

Settlement and the Built Environment

Issues

- Adverse effects of settlements and the use and provision of network utilities on the environment.
- Loss of rural character of land on the outskirts of Christchurch.
- Patterns of land use which constrain future populations and communities in urban areas and settlements from meeting their needs.
- The need for Tangata Whenua to exercise their cultural relationships in respect of settlement.

Objectives

- Avoid, remedy or mitigate adverse effects of settlements and the use and provision of network utilities on the environment.
- Settlement patterns that do not adversely affect the efficient operation, use and development of the region's infrastructure.
- Maintain the rural character of land in the proximity of Christchurch where it has significant landscape values or ecological values, including amenity values.
- Maintain Christchurch's rural-urban contrast.
- Avoid or mitigate the actual or potential costs of natural hazards within urban areas.
- Settlement patterns in rural areas should enable people and communities to provide for their wellbeing.
- Enable the establishment of papakainga settlements and marae.

Monitoring

- Adverse effects on urban, natural and physical resources.
- Efficiency in the use of infrastructure and other facilities .
- Social, economic and cultural welfare in rural settlements.
- Incidents reported to the Council relating to loss or infringement of identified mahinga kai, wahi tapu or wahi taonga.
- Extent of provision in District Plans for papakainga.

Environmental Results

- Sustainable management of urban and rural communities.
- Adverse effects of settlement expansion on natural and physical resources and the environment minimised.
- Reduction in the use of non-renewable energy sources.
- Improvements in the efficiency in the use of all resources.
- Protection of mahinga kai, wahi tapu and wahi taonga adjacent to urban areas.
- Ability for Tangata Whenua to build papakainga settlements and marae.

Policies

- Promote settlement and transport patterns that will result in effective and efficient use of energy resources, particular energy.
- Discourage urban development where this would have adverse effects on the flow regimes of water bodies, conservation values, or would contaminate drinking water.
- Encourage settlement patterns that will make efficient use of the regional transport network.
- Discourage urban development where this would adversely affect the operation, efficient use and development of the region's infrastructure.
- Discourage urban development resulting in the loss of areas containing significant landscape or ecological values, including amenity values, close to Christchurch.
- Urban development should be discouraged where there are significant adverse effects from natural hazards.
- Expansion of rural towns to have regard to the efficient use and development of natural and physical resources and to the wellbeing of people and communities.
- Promote the ability of Tangata Whenua to develop papakainga settlements and marae.

Methods

- Regional Plans
- Co-ordination
- Information Provision
- Investigations
- Resource Consents
- Iwi Management Plans
- Heritage Orders
- Regional Land Transport Strategy
- District Plan Provisions

This is a summary only, the text that follows contains the actual Council policy.



12. Settlement and the Built Environment

12.1 Introduction

Urban development and the physical expansion of settlements have significant effects on the sustainable management of natural and physical resources. If the expansion of Christchurch over the past 150 years is considered, it is evident that the land area occupied by urban uses has grown considerably and the areas affected removed from productive use or their ecological and cultural values impaired, at least for the foreseeable future. Moreover, urban areas and settlements also have the potential, if control of their form and direction is ineffective or lacks full implementation, or is removed, to expand quickly and extend their influence over an even wider area. This remains true largely irrespective of population growth due to demographic change and the creation or relocation of households.

Notwithstanding the adverse effects of urbanisation, urban areas and other settlements throughout the region have many positive effects and are an integral part of the fabric of the region. They house almost 90% of the region's population and have a significant role in meeting the present and future social, economic and cultural needs of the region's population. The physical expansion of urban areas and rural settlements is likely to be necessary to accommodate future population increases.

Many resource management issues associated with urbanisation tend to be concentrated on and around Christchurch, and the immediately adjoining area. Nevertheless, there are important resource management issues in other locations (for example, where there is a need to minimise the risk of flood damage, achieve satisfactory methods of waste disposal or recognise effects on amenity and heritage values) and to secure the sustainable development of service towns as part of their wider community.

The sustainable management of settlement and the built environment involves three elements:

- (1) safeguarding natural and physical resources from the adverse effects of urban development and the physical expansion of settlements (sections 5(2)(a)-(c) and 6 to 8, RM Act).
- (2) avoiding constraining future generations in settlements from meeting their needs (sections 5(2) (enabling provisions) and 5(2), RM Act).
- (3) promoting the sustainable development of urban and rural communities through encouraging the efficient use of resources, particularly energy (sections 5(2) (enabling provisions) and 7(b), RM Act), while satisfying the other requirements of section 5(2)(a)-(c) of the RM Act.

All three elements are necessary and are discussed further below.

The first element recognises that by controlling urban development and the physical expansion of settlements, the sustainable use, development and protection of natural and physical resources can be promoted. Physical resources includes not only roads but also all other components of the built environment including physical infrastructure and building stock.

The second element recognises the needs of future generations and seeks to avoid situations where these are not met or cannot be met without excessive cost. This includes costs or difficulties in the provision of network utilities (including sewerage, water supplies, roading), access to and within settlements, and in securing an acceptable level of safety for people including minimising costs associated with natural hazards.

Resource management policies should also seek to promote patterns of development that enable the efficient use of existing energy resources and are more adaptable to alternative energy sources in the future, especially for transport. Settlement patterns over-dependent on modes of transport that are vulnerable to sudden changes in the supply/cost of energy are, in the long-term, unsustainable, or less sustainable than if policies had been put in place to avoid these types of patterns arising. Such communities are less able to provide for their social, economic and cultural wellbeing in terms of section 5(2) (enabling provisions) of the RM Act. These types of patterns may also be unsustainable because of the emission effects associated with such development.

The built environment also includes network utilities. Network utilities, including telecommunication and radio communication utilities, are an essential physical resource within the region. The continued operation, maintenance and development of network utility systems is of strategic importance in terms of enabling people to provide for their social, economic and cultural wellbeing, and for their health and safety. Throughout the region there are many "network utility operators" as defined in section 166 of the RM Act. Some have been approved as "requiring authorities" in accordance with section 167 of the RM Act, and others may be approved for this purpose in the future. Chapter 12 recognises the need to provide for the use, development and protection of network utility infrastructure generally throughout the region, and to minimise the adverse effects of network utility use and provision on the environment.

12.2 Issue Resolution

Issue 1

Adverse effects of urban development, physical expansion of settlements and the use and provision of network utilities on the environment.

Explanation

Urban development throughout the region uses a significant proportion of the region's natural and physical resources. Resources are used directly by the expansion of urban areas (particularly land and energy), or affected by emissions and discharges resulting from urban land use (air and water). Urban development also has indirect effects by putting pressure on surrounding agricultural areas to curtail farming operations (e.g. bird scare devices, spraying) or by giving rise to some expectation of urban subdivision in the future (hence increasing the price of land which may militate against the use of the land for productive purposes).

The effects of urbanisation on resources, in terms of the ability of the resource to fulfil the purpose for which it has value, are often permanent.

Adverse effects of urban development, the physical expansion of settlements and the use and provision of network utilities in Canterbury include:

- (a) land occupied by urbanisation.
- (b) loss of amenity values (e.g. landscape, wilderness, open character), heritage values and soil of value for primary production.
- (c) threat to recreational resources of regional significance.
- (d) threat to airport and sea port operations, through housing encroachment and/or complaints about noise bringing pressure to curtail operations.
- (e) contamination of water bodies.
- (f) threats to flow and level regimes of water bodies.
- (g) loss of areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- (h) urban uses and activities encroaching on estuary and river margins and wetlands.
- (i) energy consumption and associated discharges into the atmosphere resulting from dependence on private transport (related to the location and form of urban development, including patterns that give rise to or exacerbate high commuting levels for work and other services).
- (j) exceeding the capacity or inefficient use of infrastructure and utility services (although scale economies may also make services and facilities feasible at greater population densities).
- (k) encroaching on resources of value to Tangata Whenua, for example: the loss of mahinga kai through the draining of Ihutai (the larger Avon-Heathcote estuary area), desecration of wahi tapu and wahi taonga or building over historical pa sites.

Urbanisation may also have positive effects such as in creating opportunities for the public acquisition and protection of areas with conservation values. It is recognised that many resource values do not constitute a “blanket” restraint on urban development and resource values can be protected by influencing the form of urban expansion.

Objective 1

Ch. 7 Soils, Obj. 2

Enable urban development and the physical expansion of settlements and the use and provision of network utilities to occur while avoiding, remedying or mitigating adverse effects on the environment, including in particular effects on:

Ch. 9 Water, Obj. 3

(a) uses and values associated with water quality of water bodies.

Ch. 9 Water, Obj. 1

(b) flow and level regimes of water bodies, including the flow regimes of spring-fed streams.

Ch. 13 Air, Obj. 1, 2

(c) air quality.

*Ch. 10 Beds of Rivers, Obj. 1
Ch. 11 Coastal Env., Obj. 1*

(d) natural character of coastal environments, wetlands, lake and river margins that meet the criteria of sub-chapter 20.4.

Ch. 8 Landscape, Obj.2

(e) natural features and landscapes that meet the criteria of

sub-chapter 20.4.

Ch. 8 Landscape, Obj. 3

(f) areas of significant indigenous and native vegetation and significant habitats of indigenous or native fauna including native fish, for example, inanga (whitebait), tuna (eel), including those that meet the criteria of sub-chapter 20.4.

(g) ancestral land, water, sites, wahi tapu, and wahi taonga of value to Tangata Whenua.

(h) amenity values that meet the criteria of sub-chapter 20.4.

Ch. 8 Landscape, Obj. 1

(i) heritage values of sites, buildings, places and areas that meet the criteria of sub-chapter 20.4.

Ch. 11 Coastal Env., Obj. 1

Ch. 6 Tangata Whenua, Obj. 1

(j) recreational resources that meet the criteria of sub-chapter 20.4.

Ch. 14 Energy, Obj 1.

(k) energy use.

