

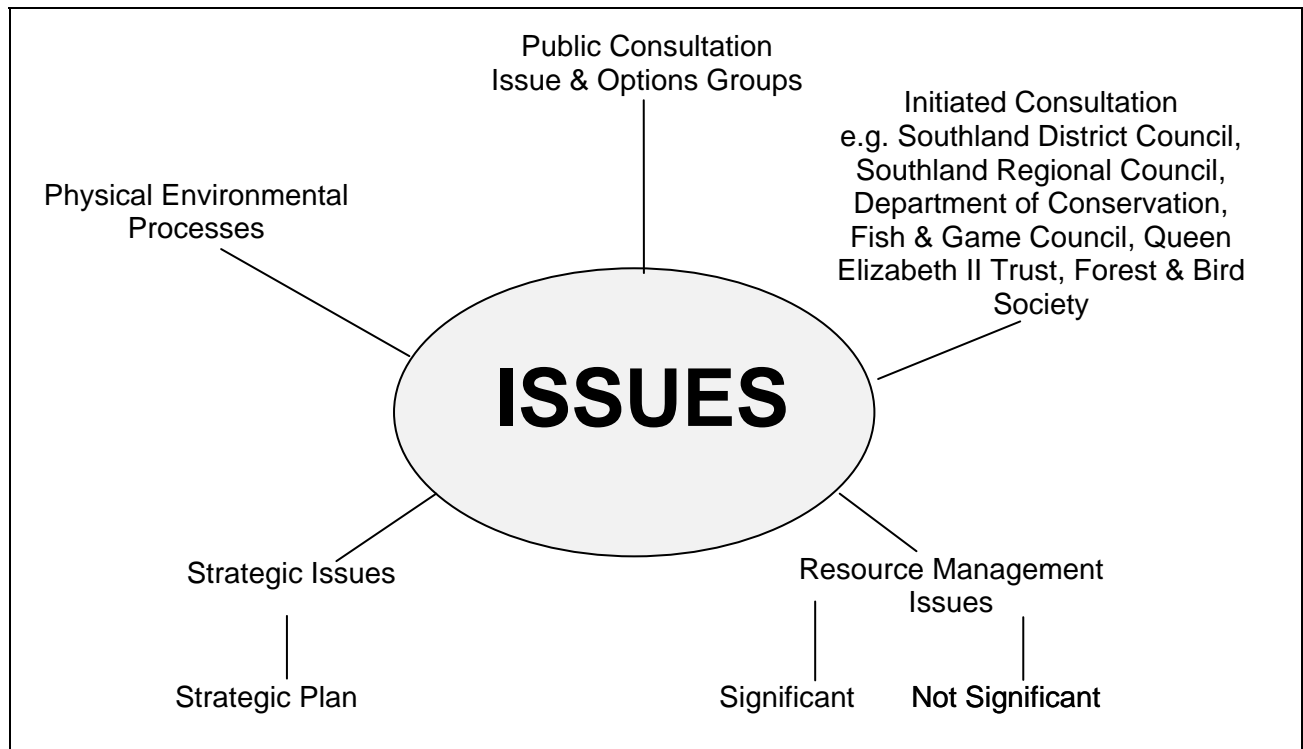
SECTION TWO

SIGNIFICANT RESOURCE MANAGEMENT ISSUES

2.1 INTRODUCTION

- 2.1.1 The process of preparing this Plan commenced with a wide-ranging programme of consultation throughout the community. Groups with a perceived community of interest were also called together to identify what they saw as fields of enquiry that should be addressed. Consultation was held with the Ministry for the Environment, the Department of Conservation, the Southland Regional Council, the Southland District Council, takata whenua (through representatives of the four runaka), and such groups as the Southland Fish and Game Council, the New Zealand Historic Places Trust, the Southland Conservation Board, Invercargill Airport Ltd, South Port, New Zealand Aluminium Smelters, New Zealand Transport Agency, the Ministry of Forestry, the Ministry of Health, and representatives from other organisations such as Federated Farmers.
- 2.1.2 From this consultative process, significant issues emerged and were explored by Council's District Plan Group. In general these issues were identified by more than one group, or were particularly significant to a group. The Plan Group selected from these issues those which could be addressed in the context of a plan prepared under the Resource Management Act. A process of "sieving" took place to identify and isolate the significant Resource Management issues to be addressed in the Plan.
- 2.1.3 For the purposes of this Plan a resource management issue is identified as significant when:
- (A) It is within the ambit of the Resource Management Act 1991
 - (B) It has been expressed by the community as being of importance
 - (C) It would be possible for Council to modify the outcome through intervention
- 2.1.4 People hold values for resources or attributes. These values combine to form the amenity values of that area. Issues arise because the amenity values of the area may be threatened by the effects of a land use activity.
- 2.1.5 Issues may relate to the District as a whole, or to specific parts within the District. The Plan reflects this by dealing with some issues on a District-wide basis, and others on an area-specific basis. The Plan divides the District into "Areas" which share amenity values.

2.1.6 The process can be shown diagrammatically as follows:



2.1.7 The significant resource management issues identified in this Plan relate to:

- 2.2 Manawhenua
- 2.3 Coastal environment
- 2.4 Wetlands, and rivers and their margins
- 2.5 Outstanding natural features and landscapes
- 2.6 Areas of significant indigenous vegetation and significant habitats of indigenous fauna
- 2.7 Soil resource
- 2.8 Mineral extraction
- 2.9 Heritage
- 2.10 Transportation
- 2.11 Natural hazards
- 2.12 Subdivision
- 2.13 Infrastructure
- 2.14 Amenity values of the District
- 2.15 Connecting to Council Infrastructure
- 2.16 Expansion of Industrial Activities

2.2 MANAWHENUA

2.2.1 Manawhenua is the customary authority or title over the land, and the rights of ownership and control of usage of resources on the land which is held by iwi rather than individuals. This concept incorporates the relationship of iwi with their culture and traditions, ancestral lands, wahi tapu, wahi taoka, tauraka waka, mahika kai sites and taiapure resources.

