

DRAFT

Environmental Reserves

Omnibus Management Plan
2021

Reserves Act 1977

Section 41

The Omnibus Management Plan for Environmental Reserves was approved by the Invercargill City Council by resolution passed at its meeting held on . All submissions, objections and suggestions relating to the Management Plan had been disposed of and suggestions allowed.

The Management Plan shall come into operation from and shall remain operative for a period of ten years.

Dated at INVERCARGILL this _____ day of _____ 2020.

Chief Executive Officer

Environmental Reserves

Beaconsfield Road Esplanade Reserve

Bluff Hill Reserve

Bluff Quarry Reserve

Colyers Island Esplanade Reserve

Forde Road Esplanade Reserve

Grant Road Reserve

Greenpoint Domain Recreation Reserve

Joeys Island

John Street Reserve

Lake Hawkins Wetland Reserve

Matua Road Reserve

McIvor Road Esplanade Reserve

McMillan Road Reserve

Mersey Street Esplanade Reserve

Metcalf Bush Reserve

Mill Road Esplanade Reserve

Ocean Beach Esplanade Reserve

Omaui Reserve

Otatara Scenic Reserve

Oteramika Road Esplanade Reserve

Parnell Sanctuary Reserve

Paterson Reserve

Racecourse Road Esplanade Reserve

Red Tussock Reserve

Liddel Street Esplanade Reserve

Seaward Bush Reserve

Short Road Esplanade Reserve

Stirling Point Reserve

Stirling Point Pilot Station Esplanade Reserve

Taiepa Dune Reserve

Thomsons Bush

Tikore Island

Tiwai Point Reserve

Waihopai River Esplanade Reserve

Management Plan

Environmental Reserves

December 2021 – December 2031

Preface

The Environmental Reserves Management Plan has been prepared in compliance with Section 41 of the Reserves Act 1977.

The purpose of this Management Plan is to provide for and ensure the use, enjoyment, maintenance, protection and preservation as the case may require, and to the extent the reserve for the purpose for which they are classified, and shall incorporate and ensure compliance with the principles set out in the relative sections of the Act.

This plan shall be held under regular review to ensure that it remains relevant to changing circumstances.

[Name to be added]

PARKS AND RECREATION MANAGER

[Date to be added]

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1.0 Introduction

1.1 Invercargill Reserves

The Invercargill City Council (ICC) Parks and Recreation Division *manages approximately 1,874 hectares of Environmental Reserves (equating to 34.9 hectares/1000 residents).*

ICC is required by legislation to prepare management plans on the reserves it manages. Management Plans contain policies on the long-term maintenance and development of the reserves. They are prepared, following public consultation, to ensure the needs of the community and interest groups are captured and reflected in the plan.

Environmental Reserves are assets held and managed by ICC for the purpose of environmental protection and passive recreation.

They are one of the parks categories that play an important role in achieving the vision (Amazing Spaces we want to connect with) set for Parks and Recreation.

The roles Environmental Reserves play is defined through the following statement:

Areas of native ecosystems to ensure ongoing biodiversity and protection of flora and fauna, while educating users.

This Management Plan has been prepared for *thirty four* of the reserves that come under the category of "Environmental Reserves". ICC categorises reserves for ease of management and assists with setting management objectives and funding priorities.

Environmental Reserves are made up predominantly of natural areas and contain remnants of forest, tussock or grassland, wetlands or sand dunes. They have significant scenic, historic or environmental values that set them apart from other reserves.

1.2 Reserve Classification

Some Council land managed as part of these reserves is freehold land which means it has no reserve status. ICC is working to review the use of that land and classify the land as reserve land.

Legislation requires reserves to be classified under the Reserves Act 1977 according to their principal or primary purpose. ICC manages reserves with Recreation, Scenic and Local Purpose classifications.

The primary purpose of these classifications can be summarised as:

Recreation

Providing areas for recreation with an emphasis on the retention of open space and on outdoor recreational activities (the majority of reserves in Invercargill have this classification).

Scenic

Preserving the indigenous flora and fauna, indigenous associations, and natural environment and beauty, for the benefit, enjoyment and use of the public.

Local Purpose

Land reserved for the purpose of providing and retaining areas for educational, community, social, or other local purposes as specified in the classification.

Reserves are classified to ensure their control, management, development, use and preservation is for the appropriate purposes. Each reserve classification has unique management objectives which must be considered when their policies are set.

Objective:

To provide, protect and enhance the amenity, recreational, environmental, scenic and historic values of reserves in the Invercargill District while providing public access where appropriate.

Policy:

1.2.1 The land within each of the *thirty four* Environmental Reserves covered by this Management Plan shall be managed in compliance with Sections 17, 19 and 23 of the Reserves Act 1977.

1.2.2 *It is foreshadowed that, as a consequence of this management plan, classification of some individual reserves may change in the future. Classification changes are noted in each individual reserve section*

1.3 How This Management Plan Works

This management plan contains two sections – one **General** section containing policies common to each of the *thirty four reserves* in this plan and an **Individual Reserve** section, which provides a description of each reserve and contains any specific policy required for the individual reserve.

