quality of water in groundwater aquifers and surface water bodies;
  - (iv) indigenous biodiversity;
  - (v) the character, amenity and safe and efficient functioning of rural areas and settlements;
  - (vi) historic heritage;
  - (vii) people and property from unacceptable risk from natural hazards and the potential adverse effects associated with climate change;
  - (viii) the relationship between tangata whenua and their ancestral lands, water, sites, wāhi tapu and other taonga;
  - (ix) high value soils.
- (b) Establish and maintain provisions in district plans which:
  - (i) identify and map areas for urban growth and development;
  - (ii) encourage development and/or redevelopment of existing urban areas ahead of greenfield development;
  - (iii) encourage the integration of land use and infrastructure;
  - (iv) avoid unplanned and unmanaged development;
  - (v) encourage high quality urban design;
  - (vi) encourage a range of urban densities which are appropriate to their locations in order to maintain amenity whilst supporting pedestrian, cycle and public transport;
  - (vii) encourage higher housing densities in locations where it is supportive of pedestrian, cycle and public transport and the viability and vibrancy of urban centres;
  - (viii) encourage the intensification and, where relevant, the regeneration of existing urban areas;
  - (ix) provide a mix of residential (e.g. density and cost), employment and recreational opportunities;
  - (x) ensure that urban development cannot occur without the appropriate infrastructure capacity to support it;
  - (xi) encourage urban growth within urban areas of Southland that have existing infrastructure capacity;

- (xii) promote appropriate site and building orientation that supports the principles of optimum energy efficiency and solar energy gain;
- (xiii) ensure reverse sensitivity effects on existing and consented activities can be avoided, remedied, or mitigated;
- (xiv) ensure sufficient upgrading of existing and/or development of new sewage and stormwater infrastructure;
- (xv) ensure the provision of a potable water supply.

**Method URB. 3 – Strategic transportation network plan**

Develop and maintain a strategic transportation network plan, or other appropriate strategic transport planning tool, that:

- (a) supports and implements programmes that make passenger transport services more effective and attractive;
- (b) supports and implements policies that encourage the use of active forms of transport such as walking and cycling.

**Local authorities will be encouraged to:**

**Method URB.4 – Urban development planning**

Require the use of spatial management tools such as structure planning prior to rezoning land for urban uses. Spatial management tools should be prepared in accordance with the scale, significance and potential effects of the proposal.

**Method URB.5 – Collaboration**

The Southland Regional Council and territorial authorities should:

- (a) work together when identifying patterns and locations of development;
- (b) in areas where significant growth is occurring or anticipated, develop and maintain growth strategies;
- (c) work together with other stakeholders including, but not limited to tangata whenua, the community, industry, and infrastructure providers, when undertaking urban development planning processes, including structure planning processes.

**Method URB.6 – Advocacy**

Promote the adoption of:

- (a) the principles of the *New Zealand Urban Design Protocol* (Ministry for the Environment, March 2005); and
- (b) *Crime Prevention Through Environmental Design* (CPTED) principles; when planning, assessing and undertaking urban development.

**Method URB.7 – Other methods**

Collaborate with other local authorities, tangata whenua and interested stakeholders to investigate additional methods that may be used to implement the policies of this chapter of the RPS.

***Explanation/Principal reasons***

A consolidated form of urban growth in and around existing urban areas is the pattern of development that is most likely to achieve the relevant policies and objectives in the RPS, particularly in relation to energy and infrastructure provision. However, it is recognised that there may be instances where these can be better achieved by an alternative development pattern. For instance, environmental or infrastructure constraints may mean that further development of some existing settlements is not appropriate.

The above methods establish the standards to be met for new settlement development. There will be limited circumstances in which development of a new settlement is appropriate. In particular, it is important that new settlements do not compromise the efficient form and development of existing settlements, and that district plans have an appropriate, comprehensive approach to new urban development to manage effects arising from these.

Development can result in adverse effects on significant natural and physical resources. These adverse effects are subject to detailed policies in other chapters of this RPS. Each of these policies is to guide and influence the location of development to the extent that the relevant policies are implemented. If development will result in the relevant policies not being implemented because of the adverse effects which result, it is to be avoided at that location.