- 2.2.2** The Ngai Tahu Claims Settlement Act 1998 identifies Statutory Acknowledgments, which must be taken into account in addressing resource consent applications. An explanation of what role Statutory Acknowledgments have in the resource consent process and their location within the District is contained in Appendix VI of the Plan.
- 2.2.3** Land use activities could significantly and adversely affect the relationship between the takata whenua and the environment.

The significant resource management issue for manawhenua is:

- * Recognition and respect for the relationship of the takata whenua and their culture and traditions with the environment

2.3 COASTAL ENVIRONMENT

- 2.3.1** The coastline that penetrates and borders the District to the west and south is about 165 kilometres in length. It is a highly dynamic entity. In a short period of time (geologically speaking) the District's coast has gone through much change. In more recent times (beginning of the 19th century) parts of the District's low lying areas were under water. Rapid geomorphological change due to coastal processes is expected to continue.
- 2.3.2** The coastal environment is characterised in part by special qualities relating to landscape landform, intrinsic values and heritage values and by regionally significant development in the Port of Bluff and the Aluminium Smelter.
- 2.3.2** Within the coastal environment, there is a diminishing degree of maritime influence as one moves inland from the sea coast. There is an area of coastal dominance that abuts the coastal marine area and is dominated by coastal processes. Moving inland, there is then an area of coastal influence. It may vary from a narrow strip to many metres in depth. The coastal hinterland area is still further inland but shows some geomorphological evidence of coastal processes.
- 2.3.4** Inappropriate subdivision, use, and development could significantly and adversely affect the natural character of the coastal environment.

The significant resource management issue for the coastal environment is:

- * The preservation and protection of the natural character of the coastal environment from inappropriate subdivision, use and development

2.4 WETLANDS AND RIVERS AND THEIR MARGINS

- 2.4.1** The river and stream systems in the District provide important habitats for native and introduced species of plants and animals. The Oreti River is the major river system in the District, and its tributaries include the Waikiwi Stream. The Oreti River starts in the Eyre Mountains and flows into the New River Estuary.
- 2.4.2** The plains of the District are crossed by various waterways. The Waihopai River, Otepuni Stream and Kingswell Creek, have all been modified to alleviate inundation problems. The creation of stopbanks and the removal of shade vegetation have reduced the quality of these water bodies as habitats.

- 2.4.3** Although there is known groundwater, there is limited information about this resource.
- 2.4.4** The Awarua Plain contains the District's largest wetland, which extends into the Southland District. A significant part of this wetland area is managed by the Department of Conservation (DOC), and makes up a part of the Seaward Moss Reserve. DOC is investigating the possibility of having the Awarua Wetland listed as a wetland of international importance under the RAMSAR Convention. This is also an important area for significant indigenous flora and fauna. The possible extension to the RAMSAR site will increase the wetland area to 23,500 ha, with the New River Estuary.
- 2.4.5** There are other wetland areas in the District. Wetland areas and lagoons are situated behind the sand dunes at Sandy Point. Lake Murihiku provides a wildlife habitat. There are also numerous ponds within reserves and on farms that contribute to wetland habitat. Gravel extraction areas between the Oreti Beach sand dunes and the Oreti River have the potential, once mining has been completed, to be turned into wetland areas.
- 2.4.6** Inappropriate subdivision, use and development could significantly and adversely affect these features.

The significant resource management issue for wetlands, and rivers and their margins is:

- * The preservation and protection of the natural character of wetlands, and rivers and their margins from inappropriate subdivision, use and development

- 2.4.7** Section 2.6 areas of significant indigenous vegetation and significant habitats of indigenous fauna is also relevant to wetlands.

2.5 OUTSTANDING NATURAL FEATURES AND LANDSCAPES

- 2.5.1** The consultative process identified a number of outstanding natural features and landscapes within the Invercargill District.

- 2.5.2** Identification was based on the following criteria:

- (A) Heritage, cultural and recreational values
- (B) Values to iwi
- (C) Habitat values
- (D) Natural science values - Physical features – geographic/geomorphology
- (E) Aesthetic/visual values
- (F) Distinctiveness or uniqueness
- (G) Biodiversity/ecological values
- (H) Naturalness, isolation and remoteness

2.5.3 These features and landscapes have been modified by humans but retain outstanding natural character and attributes which require protection. They are as follows:

(A) *Otatara Peninsula*

Contains relatively intact totara-matai forest remnants on the ancient sand dunes, this type of forest is of national significance.

(B) *Bluff Hill (Motupohue)*

The lookout point on top of Bluff Hill offers panoramic views of the islands of Foveaux Strait, Stewart Island and the Southland Plains to Fiordland. Bluff Hill is 265m above sea level, and is an important landform as it provides a marked contrast with the low relief of the remainder of the District. The seaward side of this area provides the most rugged stretch of coastline in the District. The Foveaux walkway and Glory Track provide foot access on and around Bluff Hill. This area contains nationally significant remnant kamahi, matai, miro, rimu, rata and totara as well as threatened coastal turf communities.

(C) *Three Sisters - Bluff Dunes System*

The "Three Sisters" comprise three distinctive and prominent peaks in the Omai area, and are volcanic in origin. There, vegetation is indigenous.

The Bluff Dune system comprises large and unusual windblown sand dunes with sequence of red tussock to shrub land then podocarp forest. This area is the best and most diverse dune system in southern Southland. There are nationally significant forest remnants at this location.