Policy:

- 1.3.1** Where any issue on a reserve is addressed by the General Policies section and the Individual Reserve section, then the policy of the Individual Reserve Section takes precedence.

1.4 Present Management

Environmental Reserves in this plan are under the control and management of the ICC Parks and Recreation Division. The Parks and Recreation Division is responsible for the development, maintenance and general administration of the reserves.

There are Māori, Department of Conservation (DOC) and Privately Owned Reserves that Parks and Recreation will work alongside and with respect for each others management decisions.

ICC will continue to investigate other formal collaborative agreements.

1.5 Management Plan For Environmental Reserves

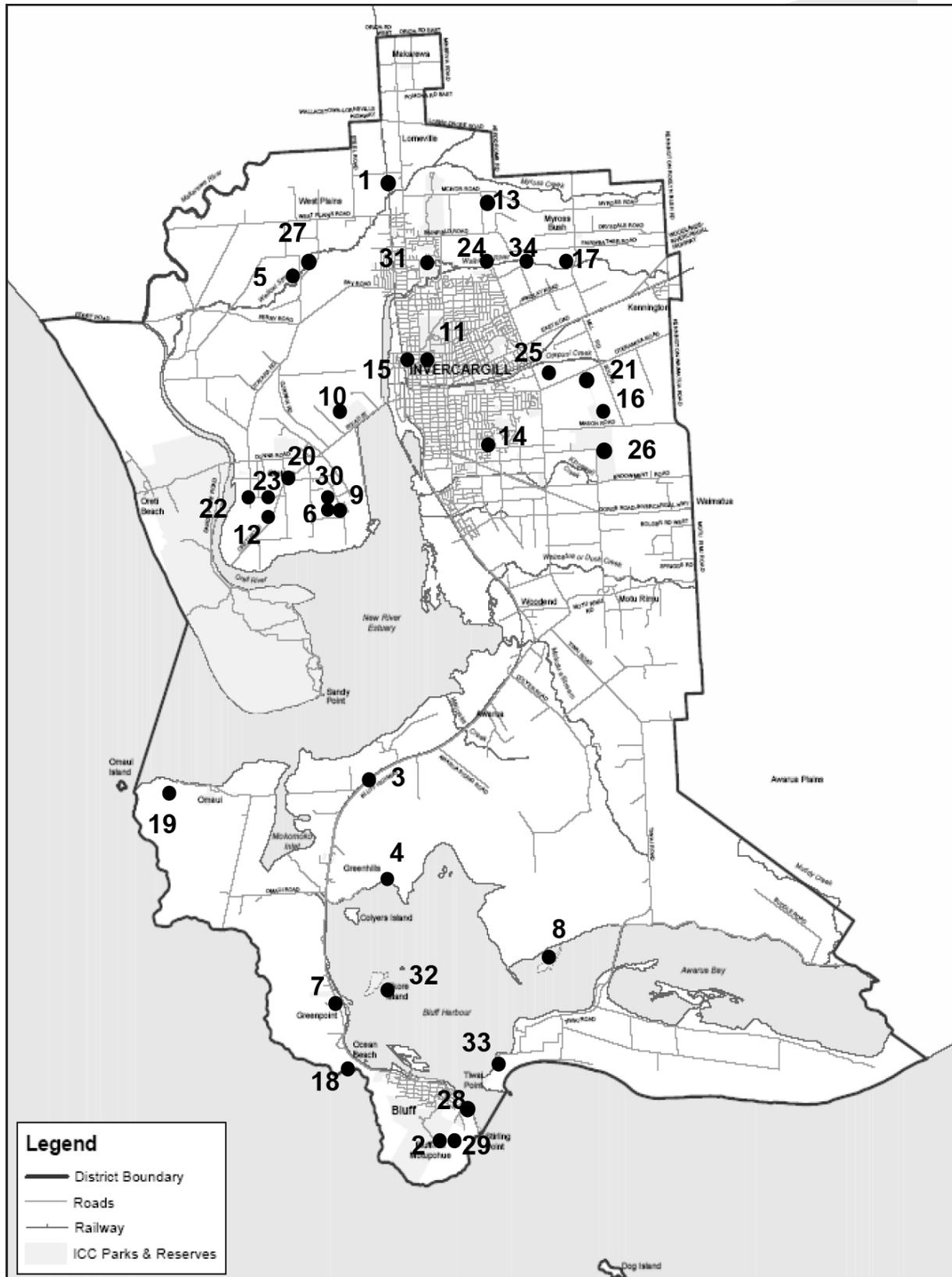
This omnibus management plan has been prepared for those reserves that are considered to be of a similar type, or reserves that do not have a current management plan in place, including Esplanade Reserves, that are managed by ICC.

Management policies within this management plan have been included to reflect the needs of current and future users and to be consistent with current 'best practice' management procedures.