Well designed urban development provides for the social, economic and cultural wellbeing 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.

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

- (a) protecting the important amenity values associated with existing urban areas;
- (b) achieving well designed developments that integrate with natural and physical resources;
- (c) promoting opportunities for walking and cycling.

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

- (a) integrating all the natural and physical resource requirements of a development;
- (b) integrating urban development into existing urban areas;
- (c) implementing travel demand management measures;
- (d) integrating the provision for public passenger transport with development;
- (e) enabling people to meet their day-to-day needs within the local area;
- (f) ensuring 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:

- (a) enabling housing types to meet changing population structure and preferences;
- (b) integrating development with key transport infrastructure and opportunities;
- (c) planning for the effects of climate change;
- (d) achieving energy-efficient building location, orientation and design;
- (e) 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.

Where a new settlement development is proposed, a comprehensive approach to urban development may include identifying where and how development is to be accommodated. This can be achieved, for example, through a structure plan process, particularly where there are development and growth pressures.

Taking into account the above, the Southland Regional Council considers that the methods in this chapter are most appropriate to achieve the objectives.

## **Anticipated environmental results (AERs)**

The purpose of the RPS is to provide an overview of the resource management issues of the region, and policies and methods to achieve integrated management of its natural and physical resources.

The anticipated environmental results (AERs) that the Southland Regional Council expects to see are the implementation of the methods contained within the RPS by local authorities. This approach creates a focus on the process of method(s) implementation across the entire region, which will determine if adequate progress towards sustainable management of the region's natural and physical resources is being achieved.

The table below sets out the methods of the RPS, along with the objectives sought to be achieved for each chapter. The table will be used to monitor the efficiency and effectiveness of the RPS and tell the community if it is working. Each method will be evaluated in table format to assess whether it has been:

- implemented;
- substantially implemented; or
- not implemented.

If the method has been substantially implemented or not implemented, an explanatory comment will be provided as part of the evaluation. The evaluation results will be used in conjunction with available state of the environment, plan and resource consent monitoring results. This will assist the Southland Regional Council in evaluating whether the implementation of methods has been achieving adequate progress towards sustainable management of the region's natural and physical resources (refer to Figure 5).

The results of the evaluation will be reported to the community every three years, through the Southland Regional Council's Long-term Plan.

If the evaluation shows that adequate progress is not being made towards implementing the methods, and therefore achieving the AERs, further action will be sought. This may include changes to the RPS, submissions and/or appeals on resource consent proposals, plan changes/reviews or submissions to Long-term and Annual Plan processes of other local authorities.