Explanation

The pattern of urban development and settlement in the region has a strong influence on the demand for transport and the use of energy (and consequently on emissions to the atmosphere). As urban areas spread, or scattered dormitory development occurs, the demand for transport and energy use increases. Urban spread now is possible because of cheap supplies of fossil fuels. However, as future supplies diminish and the cost of fuel rises, sprawling urban areas will become less sustainable. Patterns of development that minimise transport and energy use, including limiting the extent of urban areas and encouraging self-containment, will promote more sustainable forms of development in urban and rural areas

In addition, urban development and the physical expansion of settlements can have a significant effect on the potential of resources to meet the purpose for which they have value consistent with section 5 of the RM Act. Natural resources are a finite stock and the effects of urbanisation particularly on land resources can be irreversible. Objective 1 (h) includes amenity values in urban and rural settings. The effect of urbanisation may be direct (i.e. replacement of rural by urban use) or indirect (off-site or “spillover” effects). Resource values defined in sub-paragraphs (a)-(j) apply at a site specific level, ie. in respect of the form and location of urban development and settlement growth. Objective 1 may be met by policies which control urban development to avoid, remedy or mitigate adverse effects on the environment.

Network utility infrastructure is an essential physical resource within the Canterbury environment. In addition to land, air and sea transport systems, it includes those built structures necessary for supplying services to the community such as water and power supply, telecommunications and waste disposal. The social, economic and cultural wellbeing of the community and its health and safety is highly dependent on such infrastructure.

Principal Reasons

To promote the sustainable management of natural and physical resources, and safeguard and sustain the potential of these resources for future generations.

Policy 1

Promote settlement and transport patterns and built environments that will:

Ch. 14 Energy, Pol. 2

(a) result in increasingly effective and efficient use of resources, particularly energy.

Ch. 14 Energy, Pol. 1

(b) reduce the rate of use of non-renewable energy sources.

Ch. 13 Air, Pol. 2

(c) minimise the adverse effects of emissions into the atmosphere resulting from the use of motor vehicles and building heating.

Ch. 14, Energy, Pol. 2

(d) incorporate energy efficient approaches to building orientation, form and design.

Explanation

Settlement and transport patterns, and built environments, that encourage the effective and efficient use of resources, particularly energy, and reduce fossil fuel consumption enhance the sustainable development of urban and rural communities. Settlement patterns that encourage or require greater reliance on personal transport result in increased travel demand and vehicle emissions which have an adverse effect on air quality (Objective 1 (c)).

Policy 1 in most cases will be met by the consolidation of urban areas. However, this policy does not preclude extension of urban areas, but means that land use planning and resource management should seek to encourage the consolidation and infill of urban areas, to the extent that is practical, whilst providing adequate land for the accommodation of anticipated development, and choice.

Principal Reasons

The consumption of fossil fuels and consequently emissions is closely related to the pattern of settlement, particularly the physical extent of the main urban areas.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (e) Resource consents

- (f) Encourage the preparation of iwi management plans
- 2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (a) promoting settlement and transport patterns and built environments that result in increasingly effective and efficient use of resources particularly energy, reduce the rate of the use of non-renewable energy sources, minimise emissions into the atmosphere, and incorporate energy efficient approaches into building orientation, form and design.

Policy 2

Ch. 7 Soils, Pol. 6

The use of land for urban development and the physical expansion of settlements should be discouraged and the adverse effects of network utility use and provision minimised where such use would:

Ch. 9 Water, Pol. 9, 10, 12, 13

(a) result in the contamination of sources of drinking water.

Ch. 9 Water, Pol. 8

(b) have an adverse effect on flows and level regimes of water bodies, including the flow regimes of spring-fed streams.

Ch.6 Tangata Whenua, Pol. 4, 5

(c) adversely affect the natural character of coastal environments, wetlands, lake and river margins, natural features and landscapes, and recreational, amenity and heritage values that meet the criteria of sub-chapter 20.4, and significant indigenous vegetation and habitats of indigenous fauna including those that meet the criteria of sub-chapter 20.4.

Ch. 8 Landscape, Pol. 2

Ch. 9 Water, Pol. 9

Ch. 10 Beds of Rivers, Pol. 1,2

Ch.11 Coastal Env., Pol. 1,2,4

Ch. 6 Tangata Whenua, Obj. 1

(d) adversely affect ancestral land, water and sites, including prevention of the maintenance and, as may be appropriate, the enhancement of mahinga kai, and the protection of wahi tapu and wahi taonga.

Explanation

The protection of soils with productive potential is met by Chapter 7 Policy 6. Soil resources with high versatility for production have a higher value for protection nearer to Christchurch (compared to locations towards the periphery of the region) because of their proximity to the principal centre of population, labour, markets and transport. It is acknowledged that these advantages may be offset by disadvantages and additional costs immediately adjacent to the urban boundary such as incompatibility between horticultural and residential uses, which will require policies at the city and district level to minimise conflicts.

The use and provision of network utilities includes the maintenance, enhancement and operation of such infrastructure, both existing and future. These activities can create adverse effects on the environment, particularly on land and water resources. The environment also includes people and

their social, economic, aesthetic and cultural conditions. Network utility systems provide social and economic benefits to people and the requirements of an efficient and effective network utility system need to be considered when minimising adverse effects.

Principal Reasons

Policy 2 seeks to control or discourage urban development and the physical expansion of settlements where such development would result in a loss of or threat to resources, and to minimise the adverse effects of network utility use and provision on the environment. These resource effects tend to be permanent (or require high costs to ameliorate) because of the permanent nature of most settlements and network utilities. Where this policy applies to the use of land for urban purposes or settlement, it relates to where such a use arises from the extension of existing urban areas or a change of use in either urban or rural settings.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (e) Resource consents
 - (f) Encourage the preparation of iwi management plans
 - (g) Heritage orders
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (b) discouraging the use of land for urban development and the physical expansion of settlements, and minimise the adverse effects of network utility use or provision, where such use or provision would adversely affect the natural character of coastal environments (excluding the beds of rivers and lakes and their margins and the coastal marine area) and other natural features, or resources of value to Tangata Whenua.

Objective 2

Ch. 6 Tangata Whenua, Obj. 1
Ch. 15 Transport, Obj. 1

Achieve patterns of urban development and settlement that do not adversely affect the efficient operation, use and development of:

- (a) Roothing infrastructure**
- (b) Christchurch International Airport**
- (c) Timaru Airport**
- (d) Port of Lyttelton**
- (e) Port of Timaru**
- (f) Telecommunication facilities**
- (g) Military establishments for defence purposes**
- (h) Rail network**
- (i) Other network utilities**

Explanation

Roothing infrastructure, airports, sea ports, telecommunication facilities, military establishments for defence purposes, the rail network and other network utilities including electricity transmission and distribution are physical resources. The sustainable management of these resources is important in enabling people and communities to provide for their social, economic and cultural wellbeing, and for their health and safety. The facilities listed above form part of a national or regional network. Constraints on, or impediments to, their efficient use and development may have adverse effects on the regional community.

The efficient use of the facilities listed in Objective 2 and their development to meet future needs can be adversely affected by the pattern and extent of urban development and settlement, for example, where patterns lead to greater dependence on personal transport or encroach on facilities or interfere (or potentially interfere) with the efficient use thereof.

Principal Reasons

Encouraging settlement patterns that promote the efficient use and development of these facilities promotes the sustainable management of urban resources.

Policy 3

Ch. 15 Transport, Pol. 3

Encourage settlement patterns that will make efficient use of the regional transport network.

Explanation

The pattern of urban development and settlement in the region has a strong influence on the demand for transport and consequently on the use of

energy and emissions to the atmosphere. Patterns of development which minimise transport and dependence on personal transport for both work and other trips, are likely to encourage or enable more efficient use of transport facilities. Limiting the extent of urban areas and encouraging self-containment, are likely to minimise transport use and result in more efficient use of the regional transport network.

In Policy 3, the phrase "regional transport network" means regional land transport network and includes State Highways and arterial roads as defined in Appendix 2 of the Regional Land Transport Strategy 1996-2001, and the rail network.

Principal Reasons

Failure to recognise the relationship between transport and urban development could result in the inefficient use of the transport infrastructure and failure to meet the needs of the community for access.

Methods

1. The methods used or to be used by the Regional Council are:
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (h) Regional Land Transport Strategy
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (c) seeking to make efficient use of the regional transport network.

Policy 4

The use of land for urban development and the physical expansion of settlements should be discouraged where such use would adversely affect the operation, efficient use and development of Christchurch International Airport, Timaru Airport, the Ports of Lyttelton and Timaru, other network utilities, telecommunication facilities and military establishments for defence purposes.

Explanation

Urban development and the physical expansion of settlements may result in activities, particularly residential uses but also other land uses, which are incompatible with the efficient use and development of airports and sea ports and may adversely affect operations and safety by creating the potential for conflicts.

Policy 4 requires the discouragement of noise sensitive development, particularly residential use and residences, in the vicinity of airports and

sea ports to minimise the extent of area and number of residences subject to adverse noise impacts, and the discouragement of all urban uses and residences in areas where there is a greater risk of crashes, particularly take off and landing zones, and other risks associated with activities that occur at airports and sea ports such as the storage of hazardous substances.

It is noted that the air transport industry has taken steps over the past few years to reduce the noise impacts of aircraft through the introduction of quieter planes and other measures. These initiatives have been and will continue to be influenced by national standards.

Because of the paramount importance of maintaining the safety of aircraft and ship operations, it is essential that priority be directed at controlling the location and density of noise sensitive land uses, thereby avoiding existing noise problems being further exacerbated, rather than regulating the use of airports and sea ports where that could either reduce safety margins or impede efficient airport and sea port operations.

There is also a need to ensure that urban development and the physical expansion of settlements do not necessarily reduce or limit the opportunity to construct, extend or improve facilities required to meet foreseeable needs.

Policy 4 recognises the need to reinforce the use of Air Noise and Outer Control Boundaries along with compatible land use planning principles in areas adjacent to major airports to ensure continuation of their efficient operation (see New Zealand Standard 6805: 1992). The policy also recognises the need to employ compatible land use principles in areas adjacent to other strategically significant facilities included within this policy.