The Environmental Reserves in this management plan are:

- | | |
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| <p>1.5.1 Beaconsfield Road Esplanade Reserve (Local Purpose)</p> <p>1.5.2 <i>Bluff Hill Reserve (Scenic)</i></p> <p>1.5.3 <i>Bluff Road Quarry Reserve</i></p> <p>1.5.4 Colyers Island Esplanade Reserve (Local Purpose)</p> <p>1.5.5 Forde Road Esplanade Reserve (Local Purpose)</p> <p>1.5.6 Grant Road Reserve (Recreation)</p> <p>1.5.7 <i>Greenpoint Domain Recreation Reserve (replacing Greenpoint Domain Recreation Reserve Management Plan 1999) (Recreation)</i></p> | <p>1.5.8 Joeys Island (Scenic)</p> <p>1.5.9 John Street Reserve <i>(Scenic)</i></p> <p>1.5.10 <i>Lake Hawkins Wetland Reserve (Recreation)</i></p> <p>1.5.11 Liddel Street Esplanade Reserve (Local Purpose)</p> <p>1.5.12 Matua Road Reserve <i>(Scenic)</i></p> <p>1.5.13 <i>Mclvor Road Esplanade Reserve (Local Purpose)</i></p> <p>1.5.14 <i>McMillan Street Reserve (Recreation)</i></p> <p>1.5.15 Mersey Street Esplanade Reserve (Local Purpose)</p> <p>1.5.16 Metcalf Bush Reserve (Scenic)</p> <p>1.5.17 Mill Road Esplanade Reserve (Local Purpose)</p> <p>1.5.18 Ocean Beach Esplanade Reserve (Local Purpose)</p> <p>1.5.19 Omaui Reserve <i>(Scenic)</i></p> <p>1.5.20 <i>Otatara Scenic Reserve (Replacing Otatara Scenic Reserve Management Plan 2014–2024) (Scenic/Local Purpose)</i></p> <p>1.5.21 Oteramika Road Esplanade Reserve (Local Purpose)</p> <p>1.5.22 Parnell Sanctuary Reserve (Scenic)</p> <p>1.5.23 Paterson Reserve <i>(Scenic)</i></p> <p>1.5.24 Racecourse Road Esplanade Reserve (Local Purpose)</p> <p>1.5.25 Red Tussock Reserve (Scenic)</p> <p>1.5.26 Seaward Bush (Scenic)</p> <p>1.5.27 Short Road Esplanade Reserve (Local Purpose)</p> <p>1.5.28 Stirling Point Pilot Station Esplanade Reserve (Local Purpose)</p> <p>1.5.29 <i>Stirling Point Reserve (Scenic)</i></p> <p>1.5.30 Taiepa Dune Reserve <i>(Scenic)</i></p> <p>1.5.31 <i>Thomsons Bush (Replacing Thomsons Bush Management Plan 2004–2014) (Scenic)</i></p> <p>1.5.32 Tikore Island (Scenic)</p> <p>1.5.33 <i>Tiwai Point Reserve</i></p> <p>1.5.34 Waihopai River Esplanade Reserve (Local Purpose)</p> <p>Note: <i>Each numbered Environmental Reserve in 1.5 matches with the numbers on the Location Plan 1.6.</i></p> |
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1.6 Location Plan



2.0 Background

2.1 Soils and Geomorphology

The purpose of this section is to identify soils and their characteristics across the District.

Bluff Hill

Soils on Bluff Hill are in the Omaui Hill Series, and are predominantly sandy to peaty loams formed on norite, ultrabasic rocks and tuffaceous greywacke.

Joey's Island

The soil is classified as organic of the Invercargill series and yellow-brown sands of the Riverton series. The island has medium drainage. The terrain is relatively flat with estuarine mud flats and peat bog surrounding the island.

Metcalf and Seaward Bush

The soil is almost entirely classified as Mokotua soil. Mokotua soils are derived from tuffaceous, greywacke loess over gravels, sands and silts. They form a reasonably deep layer of granules - crumbly silt loam overlying a yellow-brown, iron and humus-stained heavy silt loam, over a base of brown-yellow silt. The terrain is slightly undulating, with wet and boggy hollows and swales, alternated with drier mounded areas. It is possible that some of the swales may have formed small rivulets, but drainage ditches now carry away most surplus surface water. The higher areas are reasonably well drained, although in other areas, deep peaty layers have formed and they tend to remain quite moist, except in the driest of conditions.

Omaui Reserve

Omaui Reserve has a rocky surface and is most likely to be comprised of 'Omaui 63c' soil. Within that category there are sandy, peaty and silty loams. The parent materials of such soil are known as tuffaceous greywacke sand, overlying norite and ultra basic rocks. It is very low in natural nutrients, but responds well to treatment. The soil combinations can vary in consistency and colour with sample descriptions including firm, crumbly, stony, nutty, brown, yellow and mottled.

Otatara Reserves

Otatara lies at the southern edge of the Central Southland Plains. This is a 2,400 km² area of coalescing lowlands extending south from Ohai, Dipton, and Gore to Foveaux Strait. It forms the lower flood plains of the

Aparima, Oreti, and Mataura Rivers, which have their sources in the Eyre and Takitimu Mountains.