**Figure 5: Summary of evaluation process**

**Table 19: Overview of Anticipated Environmental Results (AERs) provisions**

Chapter	Objectives	Anticipated Environmental Results (AERs)
<p><b>Tangata whenua</b></p>	<p><b>Objective TW.1</b> The principles of the Treaty of Waitangi/Te Tiriti o Waitangi are taken into account in a systematic way through effective partnerships between tangata whenua and local authorities, which provide the capacity for tangata whenua to be fully involved in council decision-making processes.</p> <p><b>Objective TW.2</b> All local authority resource management processes and decisions take into account iwi management plans.</p> <p><b>Objective TW.3</b> Mauri and wairua are sustained or improved where degraded, and mahinga kai and customary resources are healthy, abundant and accessible to tangata whenua.</p> <p><b>Objective TW.4</b> Wāhi tapu, wāhi taonga and sites of significance are appropriately managed and protected.</p> <p><b>Objective TW.5</b> Māori are able to develop and use their land and resources and provide for their social, economic and cultural wellbeing, in a manner that is sustainable.</p>	<ul style="list-style-type: none"> <li>• Method TW.1 - Regional plans</li> <li>• Method TW.2 - Consultation</li> <li>• Method TW.3 - Information and assistance</li> <li>• Method TW.4 - Sharing and transfer of responsibilities</li> <li>• Method TW.5 - District plans</li> <li>• Method TW.6 - Research and investigation</li> <li>• Method TW.7 - Collaboration</li> <li>• Method TW.8 - Protocols</li> <li>• Method TW.9 - Consultation</li> <li>• Method TW.10 - Other methods</li> </ul>
<p><b>Water</b></p>	<p><b>Part A: Water Quality</b></p> <p><b>Objective WQUAL.1</b> Water quality in the region: (a) safeguards the life-supporting capacity of water and related ecosystems; (b) safeguards the health of people and communities;</p>	<ul style="list-style-type: none"> <li>• Method WQUAL.1 - Regional plans</li> <li>• Method WQUAL.2 - Research and investigations</li> <li>• Method WQUAL.3 - Monitoring</li> <li>• Method WQUAL.4 - Consents</li> <li>• Method WQUAL.5 - Information and advice</li> <li>• Method WQUAL.6 - Land use effects on water quality</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
	<p>(c) is maintained, or improved in accordance with freshwater objectives formulated under the National Policy Statement for Freshwater Management 2014;</p> <p>(d) is managed to meet the reasonably foreseeable social, economic and cultural needs of future generations.</p> <p><b>Objective WQUAL.2</b> Halt the decline, and improve water quality in lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands in accordance with freshwater objectives formulated in accordance with the National Policy Statement for Freshwater Management 2014.</p> <p><b>Objective WQUAL.3</b> Maintain the quality of water where it is in its natural state.</p>	<ul style="list-style-type: none"> <li>• Method WQUAL.7 - Management of activities that affect water quality</li> <li>• Method WQUAL.8 - Discharges to land</li> <li>• Method WQUAL.9 - Land use rules</li> <li>• Method WQUAL.10 - Collaboration</li> <li>• Method WQUAL.11 - Integrated management</li> <li>• Method WQUAL.12 - Good management practice</li> <li>• Method WQUAL.13 - District plans</li> <li>• Method WQUAL.14 - Good management practice</li> <li>• Method WQUAL.15 - Collaboration</li> <li>• Method WQUAL.16 - Other methods</li> </ul>
	<p><b>Part B: Water Quantity</b></p> <p><b>Objective WQUAN.1</b> Flows, levels and allocation regimes of surface water and groundwater in the region are developed in accordance with the National Policy for Freshwater Management 2014 to:</p> <p>(a) safeguard the life-supporting capacity of water, catchments and related ecosystems;</p> <p>(b) support the maintenance or improvement of water quality in accordance with Policy WQUAL.1;</p> <p>(c) meet the needs of a range of uses, including the reasonably foreseeable social, economic and cultural needs of future generations;</p> <p>(d) comply with limits or targets set to achieve freshwater objectives.