

3 Infrastructure, Energy, Waste*, Hazardous Substances* and Contaminated Land

3.1 Scope and Background

This chapter deals with how activities involving infrastructure, renewable energy, *waste**, *hazardous substances**, versatile soils and contaminated land will be addressed. In general, this chapter provides broad policy guidance for managing these activities. Where appropriate, specific policy relating to these activities is integrated into the resource-based chapters of this Plan.

Infrastructure and other physical resources of regional or national importance

The Regional Council recognises that some infrastructure and other physical resources are regionally or nationally important. The establishment, *operation**, *maintenance** and *upgrading** of infrastructure and infrastructure corridors is critical to the economic wellbeing of the Region and the nation. However, infrastructure can have adverse effects on the environment and other activities can have reverse sensitivity adverse effects on infrastructure.

There can be logistical or technical constraints on where infrastructure must be located to serve communities and operate efficiently. Urban growth should be integrated with infrastructure provision. The Regional Council wants to ensure the benefits of infrastructure are recognised and appropriately weighed along with other matters in decision-making processes.

Energy

Access to reliable and sustainable energy supplies is essential to the way society functions. People and communities rely on energy for transportation, and electricity for everyday activities at home and at work. A reliable and secure supply of energy, including electricity, is fundamental for economic and social wellbeing. Furthermore, the demand for electricity is increasing.

Government has developed energy strategies and made changes to the RMA to encourage energy efficiency and greater uptake of renewable energy over use of non-renewable resources. Renewable energy means energy produced from solar, wind, hydro, geothermal, biomass, tidal, wave and ocean current sources.

The Government has made a commitment to reduce New Zealand's greenhouse gas emissions and to achieve increasingly sustainable energy use. This commitment is expressed by the inclusion of sections 7(ba), 7(i) and 7(j) in the RMA in 2004 and in national strategy and policy documents dealing with energy, renewable energy, energy efficiency and conservation, and electricity transmission.

The electricity transmission network is recognised by a national policy statement as a matter of national significance.



As at 2009, the Government's target is for 90% of New Zealand's electricity generation to be from renewable energy resources by 2025. Collectively these Government policy instruments seek to achieve economy-wide improvements in the efficiency of energy use and an increase in the supply of energy from renewable energy resources.

Given these national policy instruments and the presence of significant renewable energy resources with potential for development in the Region, the Regional Council recognises that it needs to provide for the development of renewable energy resources and the use of renewable energy.

The Region has potential for the development of renewable energy facilities, given the areas with high wind speeds, the potential to develop hydroelectricity resources, and some potential for the use of wave energy around the coastline.

The development and use of renewable electricity generation facilities face a number of barriers that include the difficulty in securing access to natural resources as well as functional, operational and technical factors that constrain the location, layout, design and generation potential of renewable energy facilities. The adverse environmental effects of renewable electricity generation facilities can also be a barrier, if they are not appropriately avoided, remedied or mitigated.

Urban growth and versatile soils

Allowing urban expansion, including the development of rural residential "lifestyle blocks", onto the more versatile soils adjacent to urban areas results in a reduction of options for their future productive use. This can adversely affect the ability of future generations to meet their reasonably foreseeable needs.

***Waste**, *hazardous substances** and contaminated land**

The Regional Council recognises the need to focus on the full life cycle of *waste** from generation to disposal, and that *waste** is a wasted resource.

The Regional Council and the Region's Territorial Authorities have similar responsibilities for the control of adverse effects from the storage, transport, use and disposal of *hazardous substances**. These responsibilities need to be clarified to prevent overlaps, gaps and inconsistencies.

The Regional Council also has responsibilities for identifying and monitoring contaminated land and Territorial Authorities are responsible for the "prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land" (ss30(1)(ca) and 31(1)(b)(iia) RMA).

The New Zealand Waste Strategy (Ministry for the Environment, 2002) sets voluntary national targets for *waste** minimisation, organic *wastes**, special *wastes**, construction and demolition *wastes**, hazardous *wastes**, contaminated land, organochlorines, trade *wastes** and *waste** disposal.