(D) *Awarua Wetlands*

This wetland complex (which extends into the Southland District) is of international significance, and is part of a larger complex, not only for its ecological and habitat values, but also for its sense of isolation and wilderness reflecting the open and natural character of the landscape.

(E) *New River Estuary*

This area is 4044.4 hectares in size and is part of a chain of five estuaries along the Southland coast. The estuary is a main spawning ground for a variety of fish species and supports a large number of bird species, with up to 74 different species having been observed. A variety of native plant species grow in and around the estuary. The waters of the estuary are a dominant landscape feature. Recreational activities mainly take place in the Oreti Arm of the estuary. Modification has been made to the estuary by major reclamation of the Waihopai Arm of the estuary. The reclaimed land contains the Invercargill airport and Invercargill's service/industrial sector.

(F) *Bluff Harbour/Awarua Bay*

This area is 5593.5 hectares and is less modified than the New River Estuary. Major developments in the Bluff Harbour/Awarua Bay include the port, Ocean Beach, the town of Bluff and the Tiwai Point Aluminium Smelter. However, away from these developments, the harbour's scenic values and sense of remoteness and isolation are especially significant.

(G) *Sandy Point Reserve*

Good examples of nationally significant totara and matai dominated forests on sand dune and sand plain ecosystems are present. Silver Lagoon provides a valuable wetland habitat in this area, with waterfowl and wading birds being plentiful. The sea, estuarine and river margins, along with Sandy Point Reserve, are a major recreational resource.

(H) *Thomsons Bush*

A valuable forest remnant in an urban area containing an almost isolated and least modified meander of the Waihopai River.

2.5.4 All these sites are delineated on the District Planning Maps.

2.5.5 Bluff Harbour, Awarua Bay, the New River Estuary and parts of the Oreti and Waihopai Rivers are within the coastal marine area which is administered by the Southland Regional Council.

2.5.6 Land use activities could significantly and adversely affect these features and landscapes.

The significant resource management issue for outstanding natural features and landscapes is:

- * The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development

2.6 AREAS OF SIGNIFICANT INDIGENOUS VEGETATION AND SIGNIFICANT HABITATS OF INDIGENOUS FAUNA

2.6.1 Invercargill City contains areas of indigenous bush, wetlands and tussock, some of which are large in size, while others are isolated. These areas are important habitats in their own right as well as significant collectively.

2.6.2 Areas of significant indigenous vegetation and significant habitats of indigenous fauna are particularly important in terms of their contribution to the indigenous biodiversity of the District.

2.6.3 Those areas of significant indigenous vegetation and significant habitats of indigenous fauna have been identified having regard to the following criteria:

- (A) **Representativeness** – reflecting importance based on ecological districts (Southland Plains, Waituna and Foveaux) enabling a comparison between historic (typically prehuman) and present distributions.
- (B) **Rarity/Distinctiveness** – with rarity being the presence of species that are uncommon to a particular area, and distinctiveness relating to unusual features or species found on the site.

- (C) **Landscape Context** – incorporating a general assessment of:
 - (1) *diversity/pattern* – whether or not an ecological sequence is represented within any one site
 - (2) *shape* – for example, discontinuous, irregular or compact
 - (3) *size* – for example, large, medium or small compared to other such remaining areas
 - (4) *connectivity* – for example, very isolated, semi-continuous, or part of a continuous landscape
- (D) **Sustainability** – if the ecological role of the site, for example, providing a corridor for movement of birds, will remain intact under the current management regime then it is sustainable.
- (E) **Viability** – refers to the continued integrity of the ecosystem itself, as distinct from the role it provides.
- (F) **Threat/Fragility** – with potential threats being grouped as:
 - (1) *biotic* – for example, troublesome plants and introduced animals
 - (2) *physical climatic* – for example, accelerated erosion
 - (3) *human* – for example, logging, burning, people damage

2.6.4 Sites within the District containing areas of significant indigenous vegetation and significant habitats of indigenous fauna were assessed by an ecologist employed by Council. The work was carried out over a six month period, being completed in early 1999. Having regard to the criteria above, sites were ranked using a numerical scoring of each of the above factors. There was an additional qualitative assessment. Where sites were not considered to be of significance, having regard to the above factors, they have not been included in the District Plan.

2.6.5 The most important areas of significant indigenous vegetation and significant habitats of indigenous fauna within the District include the Otatara Peninsula containing nationally significant totara-matai remnant forest on an ancient sand dune system; Omaui containing rare and threatened coastal turf communities; and Bluff Hill containing nationally significant podocarp forest.

2.6.6 Areas of significant indigenous vegetation and significant habitats of indigenous fauna are particularly important in terms of their contribution to the indigenous biodiversity of the District.

2.6.7 Key threats to areas of significant indigenous vegetation and significant habitats of indigenous fauna include lack of appropriate stock management, further fragmentation of land holdings, pest plants and animals, fire and inappropriate recreational use. Any activity that modifies the edge of vegetation areas, or that opens the interior of vegetation areas, has the ability to result in future changes to the ecological stability of the area, particularly within bush, where light and wind intrusions are increased.

2.6.8 Fragmentation and subsequent loss of vegetation is a particular issue in the Otatara – Sandy Point area, with forest cover in 1996 being 56% of that existing in 1947 and 21% of that existing in 1865. The ecological values of this locality are important because:

- (A) It contains the best remaining example of coastal totara and totara-matai sand dune forests in New Zealand.

- (B) It contains the only example of a sequence of totara, totara-matai and mixed podocarp remnants on different aged sand dunes and sand plain surfaces in New Zealand.
- (C) The forest remnants support good populations of endemic forest birds, including threatened species (for example, fernbird) that are strongly dependent on the forest remnants.
- (D) Although fragmented, the forest remnants are large enough and connected sufficiently to ensure their continued viability.