Although their sediments are young, the Southland lowlands are ancient features which have evolved in an environment heavily influenced by major tectonic processes since at least Permian times (250m years ago).

Much of the mudstone and sandstone which underlies the widespread alluvium of the lowlands was deposited during the Eocene to Oligocene period (60 to 30 my), when the area was subsiding. Uplift during the Kaikoura Orogeny resulted in intense erosion, and large quantities of coarse gravels and alluvium were deposited in the valleys and basins.

With the climatic changes of the Pleistocene (1.8m to 100,000 years ago), the supply of gravel was greatly increased. The Southland lowlands were free of ice during this period, but minor glaciation of the Takitimu and Eyre Mountains caused vast quantities of material to be eroded. On the Central Plains this resulted in thick deposits of loess - wind-blown dust carried from alluvial valleys and outwash plains beyond the limits of the ice sheets. The valuable lowland soils of Southland are formed mainly on the widespread blanket of fine loess, which is thickest on the terraces and rolling downlands, averaging 3 to 5 metres.

The typical soils of the Otatara area are yellow brown sands with coastal sand flats and undulating sand dunes in relatively sheltered or moist situations.

Reserve remnants are located on a sand dune or sand plain, characteristic of the Otatara forest ecosystems.

These soils have developed under forest and form a chronosequence of increasing age from Riverton to Otatara soils.

Most soils have distinct topsoils and subsoils with definite structure and staining of sand grain.

These soils have higher organic matter and cation-exchange capacity than the yellow-brown sands in drier areas (e.g. Eastern Otago, Canterbury and Nelson).

Soil pH is typically around 6.

Taiapa Dune Reserve and Paterson Reserve lie on ground that is part of an old dune system east of the Oreti River

mouth. The soils are a free draining sandy loam except for areas which are poorly drained.

Red Tussock Reserve

Red Tussock Reserve is in a low lying damp alluvial site. Soils typical of wetland and lowland environments tend to be peaty and more compact.

Tikore Island

In the Foveaux Ecological District, where Tikore Island is located, the geology is Palaeozoic Bluff complex and Anglem complex ultra-basic, basic and intermediate intrusives. Soil is mainly strong leaches acid and infertile podzolised soils from a range of intrusive and sedimentary rocks and coastal sands. Topsoils tend to be peaty and iron-cemented pans are present in subsoils.

Thomsons Bush

Thomsons Bush occupies a special place in the natural heritage of Southland. It is one of the few lowland podocarp-swamp forest remnants on alluvial deposits. Others within the Southland District (such as Seaward Bush) grow on peaty ground beside the Waituna Wetland, while some (such as Otatara Scenic Reserve) are located on relic sand dunes. The Thomsons Bush kahikatea-matai forest has formed within a dynamic environment as fine alluvial deposits, brought down by floods, shifted the watercourses and varied the water tables. The soils, which are Dacre grey soils with high fertility and generous moisture levels, can sustain a diverse and healthy flora and fauna. It is not surprising that they are prized as offering some of the best farmland in Southland.

Esplanade Reserves

Soils and geomorphology of the esplanade reserves can be different across each of the three Invercargill Ecological Districts.

The **Foveaux Ecological District** comprises esplanades located in the Bluff area (Ocean Beach and Stirling Point). This District is extremely oceanic, with a cool temperate, humid, frequently cloudy, windy climate.

The underlying geology of the Bluff-Omaui area is Palaeozoic aged volcanic and ultramafics supporting generally strongly leached, acidic and infertile podsolised soils.

The **Southland Plains Ecological District** comprises the flat to gently undulating Southland Plains, formed on Qua-

ternary sediments, with smaller areas of sand dunes and recent alluvial deposits (along Waihopai River).

Soils vary depending on underlying substrate but are generally moderately fertile and well drained.

Waituna Soils (Colyers Island) are poorly drained deep acidic peats with strongly leached to podzolised on surrounding undulating land from loess and sands. Some soils are poorly drained in areas of sand soils on coastal dunes and flats.

Soils around the coast can be expected to include estuarine mudflats and peat bog. There may also be nutrient rich soil, and organic of the Invercargill series, or the yellow - brown sands of the Riverton series.

See map on next page for Ecological Districts.

2.2 Vegetation

The earliest maps prepared by J T Thomson in 1857 and Theophilus Heale in 1865 illustrate the extent of the forest cover in the Southland Region at the time.

Much of this has been cleared for farming and settlement and only small areas of the original vegetation cover remains today. This has resulted in edge effects, facilitating the influx of weed species in some places.

The pre-Māori vegetation of the Southland Plains is believed to have been dominated by podocarp forest: mainly matai forest, kahikatea forest and mixed podocarp forest.