</p> <p><b>Objective WQUAN.2</b> The allocation and use of Southland’s water resources:</p>	<ul style="list-style-type: none"> <li>• Method WQUAN.1 - Regional plans</li> <li>• Method WQUAN.2 - Allocation limits</li> <li>• Method WQUAN.3 - Monitoring</li> <li>• Method WQUAN.4 - Research and investigations</li> <li>• Method WQUAN.5 - Consents</li> <li>• Method WQUAN.6 - Information gathering</li> <li>• Method WQUAN.7 - Integrated management</li> <li>• Method WQUAN.8 - District plans</li> <li>• Method WQUAN.9 - Consultation</li> <li>• Method WQUAN.10 - Allocation regimes</li> <li>• Method WQUAN.11 - Strategies and other mechanisms</li> <li>• Method WQUAN.12 - Information, education and public awareness</li> <li>• Method WQUAN.13 - Collaborative management</li> <li>• Method WQUAN.14 - Other methods</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
	<p>(a) is efficient;</p> <p>(b) recognises and makes provision for the Monowai and nationally significant Manapōuri hydro-electric generation schemes in the Waiau catchment and the resultant modified flows and levels.</p> <p><b>Part C: Beds of Rivers and Lakes</b></p> <p><b>Objective BRL.1</b> All significant values of lakes and rivers are maintained and enhanced.</p> <p><b>Objective BRL.2</b> Public access to, along and across lakes and rivers is maintained, and enhanced where necessary, in a strategic and co-ordinated manner, to ensure a level of public access appropriate to the values of the area.</p>	<ul style="list-style-type: none"> <li>• Method BRL.1 - Regional plans</li> <li>• Method BRL.2 - Regional rules</li> <li>• Method BRL.3 - Collaboration</li> <li>• Method BRL.4 - Regional and district plans</li> <li>• Method BRL.5 - Investigations</li> <li>• Method BRL.6 - Information, education and technical assistance</li> <li>• Method BRL.7 - Public access strategy</li> <li>• Method BRL.8 - Consultation</li> <li>• Method BRL.9 - Other methods</li> </ul>
Rural Land/Soils	<p><b>Objective RURAL.1</b> Achieve sustainable use of Southland’s rural land resource, in respect of:</p> <p>(a) agriculture and primary sector activities;</p> <p>(b) subdivision, use and development activities;</p> <p>(c) earthworks and vegetation clearance activities;</p> <p>(d) the use of soil resources;</p> <p>(e) mineral extraction activities; and</p> <p>(f) on-site wastewater systems.</p> <p><b>Objective RURAL.2</b> Safeguard the life-supporting capacity, mauri and health of soils in rural areas, and prevent or minimise soil erosion and sedimentation from land use soil disturbance.</p>	<ul style="list-style-type: none"> <li>• Method RURAL.1 - Regional plans</li> <li>• Method RURAL.2 - Research and investigation</li> <li>• Method RURAL.3 - Information, education, technical assistance and promotion</li> <li>• Method RURAL.4 - District plans and resource consents</li> <li>• Method RURAL.5 - Economic instruments</li> <li>• Method RURAL.6 - Territorial authority management</li> <li>• Method RURAL.7 - Monitoring</li> <li>• Method RURAL.8 - Information and education</li> <li>• Method RURAL.9 - Strategies</li> <li>• Method RURAL.10 - Investigation and collaboration</li> <li>• Method RURAL.11 - Consultation</li> <li>• Method RURAL.12 - Tangata whenua involvement</li> <li>• Method RURAL.13 - Research, information and collaboration</li> <li>• Method RURAL.14 - Promotion</li> <li>• Method RURAL.15 - Other methods</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
<b>Biodiversity</b>	<p><b>Objective BIO.1</b> Understand the extent of loss of indigenous ecosystems and habitats across the Southland Region and identify those most at risk to further loss and degradation.</p> <p><b>Objective BIO.2</b> Maintain indigenous biodiversity in Southland and protect areas of significant indigenous vegetation and significant habitats of indigenous fauna for present and future generations.</p> <p><b>Objective BIO.3</b> Enhance the range, extent and condition of indigenous biodiversity in Southland, with a particular emphasis on those areas most at risk to further loss or degradation.</p>	<ul style="list-style-type: none"> <li>• Method BIO.1 - Schedule of threatened, at risk and rare habitat types</li> <li>• Method BIO.2 - Biodiversity strategy</li> <li>• Method BIO.3 - Collaboration</li> <li>• Method BIO.4 - Pest plant and pest animal management</li> <li>• Method BIO.5 - Marine protected areas</li> <li>• Method BIO.6 - Protect significant indigenous vegetation and significant habitats of indigenous fauna</li> <li>• Method BIO.7 - Maintain indigenous biodiversity</li> <li>• Method BIO.8 - Lawful maintenance and operation of existing activities</li> <li>• Method BIO.9 - Resource consents</li> <li>• Method BIO.10 - Enhancement, biodiversity offsets and compensation measures</li> <li>• Method BIO.11 - Consultation</li> <li>• Method BIO.12 - Investigations, research, monitoring and reporting</li> <li>• Method BIO.13 - Education, public awareness and promotion</li> <li>• Method BIO.14 - Financial assistance</li> <li>• Method BIO.15 - Other methods</li> </ul>
