

Notes for track changes. Recommendations made by the infrastructure, Energy, and Waste Officers Report are shown in **Green**. Words recommended to be added are shown in underline, words recommended to be removed are shown in ~~strike through~~.

3 Infrastructure, Energy, and Waste

3.1 Scope and Background

This chapter details with how activities involving infrastructure*, renewable energy, waste*, hazardous substances* and contaminated land will be addressed. In general, policy relating to these activities is integrated into the resource-based chapters of this Plan. Specific policies developed by Horizons for these activities are detailed in this chapter.

Infrastructure

Horizons recognises that some infrastructure* is regionally and nationally important. Infrastructure* can have adverse effects on the environment and other activities can have adverse effects on infrastructure*. Horizons wants to ensure the benefits and effects are balanced and managed appropriately.

Infrastructure* includes road and rail networks, energy networks for electricity, oil and gas, facilities for energy generation, water supply and wastewater networks, drainage systems, telecommunications, airports, ports, and any other network utility operations. Infrastructure* has significant community benefit.

Renewable energy

Horizons recognises it has a requirement to provide for development of renewable energy resources and using renewable energy. 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. One of the barriers facing development of renewable energy includes the difficulty in securing access to natural resources.

Waste, hazardous substances and contaminated land

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

Horizons 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.

Horizons 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" (ss 30(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 sites, organochlorines, trade wastes and waste disposal.

3.2 Issues

Issue 3-1: Infrastructure and energy

There is potential for concerns about local adverse effects to prevail over the regional and national benefits of developing infrastructure* and renewable energy.

Issue 3-2: Waste, hazardous substances and contaminated sites

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) unsafe use, storage, disposal and transportation of hazardous substances*
- (iii) land becoming contaminated to the point it poses a risk to people and the environment.

3.3

Objectives

Objective 3-1: Infrastructure and energy

Resource use activities associated with the provision, maintenance and upgrading of infrastructure*, and/or with the use of renewable energy, will be recognised and enabled.

Whāinga 3-1: Ngā kaupapa o raro me te pūngao

Ka tohua, ka whakamanatia ngā ngohe whakamahi rauemi e pā ana ki te tuku, te tiaki me te whakapai ake i ngā kaupapa o raro, te whakamahi pūngao ka taea te whakahou hoki/rānei.

Objective 3-2: Waste, hazardous substances and contaminated sites

Horizons and Territorial Authorities will work together in a regionally consistent way to:

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

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

Ka mahi tahi a Horizons me Territorial Authorities i runga i te tikanga rite ki te:

- (i) *Whakaiti i te rahi o te para kia whakawāteatia huri noa i te Rohe, kia tika hoki te whakawātea*
- (ii) *Whakahaere i ngā pānga kōaro nā te whakamahi, te putu, te whakawātea, me te kawē i ngā matū mōrearea, me te*
- (iii) *Whakahaere i ngā pānga kōaro nō te whenua tāhawahawa.*

3.4 Policies

3.4.1 Infrastructure

Policy 3-1: Benefits of infrastructure

- (a) All persons exercising functions and powers under the RMA shall recognise the following infrastructure* within the Region as being physical resources of regional and 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 transmission and distribution networks grid and facilities and infrastructure to transmit the electricity generated into the electricity grid
 - (ii) the electricity grid, ~~as defined~~ as the system of transmission lines, substations and other works, including the HVDC link used to connect grid injection points and grid exit points to convey electricity throughout the North and South Island by the Electricity Governance Rules 2003
 - (iii) Electricity distribution networks defined as the system of sub-transmission and distribution feeders (6.6kV and above) and substations
 - (iv) Pipelines, and gas facilities used for the transmission of natural, and manufactured gas
 - (v) the strategic road and rail network as defined in the Regional Land Transport Strategy
 - (vi) the Palmerston North and Wanganui Airports
 - (vii) the RNZAF airport at airfield in Ohakea
 - (viii) telecommunications and radiocommunications facilities
 - (ix) ~~community wastewater and water~~ Public sewerage treatment plants and associated sewerage systems -managed by Territorial Authorities.
 - (x) Public water supply* treatment plants and distribution systems
 - (xi) Flood protection and drainage schemes managed by a local authority
 - (xii) Port of Wanganui
- (b) In making decisions about the establishment, maintenance, alteration, upgrading, and expansion of infrastructure* within the Region, including the infrastructure* of regional and national importance listed in subsection (a), the benefits derived from the infrastructure* at a local, regional and national level shall be taken into account.
- (c) Existing and future infrastructure* shall be managed in a manner which achieves as much consistency across local authority boundaries as is reasonably possible.