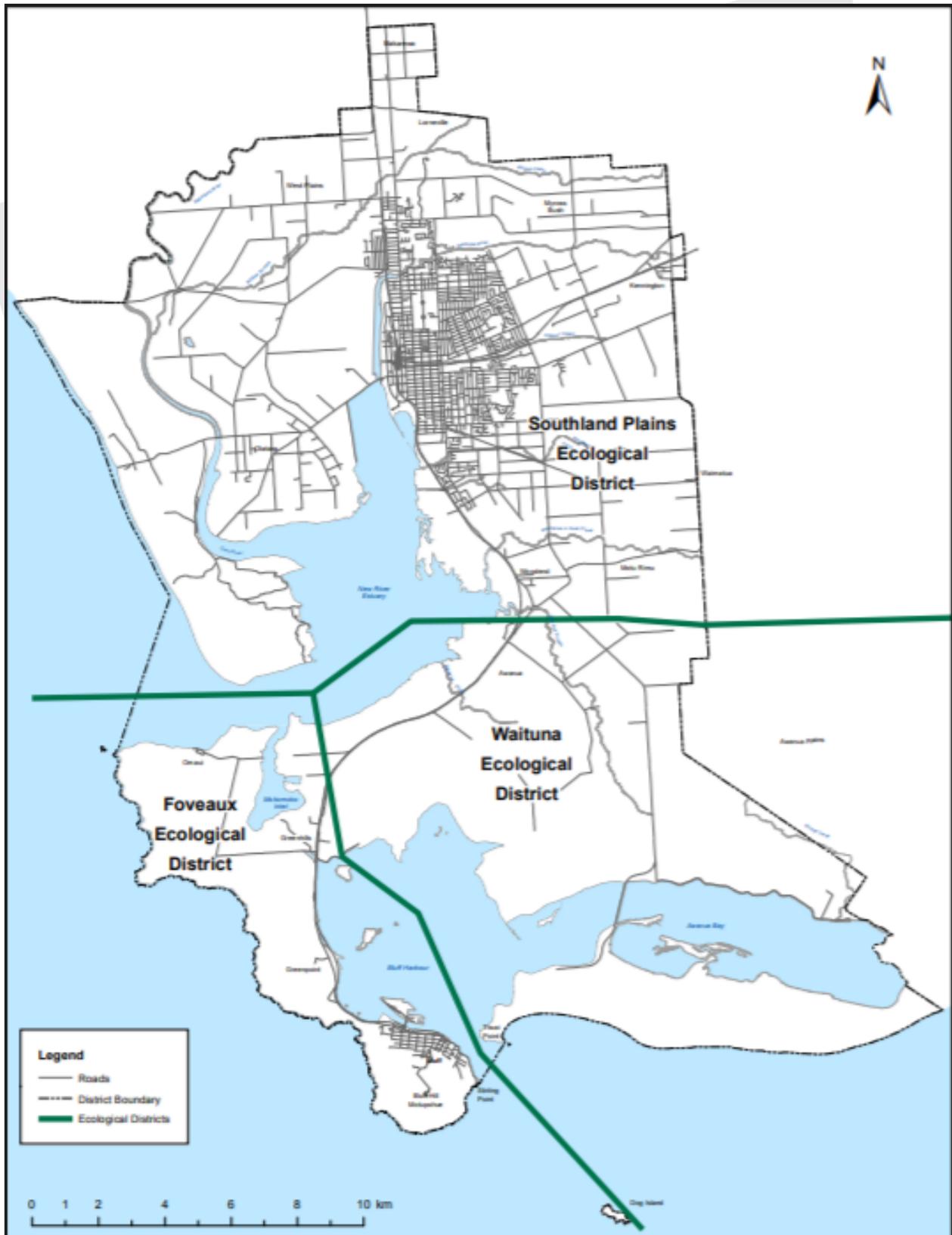
Other forest types that would have been found include kowhai-ribbonwood forest along river margins, totara forest in the Otatara-Sandy Point-Oreti Beach area, silver beech forest along the Mataura River, and mixed broadleaved (podocarp) forest and rata-kamahai forest on the limestone hills.

The original vegetation included areas of valley floor swamp, raised peat domes and shrub land communities.

Coastal dunes were dominated by sand tussock grasslands and pingao sedge lands, with some turfs associated with swales and small dune lakes.

The New River Estuary contained a variety of salt marsh, rush and shrub land communities.

Ecological Districts



Semi-braided beds of the Maitara, Oreti and Aparima Rivers would have been dominated by gravel with a light cover of low herbs and small shrubs.

A lot of this vegetation still exists in the Otatara-Sandy Point region, where predominantly totara, sand dune and sand plain forest remnants are still naturally occurring. In other areas native plants have regenerated or have been planted to protect native wildlife and increase the beautification of the Invercargill District.

The significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area have been ranked as nationally representative (Bill, 1999) for the following reasons:

- Nationally, sand dune and sand plain ecosystems have been altered by human activities, resulting in the loss of indigenous vegetation cover, especially forest.
- Otatara has the best remaining example of coastal totara and totara-matai sand dune forests in New Zealand.
- This area has the only example of a sequence of totara, totara-matai and mixed podocarp forest remnants on differently aged sand dune and sand plain surfaces in New Zealand.
- Although fragmented, the forest remnants are large enough and connected enough to ensure their future viability/survival.