Principal Reasons

Avoidance of uses or activities which have adverse effects on, prevent, impede or threaten the efficient use and/or operation of airports and sea ports and other strategically significant facilities.

Methods

1. The methods used or to be used by the Regional Council are:
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (h) Regional Land Transport Strategy
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should:
 - (d) avoid or mitigate adverse effects on the operation, efficient use and development of Christchurch International Airport, Timaru Airport and the Ports of Lyttelton and Timaru, other network

utilities, telecommunication facilities and military establishments for defence purposes.

Issue 2

Loss of rural character of land on the outskirts of Christchurch.

Ch. 8 Landscape, Iss. 1

Explanation

“Rural character” is defined in terms of the low density of settlement characteristic of rural areas and the use of land for agricultural, horticultural, forestry, recreational or other activities of a predominantly open character. The area surrounding built-up Christchurch contains a concentration of natural and physical resources including amenity, landscape and ecological values of importance to the region, particularly the Port Hills, savannah-type grasslands, and coastal and river margins. Visitor surveys of the Port Hills and the Waimakariri River show that these areas are visited by people from all over Canterbury. This area is already intensively subdivided and is subject to probably the most intense pressure for change of use. The physical expansion of Christchurch provides one of the most significant types of land use change which, if uncontrolled, could have adverse effects which would degrade the amenity, landscape and ecological values of significant parts of the area or limit public access. The proximity of this area to the principal centre of population adds to the value of these resources for a large proportion of the whole population of Canterbury.

The resource values of this area were protected through the “greenbelt” provisions of the former Canterbury Regional Planning Scheme (Second Review) Section 1 - “Overall Objectives and Settlement Distribution”. The “greenbelt” is not a resource in itself but a policy instrument to achieve other planning and resource management objectives, including the protection of good soils, amenity and landscape values, and the like. The resource values safeguarded by this instrument are protected by Objectives 1 and 2 above, and by Objective 3 below.

Objective 3

*Ch 6 Tangata Whenua, Obj. 1
Ch. 8 Landscape, Obj. 2*

Maintain the rural character of land in the proximity of Christchurch where that land has significant landscape or ecological values, including amenity values, and maintain Christchurch’s rural-urban contrast.

Explanation

This objective seeks to maintain in rural or recreational use, land in the proximity of Christchurch which has significant, landscape or ecological values including amenity values. It also seeks to maintain the contrast between urban Christchurch and its rural outskirts. However, it does not preclude this interface from moving over time provided the contrast is maintained. The phrase “in the proximity of Christchurch” refers to land on the outskirts of the built up area extending to the Waimakariri River, the summit of the Port Hills and a line extending from Tai Tapu through West Melton. Not all areas on the outskirts of Christchurch have rural values that justify protection.

Amenity values include those values associated with “openness”. The amenity value arises from the contrast between the area of open character and the built environment, and from the proximity of open countryside to the urban population. The issue has been raised solely in relation to Christchurch and surrounding areas. It is not perceived to be an issue in relation to Timaru or Ashburton. Objective 3 also relates to Issue 1.

Principal Reasons

Maintenance of the rural character of land in the proximity of Christchurch safeguards amenity, landscape and ecological values of regional significance.

Policy 5

Discourage urban development and the physical expansion of settlements where the use of land for such purposes would result in loss of areas containing significant landscape or ecological values, including amenity values, in the proximity of Christchurch or adversely affect the maintenance of rural-urban contrasts where such effects meet the criteria of sub-chapter 20.4.

Explanation

This policy does not preclude intensive rural uses such as horticulture and orcharding, with associated shelter belts, nor the change of use or intensification of rural activities and the associated increase in settlement, but seeks to maintain the contrast between the higher intensity of development and use in built-up areas and the lower density of settlement characteristic of rural areas.

Policy 5 does not require that the “inward” boundary of the area of rural character be static, but may shift over time where necessary and appropriate. However, the value of open space would be diminished if it became remote to the main concentration of population. The emphasis is to ensure the retention of those important areas of rural character, while enhancing the quality of the rural-urban interface.

Principal Reasons

Urban development or the physical expansion of settlements would result in the loss of areas containing significant amenity, landscape or ecological values in the proximity of Christchurch.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Co-ordination
 - (c) Information provision

- (d) Investigations
 - (f) Encourage the preparation of iwi management plans
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
- (e) avoiding or mitigating the loss of areas containing significant amenity, landscape or ecological values in the proximity of Christchurch, or adverse effects on the maintenance of rural-urban contrasts, where such effects meet the criteria of sub-chapter 20.4.

Issue 3

Land uses or land use patterns which constrain future populations and communities in urban areas and settlements from meeting their needs.

Ch. 16 Nat Hazards, Iss. 1, 2

Explanation

The needs of future populations and communities in urban areas and settlements for land (for various purposes), clean air and water have been addressed as part of Issue 1 and Issue 2 above. In addition, there is a need for security in terms of minimising the risk to health and safety or property damage associated with natural hazards, particularly flooding, and to maintain and enhance public health through the provision and efficient use of network utilities to meet local needs.

Rural towns also make an important contribution to the wellbeing of rural communities through the provision of local services, employment etc. There is an important link between sustainable rural communities and sustainable agriculture. Rural towns also play an important role in the provision of resource management services such as pest control and thereby make a contribution to sustainable resource management.

Objective 4

*Ch. 6 Tangata Whenua, Obj. 1
Ch. 15 Nat. Hazards, Obj.1,2*

Within urban areas and settlements, avoid or mitigate the actual or potential costs (both monetary and non-monetary) of natural hazards to the community.

Principal Reasons

Avoids patterns of urbanisation and physical expansion of settlements that are unsustainable because of the exposure of future populations and communities to risk to health and safety or property damage from natural hazards, particularly flooding.

Policy 6

*Ch. 16 Nat. Hazards, Pol.
1,2,3,4,5,6*

Use of land for urban development or the physical expansion of settlements should be discouraged where there are significant adverse effects from natural hazards.

Explanation

The location and form of many urban areas and settlements pose problems for present and future populations because of the exposure of their inhabitants to risk associated with natural hazards, particularly flooding.

Principal Reasons

Control of urban development and the physical expansion of settlements would minimise the risk to health and safety or damage associated with natural hazards.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (e) Resource consents
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions and responsibilities as specified in Chapter 16 Policy 2 should consider:
 - (f) avoiding or mitigating significant adverse effects from natural hazards.

Objective 5

Ch. 6 Tangata Whenua, Obj. 1

Patterns of settlement in rural areas should enable people and communities to provide for their social, economic and cultural wellbeing.

Principal Reasons

Rural towns make an important contribution to the wellbeing of their local communities and rural areas through the provision of local services, employment etc.

Policy 7

The development and expansion of rural towns should enable people and communities to provide for their wellbeing, health and safety, and have particular regard to the efficient use and development of natural and physical resources.

Explanation

The development and expansion of rural towns often raises issues about the provision of services to maintain public health within the towns and in adjacent areas. Proposals for the development and expansion of rural

towns should be accompanied by strategies for ensuring that acceptable public health standards are established and maintained.

The development and expansion of rural towns should have regard to the efficient use of existing resources including sewerage, water reticulation, stormwater drainage and electrical and telecommunication systems.

Principal Reasons

Promotes the wellbeing of rural communities, and encourages efficient utilisation of existing resources.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Co-ordination
 - (c) Information provision
 - (d) Investigations
 - (f) Encourage the preparation of iwi management plans
 - (h) Regional Land Transport Strategy
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (g) seeking to enable people and communities to provide for their wellbeing, health and safety, and have particular regard to the efficient use and development of natural and physical resources.

Issue 4

The need for Tangata Whenua to be able to exercise their cultural relationships in respect of settlement in urban and rural areas.

Explanation

Tangata Whenua have a need to be able to live in papakainga settlements.

Objective 6

Ch. 6 Tangata Whenua, Obj. 1

Enable the establishment of papakainga settlements and marae within the region.

Principal Reasons

Allows Tangata Whenua to exercise their relationship with land as provided by the Treaty of Waitangi.

Policy 8

Promote the ability of Tangata Whenua to develop papakainga settlements and marae.

Explanation

Papakainga settlements are integral to tribal identity and tribal development. They are one of the essential elements that denote mana whenua.

Principal Reasons

To better provide for the needs of Tangata Whenua.

Methods

1. The methods used or to be used by the Regional Council are:
 - (b) Co-ordination
 - (c) Information provision
 - (e) Resource consents
 - (f) Encourage the preparation of iwi management plans
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (h) seeking to enable Tangata Whenua to develop papakainga settlements and marae.

12.3 Methods

1. Regional Council

The methods used or to be used by the Regional Council are:

(a) Regional plans

Regional plans may make provision for any matter relating to the use, development, or protection of any natural and physical resources for which the Regional Council has responsibility under the RM Act including the control of land for the purpose of soil conservation, the maintenance and enhancement of the quality of water in water bodies and coastal water, the maintenance of the quantity of water in water bodies and coastal water, and the avoidance or mitigation of natural hazards.

Provisions in regional plans, such as the Natural Resources Regional plan, which is currently in preparation, will contain specific objectives, policies and methods, including rules, to achieve the integrated management of natural and physical resources. In addition, regional plans may include objectives and policies, but not rules, for any actual or potential adverse effects of any use,

development, or protection of land which are of regional significance. When preparing regional plans the Regional Council will consider the use of economic instruments, performance standards, codes of practice, financial contributions, and may adopt provisions contained in an Iwi Management Plan.

For the purpose of achieving the integrated management of natural and physical resources, and other functions of the Regional Council under the RM Act, regional plans may identify the effects of urban development and the physical expansion of settlements on the sustainable management of natural and physical resources, and include policies and methods (including rules where enabled) for the purpose of avoiding, remedying or mitigating any adverse effects of these activities on the environment.