<b>Coast</b>	<p><b>Objective COAST.1</b> Provide clear direction on appropriate and inappropriate subdivision, use and development activities, the cumulative effect of an activity, and precedent effects of a decision, within the region's coastal environment.</p> <p><b>Objective COAST.2</b> Infrastructure, ports, energy projects, aquaculture, mineral extraction activities, subdivision, use and development in the coastal environment are provided for and able to expand,</p>	<ul style="list-style-type: none"> <li>• Method COAST.1 - Regional Coastal Plan</li> <li>• Method COAST.2 - Resource consents</li> <li>• Method COAST.3 - Protocols and accords</li> <li>• Method COAST.4 - District plans</li> <li>• Method COAST.5 - Public access</li> <li>• Method COAST.6 - Education, public awareness and promotion</li> <li>• Method COAST.7 - Advocating</li> <li>• Method COAST.8 - Resource consents</li> <li>• Method COAST.9 - Other methods</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
	<p>where appropriate, while managing the adverse effects of those activities.</p> <p><b>Objective COAST.3</b> Coastal water quality and ecosystems are maintained or enhanced.</p> <p><b>Objective COAST.4</b> The natural character of the coastal environment is restored, rehabilitated or preserved.</p> <p><b>Objective COAST.5</b> Recognise the contribution of aquaculture to the well-being of people and communities by making provision for aquaculture in appropriate locations while:</p> <ul style="list-style-type: none"> <li>(a) protecting coastal indigenous biodiversity in accordance with Policy BIO.3;</li> <li>(b) protecting outstanding natural features, landscapes and natural character in accordance with Policy COAST.3; and</li> <li>(c) avoiding, remedying, or mitigating other adverse effects.</li> </ul>	
<b>Natural Hazards</b>	<p><b>Objective NH.1</b> The risks to people, communities, their businesses, property and infrastructure from the effects of natural hazards are understood and avoided, remedied or mitigated, resulting in communities becoming more resilient.</p>	<ul style="list-style-type: none"> <li>• Method NH.1 - Regional plans and bylaws</li> <li>• Method NH.2 - Research and investigation</li> <li>• Method NH.3 - Information, education and technical assistance</li> <li>• Method NH.4 - Monitoring</li> <li>• Method NH.5 - District plans</li> <li>• Method NH.6 - Information</li> <li>• Method NH.7 - District plans and resource consents</li> <li>• Method NH.8 - Promote</li> <li>• Method NH.9 - Risk assessments</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
		<ul style="list-style-type: none"> <li>• Method NH.10 - Resource consents</li> <li>• Method NH.11 - Critical infrastructure</li> <li>• Method NH.12 - Research, information and collaboration</li> <li>• Method NH.13 - Collaboration</li> <li>• Method NH.14 - Sharing and transfer of responsibilities</li> <li>• Method NH.15 - Strategies</li> <li>• Method NH.16 - Other methods</li> </ul>
<b>Air Quality</b>	<p><b>Objective AQ.1</b> Enable the discharge of contaminants into air while managing the adverse effects of those contaminants on human health and wellbeing, and the environment.</p> <p><b>Objective AQ.2</b> New activities established in Southland do not hinder the region's ability to achieve compliance with national environmental standards and guidelines for ambient air quality.</p>	<ul style="list-style-type: none"> <li>• Method AQ.1 - Regional plans</li> <li>• Method AQ.2 - Research and monitoring</li> <li>• Method AQ.3 - Information, education and public awareness</li> <li>• Method AQ.4 - District plans</li> <li>• Method AQ.5 - Financial incentives</li> <li>• Method AQ.6 - Support and promote</li> <li>• Method AQ.7 - Strategies</li> <li>• Method AQ.8 - Consultation</li> <li>• Method AQ.9 - Collaboration and protocols</li> <li>• Method AQ.10 - Bylaws and legislation</li> <li>• Method AQ.11 - Other methods</li> </ul>