2.3 Threats to Indigenous Biodiversity

Fragmentation and the clearance of forest remnants, and changes to wetland hydrology have all had a significant impact on the indigenous ecosystems and habitats of the Southland Region.

The introduction of exotic vegetation and animals to New Zealand has meant weeds and animal pests have become numerous and varied within Southland reserves.

Weeds such as gorse and broom are threats to tussock lands and willows, while elderberry threatens riparian forests.

Animal pests are a problem and have a detrimental effect on the ecology of Environmental Reserves. They damage native flora and reduce numbers of native wildlife (especially birds) associated with each reserve environment.

Most forest remnants contain possums, rabbits or hares, rats, mice, hedgehogs, stoats, ferrets, magpies and domestic and feral cats.

Animal pest numbers can be controlled and monitored through approved methods to protect the conservation values of the reserves. Ongoing management is necessary to control and reduce numbers of unwanted pest animals from Environmental Reserves.

Ongoing removal of animal and plant pests and monitoring of regeneration will allow habitats to recover and populations of bird species to grow. This will ensure the sustainability and viability of the reserves is maintained.

Other key threats include: housing (causing increased nutrient status in the forest, altered hydrological conditions and herbicide impacts from unwanted plant control), and soil compaction.

While it is impossible to turn back the clock and reproduce exactly what was present prior to human occupation, careful planning will ensure that those small remaining remnants are protected for future generations.

2.4 Climate

Being the most southerly part of mainland New Zealand, Southland is cooler than the rest of the country. It has more frosts and substantially less sunshine. Invercargill is located between latitude 46 and 47 degrees, meaning it is in the latitude of prevailing westerlies. The funnelling effect caused by Foveaux Strait also increases the severity of the coastal winds.

The westerly winds normally bring a plentiful supply of moisture so that Invercargill's rainfall is very evenly distributed throughout the year.

The positioning of anticyclones as they pass over New Zealand greatly influences rainfall and its frequency. Anticyclones often have shower cloud around their outer edges and when they pass too far north, Invercargill experiences showers instead of fine weather. These anticyclones are frequently followed by rapidly moving fronts which bring further rain.

Sunshine is another important factor and the amount of sunshine that Invercargill receives is strongly influenced by a coastal cloud belt associated with Foveaux Strait.

Invercargill receives 20%-25% less sunshine than centres in the sunnier climes north of latitude 45 degrees and up to 40% less than centres such as Nelson and Blenheim.

Cloudy days are frequent and there are long periods when very little sun is recorded.

Lack of sunshine has a very marked influence on plant growth, especially when combined with cool temperatures, strong salt laden winds and frequent showers.

Summary

Invercargill has a cool temperate climate with a relatively high rainfall, strong persistent winds which are often strongly salt laden and frequently cloudy skies. The winds reach their greatest intensity during the spring months and to a lesser extent, with the autumn equinox and the summer solstice.

Invercargill experiences an average of about 94 days of ground frost per year.

While the local climate is an inhibiting factor for some plants common in other parts of New Zealand, it also favours a large number of plants from cool temperate regions.

Climate contributes to reserve edge effects which damage any exposed and internal vegetation through changes in external temperature and moisture, depending on the amount of site exposure the reserve has.

Snowstorms occur on an average of three to five days per year, but snow seldom lies on the ground for more than two to three hours. However, the one off snow

activity in 1996 and 2010 caused a lot of canopy damage to trees in reserves.

Trees collapsed under the heavy weight of the snow which opened up light gaps amongst the vegetation.

Summary of Invercargill's Climate

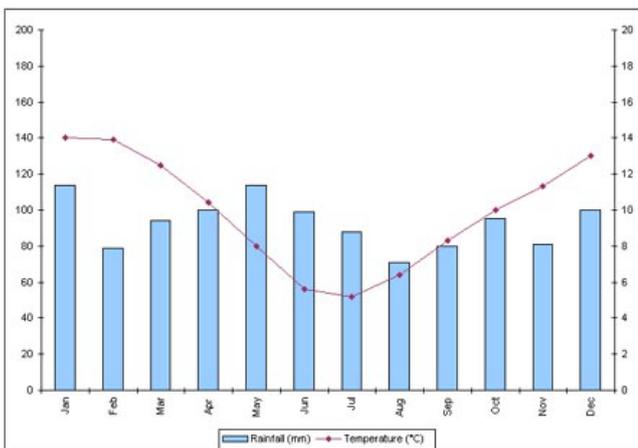
Mean annual values for period 1971-2000¹

	Invercargill	NZ Average*
Rainfall	1112 mm	1114 mm
Wet days	158 days	115 days
Sunshine hours	1614 hrs	2023 hrs
Mean temperature	9.9 °C	12.74 °C
Very highest temperature	32.2 °C**	
Very lowest temperature	-9.0 °C	
Ground frost	94 days	54 days
Mean wind speed	18 km/hr	14 km/hr
Gale days (over 63km/hr)	18 days	5 days

* Average of 26 New Zealand main centres for period 1971-2000.