Regional plans will take into account the need for land and other resources for urban development and the physical expansion of settlements, and the importance of urban areas and other settlements in enabling people and communities to provide for their social, economic and cultural wellbeing.

Principal Reasons

Preparation of objectives and policies in relation to the actual or potential effects of the use, development or protection of land for urban development and the physical expansion of settlements, and control of the use of land for the purposes listed above, is necessary to achieve the integrated management of the natural and physical resources of the region and for the avoidance, remedy, or mitigation of adverse effects on the environment.

(b) Co-ordination

Preparation of strategies in co-operation with the distinct/city councils for the co-ordination of settlement development policies with the sustainable management of natural and physical resources, and for enhancing community development. The Regional Council will encourage the formation of consultative collaborative approaches to co-ordinate settlement policies, community development and transport where this may assist in the achievement of the objectives and policies in the Regional Policy Statement.

Principal Reasons

This method provides for the voluntary co-ordination of local authority resource management and settlement policies to promote settlement policies that enhance the social and resource sustainability of urban and rural communities.

This method is indicative only and does not purport to direct settlement to any location. Rather it provides an opportunity for the integration of public investment in infrastructure by territorial authorities in terms of the Local Government Act 1974 with settlement patterns reflecting the considerations and requirements of the RM Act.

(c) Information provision

The Regional Council will make available resource information it holds to assist territorial authorities and others with settlement planning. This includes providing advice and information on natural and physical resource limitations, provision for Tangata Whenua values and activities.

Principal Reasons

To enable better resource management decisions to be made.

(d) Investigations

The Regional Council will co-ordinate or undertake as appropriate investigations to provide information on the effects of the expansion or consolidation of urban areas and settlements on natural and physical resources and the environment.

Areas the Regional Council will consider include:

- (1) effects of rural subdivision and settlement on primary production;
- (2) effects of population growth and urbanisation on soils and primary production potential;
- (3) effects of population growth and the distribution of urban development on the efficient use of the regional transport network, public utility network and other strategically significant facilities;
- (4) relationship between settlement distribution, transport and energy use;
- (5) options for long-term urban development in the region and the implications for the sustainable management of resources including energy;
- (6) ways to internalise the costs of urban expansion.

Principal Reasons

To ensure necessary resource information is gathered.

(e) Resource Consents

The Regional Council is a consent authority for coastal permits, water permits, discharge permits and land use consents in relation to the use of beds of lakes and rivers. The preceding objectives and policies relating to the effects of urban development and the physical expansion of settlements shall be had regard to when considering any application for a resource consent.

Principal Reasons

To minimise the adverse effects of urban development and the physical expansion of settlements on resources through the control of land use and conditions on consents.

(f) Encourage the preparation of iwi management plans

Iwi management plans are non-statutory documents which have been prepared by Tangata Whenua. The Regional Council, in preparing regional plans, must have regard to iwi management plans. By agreement with the Regional Council all or part of an iwi management plan, for example, dealing with wahi tapu or wahi taonga, may be incorporated into a regional plan. The development of the regional plan would be subject to the public consultation processes set out in the RM Act. The Regional Council, by agreement with Tangata Whenua, recognises that there is opportunity for this to occur.

Iwi management plans can provide mechanisms for implementing aspects of policy, for example: the process for managing the discovery of koiwi tangata; how any powers transferred will be discharged; and the joint management of sites and/or resources. They can also be a source of information which aids, but does not replace, consultation with Tangata Whenua during regional plan preparation or consideration of consents.

The Regional Council will encourage runanga to prepare iwi management plans and if requested, will provide advice to aid their formulation.

Principal Reasons

Reference to iwi management plans assist the understanding of Tangata Whenua perspectives, and can provide an appropriate method to achieve certain environmental policies.

(g) Heritage orders

The RM Act provides for the use of heritage orders to protect any feature, area or structure where such protection is in the public interest (sections 187-198, RM Act). A "heritage order" is a provision made in a district plan to give effect to a requirement made by a "heritage protection authority" under section 189 of the RM Act. Any local authority (including a regional council) acting either on its own notion or on the recommendation of an iwi authority is a heritage protection authority. In Chapter 8 the Regional Council has undertaken to identify features, areas or structures having heritage values of regional importance and it will investigate the potential use of heritage orders to protect such values, in the preparation of the Natural Resources Regional Plan. While a heritage order can be very effective, a heritage protection authority risks exposure to considerable costs subsequent to the use of a heritage order, and so other means of achieving the same ends will usually be explored first.

Principal Reasons

The use of heritage orders will assist the protection of any features, area or structure containing heritage values, where such protection is in the public interest.

(h) Regional Land Transport Strategy

A Regional Land Transport Strategy is required under the Land Transport Act 1993. It identifies the need for transport, how that need can be met, and the appropriate roles of different transport systems in meeting those needs including the need to promote the sustainable management of natural and physical resources. The Strategy has a five-year horizon and looks at land transport, and will be reviewed at approximately two-year intervals. It will ensure that the needs of the transport disadvantaged, pedestrians and cyclists are recognised.

The Regional Land Transport Strategy cannot be inconsistent with the Regional Policy Statement.

Principal Reasons

The Regional Land Transport Strategy provides a means for the consideration of future land transport needs and the means of responding to such needs having regard to the effect of the transport system on the environment, including the co-ordination of land use and transport, and consequently can help achieve the objectives and policies in the Regional Policy Statement.

2 District plan provisions

Responsibility for the control of subdivision of land and the control of any actual or potential effects of the use, development, or protection of land for the purpose of avoiding, remedying or mitigating adverse effects on natural and physical resources and for the avoidance or mitigation of natural hazards is vested in territorial councils (section 31 (b) and (c), RM Act).

District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should:

- (a) consider promoting settlement and transport patterns and built environments that result in increasingly effective and efficient use of resources particularly energy, reduce the rate of the use of non-renewable energy sources, minimise emissions into the atmosphere, and incorporate energy efficient approaches into building orientation, form and design.
- (b) consider discouraging the use of land for urban development and the physical expansion of settlements, and minimise the adverse effects of network utility use or provision, where such use or provision would adversely affect the natural character of coastal environments (excluding the beds of rivers and lakes and their margins and the coastal marine area) and other natural features, and resources of value to Tangata Whenua.
- (c) consider seeking to make efficient use of the regional transport network.
- (d) avoid or mitigate adverse effects on the operation, efficient use and development of Christchurch International Airport, Timaru Airport and the Ports of Lyttelton and Timaru, other network utilities, telecommunication facilities and military establishments for defence purposes.
- (e) consider avoiding or mitigating the loss of areas containing significant amenity, landscape or ecological values in the proximity of Christchurch, or adverse effects on the maintenance of rural-urban contrasts, where such effects meet the criteria of sub-chapter 20.4.
- (f) consider avoiding or mitigating significant adverse effects from natural hazards, as specified in Chapter 16, Policy 2.
- (g) consider seeking to enable people and communities to provide for their wellbeing, health and safety, and have particular regard to the efficient use and development of natural and physical resources.
- (h) consider seeking to enable Tangata Whenua to develop papakainga settlements and marae.

Principal Reasons

Control of the subdivision of land and the effects of the use, development and protection of land through district plans is necessary for the avoidance or mitigation of the adverse effects of urban development and the physical expansion of settlement on the environment.

12.4 Environmental Results Anticipated

Implementation of the above policies and methods relating to settlements and the built environment is expected to have the following environmental results:

- (1) Sustainable management of urban and rural communities.
- (2) Adverse effects of urban development and the physical expansion of settlements on natural and physical resources and the environment minimised.
- (3) Reduction in the use of non-renewable energy sources.
- (4) Improvements in the efficiency in the use of all resources (particularly energy) including infrastructure and network utilities.
- (5) Protection of mahinga kai, wahi tapu and wahi taonga adjacent to urban areas.

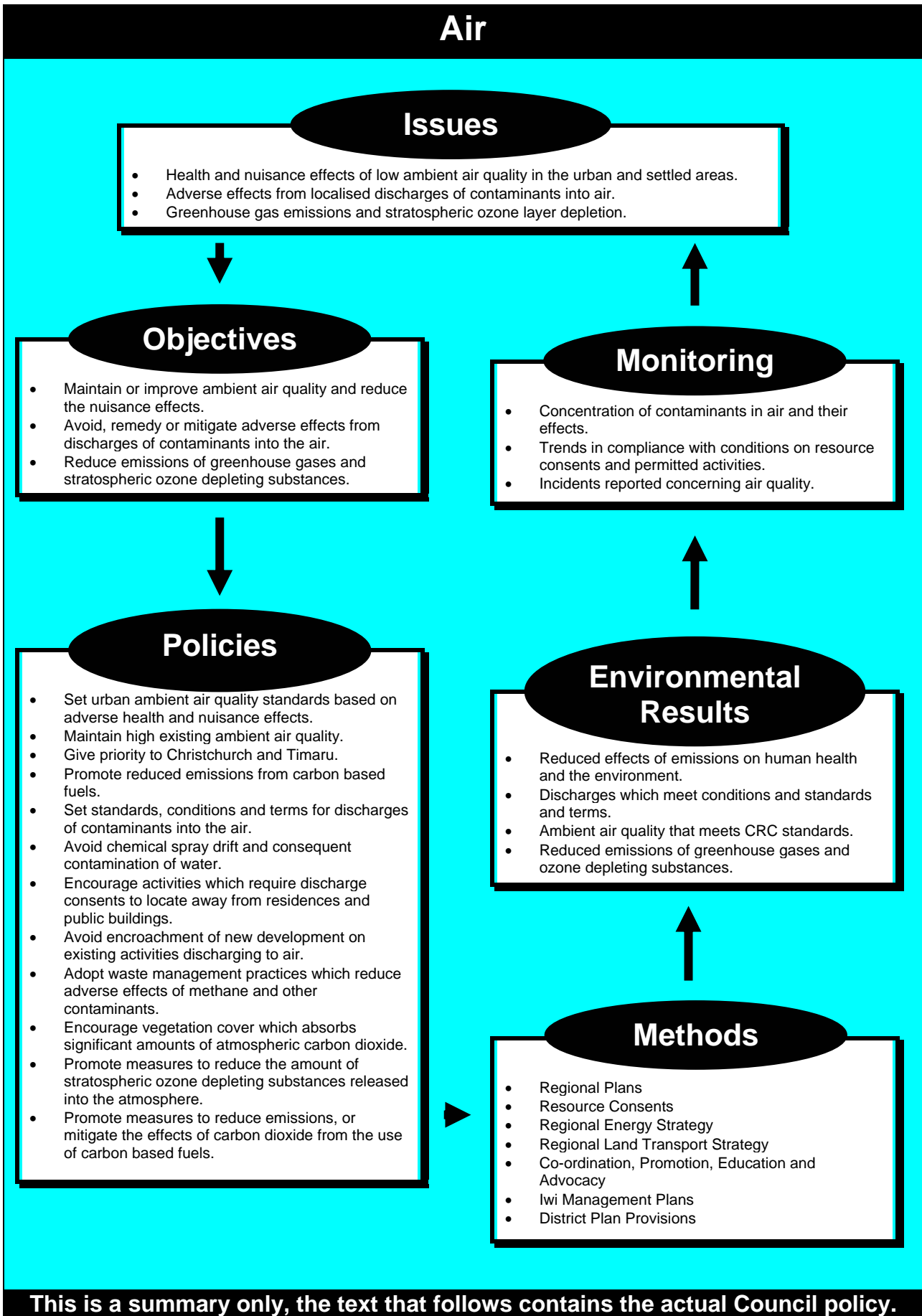
- (6) Ability for Tangata Whenua to develop and maintain papakainga settlements and marae.