<b>Natural Features and Landscapes</b>	<p><b>Objective LNF.1</b> Southland's outstanding natural features and landscapes are identified and protected from inappropriate subdivision, use and development.</p> <p><b>Objective LNF.2</b> Southland's locally distinctive and valued natural features and landscapes are identified, and managed so that subdivision, use and development is consistent with their values.</p>	<ul style="list-style-type: none"> <li>• Method LNF.1 - Regional plans</li> <li>• Method LNF.2 - Identify regional landscape character values</li> <li>• Method LNF.3 - District plans</li> <li>• Method LNF.4 - Resource consents</li> <li>• Method LNF.5 - Information sharing and collaboration</li> <li>• Method LNF.6 - District plans</li> <li>• Method LNF.7 - Consultation</li> <li>• Method LNF.8 - Landscape assessments</li> <li>• Method LNF.9 - Identification, investigation and assessment of locally distinctive and valued natural features and landscapes</li> <li>• Method LNF.10 - Areas and values</li> <li>• Method LNF.11 - Investigation and assessment</li> <li>• Method LNF.12 - Other methods</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
<b>Contaminated Land</b>	<p><b>Objective CONTAM.1</b> Land affected by soil contamination is identified, investigated and managed.</p> <p><b>Objective CONTAM.2</b> Adverse effects on the environment (including human health) from contaminated land are avoided, remedied or mitigated.</p>	<ul style="list-style-type: none"> <li>• Method CONTAM.1 - Regional plans</li> <li>• Method CONTAM.2 - Identify, investigate and manage</li> <li>• Method CONTAM.3 - Information, education and assistance</li> <li>• Method CONTAM.4 - District plans</li> <li>• Method CONTAM.5 - Collaboration and information sharing</li> <li>• Method CONTAM.6 - Strategies and protocols</li> <li>• Method CONTAM.7 - Consultation</li> <li>• Method CONTAM.8 – Other methods</li> </ul>
<b>Hazardous Substances</b>	<p><b>Objective HAZ.1</b> Adverse effects on the environment (including human health and safety) from the storage, use, transportation and disposal of hazardous substances are prevented or mitigated.</p>	<ul style="list-style-type: none"> <li>• Method HAZ.1 - Regional plans</li> <li>• Method HAZ.2 - District plans</li> <li>• Method HAZ.3 - Collaboration</li> <li>• Method HAZ.4 - Transport routes</li> <li>• Method HAZ.5 - Bylaws</li> <li>• Method HAZ.6 - Collection programmes and facilities</li> <li>• Method HAZ.7 - Protocols</li> <li>• Method HAZ.8 - Information, education and public awareness</li> <li>• Method HAZ.9 - Promote, support and advocate</li> <li>• Method HAZ.10 - Financial incentives</li> <li>• Method HAZ.11 - Consultation</li> <li>• Method HAZ.12 - Monitoring</li> <li>• Method HAZ.13 - Other methods</li> </ul>
<b>Solid Waste</b>	<p><b>Objective WASTE.1</b> Reduce the generation of solid waste in Southland.</p> <p><b>Objective WASTE. 2</b> Avoid, mitigate, or where appropriate remedy the adverse environmental effects of solid waste storage, disposal, processing, handling and transportation.</p>	<ul style="list-style-type: none"> <li>• Method WASTE.1 - Regional plans</li> <li>• Method WASTE.2 - Monitoring</li> <li>• Method WASTE.3 - Information, education and public awareness</li> <li>• Method WASTE.4 - District plans</li> <li>• Method WASTE.5 - Advocate</li> <li>• Method WASTE.6 - Agreements and accords</li> <li>• Method WASTE.7 - Promote and collaborate</li> <li>• Method WASTE.8 - Economic instruments</li> <li>• Method WASTE.9 - Monitoring and regulation</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
		<ul style="list-style-type: none"> <li>• Method WASTE.10 - Information, education and public awareness</li> <li>• Method WASTE.11 - Consultation</li> <li>• Method WASTE.12 - Integration</li> <li>• Method WASTE.13 - Central government</li> <li>• Method WASTE.14 - Regional waste strategy</li> <li>• Method WASTE 15 - Other methods</li> </ul>