** Record high temperature of 34.4 °C on 23 January 2006

¹ NIWA - Taihoro Nukurangi - www.niwa.cri.nz/edu/resources/climate/summary



3.0 Management Objectives

Management Objectives are the ICC goals for the long-term management of the Environmental Reserves identified in this Management Plan.

Policies in this Management Plan provide the direction for managing the reserves now and in the future. They shall be consistent with the statutory requirements relating to the 'scenic, recreation and local purpose' classifications most relevant to each of the *thirty four* reserves under the Reserves Act 1977.

- 3.1 *To use the ICC Parks and Recreation Strategy as a guide to development and maintenance of Environmental Reserves.*
- 3.2 Environmental Reserves shall be managed in perpetuity for the primary purpose of protecting, preserving and enhancing the intrinsic and conservation values. *Any removal of native bush on Environmental Reserves will only be undertaken if there are immediate safety concerns. Activity (e.g. track development) required to be undertaken shall ensure it minimises any reduction or loss of native bush (e.g. restoration) to remove vegetation.*
- 3.3 *Actions will be undertaken to improve and enhance/preserve the scenic qualities, natural beauty and landscape significance while enabling the public to obtain benefit and enjoyment from the reserves. This will include pest plant removal and the planting of appropriate genetic stock, particularly in areas that may be affected by environmental elements such as wind, erosion.*
- 3.4 Environmental Reserves shall be managed and developed to provide the necessary facilities and amenities compatible with their natural and scenic values that will encourage and facilitate the wise use of the land for *a broad range of activities, both passive and active, provided it does not compromise Objectives 3.1 or 3.2.*
- 3.5 Environmental Reserves shall be managed in a manner that enhances the educational opportunities for all users and promotes a greater understanding of the natural processes and values found within the reserves.
- 3.6 ICC encourages (where demand exists and resources permit) access into Environmental Reserves, unless there is an access restriction

to a specific reserve, which would then require permission from landowners first before accessing the reserve.

- 3.7 *Environmental Reserves should be safe places for members of the public to use. While it is impossible to avoid all potential risks, it is important the reserves are as safe as possible.*
- 3.8 Esplanade Reserves shall be managed for the protection of the adjoining waterways.
- 3.9 *Encourage community input into the management and maintenance of Environmental Reserves.*

Note: Where the policies in this management plan refer to the term 'ICC' this generally means the GM – Leisure and Recreation and/or Parks and Recreation Division as the delegated representative of the Invercargill City Council, unless otherwise stated.

Where the policies in this management plan refer to 'Environmental Reserves' this refers to the *thirty four* reserves defined in this management plan.

4.0 General Policies

Many of the management issues requiring policies are common throughout all of the reserves described in this management plan.

These issues are covered in the General Policies Section. If an individual reserve requires a specific policy not covered in the General Policies Section this will be covered within the Individual Reserve descriptions.

4.1 Classification

Scenic reserves are managed for preserving in perpetuity areas of natural scenic value for their intrinsic worth and for the benefit of the public.

Scenic reserves provide passive recreation such as walking and nature watching rather than the more active pursuits, which would be more common on Recreation reserves.

Recreation reserves provide areas for both passive and active recreation with an emphasis on the retention of open space and on outdoor recreational activities.

Local Purpose reserves are managed for the purpose of providing and retaining areas for educational, community, social, or other local purposes as specified in the classification.

Objective:

To provide, protect and enhance the amenity, recreational, environmental, scenic and historic values of the reserves in the Invercargill District while providing public access where appropriate.

Policies:

- 4.1.1** Environmental Reserves defined in this Management Plan as 'scenic' shall be managed in compliance with Section 19 of the Reserves Act 1977.
- 4.1.2** Environmental Reserves defined in this Management Plan as 'recreation' shall be managed in compliance with Section 17 of the Reserves Act 1977
- 4.1.3** Environmental Reserves defined in this Management Plan as 'local purpose' shall be managed in compliance with Section 23 of the Reserves Act 1977.

4.2 General Use

With the goal for Environmental Reserves to have the classification of Scenic reserves, priority is therefore towards the preservation of natural resources within and around these reserves.

Reserves are a major source of open space in the City and are provided for the benefit, enjoyment and use of the public. "Use" policies guide the response of ICC to applications to use the reserves. The scope of "uses" that may be proposed is wide and includes: sport, passive recreation, art and cultural events, commercial promotions and festival activities.

ICC reserves the right to decline a proposal for use of a reserve, or take action as it sees fit against a user, or stop a use, if the use is likely to cause any adverse effects to the reserve, reserve users or reserve neighbours.