2.6.9 The built up nature and multiple ownership of forested areas in the Otatara-Sandy Point locality require the adoption of a different approach and management regime within this area to other parts of the District.

2.6.10 In total there are 6,189 hectares of areas of significant indigenous vegetation and significant habitats of indigenous fauna within the District. Of this 1,740 ha (28.1%) is owned by the Crown, 639 ha (10.3%) by the Invercargill City Council, and 3,810 ha (61.6%) in private ownership.

2.6.11 In addition to providing the basis for identifying areas of significant indigenous vegetation and significant habitats of indigenous fauna within the District Plan the research and assessments carried out provides a baseline for future monitoring of changes to these areas, both on an individual property basis and over the entire District. Such monitoring will be required on a regular basis in order to determine the effectiveness of the approach contained in this Plan for managing activities within these areas. That approach is highly reliant on the use of non-regulatory methods, supplemented where necessary with rules.

2.6.12 Council acknowledges that, in some areas, there have been concerted efforts made by landowners and occupiers to protect and enhance areas of significant indigenous vegetation and significant habitats of indigenous fauna so that they are available for future use and enjoyment. Council will encourage such voluntary activities to continue. Council will also encourage by non-regulatory means the promotion of public access to areas of significant indigenous vegetation and significant habitats of indigenous fauna where this will not give rise to adverse effects, either on the areas themselves or the use of private land and the privacy of the land occupier. The provision of public access should not compromise public safety or security issues and Council accepts that where private land is involved the final decision on whether to permit the public to access the areas, and the conditions of such access, will be that of the land owner. In addition the provisions of the Trespass Act 1980 also remain in instances where people access areas that the land owner does not wish to open to the public.

The significant resource management issues for the areas of significant indigenous vegetation and significant habitats of indigenous fauna are:

- * The ecological integrity of areas of significant indigenous vegetation and significant habitats of indigenous fauna is at risk from inappropriate land use activities and practices, including subdivisions
- * Amenity values can be adversely affected by clearing and altering areas of significant indigenous vegetation and significant habitats of indigenous fauna and by inappropriate land use activities and practices, including subdivisions

2.6.13 If an area of significant indigenous vegetation and significant habitats of indigenous fauna is a wetland, Section 2.4 is also relevant.

2.7 SOIL RESOURCE

2.7.1 The soils of the District are mainly used for pastoral farming, with small areas of arable horticulture. Safeguarding the life-supporting capacity of the soil will assist in meeting the reasonably foreseeable needs of future generations.

2.7.2 The District's soils range from the soils that have a low production value to versatile soils suitable for arable horticulture.

2.7.3 Soils have been identified in: *Classification of Land for Horticulture, Forestry and Urban Use in Invercargill City*, P D McIntosh and J R F Barringer, Landcare Research New Zealand Limited: 1993.

2.7.4 The District's soils range from Class 2 to Class 5. Class 2 arable horticultural soil was the most versatile soil found in the District by the McIntosh Study. These soils are delineated on the District Planning Maps.

2.7.5 The Southland Regional Council also has an important role and particularly so in the conservation of the soil resource. To this extent, the District's soils resource should be managed in an integrated manner.

2.7.6 Land use activities could significantly and adversely affect the soil resource.

The significant resource management issue for soil is:

- * Safeguarding the life supporting capacity of the soil

2.8 MINERAL EXTRACTION

2.8.1 The District is located on Cenozoic sediments except for the Omai and Bluff areas which have a pre-Cenozoic basement.

2.8.2 The coal deposits, within and neighbouring, the District are potential sources for energy generation. The Waimatua coal field, part of which is in the east of the District, has an estimated total resource of 962 million tonnes of lignite in three seams, at a depth less than 200 metres. The Ashers-Waituna coal fields in the Southland District may be a resource of significance to the District and the Region.

2.8.3 There are widespread potential oil and gas deposits throughout the Region, and in the Great South Basin off the south east coast of Southland. Silica deposits are also evident, in the Region. In coastal areas of the District there are deposits of gravel, dunite and gold.

2.8.4 Mineral extraction could have significant adverse effects on the environment, whether the extraction operation is within or outside of the District.

The significant resource management issue with respect to mineral extraction is:

* The adverse effects of mineral extraction on the environment

2.9 HERITAGE

2.9.1 The New River Estuary is an important heritage area for both takata whenua and European. Maori had major settlements at Omaui and Oue: Sandy Point. Early European settlement was also situated around the estuary at Sandy Point and Stanleytown.

2.9.2 Bluff Harbour, its islands and the Tiwai Peninsula have important takata whenua and European heritage values. Takata whenua heritage values in this area include archaeological sites, mahika kai, tauraka waka, wahi taoka and wahi tapu sites. Among the European heritage items are shipwrecks and gun emplacements.

2.9.3 The water bodies of the District have importance to takata whenua in providing traditional mahika kai sites.

2.9.4 Dog Island contains a number of archaeological sites of takata whenua origin. The Island also contains a lighthouse that was constructed in 1864.

2.9.5 The New Zealand Historic Places Trust has registered historic places and areas within the District.

2.9.6 The District retains significant built heritage which reflects its development. The city centre in particular contains a variety of good examples of architectural styles from the 1870's to the present day, as identified in *Invercargill City Central City Area Heritage Buildings Review*, J B Gray: 1997.