3.2

Issues

Issue 3-1: Infrastructure and other physical resources of regional or national importance

There is potential for concerns about local adverse effects to prevail over recognition of the regional and national benefits of establishing infrastructure and other physical resources of regional or national importance. There is also potential for other activities to constrain the *operation**, *maintenance** or *upgrading** of infrastructure and other physical resources of regional or national importance.

Issue 3-1A: Energy

Energy conservation and energy efficiency are important but on their own will not be sufficient to meet future energy demands. If consumption of non-renewable energy resources is to be reduced or avoided, there will need to be an increase in the use of renewable energy resources. However, there are functional, operational and technical factors that constrain the location, layout, design and generation potential of renewable energy facilities.

Issue 3-1B: The strategic integration of infrastructure with land use

Urban development that is not strategically planned can result in the piecemeal and inefficient provision of associated infrastructure.

Issue 3-1C: Adverse effects from urban growth on versatile soils

Urban growth, including the development of rural residential “lifestyle blocks”, on versatile soils can occur on the fringes of some of the Region’s urban areas, most notably Palmerston North. This can result in those soils no longer being available for use as production land.

Issue 3-2: Waste*, hazardous substances* and contaminated land

The increasing production of *waste** and use of *hazardous substances** in the Region has resulted in:

- (i) wasted resources and an increasing need for appropriate disposal
- (ii) potential for the unsafe use, storage, disposal and transportation of *hazardous substances**
- (iii) potential for land becoming contaminated to the point it poses a risk to people and the environment.

3.3

Objectives

Objective 3-1: Infrastructure[^] and other physical resources of regional or national importance

To have regard to the benefits of *infrastructure[^]* and other physical resources of regional or national importance by enabling their establishment, *operation**, *maintenance** and *upgrading**.

Whāinga 3-1: Ngā kaupapa o raro me ētahi atu rauemi ōkiko whakahirahira - rohe mai, motu mai rānei

Kia aro atu ki ngā painga o ngā kaupapa o raro me ētahi atu rauemi ōkiko whakahirahira – rohe mai, motu mai rānei mā te whakatinana i te whakatū, te whakamahi, te tiaki me te whakapai ake i ērā.



Objective 3-1A: Energy

An improvement in the efficiency of the end use of energy and an increase in the use of *renewable energy*[^] resources within the Region.

Whāinga 3-1A: Pūngao

He whakapai ake i te kaha o te putanga whakamutunga o te pūngao, he whakarahi ake i te whakamahi i ngā rauemi pūngao whakahou i roto i te Rohe.

Objective 3-1B: The strategic integration of *infrastructure*[^] with *land*[^] use

Urban development occurs in a strategically planned manner which allows for the adequate and timely supply of *land*[^] and associated *infrastructure*[^].

Whāinga 3-1B: Te kōmitimiti rautaki o ngā kaupapa o raro me te whakamahi whenua

Ka mahia te whakaahu tāone mā tētahi huarahi e whakamaheretia ā-rautaki kia nui ai, kia arotau ai hoki te ranea o te whenua me ngā kaupapa o raro whai pānga.

Objective 3-1C: Urban growth, rural residential subdivision and versatile soils

The retention, as far as is reasonably practicable, of Class I and II¹ versatile soils² for use as *production land*[^].

Whāinga 3-1C: Te tupu o ngā tāone, te whakaahu whenua hei nohoanga taiwhenua, me ngā oneone whai pūkenga

I ngā wā e tika ana ka pupuritia tonutia ngā oneone whai pūkenga Momo I me te Momo II kia whakamahia hei whenua whakaputa hua.

Objective 3-2: Waste*, hazardous substances* and contaminated land[^]

The Regional Council and *Territorial Authorities*[^] must work together in a regionally consistent way to:

- (i) minimise the quantity of *waste*^{*} generated in the Region and ensure it is disposed of appropriately,
- (ii) manage adverse *effects*[^] from the use, storage, disposal and transportation of *hazardous substances*^{*}, and
- (iii) manage adverse *effects*[^] from *contaminated land*[^].