<b>Historic Heritage</b>	<p><b>Objective HH.1</b> Historic heritage values are identified and protected from inappropriate subdivision, use and development.</p> <p><b>Objective HH.2</b> The built heritage of Southland is appropriately recognised and where possible utilised in a sustainable manner.</p> <p><b>Objective HH.3</b> Historic heritage values are appropriately managed to avoid or mitigate the potential adverse effects of natural processes and climate change.</p>	<ul style="list-style-type: none"> <li>• Method HH.1 - District plans and regional plans</li> <li>• Method HH.2 - Collaboration</li> <li>• Method HH.3 - Education, information, advocacy and consultation</li> <li>• Method HH.4 - Other methods</li> </ul>
<b>Infrastructure/ Transport</b>	<p><b>Part A: Infrastructure</b></p> <p><b>Objective INF.1</b> Southland’s regionally significant, nationally significant and critical infrastructure is secure, operates efficiently, and is appropriately integrated with land use activities and the environment.</p> <p><b>Part B: Transport</b></p> <p><b>Objective TRAN.1</b> Development of transport infrastructure and land use take place in an integrated and planned manner which: (a) integrates transport planning with land use;</p>	<ul style="list-style-type: none"> <li>• Method INF.1 - Regional plans</li> <li>• Method INF.2 - District plans</li> <li>• Method INF.3 - Consistent approach</li> <li>• Method INF.4 - Monitoring</li> <li>• Method INF.5 - Consultation</li> <li>• Method INF.6 - Other methods</li> <li>• Method TRAN.1 - Regional plans and strategies</li> <li>• Method TRAN.2 - Strategic transportation network plan</li> <li>• Method TRAN.3 - District plans</li> <li>• Method TRAN.4 - Regional Land Transport Strategy</li> <li>• Method TRAN.5 - Promotion and information</li> <li>• Method TRAN.6 - Collaboration</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
	<p>(b) protects the function, safety, efficiency and effectiveness of the transport system;</p> <p>(c) minimises potential for reverse sensitivity issues to arise from changing land uses;</p> <p>(d) provides for positive social, recreational, cultural and economic outcomes;</p> <p>(e) minimises the potential for adverse public health and environmental effects;</p> <p>(f) enhances accessibility and connectivity, maximising transport choice for users of the transport system.</p>	<ul style="list-style-type: none"> <li>• Method TRAN.7 – Monitoring</li> <li>• Method TRAN.8 – Other methods</li> </ul>
<b>Energy</b>	<p><b>Objective ENG.1</b> Efficient use of energy resources.</p> <p><b>Objective ENG.2</b> Use, development, transmission and distribution of local and regional energy resources is undertaken where the adverse effects on the environment (including communities) are avoided, remedied, mitigated, or where appropriate, and such measures are volunteered by the resource user, offset or compensated for.</p> <p><b>Objective ENG.3</b> Generation and use of renewable energy resources is increased.</p> <p><b>Objective ENG.4</b> Recognise and make provision for the national significance of renewable electricity generation activities.</p>	<ul style="list-style-type: none"> <li>• Method ENG.1 - Regional plans</li> <li>• Method ENG.2 - District plans</li> <li>• Method ENG.3 - Promotion of efficient transport choices</li> <li>• Method ENG.4 - Resource consents</li> <li>• Method ENG.5 - Collaboration</li> <li>• Method ENG.6 - Southland Regional Energy Strategy</li> <li>• Method ENG.7 - Identification of energy resources</li> <li>• Method ENG.8 - Advocacy, education and economic instruments</li> <li>• Method ENG.9 - Information, education and public awareness</li> <li>• Method ENG.10 - Consultation</li> <li>• Method ENG.11 - Other methods</li> </ul>
<b>Urban</b>	<p><b>Objective URB.1</b> Urban (including industrial) development occurs in an integrated, sustainable and well-planned manner which provides for positive environmental, social, economic and cultural outcomes.</p>	<ul style="list-style-type: none"> <li>• Method URB.1 - Regional plan</li> <li>• Method URB.2 - District plans</li> <li>• Method URB.3 - Strategic transportation network plan</li> <li>• Method URB.4 - Urban development planning</li> <li>• Method URB.5 - Collaboration</li> </ul>

Chapter	Objectives	Anticipated Environmental Results (AERs)
		<ul style="list-style-type: none"><li data-bbox="1214 237 1570 264">• Method URB.6 - Advocacy</li><li data-bbox="1214 272 1637 300">• Method URB.7 - Other methods</li></ul>