2.9.7 Land use activities could significantly and adversely affect heritage values.

The significant resource management issues for heritage are the protection from inappropriate land use activities of:

* Values of sites, structures, places and areas pertaining to the District's European heritage

* Sites, structures, places, areas and wahi taoka of heritage value to takata whenua

* Archaeological sites

2.10 TRANSPORTATION

- 2.10.1** The transportation network, links the District internally and externally as illustrated on *Infogram No. 4: Transportation Networks of the District*.
- 2.10.2** Invercargill City is the main transport hub for Southland. The District is surrounded by agriculture and horticulture land use activities. Planted production forestry is also widespread throughout Southland. Raw material for these activities and produce from them, together with minerals, are transported to and through the District.
- 2.10.3** The roading hierarchy, as illustrated on Infogram 5, encourages heavy transport and the associated noise effects away from noise-sensitive areas of the District.
- 2.10.4** The main trunk rail line of the South Island terminates at Invercargill. Branch lines extend from Invercargill to Bluff and Wairio.
- 2.10.5** The Invercargill Airport provides a means of communication and rapid transport between Southland, the rest of New Zealand and the world.
- 2.10.6** The commercial port facilities at Bluff and Tiwai are the region's primary focus for commercial maritime activity.
- 2.10.7** The transportation network is a significant physical resource which can affect and be affected by land use activities.

The significant resource management issues for transport are:

- * Enabling the safe and efficient use and development of the transport networks
- * Avoiding, remedying or mitigating the adverse effects of or on transportation networks

2.11 NATURAL HAZARDS

2.11.1 The Invercargill District is located at about latitude 46.5° South, at the southern end of the South Island. Its location:

- (A) In terms of latitude
- (B) At the mouth of the Oreti and Waihopai Rivers
- (C) Adjacent to Foveaux Strait
- (D) On a flood plain

results in the District being susceptible to geomorphological and meteorological natural hazards.

2.11.2 The predominant wind directions in the District are from north through west to south-west, as seen on *Infogram No. 6: Prominent wind directions*.

2.11.3 The majority of the District is located on modified flood plains which historically have experienced periodic inundation and watercourse change. In response to the January 1984 flood, major alleviation works were carried out along the three watercourses that pass through the City. These works now provide urban areas with a significant level of protection from future flood events.

- 2.11.4** Sea level rise/storm surge has been identified as a natural hazard in respect of land adjoining the New River Estuary and tidal tributaries. Sea level rise has the potential to increase the effect of storm surge events in the Estuary and on adjoining land less than three metres above mean sea level, which is not adequately protected by flood banks. While sea level rise and storm surge may be an issue within other areas of the District, sufficient accurate data is not presently available on the combined effects of these hazards.
- 2.11.5** The District, like the rest of New Zealand, is particularly susceptible to seismic activity.
- 2.11.6** Land use activities are subject to such natural phenomena as inundation, seismic activity, liquefaction, coastal erosion, sea level rise/storm surge and wind.
- 2.11.7** The occurrence of such phenomena may adversely affect the environment.

Significant resource management issues for natural hazards are:

- * Recognition of the natural processes
- * Avoidance or mitigation of the potential effects of natural hazards

2.12 SUBDIVISION

- 2.12.1** Subdivision is the legal process of creating new titles to parcels of land as a result of the division of allotments.
- 2.12.2** General subdivision provisions are outlined in the Resource Management Act 1991, with the objectives, policies, methods and specified standards contained within the District Plan.
- 2.12.3** Under Section 31 of the Resource Management Act 1991 the control of subdivision for the purpose of giving effect to the Act in the Invercargill District is the function of the Invercargill City Council. In discharging this statutory function Council is involved in processing applications for subdivision consent and in developing objectives, policies, methods and standards relevant to the District.
- 2.12.4** The District Plan recognises a fundamental relationship between subdivision and subsequent land use and a need to ensure that the subdivision of land creates allotments suitable for their intended use. Although subdivisions are not land use activities, the use of land and the subdivision of land are linked in terms of potential effects and cannot be easily separated.
- 2.12.5** It is possible in some areas, such as the Enterprise Sub-Areas or Business Sub-Areas, to carry out a freehold subdivision which places existing buildings in a position where they do not comply with the Building Act. While this could have implications in terms of the safety of buildings under the Building Act, unfortunately it is not a matter able to be addressed under the Resource Management Act.

The significant resource management issues for subdivision are:

- * Ensuring that newly created allotments are suitable for their intended use

* The consideration of the actual and potential effects of subdivision on the natural and physical resources of the District

2.13 INFRASTRUCTURE

2.13.1 The infrastructure of Invercargill City is an important physical resource. Infrastructure includes:

- (A) Network utility systems such as street lighting, electricity, water supply, stormwater drainage, sewerage and roading.
- (B) Facilities of public benefit including navigation aids, meteorological facilities, lighting in public places, data recording and monitoring systems.
- (C) Installations for the receiving and sending of communications.

2.13.2 The provision of infrastructure is essential for meeting the economic, social and health and safety needs of individuals and the community and it is appropriate for the District Plan to recognise these benefits. It is also appropriate for the District Plan to provide for these activities and their maintenance and replacement as permitted, where they can be undertaken without giving rise to adverse environmental effects that cannot be avoided, remedied or mitigated.

2.13.3 Under the Resource Management Act 1991 the providers of infrastructure for public works and network utilities are able to use procedures to designate land for such activities. Any request for such a designation can be assessed having regard to the environmental effects of the activity and any works to be undertaken.

2.13.4 Not all infrastructure and its component parts can be undertaken by way of designation. As a result the District Plan must recognise and provide for appropriate infrastructure services and to avoid, remedy or mitigate any adverse environmental effects. Where subdivision is undertaken the provisions of infrastructure can be considered as part of that process.

2.13.5 As some network utilities cross the District and may also cross territorial boundaries consistency of provisions for network utilities is desirable both throughout the District and where appropriate with adjoining local authorities.