Whāinga 3-2: Te para, ngā matū mōrearea, me ngā whenua tāhawahawa

Ka mahi tahi te Kaunihera ā-Rohe me ngā Mana Takiwā i runga i te tikanga rite huri noa i te rohe ki te:

- (i) *whakaiti i te rahi o te para ka puta mai huri noa i te Rohe, kia hua ai hoki ka tika te whakawātea*

¹ As identified in the Land Use Capability Classification system.

² For general information purposes these soils largely comprise the following soil series: Egmont, Kiwitea, Westmere, Manawatu, Karapoti, Dannevirke, Ohakune, Kairanga, Opiki and Te Arakura.



- (ii) *whakahaere i ngā pānga kino nā te whakamahi, te putu, te whakawātea, me te kawē i ngā matū mōrearea, me te*
- (iii) *whakahaere i ngā pānga kino nō te whenua tāhawahawa.*

3.4 Policies

3.4.1 **Infrastructure[^] and other Physical Resources of Regional or National Importance**

Policy 3-1: Benefits of *infrastructure[^]* and other physical resources of regional or national importance

- (a) The Regional Council and *Territorial Authorities[^]* must recognise the following *infrastructure[^]* as being physical resources of regional or national importance:
 - (i) facilities for the generation of more than 1 MW of electricity and its supporting *infrastructure[^]* where the electricity generated is supplied to the electricity distribution and transmission networks
 - (ia) the National Grid and electricity distribution and transmission networks defined as the system of transmission lines, sub-transmission and distribution feeders (6.6kV and above) and all associated substations and other works to convey electricity
 - (ib) pipelines and gas facilities used for the transmission and distribution of natural and manufactured gas
 - (iii) the *road[^]* and rail networks as mapped in the Regional Land Transport Strategy
 - (iv) the Palmerston North and Wanganui *airports[^]*
 - (v) the RNZAF *airport[^]* at Ohakea
 - (vi) telecommunications and radiocommunications facilities
 - (vii) public or community sewage treatment plants and associated reticulation and disposal systems
 - (viii) *public water supply^{*}* intakes, treatment plants and distribution systems
 - (ix) public or community drainage systems, including stormwater systems
 - (x) the Port of Wanganui.
- (aa) The Regional Council and *Territorial Authorities[^]* must recognise the following facilities and assets as being physical resources of regional or national importance:
 - (i) solid *waste^{*}* facilities including *landfills^{*}*, transfer stations and resource recovery facilities that deal with municipal *waste^{*}*
 - (ii) flood protection schemes
 - (iii) New Zealand Defence Force facilities.
- (b) The Regional Council and *Territorial Authorities[^]* must, in relation to the establishment, *operation^{*}*, *maintenance^{*}*, or *upgrading^{*}* of *infrastructure[^]* and other physical resources of regional or national importance, listed in (a) and (aa), have regard to the benefits derived from those activities.
- (c) The Regional Council and *Territorial Authorities[^]* must achieve as much consistency across *local authority[^]* boundaries as is reasonably possible with respect to policy and plan provisions and decision-making for existing and future *infrastructure[^]*.



Policy 3-2: Adverse effects[^] of other activities on *infrastructure*[^] and other physical resources of regional or national importance

The Regional Council and *Territorial Authorities*[^] must ensure that adverse effects[^] on *infrastructure*[^] and other physical resources of regional or national importance from other activities are avoided as far as reasonably practicable, including by using the following mechanisms:

- (a) ensuring that current *infrastructure*[^], *infrastructure*[^] corridors and other physical resources of regional or national importance, are identified and had regard to in all resource management decision-making, and any development that would adversely affect the *operation*^{*}, *maintenance*^{*} or *upgrading*^{*} of those activities is avoided as far as reasonably practicable,
- (b) ensuring that any new activities that would adversely affect the *operation*^{*}, *maintenance*^{*} or *upgrading*^{*} of *infrastructure*[^] and other physical resources of regional or national importance are not located near existing such resources or such resources allowed by unimplemented *resource consents*[^] or other RMA authorisations,
- (ba) ensuring that there is no change to existing activities that increases their incompatibility with existing *infrastructure*[^] and other physical resources of regional or national importance, or such resources allowed by unimplemented *resource consents*[^] or other RMA authorisations,
- (c) notifying the owners or managers of *infrastructure*[^] and other physical resources of regional or national importance of consent applications that may adversely affect the resources that they own or manage,
- (d) ensuring safe separation distances are maintained when establishing *rules*[^] and considering applications for buildings, *structures*[^] and other activities near overhead electric lines and conductors eg., giving effect to the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001), prepared under the Electricity Act 1992, and the Electricity (Hazards from Trees) Regulations 2003 prepared under the Electricity Act 1992,
- (da) ensuring safe separation distances are maintained when establishing *rules*[^] and considering applications for buildings, *structures*[^] and other activities near transmission gas pipelines eg., giving effect to the Operating Code Standard for Pipelines - Gas and Liquid Petroleum (NZS/AS 2885) and the Gas Distribution Networks (NZS 5258:2003), the latter promulgated under the Gas Act 1992,
- (e) ensuring that any planting does not interfere with existing *infrastructure*[^], eg., giving effect to the Electricity (Hazards from Trees) Regulations 2003 promulgated under the Electricity Act 1992 and Section 6.4.4 External Interference Prevention of the Operating Code Standard for Pipelines - Gas and Liquid Petroleum (NZS/AS 2885), and
- (f) ensuring effective integration of transport and *land*[^] use planning and protecting the function of the strategic *road*[^] and rail network as mapped in the Regional Land Transport Strategy.



Policy 3-3: Adverse effects[^] of infrastructure[^] and other physical resources of regional or national importance on the environment

In managing any adverse environmental effects[^] arising from the establishment, operation*, maintenance* and upgrading* of infrastructure[^] or other physical resources of regional or national importance, the Regional Council and Territorial Authorities[^] must:

- (a) allow the operation*, maintenance* and upgrading* of all such activities once they have been established, no matter where they are located,
- (b) allow minor adverse effects[^] arising from the establishment of new infrastructure[^] and physical resources of regional or national importance, and
- (c) avoid, remedy or mitigate more than minor adverse effects[^] arising from the establishment of new infrastructure[^] and other physical resources of regional or national importance, taking into account:
 - (i) the need for the infrastructure[^] or other physical resources of regional or national importance,
 - (ii) any functional, operational or technical constraints that require infrastructure[^] or other physical resources of regional or national importance to be located or designed in the manner proposed,
 - (iii) whether there are any reasonably practicable alternative locations or designs, and
 - (iv) whether any more than minor adverse effects[^] that cannot be adequately avoided, remedied or mitigated by services or works can be appropriately offset, including through the use of financial contributions.

Policy 3-3A: The strategic integration of infrastructure[^] with land[^] use

Territorial Authorities[^] must proactively develop and implement appropriate land[^] use strategies to manage urban growth, and they should align their infrastructure[^] asset management planning with those strategies, to ensure the efficient and effective provision of associated infrastructure[^].

Policy 3-3B: Urban growth and rural residential subdivision on versatile soils

In providing for urban growth and rural residential subdivision (lifestyle blocks), Territorial Authorities[^] must place priority on:

- (a) the retention, as far as is reasonably practicable, of Class I and II versatile soils for use as production land[^], and
- (b) considering the consolidation of existing or partly developed areas before opening up new areas to urban development.



3.4.2

Energy

Policy 3-4: *Renewable energy*[^]

- (a) The Regional Council and *Territorial Authorities*[^] must have particular regard to:
 - (i) the benefits of the use and development of *renewable energy*[^] resources including:
 - (A) contributing to reduction in greenhouse gases,
 - (B) reduced dependency on imported energy sources,
 - (C) reduced exposure to fossil fuel price volatility, and
 - (D) security of supply for current and future generations,
 - (ii) the Region's potential for the use and development of *renewable energy*[^] resources, and
 - (iii) the need for *renewable energy*[^] activities to locate where the *renewable energy*[^] resource is located.
- (aa) The Regional Council and *Territorial Authorities*[^] must give preference to the development of *renewable energy*[^] generation and use of *renewable energy*[^] resources over the development and use of non-*renewable energy*[^] resources in policy and plan development and decision-making, except with regard to providing for security of supply in "hydro dry" years³.
- (b) The Regional Council and *Territorial Authorities*[^] must generally not restrict the use of small domestic-scale *renewable energy*[^] production for individual domestic use.