Policy 3-2: Adverse effects of other activities on infrastructure

Adverse effects from other activities on infrastructure* shall be avoided by using the following mechanisms:

- (a) ensuring that current infrastructure* corridors are taken into account in all resource management decision-making, and any development that will adversely affect the efficiency or effectiveness of infrastructure* within these corridors is avoided
- (b) ensuring that any new activities that will adversely affect the efficiency or effectiveness of infrastructure* are not located near existing

Recommendation
IEW 9 page 112

Recommendation
IEW 10 page 124

- infrastructure*, and that there is no change to existing activities that increases their incompatibility with existing infrastructure*
- (c) notifying the owners or managers of infrastructure of consent applications that may adversely affect the infrastructure* that they own or manage
 - (d) giving effect to the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001), prepared under the Electricity Act 1992, when establishing rules and considering applications for buildings, structures, and other activities near overhead electric lines and conductors
 - (e) giving effect to the operating code standard for Pipelines - Gas and Liquid Petroleum (NZ/AS2885), when establishing rules and considering applications for buildings, structures and other activities near transmission gas pipelines.
 - (f) ensuring that any planting does not interfere with existing infrastructure*, including 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 (NZ/AS2885).
 - (g) Ensuring effective integration of transport and land-use planning in growth areas of the Region, including protecting the function of the strategic road and rail network.

Policy 3-3: Adverse effects of infrastructure on the environment

When making decisions on consent applications regarding infrastructure*, the adverse effects of infrastructure* on the environment shall be managed in the following manner:

Recommendation
IEW 11 page 155

- (a) **Effects to be avoided** – The following adverse effects of infrastructure* on: shall be avoided to the same extent required of other types of activities:
 - (i) effects on waahi tapu, waahi tupuna and other sites of significance to Māori
 - (ii) effects on specified waterways valued for natural state and sites of significance (aquatic)
 - (iii) effects on rare and threatened habitats as defined in Chapter 7
 - (iv) effects on the outstanding natural features and landscapes identified in Chapter 7
 - (v) effects on protection zones in the coastal marine area as identified in Chapter 9

Shall be managed in the same manner as other types of activities unless functional constraints require them to locate in those areas make this impossible, in which case adverse effects should be mitigated. Mitigation may include the use of financial contributions in accordance with the policies in Chapter 18.

- (b) **Other effects** – All other adverse effects of infrastructure* will be managed in a manner that tolerates minor adverse local effects and takes into account:
 - (i) the benefits of infrastructure*, particularly the benefits of regionally or nationally important infrastructure*
 - (ii) the integration of the infrastructure* with land use
 - (iii) the benefits to be derived from the use and development of renewable energy.

A financial contribution may be sought in order to provide the option of offsetting or compensating for adverse effects, rather than requiring adverse effects to be avoided, remedied or mitigated, in accordance with the policies for financial contributions in Chapter 18 of this Plan.

3.4.2

Energy

Policy 3-4: Renewable energy

- (a) All persons exercising functions and powers under the RMA shall have particular regard to:
- i. The social, economic, cultural and environmental benefits of renewable energy generation
 - ii. The Manawatu-Wanganui Region's potential for the development of renewable energy resources
 - iii. The need for renewable energy facilities to locate where the renewable energy resource is located
 - iv. The development of renewable energy generation and use of renewable energy resources shall be preferred to the development and use of non-renewable energy resources in policy development and resource consent decision making.
- (b) Local authority decisions and controls on land use should generally not restrict the use of small domestic-scale renewable energy production for individual domestic use.

Recommendation
IEW 11 page 155

Policy 3-5: Energy efficiency

- (a) The efficient use of energy shall be taken into account in consent decision-making processes for large users of energy.
- (b) Local authority decisions and controls on subdivision and housing, including layout of the site and layout of the lots in relation to other houses/subdivisions, should encourage energy-efficient house design and access to solar energy.
- (c) Local authority decisions and controls on subdivision and land use should ensure that sustainable transport options such as public transport, walking and cycling can be integrated into land use development.

3.4.3

Waste

Policy 3-6: Waste policy hierarchy

Wastes*, including solid, liquid, gas and sludge waste*, shall 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

An assessment shall 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
- (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 operations.

Policy 3-9: Landfill management

Landfills* shall 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, ME367.
- (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.
- (e) Ministry for the Environment, A Guide to the Management of Closing and Closed Landfills in New Zealand, May 2001, ME390.
- (f) Ministry for the Environment, Guide to Landfill Conditions, May 2001, ME389.
- (g) Ministry for the Environment, Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions, September 2001.
- (h) Landfill gas collection and destruction or reuse as per the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and other Toxics) Regulations 2004.
- ~~(a) Guidelines, May 2004, Ref. ME510~~
- ~~(b) Ministry for the Environment, Module 1: Hazardous Waste Guidelines – Identification and Record keeping June 2002, Ref. ME637~~
- ~~(c) Ministry for the Environment, Waste Acceptance Criteria for Class A Landfills – Final Report, September 2003, Ref. TR134~~
- ~~(d) Ministry for the Environment, Good Practice Guide for Assessing and Managing Odour in New Zealand, June 2003~~