12.5 Monitoring Effectiveness

For settlement the following indicators will be monitored to assess the suitability and effectiveness of this part of the Regional Policy Statement, and any need for it to be reviewed:

- (1) Adverse effects of urban development and the physical expansion of settlements on urban, natural and physical resources of regional significance.
- (2) Efficiency in the use of transport infrastructure and other facilities of regional significance.
- (3) Social, economic and cultural welfare in rural settlements.
- (4) Incidents reported to the Regional Council relating to loss or infringement of identified mahinga kai, wahi tapu or wahi taonga.
- (5) Extent of provision in district plans for papakainga.

-





13. Air

13.1 Introduction

Air quality in parts of Christchurch does not presently meet the Ministry for the Environment's 1994 ambient air quality guidelines for New Zealand. It is considered that the guidelines may not be met elsewhere in the region although widespread measurements of air quality are not made. The guidelines are based principally on health effects and do not take into account odours or other nuisance effects of discharges to air. Standards or controls for the latter and for the maintenance of air quality higher than the minimum guidelines are matters for regional determination.

The two principal regional air quality considerations in Canterbury are:

- (a) health effects and nuisance effects (e.g. visual, odour) resulting from combustion processes; and
- (b) odours and dust from agriculture, manufacturing and other industries.

Concerns publicly identified range from winter smoke levels and motor vehicle emissions to odours from agricultural waste disposal and the visual effect of burn-offs in rural areas.

Winter air quality in all urban areas of the region is affected to varying degrees by smoke from domestic fires and motor vehicle emissions. Industrial emissions are not a major source of ambient air quality problems in Canterbury.

The two global air quality issues of major importance are the reduction in the ozone layer and the build up of greenhouse gases. Canterbury's contribution to ozone layer depletion is caused mainly by the release of certain refrigerants (including CFC's) into the air. Emissions of carbon dioxide resulting mainly from fossil fuel use for energy are also referred to in the Chapter on Energy.

To date, central government initiatives to address these issues include the Ozone Layer Protection Act 1990 and the Government Policy Statement (July 1994). The latter is aimed at reducing levels of atmospheric carbon dioxide.

Under the RM Act, the Regional Council is charged with establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of resources, and in the context of this chapter, particularly land and air. The Regional Council also controls the discharge of contaminants into air. Discharges may be from a single source, such as a chimney, or from an area source, such as a factory farm. District/city councils are charged with controlling the effects of the use, development, or protection of land. Such effects may include effects on air quality.

If a regional rule provides for it, emissions into the air as a result of ordinary activities are not allowed without a resource consent. This includes smoke from domestic fires, and exhaust from cars. Discharges from industrial or trade premises are not allowed unless permitted by a rule in a plan or by a discharge permit.

Air is significant to Tangata Whenua because of the interrelationship of air with other resources such as water and flora and fauna and its life-supporting capacity. To Tangata Whenua air is a taonga. It is important that the physical, amenity, aesthetic and life-supporting qualities of the taonga are maintained.

13.2 Issue Resolution

Issue 1

Existing and potential health and nuisance effects of low ambient air quality in the urban and settled areas of Canterbury, particularly in Christchurch and Timaru.

Objective 1

Ch.6 Tangata Whenua, Obj.1

Maintain or improve ambient air quality so that it is not a danger to people's health and safety, and reduce the nuisance effects of low ambient air quality.

Principal Reasons

The life-sustaining capacity of air depends on it being safe to breathe. Ambient air quality should not be such that it is unpleasant to live with through the nuisance effects low ambient air quality creates.

Policy 1

- (a) Set standards to maintain minimum ambient air quality in urban areas of Canterbury based on concentrations of contaminants that cause adverse health effects and nuisance effects.**
- (b) Where ambient air quality standards have not been set and existing ambient air quality is higher than required to avoid adverse health effects and nuisance effects, the discharge of contaminants into air shall only be allowed where the adverse effects of the discharge are minor.**
- (c) Give priority to ensuring ambient air quality improvements are achieved in Christchurch and Timaru.**

Explanation

Ambient air quality standard should be a fundamental basis for considering consents and taking other action to bring air quality levels up to the standard. Ambient air quality is measured as an average level over a specified period or periods. Average concentrations of contaminants may be higher over a short period and still meet the quality standards. Maintaining ambient air quality will require the exercise of control over discharges to air as well as other measures. In setting standards and in undertaking action to improve ambient air quality Christchurch and Timaru should be tackled first.

Principal Reasons

Standards for ambient air quality in combination with discharge controls are necessary to deal with air discharges which have (cumulative) ambient or quality effects in combination with other discharges. Christchurch and Timaru are where the problem is greatest.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (b) Resource consents

Policy 2

Promote measures that reduce emissions from the use of carbon based fuels

Explanation

Policy 2 addresses health effects and nuisance effects resulting from pollutants in ambient air. Global impacts of carbon dioxide are addressed in Policies 8 and 9.

The principal sources of air pollution are from solid fuel combustion for domestic heating, fossil fuel combustion for commercial heating and industrial purposes, and motor vehicle exhaust emissions.

Discharges from burning wood and coal for domestic heating include sulphur and nitrogen oxides, and suspended particulate (including smoke). Similar contaminants are discharged when coal is burnt in industrial and trade processes.

Emissions from motor vehicle exhaust systems include carbon monoxide, carbon dioxide, oxides of nitrogen, lead compounds, hydrocarbons, sulphur dioxide, suspended particulate and products of incomplete combustion. Motor vehicles are a major source of carbon monoxide and an increasing source of suspended particulate in ambient air in Christchurch.

Emissions from the combustion of carbon based fuels are of concern because levels of suspended particulate and carbon monoxide in Christchurch often exceed health guidelines. In addition, nuisance and amenity effects, such as smoke, odours and visual impacts, for example, smog, result from these discharges.

The purpose of Policy 2 is to ensure a reduction in the total quantity of emissions.

Principal Reasons

Discharges from the combustion of carbon based fuels need to be reduced to ensure levels of contaminants do not cause health effects and that nuisance effects are reduced.

*Ch.14 Energy, Pol.1
Ch. 12 Settlement and the Built
Environment, Pol.1*

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (b) Resource Consents
 - (c) Regional Energy Strategy
 - (d) Regional Land Transport Strategy
 - (e) Co-ordination, promotion, education and advocacy
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions should consider:
 - (c) encouraging patterns and forms of urban settlement and infrastructure which decrease production of motor vehicle emissions and decrease demand for transport.

Issue 2

Nuisance and health effects and adverse effects on natural and physical resources and social and cultural values from localised discharges of contaminants into air including:

- (a) smoke from domestic fires and emissions from motor vehicles.**
- (b) smoke and gases from industrial processes, for example from chemical manufacturing plants, spray painting and waste incineration.**
- (c) odours generated, for example, from composting, fish processing factories, piggeries, oxidation ponds, land effluent disposal, fertiliser and freezing works.**
- (d) chemical spray drift.**
- (e) dust, for example, from land where vegetation has been removed, quarries, gravel roads, cultivation, and from stockpiles of materials such as coal.**
- (f) smoke generated in both urban and rural areas by burning of vegetation and waste.**

Objective 2

*Ch.6 Tangata Whenua, Obj.1
Ch.8 Landscape, Obj.3*

Avoid, remedy or mitigate the adverse effects on people, flora and fauna, and other natural and physical resources resulting from discharges of contaminants into the air.

Principal Reasons

Sustainable management involves avoiding, remedying or mitigating adverse effects on the environment. Where there are adverse effects from discharges an appropriate response to avoid, remedy or mitigate those effects needs to be formulated.

Policy 3

Set standards, conditions and terms for discharges of contaminants into the air to avoid, remedy or mitigate adverse effects.

Explanation

Conditions may be specified in a plan under which discharges into air will be treated as permitted activities. Similarly standards and terms may be specified in a plan for controlled or discretionary activities. Some discharges may be prohibited. These conditions, standards and terms may specify acceptable contaminant emission levels or acceptable discharge processes.

Principal Reasons

A large number of discharges occur as a result of everyday commercial activities in Canterbury. It would be unreasonable for most of these activities to be required to have a discharge permit. Similarly many discharges may be acceptable if procedures or methods are followed which avoid adverse effects on people, flora and fauna, cultural values and natural and physical resources.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (b) Resource consents

Policy 4

Avoid chemical sprays drifting beyond property boundaries or to non-targeted properties and avoid contamination of water.