Policy 3-5: *Energy efficiency*^{*}

- (a) The Regional Council and *Territorial Authorities*[^] must have particular regard to the efficient end use of energy in consent decision-making processes for large users of energy.
- (b) *Territorial Authority*[^] decisions and controls on subdivision and housing, including layout of the *site*^{*} and layout of the lots in relation to other houses/subdivisions, must encourage energy-efficient house design and access to solar energy.
- (c) *Territorial Authority*[^] decisions and controls on subdivision and *land*[^] use must ensure that sustainable transport options such as public transport, walking and cycling can be integrated into *land*[^] use development.

³ When inflows to hydroelectricity generation storage lakes are below long run normal levels.



3.4.3

Waste*

Policy 3-6: Waste* policy hierarchy

Wastes*, including solid, liquid, gas and sludge waste*, must be managed in accordance with the following hierarchy:

- (a) reducing the amount of waste* produced
- (b) reusing waste*
- (c) recycling waste*
- (d) recovering resources from waste*
- (e) appropriately disposing of residual wastes*.

Policy 3-7: Consent information requirements - waste* policy hierarchy and hazardous substances*

Where a proposal has the potential to give rise to significant adverse effects[^] on the receiving environment[^], an assessment must be required, as part of the consent information requirements for all discharges[^] to air, land[^], water[^] and the coastal marine area[^], of:

- (a) reduction, reuse, recycle and recovery options for the discharge[^] in accordance with Policy 3-6, and
- (b) any hazardous substances* that may be present in the discharge[^], and alternatives to those hazardous substances*.

Policy 3-8: Cleanfills*, composting* and other waste* reduction activities

Waste* reduction activities will be encouraged, in particular by generally allowing cleanfills* and composting* activities.

Policy 3-9: Landfill* management

Landfills* must generally be designed, constructed, managed, operated, remediated and monitored in line with appropriate guidelines and national environmental standards[^]. Taking into account the applicability of these guidelines and standards in relation to the type and scale of activity proposed, the following guidelines may be considered appropriate:

- (a) Centre for Advanced Engineering, Landfill Guidelines, April 2000
- (b) Ministry for the Environment, Module 1: Hazardous Waste Guidelines - Identification and Record Keeping, June 2002, ME637
- (c) Ministry for the Environment, Module 2: Hazardous Waste Guidelines. Landfill Waste Acceptance Criteria and Landfill Classification, May 2004, ME510
- (d) Ministry for the Environment, A Guide to the Management of Cleanfills, January 2002, ME418
- (da) Ministry for the Environment, A Guide to the Management of Closing and Closed Landfills in New Zealand, May 2001, ME390
- (db) Ministry for the Environment, Guide to Landfill Conditions, May 2001, ME389



- (e) Ministry for the Environment, Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions, September 2001
- (f) Landfill gas collection and destruction or reuse in accordance with the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics) Regulations 2004.

3.4.4 Hazardous Substances*

Policy 3-10: Responsibilities for the management of hazardous substances*

In accordance with s62(1)(i) RMA, *local authority*[^] responsibilities for the management of *hazardous substances** in the Region are as follows:

- (a) The Regional Council must be responsible for developing objectives, policies and methods to control the use of *land*[^] for the purpose of preventing or mitigating the adverse *effects*[^] of the disposal of *hazardous substances**
- (b) *Territorial Authorities*[^] must be responsible for developing objectives, policies and methods to control the use of *land*[^] for the purpose of preventing or mitigating the adverse *effects*[^] of the storage, use or transportation of *hazardous substances**

Policy 3-11: Regulation of hazardous substances*

The Regional Council must not grant *resource consents*[^] for *discharges*[^] that contain or result in the production of environmentally persistent hazardous chemicals or hazardous chemicals that will bioaccumulate to a level that has acute or chronic toxic *effects*[^] on humans or other non-target species.

3.4.5 Contaminated Land[^]

Policy 3-12: Identification of priority contaminated land[^]

The Regional Council and *Territorial Authorities*[^] shall jointly identify priority *contaminated land*[^].