Recommendation
IEW 17 page 199

- ~~(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 as per 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 s 62(1)(i) RMA, local authority responsibilities for the management of hazardous substances* in the Manawatu-Wanganui Region are as follows:

- (a) The Regional Council shall 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 shall 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

Resource consents will not be granted 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

Priority contaminated land shall be land that:

- (a) is listed on a register of contaminated land held by the Regional Council or a Territorial Authority
- (b) would have been the site of an activity identified on the Hazardous Activities and Industries List (Ministry for the Environment, 2004a) in the past, including horticulture and sheep dips
- (c) is likely to be subject to a change of land use within the next 10 years - in particular to residential subdivision, likely to increase the risks to human health or the environment.

The Regional Council and Territorial Authorities will jointly identify priority contaminated land ~~by 2008.~~

Recommendation
IEW 20 page 209

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 developer shall:

- (a) fully investigate 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) remediate the site to an appropriate level prior to any development occurring
- (c) undertake adequate ongoing monitoring of contaminant levels and associated risks.

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.

Project Name	Regional Territorial Authority Waste Forum
Project Description	<p>The aim of this project is to work with the Territorial Authorities to achieve a regionally consistent approach to waste* and to progress region-wide waste* issues and implement agreed initiatives, including:</p> <ul style="list-style-type: none"> • hazardous waste* disposal facilities • recycling facilities • resource recovery network/ waste* exchange • public information • waste* education in schools • consistent waste* data collection and reporting • development of region-wide waste* reduction targets in line with the New Zealand Waste Strategy 2002 • cleanfill management and monitoring • waste* minimisation and cleaner production in business/trade sectors • economic instruments including incentives for waste* reduction.
Who	Regional Council and Territorial Authorities.
Links to Policy	This project links to Policies 3-6, 3-8 and 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.

Public Information – Waste	
Project Name	
Project Description	Easily accessible information will be developed and provided to increase public awareness on waste* issues generic to the Region, including: <ul style="list-style-type: none"> • cleanfill* management and guidelines • waste* minimisation • availability of waste* disposal and recovery facilities • fly tipping • hazardous substances* • burning of waste* • offal pits and farm dumps • septic tank discharges • composting.
Who	Regional Council and Territorial Authorities.
Links to Policy	This project links to Policies 3-6 and 3-10.
Target	Information provided via website and available in paper form by 2008.

Contaminated Land – Information System	
Project Name	
Project Description	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. A regional register of contaminated land* will be maintained and updated.
Who	Regional Council, Territorial Authorities and Ministry for the Environment.
Links to Policy	This project links to 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.

Contaminated Land – Identification of Priority Sites	
Project Name	
Project 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 previous land use activities listed on the Hazardous Activities and Industries List (Ministry for the Environment, 2004a), in particular horticultural sites and sheep dip sites.
Who	Regional Council, Territorial Authorities and Ministry for the Environment.
Links to Policy	This project links to Policy 3-12.
Target	Pressure areas identified by 2008.

3.6 Anticipated Environmental Results

Anticipated Environmental Result	Link to Policy	Indicator	Data Source
This Plan is perceived as even-handed by resource users in the way it deals with existing and development of infrastructure* and renewable energy activities.	Policies: 3-1, 3-2, 3-3, 3-4 and 3-5	<ul style="list-style-type: none"> Customer satisfaction 	<ul style="list-style-type: none"> Horizons' customer surveys
By 2017, there will be a net reduction in the damage to critical infrastructure caused by hillcountry and coastal wind erosion in the Region.	Policies: 3-1, 3-2 and 3-3. Land Policies: 5-1, 5-2, 5-3, 5-4 and 5-5	<ul style="list-style-type: none"> Costs of storm damage Costs of wind erosion in coastal environment. 	<ul style="list-style-type: none"> Horizons' and Territorial Authority incidents databases Horizons' and Territorial Authority storm damage reports Transit New Zealand
By 2017, the amount of residual waste* generated in the Manawatu-Wanganui Region will be less than prior to this Plan becoming operative.	Policies: 3-6, 3-7, 3-8 and 3-9	<ul style="list-style-type: none"> Volume or weight of residual waste* 	<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 Horizons' 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

Recommendation
IEW 29 page 238

3.7 Explanations and Principal Reasons

3.7.1 Infrastructure and energy

Objective 3-1 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*. 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 Resource Management Act 1991).

Parts of Policies 3-1, 3-2 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.

3.7.2**Waste**

Objective 3-2, Policies 3-6, 3-7, 3-8 and 3-9 and associated methods set up an over-arching 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 remains 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, 3-8 and 3-9 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 s 62(1)(i) of the Resource Management Act 1991.

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 sites 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 ~~rural subdivision~~ is most likely in the next 10 years and to identify the risks associated with contaminated land.

Recommendation
IEW 3 page 260