Explanation

Unintended effects of sprays which drift across property boundaries or into water courses may be avoided by proper operating practices by persons using chemical sprays.

Principal Reasons

To avoid adverse effects on the environment.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (e) Co-ordination, promotion, education and advocacy
 - (f) Encourage the preparation of iwi management plans

Ch.9 Water, Pol.12

Policy 5

- (a) **Activities which require resource consents to discharge contaminants into air should be encouraged to locate away from residential dwellings, educational facilities, hospitals, shops and other similar public buildings unless adverse effects can be avoided or mitigated.**
- (b) **Avoid encroachment of new development on existing activities discharging to air, unless the adverse effects can be avoided or mitigated.**

Explanation

Many adverse effects can be avoided if contaminants are not discharged near dwellings. However, it is possible for adverse effects to be avoided or mitigated by other means.

Principal Reasons

Odour, spray drift, dust or other emissions which adversely affect people who unwillingly expose themselves to risks of contamination need to be avoided, or mitigated. Workers are in a different situation and are covered by occupational health and safety legislation.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (b) Resource consents
 - (f) Encourage the preparation of iwi management plans
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions, should consider:
 - (a) providing appropriate locations for activities discharging contaminants to air.
 - (b) making provisions to protect established activities that discharge contaminants to air from encroachment by sensitive land uses.

Policy 6

Practices which reduce the adverse effects of the discharge to air of methane and other contaminants from waste management activities should be adopted. For landfill management, regard should be had to the Ministry for the Environment Landfill Guidelines (November 1992) with respect to discharges to air.

Explanation

Waste management activities discharge methane and other contaminants into air. Practices to reduce adverse effects are needed.

The landfill guidelines contain provisions to deal with methane and other gas emissions in a safe and environmentally sensitive manner.

Principal Reasons

To reduce the adverse effects of discharges from waste management activities and to avoid or utilise landfill greenhouse gas emissions.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (a)(ii) Other Regional plans
 - (b) Resource consents
 - (e) Co-ordination, promotion, education and advocacy

Issue 3

- (a) **The potential for climate change from greenhouse gas emissions, including: emissions from burning of carbon-based fuels, methane and other emissions from landfills, motor vehicle emissions, and pastoral and dairy farming.**
- (b) **Stratospheric ozone layer depletion from the release of CFCs and other ozone depleting substances.**

Objective 3

Ch.6 Tangata Whenua, Obj.1
Ch.14 Energy, Obj.1

- (a) **Reduce emissions of greenhouse gases.**
- (b) **Reduce emissions of stratospheric ozone depleting substances.**

Principal Reasons

This objective is a commitment to make a Canterbury contribution towards preventing possible global warming and ozone depletion in order to meet the needs of future generations.

Policy 7

Ch.8 Landscape, Pol.4
Ch.9 Water, Pol.8
Ch.10 Beds of Rivers, Pol.3,4

Increased and long-lived vegetation cover which absorbs significant amounts of atmospheric carbon dioxide either permanently or for a long period should be encouraged where it does not cause other significant adverse effects.

Explanation

Forestry and other forms of permanent or increased vegetation ground cover contributes to reductions in atmospheric carbon dioxide. However, there are other aspects which should also be considered such as effects on water or landscapes.

Principal Reasons

Reductions in global greenhouse gases are also achieved by increased vegetation cover.

Methods

1. The methods used or to be used by the Regional Council are:
 - (e) Co-ordination, promotion, education and advocacy
 - (f) Encourage the preparation of iwi management plans

Policy 8

In accord with the purpose of the Ozone Layer Protection Act 1990, promote measures to reduce the amount of stratospheric ozone-depleting substances which may be released into the atmosphere.

Explanation

Ozone depleting substances act to break down the protective layer of ozone in the upper atmosphere. They are present in some propellants, refrigerants, cleaners, cleaning agents and fire extinguisher contents. Measures to reduce emissions include measures to reduce the use of such chemicals and to safely collect and if possible re-use them in a way which precludes further emissions. The Regional Council should support initiatives of industries to phase out the use of such chemicals.

The purpose of the Ozone Layer Protection Act 1990 is to help protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer:

- (a) By providing for the phasing out by the year 2000 of all but essential uses of controlled substances and for the restriction of the use of other ozone depleting substances.
- (b) By giving further effect to New Zealand's obligations under the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer.

The Vienna Convention includes a requirement for parties to the convention to adopt protocols, including the Montreal protocol, on ozone depleting substances. The Montreal protocol provides for specific reductions in the use of controlled ozone depleting substances.

Principal Reasons

To contribute towards New Zealand's participation in international agreements to reduce the use and release of such chemicals.

Methods

1. The methods used or to be used by the Regional Council are:
 - (e) Co-ordination, promotion, education and advocacy

Policy 9

Promote measures to reduce emissions, or mitigate the effects of carbon dioxide from the use of carbon based fuels.

Explanation

When carbon based fuels are burnt they emit carbon dioxide into the atmosphere. Major sources of carbon dioxide in Canterbury include motor vehicle exhaust emissions, burning of coal for domestic heating and in industrial boilers, and landfill gas. Carbon dioxide is one gas that may be contributing to an enhanced greenhouse effect.

Mitigation measures can include: the offsetting of carbon dioxide emissions by planting forest to act as carbon sinks, the purchase of emission reduction at another site, or investing in energy efficiency off-site.

Principal Reasons

While an enhanced greenhouse effect and the potential for climate change are of national and global significance, these matters are also important at the regional level. Measures can be promoted and adopted both at a local and regional level to reduce emissions of carbon dioxide.

Action taken by the Regional Council needs to be consistent with national and other regional policies.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a)(i) Natural Resources Regional Plan - Air Chapter
 - (d) Regional Land Transport Strategy
 - (e) Co-ordination, promotion, education and advocacy
2. District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions, should consider:
 - (c) encouraging patterns and forms of urban settlement and infrastructure which decrease production of motor vehicle emissions and decrease demand for transport.

13.3 Methods

1. Regional Council

The methods used or to be used by the Regional Council are:

(a) Regional plans

(a)(i) Natural Resources Regional Plan - Air Chapter

The Regional Council will prepare a regional plan to address the discharge of contaminants to air. The plan will include objectives, policies, rules, standards or other methods relating to:

- motor vehicle emissions
- discharges from domestic fires and industrial boilers
- controls on fuel use and burning methods and appliances
- chemical spray drift
- the uncontrolled burning of refuse in urban areas and at landfills
- the burning of vegetation and refuse in rural areas
- the control of discharges from industrial and trade premises
- odours from a variety of sources
- emissions of greenhouse gases
- other discharges as appropriate.

The plan will also include ambient air quality standards.

During the development of the plan, the Regional Council will consult with user/industry groups, the general public and other interested parties. Consideration will be given to :

- adopting the relevant parts of Codes of Practice developed by industry.
- requiring the best practicable option to be used with respect to discharges of contaminants to air.

Principal Reasons

The Natural Resources Regional Plan - Air Chapter is needed so that discharges that are causing adverse effects on the environment can be controlled.

The RM Act states that discharges from industrial or trade premises are prohibited unless a rule in a regional plan provides otherwise. The RM Act also provides an option to control other discharges to air. A regional plan is needed so that some discharges from industrial or trade premises can be permitted activities and other discharges controlled as appropriate.

(a)(ii) Other regional plans

Other regional plans need to contain provisions relating to air quality in order to complement provisions in the Natural Resources Regional Plan - Air Chapter. Air quality management needs to be integrated with the use of other resources, for example, the Landfill Regional Plan will address any adverse effects on air quality arising from landfills.

Principal Reasons

To ensure the integrated management of air.

(b) Resource consents

Consents may be granted for activities which discharge into air. These may involve discharges into air which are specified as controlled, discretionary, or non-complying through not meeting criteria specified in a regional plan for permitted activities; or air discharges from industrial or trade premises not covered by a plan.

Principal Reasons

It may not be possible to have conditions such that all discharges can be treated as permitted activities.

(c) Regional Energy Strategy

The Regional Council will develop a regional energy strategy in consultation with Tangata Whenua, government departments, the energy industry, the community and district/city councils.

The strategy should evaluate existing energy use and production in the region and analyse options for moving to a more sustainable regional energy system. This should include examining the potential for further hydro-electricity production, solar, wind and tidal power generation and the use of biomass. It should also include provisions for energy conservation and energy efficiency. The strategy should include the impact of telecommunication, urban settlement and growth options, and the viability of and dependence on fossil fuels of present farming, fishing, heavy transport and other energy users.

Principal Reasons

Even with a national energy strategy, a regional strategy is required to focus on the particular needs and opportunities of the region. Promoting the use of sustainable energy will be more successful if we know what the opportunities and constraints are.

(d) Regional Land Transport Strategy

A Regional Land Transport Strategy will identify the need for transport, how that need can be met, and the appropriate roles of different transport systems in meeting those needs including the need to promote the sustainable management of natural and physical resources. The Strategy has a five-year horizon and looks at land transport, and will be reviewed at approximately two-year intervals.

The Strategy will include measures to reduce traffic congestion and to reduce motor vehicle exhaust emissions.

Principal Reasons

Motor vehicle emissions are a major cause of ambient air pollution in Canterbury.

(e) Co-ordination, promotion, education and advocacy

The Regional Council will undertake promotion, co-ordinate activities of various agencies and advocate policies to central government and district councils. This will include:

- (i) Waste management activities: advocate to the city and district councils to adopt waste management practices that reduce the adverse effects of methane and other contaminant discharges.
- (ii) Greenhouse gas emissions:
 - advocate to central government for a national policy statement to reduce greenhouse gas emissions.
 - advocate to central government appropriate strategies and methods to be used to reduce emissions of greenhouse gases.
 - participate in central government initiatives to develop guidelines for local government.
 - promote energy efficiency and the use of alternatives to carbon based fuels.
- (iii) Emissions of ozone depleting substances:
 - promote provisions for the safe collection, treatment and re-use of refrigerants and vehicle air conditioning systems.
- (iv) Motor vehicle exhaust emissions:
 - The Regional Council will continue to encourage the reduction of emissions from motor vehicle exhaust.