Priority *contaminated land*[^] is *land*[^] that:

- (a) is listed on a register of verified *contaminated land*[^] held by the Regional Council or a *Territorial Authority*[^], or
- (b) would have been the *site** of an activity identified on the Hazardous Activities and Industries List (Ministry for the Environment, 2004a), including horticulture and sheep dips, and *site** investigations have verified that the *land*[^] is contaminated, and
- (c) is expected to be subject to a change of *land*[^] use within the next 10 years that is likely to increase the risks to human health or the *environment*[^], including where *land*[^] is identified for future residential zoning or where a specific development is proposed.

Policy 3-13: Management of priority contaminated land[^]

Where *land*[^] use changes are likely to increase the risks to human health or the *environment*[^] from priority *contaminated land*[^] (as identified under Policy 3-12) the Regional Council and *Territorial Authorities*[^] must ensure that:

- (a) the landowner or *land*[^] developer fully investigates the extent and degree of contamination prior to the granting of consent allowing development



(assistance with investigations may be provided by the Regional Council in some cases),

- (b) *land*[^] is made suitable for its intended use through an appropriate level of remediation or management (including engineering) controls, and
- (c) *land*[^] remains suitable for its intended use through appropriate monitoring of residual *contaminant*[^] levels and associated risks and through the use of management controls on the activities undertaken on the *land*[^].

3.5 Methods

Many of the policies in this chapter will be implemented by Territorial Authorities in district plans and in decisions on resource consents and designations. The policies in this chapter will also be implemented by methods in other chapters in this Plan.

Managing the environmental impacts of *waste*^{*}, *hazardous substances*^{*} and contaminated *sites*^{*} is a mix of regulatory and non-regulatory approaches. Part II of this Plan contains regional rules relating to the *waste*^{*} activities described in this chapter. The key non-regulatory methods the Regional Council will pursue are outlined below.

Method 3-1 Regional Territorial Authority Waste Forum	
Description	The aim of this method is to work with the Territorial Authorities to achieve a regionally consistent approach to <i>waste</i> [*] and to progress Region-wide <i>waste</i> [*] issues and implement agreed initiatives, including: <ul style="list-style-type: none"> • <i>hazardous waste</i>[*] disposal facilities • recycling facilities • resource recovery network <i>waste</i>[*] exchange • public information • <i>waste</i>[*] education in schools • consistent <i>waste</i>[*] data collection and reporting • development of Region-wide <i>waste</i>[*] reduction targets in line with the New Zealand Waste Strategy 2002 • <i>cleanfill</i>[*] management and monitoring • <i>waste</i>[*] minimisation and cleaner production in business/trade sectors • economic instruments including incentives for <i>waste</i>[*] reduction.
Who	Regional Council and Territorial Authorities.
Links to Policy	This method implements Policies 3-6 to 3-10.
Targets	<ul style="list-style-type: none"> • Continue Regional Territorial Authority Waste Forum • Implement initiatives • Report to central Government on New Zealand Waste Strategy targets on a two-yearly basis.

Method 3-2 Public Information - <i>Waste</i> [*]	
Description	Easily accessible information will be developed and provided to increase public awareness on <i>waste</i> [*] issues generic to the Region, including: <ul style="list-style-type: none"> • <i>cleanfill</i>[*] management and guidelines • <i>waste</i>[*] minimisation • availability of <i>waste</i>[*] disposal and recovery facilities (including for campervans) • fly tipping • <i>hazardous substances</i>[*]



Method 3-2 Public Information - <i>Waste*</i>	
	<ul style="list-style-type: none"> • burning of <i>waste*</i> • offal pits and farm dumps • septic tank discharges • <i>composting*</i>.
Who	Regional Council and Territorial Authorities.
Links to Policy	This method implements Policies 3-6 to 3-11.
Target	Information provided via website and available in paper form by 2008.

Method 3-3 Contaminated Land - Information System	
Description	<p>The Regional Council will seek to work with Territorial Authorities to develop and implement a regionally consistent recording and category system and a procedure for the consistent handling of information for registered contaminated land. Appropriate information will be supplied on land information memoranda (LIM).</p> <p>A regional register of contaminated land will be maintained and updated.</p>
Who	Regional Council, Territorial Authorities and Ministry for the Environment.
Links to Policy	This method implements Policies 3-12 and 3-13.
Targets	<ul style="list-style-type: none"> • Regionally consistent recording and category system implemented by all Territorial Authorities by 2010. • Regional selected land use register linking to appropriate information held by Territorial Authorities by 2010.