The significant resource management issues for infrastructure are:

- * Ensuring that provision is made for the development, use, maintenance and upgrading of infrastructure in the District in order to meet the needs of the community
- * Avoiding, remedying or mitigating the adverse effects of infrastructure on the environment

2.14 AMENITY VALUES OF THE DISTRICT

- 2.14.1** An important part of the consultative process undertaken in the preparation of this Plan was the setting up of “issues and options groups”. These groups met at varying locations throughout the District. Membership comprised those who were perceived to have some community of interest, in addition to elected representatives from Community Boards and Council. Protection and enhancement of qualities and attributes of areas emerged as a dominant concern of these groups.
- 2.14.2** For the purposes of this Plan, amenity values have been identified as being a combination of:
- (A) The existing characteristics of an area
 - (B) The qualities that contribute to people’s appreciation of that area’s pleasantness, aesthetic coherence, and cultural and recreational attributes
- 2.14.3** It is these values when combined that provide the opportunity for the District to evolve and develop.
- 2.14.4** People recognised that these amenity values vary from place to place and person to person. However, shared common amenity values became apparent.

Significant resource management issues for amenity values of the District are:

- * Identification, maintenance and enhancement of amenity values
- * Recognition that amenity values vary throughout the District and that priorities for protection and enhancement of amenity will also vary in a manner which reflects any specific area’s existing uses and characteristics

2.15 CONNECTING TO COUNCIL INFRASTRUCTURE

- 2.15.1** Within some parts of the City a combination of ground conditions, climatic factors and the intensity of development has resulted in problems associated with the disposal of treated effluent from septic tanks. In order to protect public health and amenity values Council has installed an extension to the reticulated sewerage system along North Road to Beaconsfield Road to service the properties most at risk. This area is identified on the District Planning Maps as the North Road Sewerage Reticulation Area (NRSRA).
- 2.15.2** Sewerage servicing within the NRSRA has been designed to accommodate the establishment of permitted activities on land within the Rural Sub-Area and the disposal of effluent from staff within the Industrial Sub-Area. The sewer pipeline does not have sufficient capacity to accommodate liquid trade waste discharges from industrial production activities within the NRSRA. Connection to the sewer pipeline by sites outside of the NRSRA, or the intensification of land use within the NRSRA, would compromise the purpose of the sewer pipeline in that area and reduce its efficiency.
- 2.15.3** In addition, the continuing use of septic tanks within the NRSRA and construction of new septic tanks would likely give rise to adverse environmental affects.

The significant resource management issues for connecting to Council infrastructure are:

- * Connecting to the sewage pipeline serving the NRSRA from sites outside of the NRSRA and intensification of development within the NRSRA could compromise public health and amenity values within the NRSRA.
- * Continuing use, or establishment of new septic tanks within the NRSRA could compromise public health and amenity values within that area.

2.16 EXPANSION OF INDUSTRIAL ACTIVITIES

2.16.1 There is a shortage of land in Invercargill suitable for industrial development that is adequately served by infrastructure (water, sewerage and electricity) and readily accessible to main transport routes (road, rail, air and sea). Suitable areas previously identified for such purposes either have been developed or are in the ownership of existing industries located on adjoining land.

2.16.2 Council wishes to attract further industrial development to the City. It recognises that land must be zoned for such use and provision made for the supply of essential services. Land at Awarua, adjoining that already developed for industrial use, has been purchased by the Council for that reason. This land is to be zone Industrial A. A small area of privately owned land has also been included in the Industrial A Sub-Area because all contiguous land is zoned for industrial use.

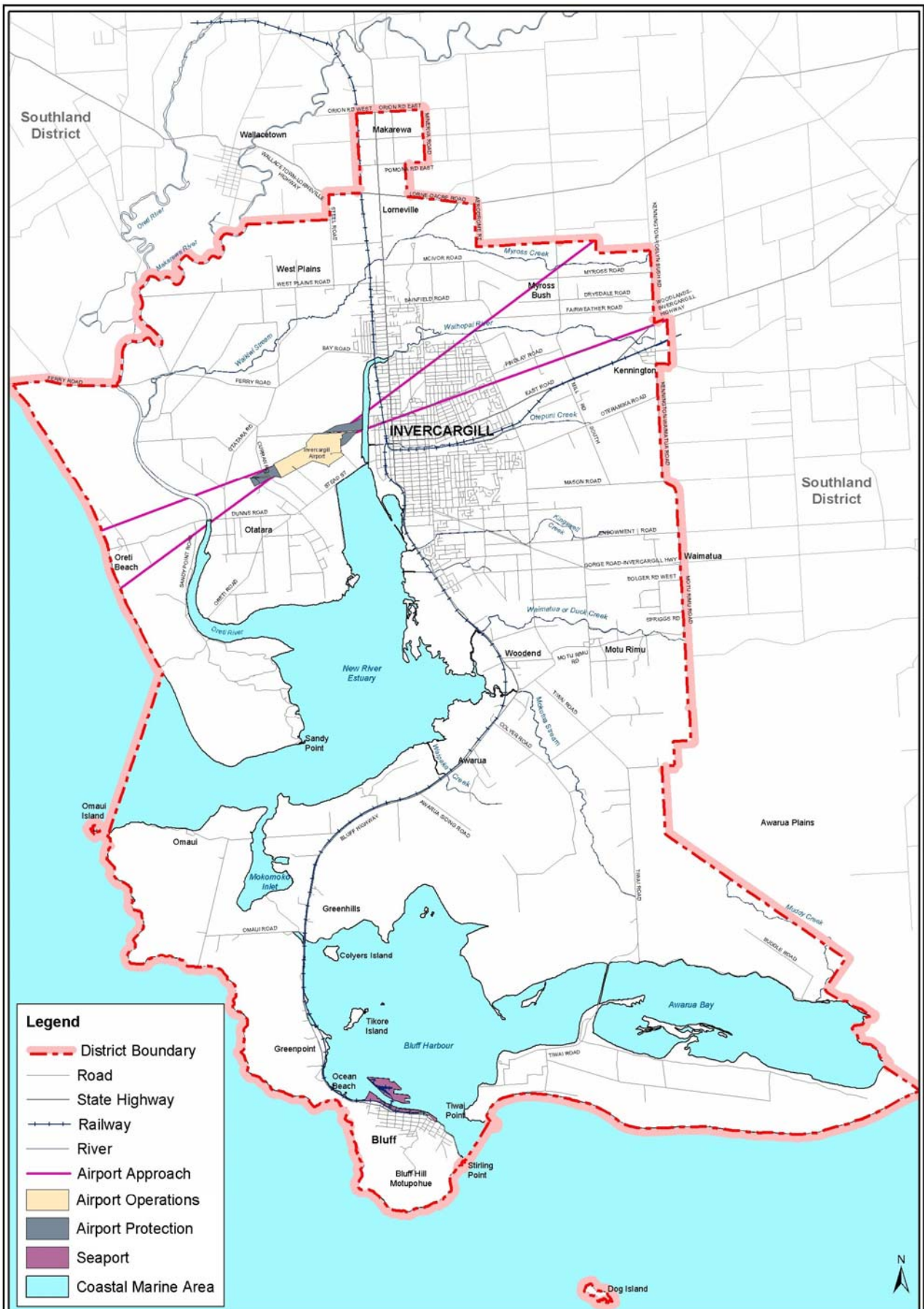
2.16.3 The type of industry anticipated to locate at Awarua may include activities that:

- Require large sites for the storage of material; or
- Require segregation, because of their noxious nature; or
- Involve the erection of large buildings; or
- Require a supply of treated water and generate effluent and waste; or
- Generate discharges to air, land and water
- Be compatible with lawfully established activities that may generate adverse effects including but not limited to noise, odour and dust emission.

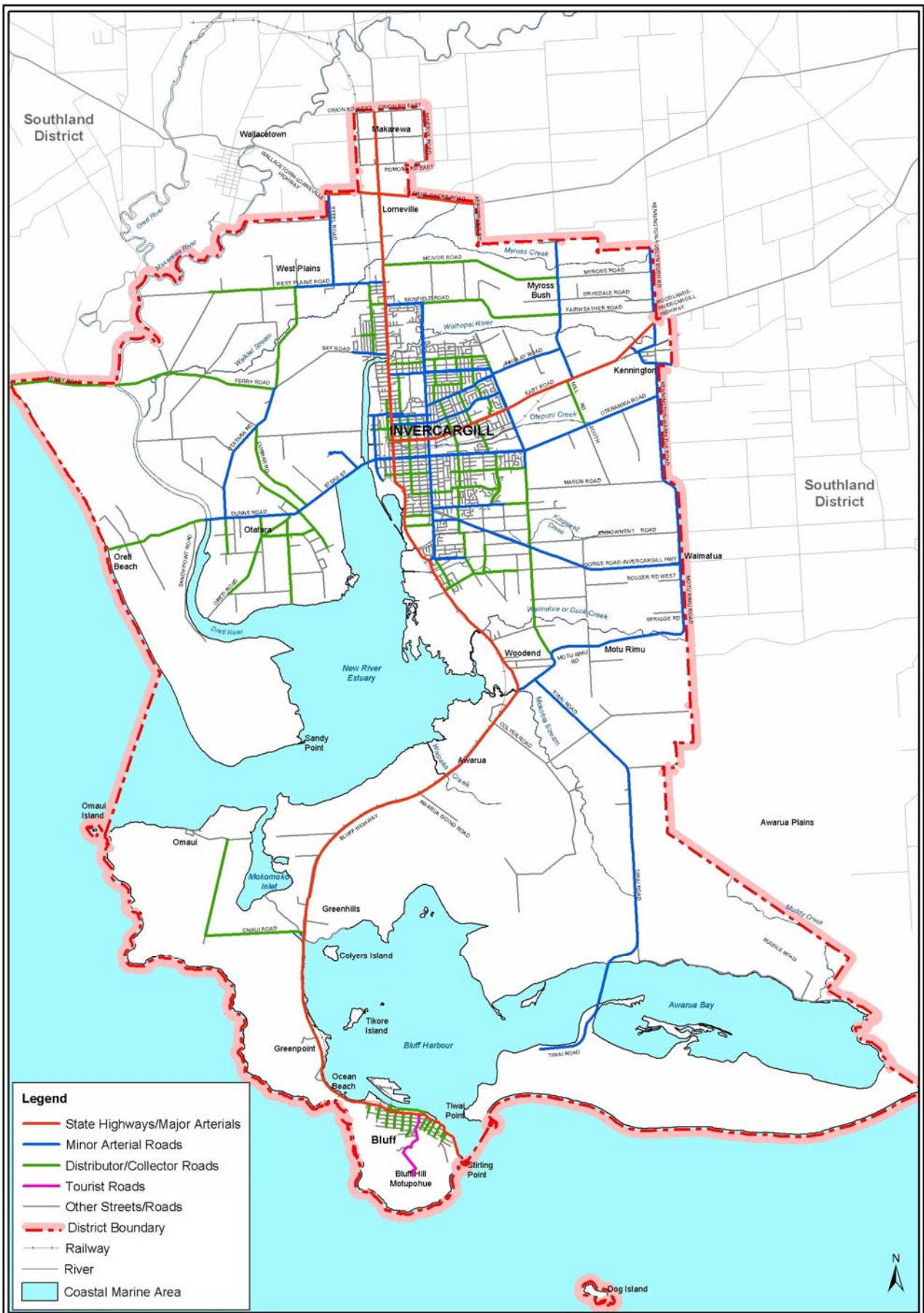
2.16.4 The extension to the Awarua industrial area is not presently served by water, sewerage or stormwater reticulation. When land is subdivided consideration will be given to the provision of and payment for these services.