Principal Reasons

This is an important method where it is not possible or practical for the Regional Council to regulate certain activities.

(f) Encourage the preparation of iwi management plans

Iwi management plans are non-statutory documents that have been prepared by Tangata Whenua. The Regional Council, in preparing regional plans, must have regard to iwi management plans. By agreement with the Regional Council all or part of an iwi management plan, for example, dealing with wahi tapu or wahi taonga, may be incorporated into a regional plan. The development of the regional plan would be subject to the public consultation processes set out in the RM Act. The Regional Council, by agreement with Tangata Whenua, recognises that there is an opportunity for this to occur.

Iwi management plans can provide mechanisms for implementing aspects of policy, for example: the process for managing the discovery of koiwi tangata; how any powers transferred will be discharged; and the joint management of sites and/or resources. They can also be a source of information that aids, but does not replace, consultation with Tangata Whenua during regional plan preparation or consideration of consents.

The Regional Council will encourage runanga to prepare iwi management plans and if requested, will provide advice to aid their formulation.

Principal Reasons

Reference to iwi management plans assist the understanding of Tangata Whenua perspectives, and provides an appropriate method to achieve certain environmental policies.

2. District plan provisions

District/city councils in the preparation, variation, change or review of district plans, through the exercise of their functions, should consider:

- (a) providing appropriate locations for activities discharging contaminants to air.
- (b) making provisions to protect established activities that discharge contaminants to air from encroachment by sensitive land uses.
- (c) encouraging patterns and forms of urban settlement and infrastructure which decrease production of motor vehicle emissions and decrease demand for transport.

Principal Reasons

Provisions in district plans are important as they can influence the long term location of activities discharging to air and the quantity of motor vehicle emissions generated.

13.4 Environmental Results Anticipated

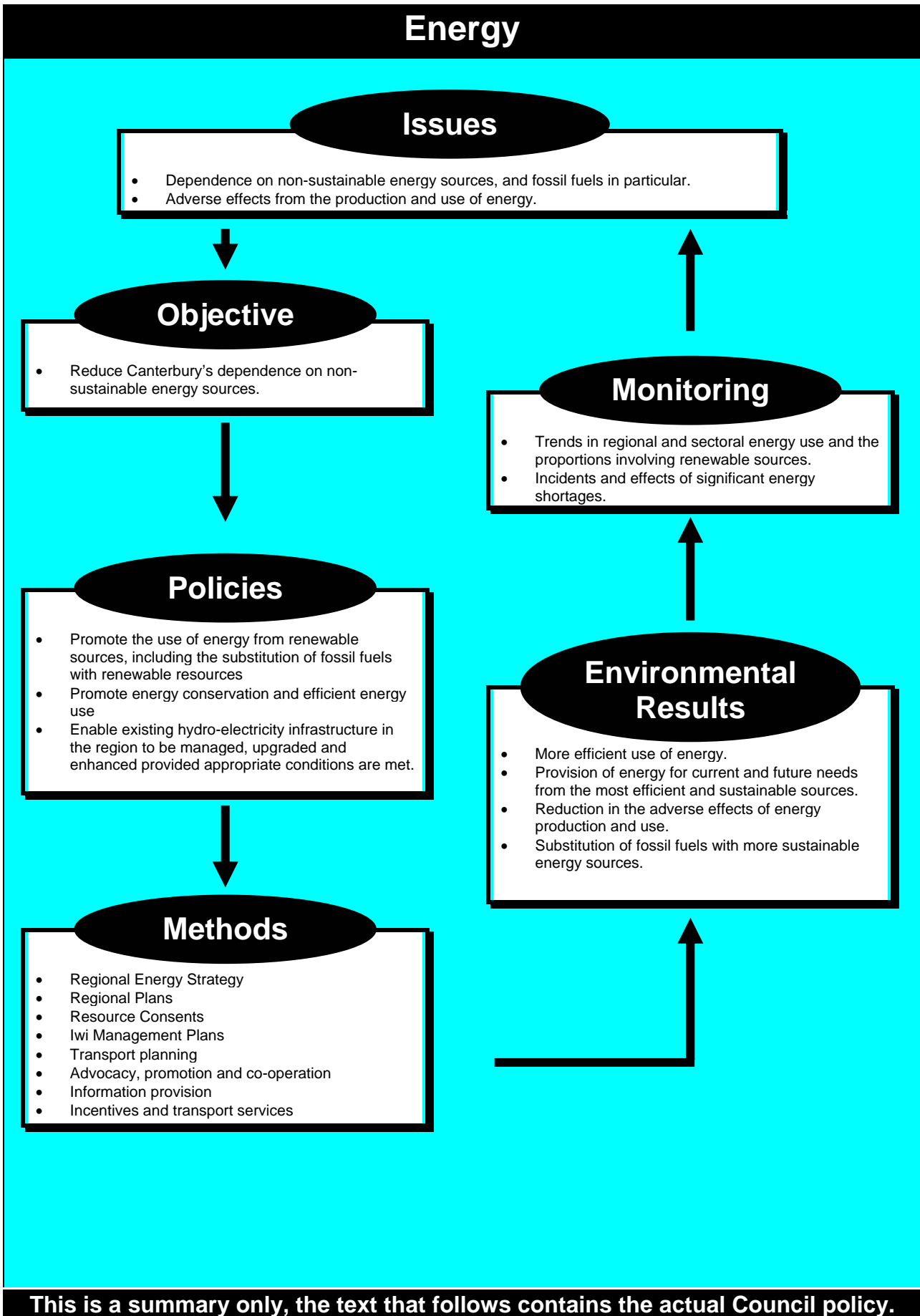
Implementation of the above policies and methods is expected to have the following environmental results:

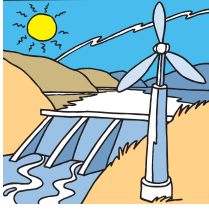
- (1) Reduced effects of emissions on human health and the environment.
- (2) Discharges into air which meet conditions and standards and terms for consents and permitted activities, and enable ambient air quality standards to be met.
- (3) Ambient air quality that meets air quality standards set by the Regional Council.
- (4) Reduced emissions of greenhouse gases and ozone depleting substances.

13.5 Monitoring Effectiveness

For air, the following indicators should be monitored to assess the suitability and effectiveness of this part of the Regional Policy Statement, and any need for it to be reviewed:

- (1) Concentration of contaminants in air and their effects.
- (2) Trends in compliance with conditions on resource consents and on permitted activities.
- (3) Incidents reported to the Regional Council relating to air quality.





14. Energy

14.1 Introduction

The Regional Council is including policies on energy in this Regional Policy Statement for several reasons. In addition to dealing with the adverse effects of using carbon based fuels, the Regional Council is concerned with enabling energy to be produced for the needs of future generations. This involves encouraging the use of renewable sources as well as promoting energy conservation and efficiency. Energy is related to water management through hydro-electricity production. Production and use of energy can have adverse effects on wahi tapu, wahi taonga and mahinga kai through emissions, and damming, diverting and mixing of water bodies. Energy production may also result in positive effects in addition to the benefits of the use of the energy itself. For example, normally associated with hydro-electricity generation is the provision of new or replacement recreational facilities and reduced flood hazard. Some adverse effects may be mitigated, for example, through the use of forests as carbon sinks for greenhouse gases.

Canterbury is a large producer of hydro-electricity. The eight hydro stations on the Waitaki River system produce about 34% of the nation's electrical energy. When full, Lakes Pukaki and Tekapo represent nearly two-thirds of New Zealand's total hydro storage capacity. There is potential for development, upgrading and enhancement of hydro-electricity in the region.

Canterbury imports almost all of its fossil fuels and relies heavily on them for transport fuels and industrial, commercial and domestic heat. Continued reliance on fossil fuels may be unsustainable, making the region vulnerable to future supply problems for some fuels and price rises. These could cause major economic and social problems. Petrol, oil, gas and coal are sources of local air pollution and "greenhouse" gases. Canterbury produces about ten percent of the country's total carbon dioxide emissions, which could well be contributing to global climate change, including reduced rainfall and greater weather extremes for Canterbury. The purpose of the RM Act specifically excludes "minerals" from being managed to sustain their potential to meet the needs of future generations. This means that the Regional Policy Statement cannot be concerned under the RM Act with the rate at which energy resources such as oil or coal are depleted. It should be concerned with the effects of their use on the environment. A "non-sustainable energy source" may be "non-sustainable" because of these effects, not because its supply is unable to be sustained indefinitely.

Through this Regional Policy Statement and the plans which will follow, the Regional Council will work with the people, organisations, government agencies and councils in the region, to significantly reduce the region's dependence on unsustainable fuels, increase the efficiency of energy usage, move to greater production of renewable energy and improve the quality of air and water.

14.2 Issue Resolution

Issue 1

The region's dependence on non-sustainable energy sources, and fossil fuels in particular, to meet present and future needs. These energy sources include those that are non-sustainable because of the adverse global and regional environmental effects that result from their production and use.

Objective 1

Ch. 6 Tangata Whenua, Obj. 1

Reduce Canterbury's dependence on non-sustainable energy sources.

Principal Reasons

The sustainable management of energy resources means that people should be enabled to provide for themselves while sustaining the potential of energy to meet the reasonably foreseeable needs of future generations and avoiding, remedying or mitigating any adverse effects on the environment, including effects on the welfare of people and communities (see section 5 of the RM Act). Reduced dependency on non-sustainable energy sources helps achieve this. The purpose of the RM Act excludes minerals when considering the reasonable needs of future generations. This means that this Regional Policy Statement cannot be concerned with the rates of extraction of mineral energy resources such as coal, natural gas and petroleum fuels in Canterbury or the reserves remaining of such minerals.