Method 3-4 Contaminated Land - Identification of Priority <i>Sites*</i>	
Description	The Regional Council, together with Territorial Authorities, will identify areas of land where pressure for residential development exists and those areas where there is potential for contaminated land issues according to land use activities listed on the Hazardous Activities and Industries List (Ministry for the Environment, 2004a), in particular horticultural <i>sites*</i> and sheep dip <i>sites*</i> .
Who	Regional Council, Territorial Authorities and Ministry for the Environment.
Links to Policy	This method implements Policy 3-12.
Target	Pressure areas identified by 2008.



3.6 Anticipated Environmental Results

Anticipated Environmental Result	Link to Policy	Indicator	Data Source
Increased efficiency of the end use of energy and increased generation of energy from renewable resources in the Region.	Policies 3-4 and 3-5	<ul style="list-style-type: none"> Efficient end use of energy in the Region Amount of energy generated from renewable energy resources in the Region 	<ul style="list-style-type: none"> Energy Efficiency and Conservation Authority (EECA) and Territorial Authority monitoring of building and resource consent applications to improve energy efficiency Monitoring of the quantity of installed generation capacity in the Region
Urban growth occurs in a strategically planned manner.	Policy 3-3A	<ul style="list-style-type: none"> Urban growth 	<ul style="list-style-type: none"> District plan variations and changes
Class I and II versatile soils are retained, as far as it is reasonably practicable to do so, in productive use.	Policy 3-3B	<ul style="list-style-type: none"> Urban growth 	<ul style="list-style-type: none"> District plan variations and changes
By 2017, the amount of residual waste* per capita generated in the Region will be less than prior to this Plan becoming operative.	Policies: 3-6, 3-7 and 3-8	<ul style="list-style-type: none"> Volume or weight of residual waste* per capita 	<ul style="list-style-type: none"> Territorial Authority monitoring of solid waste* strategies
No “clean” sites* prior to this Plan becoming operative will become contaminated by 2017.	Policies: 3-7, 3-8, 3-9, 3-10, 3-11 and 3-12	<ul style="list-style-type: none"> Number of clean sites becoming contaminated 	<ul style="list-style-type: none"> Regional register of contaminated land Regional Council’s incidents database
Priority contaminated sites* are remediated appropriately prior to change in land use.	Policies: 3-12 and 3-13	<ul style="list-style-type: none"> Number of remediated sites 	<ul style="list-style-type: none"> Regional register of contaminated land

3.7 Explanations and Principal Reasons

3.7.1 Infrastructure and energy

Objectives 3-1 to 3-1C and Policies 3-1 to 3-5 have been adopted to recognise the benefits of infrastructure and having it well integrated with other land uses, and to recognise and provide for renewable energy and energy efficiency measures. The policies on infrastructure aim to give guidance to decision-makers about how to weigh up the local adverse effects of infrastructure against the positive regional and national benefits. They also aim to provide guidance on how to avoid adverse effects on important infrastructure through the inappropriate use of land near or adjoining important infrastructure, and the importance of integrating urban growth with infrastructure provision and the retention of versatile soils for use as production land. The policies regarding energy efficiency and renewable energy seek to recognise the benefits to be derived from the use and development of renewable energy, and the efficient use of energy and resources (both of which are matters to be had in particular regard in Part II of the RMA).



Parts of Policies 3-1, 3-2, 3-3A and 3-5 are included to give effect to parts of the Regional Land Transport Strategy, which seeks to protect the strategic transport network and create opportunity for the uptake of public transport options in the future.

3.7.1A **Urban growth and versatile soils**

The RMA requires those with functions under it to have regard to resource costs and benefits of urban development. For example, directing urban growth or development onto less versatile soils may increase travel distances, costs of service provision or other economic or environmental costs of land development. However, allowing urban expansion onto the more versatile soils adjacent to urban areas will result in a reduction of options for their future productive use, which is a cost to future generations. Territorial Authorities need to weigh these matters when making land use decisions.