The significant resource management issues with respect to expansion of industrial activities are:

- * Within the City there is a shortage of land suitable for industrial use.
- * An area of land at Awarua is to be developed for industrial purposes and infrastructure is required to be provided to service that land.
- * The supply and maintenance of infrastructure within the Industrial A Sub-Area at Awarua will be considered at the time of land subdivision.

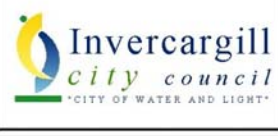


Invercargill City Council
TRANSPORTATION NETWORKS OF THE DISTRICT



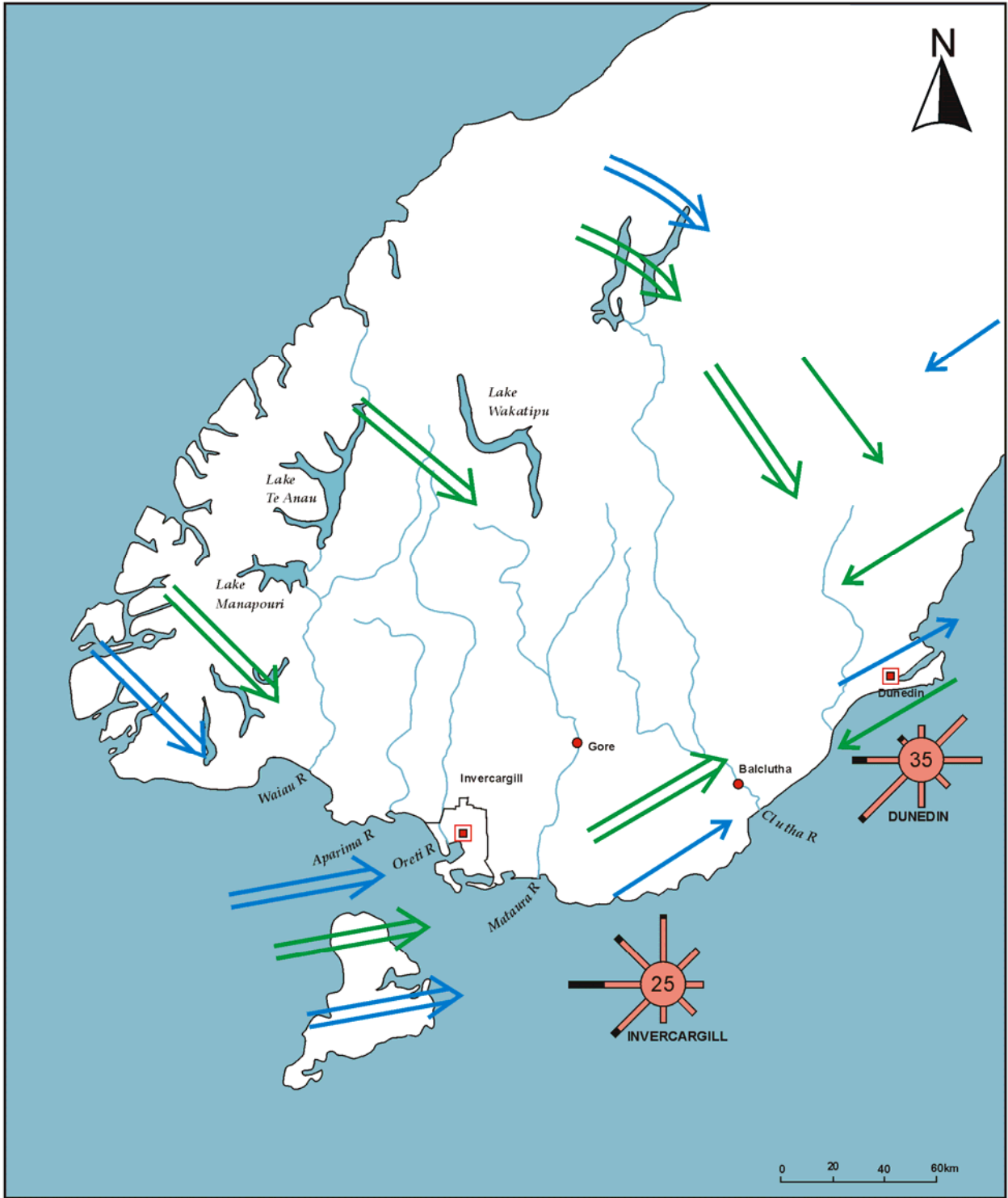
Legend

- State Highways/Major Arterials
- Minor Arterial Roads
- Distributor/Collector Roads
- Tourist Roads
- Other Streets/Roads
- - - District Boundary
- Railway
- River
- Coastal Marine Area



Invercargill City Council
ROADING HIERARCHY OF THE DISTRICT
 Current as at: 1 January 2005

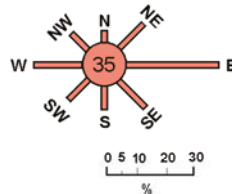
Infogram
5



PROMINENT WIND DIRECTION

	Slight predominance	Marked predominance
Winds of all speeds (Excluding Calms)	→	⇒
Strong winds only (Over 15 knots)	→	⇒

Slight predominance: 20-35% of winds from all directions.
 Marked predominance 36-55% of winds from all directions.



AVERAGE ANNUAL PERCENTAGE FREQUENCY OF WIND DIRECTION



**Invercargill City Council
 PROMINENT WIND DIRECTIONS**

Infogram
6