Policy 1

*Ch. 12 Settlement, Pol. 1
Ch. 13 Air, Pol. 2
Ch. 15 Transport, Pol.3*

Promote the use of energy from renewable sources consistent with sustainable management of natural and physical resources, including the promotion of the substitution of fossil fuels with renewable sources.

Explanation

Such sources may include non-nuclear sources involving wind, water, biomass and the sun. Water sources may include tidal, geothermal or hydro lake storage and generation. Not all such sources may be consistent with sustainable management if they have significant adverse effects on the environment.

Principal Reasons

By promoting energy use from sources consistent with sustainable management of natural and physical resources, the region's dependence on fossil fuels is reduced, avoiding the adverse effects associated with dependence. The potential hazards to present and future Canterbury residents and the long-term environmental risks involved with nuclear

waste, make nuclear power plants non-sustainable under present technologies.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional energy strategy
 - (f) Advocacy, promotion and co-operation
 - (g) Information provision
 - (h) Incentives and transport services

Policy 2

Promote energy conservation and efficient energy use.

Ch. 12 Settlement, Pol. 1
Ch. 13 Air, Pol. 2
Ch. 15 Transport, Pol. 3

Explanation

The Canterbury community is able to achieve energy savings through promoting measures which conserve energy or use it more efficiently.

Principal Reasons

Energy conservation and efficiency reduces Canterbury's dependence on limited energy resources from non-sustainable sources. If Canterbury uses less, what it has will last longer.

If Canterbury conserves fossil fuels this also has a direct impact on the production of potentially environmentally damaging greenhouse gases such as carbon dioxide. Conservation of renewable energy sources also avoids potential adverse effects on the environment. For example, conservation may avoid landscape impacts of windpower generation, or the changes hydro-electric dams or canals make to the natural environment.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional energy strategy
 - (e) Transport planning
 - (f) Advocacy, promotion and co-operation
 - (g) Information provision
 - (h) Incentives and transport services

Policy 3

Ch. 9 Water, Pol. 4, 5, 11, 14

To enable existing hydro-electricity infrastructure in the region to be maintained, upgraded and enhanced provided appropriate regional plan rules and consent conditions relating to protection of water quality and quantity are met.

Explanation

This policy ensures that the importance and value of the region's hydro-electricity resources are recognised. It is also appropriate to provide for upgrading and enhancement of existing infrastructure to make better or more efficient use of it. The rules and conditions concerning water should include avoidance, remediation or mitigation of effects on natural and physical resources including mahinga kai and other taonga.

Principal Reasons

If the energy needs of future generations are to be met then existing schemes should be able to be maintained, upgraded and enhanced without being unduly impeded by plan changes.

Methods

1. The methods used or to be used by the Regional Council are:
 - (b) Regional plans
 - (c) Resource consents
 - (d) Encourage the preparation of iwi management plans

Issue 2

The adverse global and regional environmental effects which result from the production and use of energy. The adverse effects include:

- (a) air pollution**
- (b) loss of land**
- (c) effects on ancestral lands, sites and other taonga of value to Tangata Whenua**
- (d) loss of recreational values**
- (e) landscape effects**
- (f) human health effects**
- (g) effects on natural and physical resources**

The above issue has been dealt with in the following chapters: Ch. 8 Landscape and Ecology, Iss. 1; Ch. 9 water, Iss. 1; and Ch. 13 Air, Iss. 1, 2 and 3.

14.3 Methods

1. Regional Council

The methods used or to be used by the Regional Council are:

(a) Regional Energy Strategy

The Regional Council will develop a Regional Energy Strategy in consultation with Tangata Whenua, government departments, the energy industry, the community and district/city councils. The Strategy should evaluate existing energy use and production in the region and analyse options for moving to a more sustainable regional energy system. This should include examining the potential for further hydro-electricity production, solar, wind and tidal power generation and the use of biomass. It should also include provisions for energy conservation and energy efficiency. The strategy should include the impact of telecommunication, urban settlement and growth options, and the dependence on fossil fuels of present farming, fishing, heavy transport and other energy users.

Principal Reasons

Even with a national energy strategy a regional strategy is required to focus on the particular needs and opportunities of the region. Promoting the use of sustainable energy will be more successful if people know what the opportunities and constraints are.

(b) Regional plans

Regional plans may make provision for any matter relating to the use, development, or protection of any natural or physical resources for which the Regional Council has responsibility under the RM Act, including the control of:

- (i) taking, using, damming, or diverting of any water in the region
- (ii) the quantity, level, and flow of water in any water body, including:
 - the setting of any maximum or minimum levels or flows of water
 - the control of the range, or rate of change, of levels or flows of water
- (iii) discharges of contaminants into or onto land, air, or water, and discharges of water into water
- (iv) use of land for the purpose of:
 - soil conservation
 - the maintenance and enhancement of the quality of water in water bodies and coastal water
 - the maintenance of the quantity of water in water bodies and coastal water
 - the avoidance or mitigation of natural hazards
 - the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances.

Regional Plan provisions should provide for continued existing use of water bodies for the purposes of hydro-electricity generation. They should also include rules to protect other values (including Tangata Whenua values) for water bodies and other resources used for energy production. Provisions from iwi management plans may be included.

Principal Reasons

The importance of hydro-electricity generation to the wellbeing of the region and New Zealand as a whole means that plan provisions should not place existing hydro-electricity schemes at physical or financial risk. Plan provisions are also needed to protect other values, for example, the use of geothermal resources by the Tangata Whenua.

(c) Resource consents

Water permits for use of water for geothermal energy and hydro-electricity purposes will provide for protection of water quality and quantity in accordance with regional rules. Land use consents may be required for works in river and lake beds and to construct generating facilities for hydro-electricity.

Principal Reasons

The impact of hydro-electricity and other generation is likely to be such that requiring water permits and land use consents is appropriate.

(d) Encourage the preparation of iwi management plans

Iwi management plans are non-statutory documents that have been prepared by Tangata Whenua. The Regional Council, in preparing regional plans, must have regard to iwi management plans. By agreement with the Regional Council all or part of an iwi management plan, for example, dealing with wahi tapu or wahi taonga, may be incorporated into a regional plan. The development of the regional plan would be subject to the public consultation processes set out in the RM Act. The Regional Council, by agreement with Tangata Whenua, recognises that there is an opportunity for this to occur.

Iwi management plans can provide mechanisms for implementing aspects of policy, for example: the process for managing the discovery of koiwi tangata; how any powers transferred will be discharged; and the joint management of sites and/or resources. They can also be a source of information that aids, but does not replace, consultation with Tangata Whenua during regional plan preparation or consideration of consents.

The Regional Council will encourage runanga to prepare iwi management plans and if requested, will provide advice to aid their formulation.

Principal Reasons

Reference to management plans assist the understanding of Tangata Whenua perspectives, and provides an appropriate method to achieve certain environmental policies.

(e) Transport planning

Incorporate energy objectives and policies into the Regional Council's strategic transport planning under the Land Transport Act 1993, the RM Act and other legislation. Use the Regional Council's function of transport planning to implement its energy policies.

Principal Reasons

The method provides the means of integrating energy and transport policies and methods (see sections 30(1) and 59 of the RM Act).

(f) Advocacy, promotion and co-operation

In discussions with, or submissions to Central Government the Regional Council will advocate the development and application of a national energy strategy and lobby the Government for a National Policy Statement on energy. A National Policy Statement on energy should include a statement of the policy to keep New Zealand free of nuclear power generation, the Government's policies on sustainable energy and carbon dioxide emissions, promotion of renewable energy sources, energy conservation and efficiency requirements and provision for avoiding adverse effects of energy production and use.

The Regional Council will work with district/city councils, the energy industry, energy supply authorities and other interested parties to promote energy conservation and reduced fossil fuel use by householders and others (including industry). Energy efficiency can be introduced at an early stage in planning developments through building methods, site layout and construction materials. The Regional Council will participate in and lend support to energy conservation promotion and education programmes, and will promote energy audits and efficiency programmes.

Principal Reasons

Dependence on non-sustainable energy is a national problem. One region cannot easily act alone without experiencing disproportionate and perhaps unaffordable social and economic costs which may put it at a competitive disadvantage relative to other regions.

(g) Information provision

Provide information on the environmental impacts of energy use, the benefits of energy conservation and the use of renewable sources.

Principal Reasons

This method is adopted because the region cannot directly control the use of energy by people except where water is involved or where there are discharges of contaminants. By providing people with information and education they are enabled to make their own judgements about the efficiency and equity of their actions.

Basic information is needed about household energy consumption before energy conservation measures can be implemented. There is evidence that households can fund and achieve energy conservation if provided with information and some financial constraints are removed.

(h) Incentives and transport services

The Regional Council should promote the reduction of transport emissions by providing incentives to use public transport through funding or part funding the provision of services, through provision for public transport and cycling in strategic transportation plans and encouraging more energy/fuel efficient disposition of land use and activities.

Principal Reasons

Public transport and cycling are less energy intensive than the use of private motor vehicles and the Regional Council has a clearly defined function to provide such services and to plan for their use (see section 30(1)(a) and 32 of the RM Act).

14.4 Environmental Results Anticipated

Implementation of the above policies and methods is expected to have the following environmental results:

- (1) More efficient use of energy.
- (2) Provision of energy for the region's and nation's current and future needs from the most efficient and sustainable sources.
- (3) Reduction in the adverse effects of energy production and use, (including the effects on water resources, reduced carbon dioxide emissions and reduced air pollution).
- (4) Substitution of fossil fuels with more sustainable energy sources.

14.5 Monitoring Effectiveness

For energy resource management, the following indicators should be monitored to assess the suitability and effectiveness of this part of the Regional Policy Statement, and any need for it to be reviewed:

- (1) Trends in regional and sectoral energy use and the proportions involving renewable sources.
- (2) Incidents and effects of significant energy shortages.