3.7.2 **Waste***

Objective 3-2, Policies 3-6, 3-7, 3-8 and 3-9 and associated methods set up an overarching policy framework for reducing *waste** generation and managing the environmental effects of *waste** discharges to air, land and water.

The Stocktake on Waste Report (Horizons Regional Council, 2004) was a first regional attempt to assess the amount and type of *waste** generated in the Region, and the current level of existing *waste** reduction and reuse opportunities. The report indicated that approximately 22 years of *landfill** space remained in the Region, based on current disposal rates. Looking ahead, possible scenarios include:

- (a) the establishment of more *landfills** for both domestic and industrial *waste**, with associated environmental effects
- (b) increased costs associated with limited disposal space or transport and disposal outside the Region
- (c) reducing the amount of *waste** generated to enable remaining *landfill** space to last longer.

Policy 3-6 establishes a hierarchy of reducing, reusing, recycling, recovering and finally disposing of *waste**. Policies 3-6, 3-7 and 3-8 together encourage reduction, reuse and recycling activities by being less restrictive and discouraging *waste** disposal as a first option. This framework is encouraged at the national level by the New Zealand Waste Strategy (Ministry for the Environment, 2002). Policy 3-9 also sets high standards for *landfills**, reflecting the significant adverse effects that *waste** disposal can have on the environment.

Territorial Authorities are required to develop *waste** management strategies under the Local Government Act 2002 and, along with private operators, to provide and manage *waste** disposal services. It is appropriate that the Regional Council works with the Territorial Authorities on the Region's generic *waste** issues, to provide a consistent approach to *waste** management and *waste** minimisation where possible.

Public information on the appropriate disposal of *wastes** and opportunities for reduction, reuse and recycling are key to reducing *waste** to *landfill** into the future.



3.7.3

Hazardous Substances*

Objective 3-2, Policies 3-10 and 3-11 and the associated methods set up the policy framework for managing the effects of the storage, use, transport and disposal of *hazardous substances** in the Region as required under s62(1)(i) of the RMA.

The Hazardous Substances and New Organisms Act 1996 provides a definition of *hazardous substances**. These substances pose a significant threat to the environment if not stored, used, transported and disposed of safely and appropriately. The Regional Council considers that it is in an appropriate position to control the effects of the discharge of *hazardous substances** to the environment by means of the resource consenting process. This enables an assessment of the environmental effects of *hazardous substance** discharges to air, land and water on a case-by-case basis. Regional rules are an effective means of controlling the effects of these substances. Territorial Authorities are considered to be in an appropriate position to manage the storage, use and transport of *hazardous substances** through their district planning provisions.

The Stockholm Convention, to which New Zealand is a signatory, aims to rid the world of persistent organic pollutants. Many of these are *hazardous substances** previously used in old *agrichemicals**. Despite the Regional Council providing a comprehensive old *agrichemical** collection in 1996, there is likely to be a risk posed by old *agrichemicals** still stored on farms. The Regional Council and the Ministry for the Environment are committed to providing a further collection of old *agrichemicals**.

3.7.4

Contaminated Land

Objective 3-2, Policies 3-12 and 3-13, and the associated methods set up the policy framework for managing contaminated land in the Region, including an approach to determining priority contaminated land and a process to establish a consistent information system across the Region.

The consistent management and appropriate remediation of contaminated land is of national concern because of the significant threat these *sites** pose to the environment.

Contaminated land is any *site** where past (or present) activities have left a *hazardous substance** that has, or is reasonably likely to have, significant adverse effects. In order to adequately protect people and the environment, contaminated land needs to be located and remediated as necessary. A number of *sites** have been located in the Region already - mainly timber treatment yards, gasworks *sites**, and *landfills** - and because of this can be managed appropriately as land use changes. However, the increase in residential subdivision in rural areas in recent years means that other contaminated land such as horticulture and sheep dip *sites**, yet to be identified on the ground, pose a threat to people moving into those areas. These are considered priority *sites**, along with *sites** already identified. The Regional Council will work with Territorial Authorities to determine where pressure for residential development is expected in the next 10 years and to identify the risks associated with contaminated land.