ICC occasionally receives applications for the use of reserves for temporary or long-term commercial activities. Commercial activities are an acceptable part of the range of activities within the reserves of the City provided they are consistent with the primary purpose of the reserves as classified under the Reserves Act 1977. The activities should not adversely impact on the reserve, reserve values, reserve users or reserve neighbours.

Long-term non-commercial use of a reserve occurs predominantly through lease arrangements. It generally relates to non-commercial activities carried out from sports fields, clubhouses, halls and other indoor facilities and community group buildings. This generally means long-term enclosure of reserve space for the use by a particular group that then obtains a greater benefit than that received by the general public.

Objective:

To allow and encourage public use that is compatible with the purpose of the reserve.

Policies:

- 4.2.1** The utilisation of each Environmental Reserve shall be in compliance with its classification as a Recreation, Scenic or Local Purpose reserve and the general and individual policies set out in this Management Plan.

- 4.2.2** Access to Environmental Reserves will be free of charge to the general public except as provided for in Policy 4.2.4 or where exclusive use has been granted.
- 4.2.3** All events on Environmental Reserves must be booked in advance with the Parks and Recreation Division and users must comply with the "Terms and Conditions" for use of the Reserves. These terms and conditions are reviewed and updated from time to time.
- 4.2.4** *ICC may charge a fee for use of the reserve where the user gains a special benefit that is not available to other reserve users, or where there are costs associated with the activity or event. The rate of fee set will be charged:*
- (a) To ensure a reserve or part of a reserve has been booked for an event or activity.*
 - (b) To provide temporary or long term exclusive use of a reserve or part of a reserve.*
 - (c) To cover a booking service and administrative costs.*
 - (d) To cover additional costs resulting from the activity or event i.e. staff coverage, opening gates, power, water, rubbish collection etc.*
 - (e) Where the activity or event is of a commercial nature.*
- 4.2.5** Environmental Reserve facility and park fees and charges are adopted by ICC annually and are identified in ICC's Annual Plan.
- 4.2.6** Where necessary, ICC will consider temporary closure of a reserve, or part of a reserve, in conjunction with statutory requirements for the protection and wellbeing of Environmental Reserves and for the protection and control of the public using them.
- 4.2.7** ICC may grant a permit for commercial activities to temporarily occupy part of an Environmental Reserve for a period of up to six consecutive days (Section 54(1)(d) and Section 56(1)(b) of the Reserves Act 1977), if it is necessary to enable the public to obtain the benefit and enjoyment of the reserve or for the convenience of those using the reserves.
- 4.2.8** ICC may grant a long-term lease or licence for a recreation or commercial activity to occupy part of Environmental Reserves where the activity complies with the Reserves Act 1977.
- 4.2.9** Any user of any Environmental Reserve shall be responsible for ensuring that any adverse effects on the reserve and reserve values, reserve users or reserve neighbours can be avoided, remedied or mitigated, except as otherwise authorised by ICC and includes compliance with ICC Bylaws.
- 4.2.10** *Existing drains on the reserves will be maintained in accordance with requirements under the Land Drainage Act 1908. Extensions to existing drains or new drains are not permitted without prior approval from the GM – Leisure and Recreation.*
- 4.2.11** *Extensions to existing infrastructure or new infrastructure is not permitted without prior approval from the GM – Leisure and Recreation.*
- 4.2.12** *Iwi, stakeholders and the wider public will be consulted and involved with the management and development of Environmental Reserves where required by Parks and Recreation.*
- 4.2.13** *Any additional Environmental Reserve land ICC Parks and Recreation foresees as being vested reserve shall be managed under the policies within this Management Plan until it is reviewed or an amendment is required.*
- 4.3 Access Into and Through Reserves**
- The level and standard of access provision into an Environmental Reserve needs to be appropriate to the reserve classification, reserve values and the anticipated level of public utilisation of the reserve.
- At various times ICC may close the reserves or parts of the reserves for issues of safety, maintenance, development and wildlife protection. Some events may also require temporary closure of part of the reserves. Some occupation agreements may allow restricted access by the general public into areas of the reserve by the use of fences and/or forms of barriers.
- Motorised and non-motorised vehicles on reserves can be a source of danger to other reserve users, plant and wildlife, and may have the potential to cause damage to reserves.
- Many of these reserves contribute as important recreational, environmental and community resources, whether

they are classified as scenic, recreational or local purpose reserves, and are popular for informal and formal recreation.

To protect and preserve each reserve's special values, it is important to ensure the public areas and walkways are well defined. It is also important that ICC has the ability to limit or exclude public access into certain areas where the impact of human activities would be at the detriment of the vegetation habitat.

Tracks and footpaths are often integral to the ease of use and enjoyment of a reserve by users, providing recreational opportunities and links between areas.

ICC is committed to working towards the removal of barriers to the participation of the elderly or people with limited mobility in leisure and recreational activities on reserves. Improved access to parks and reserves can increase the use of a park by enhancing comfort and convenience for a range of users and provide significant safety benefits.

It will not always be feasible or desirable to make all facilities fully accessible. Different degrees of accessibility will be achievable at different sites. Many existing facilities are not accessible and it may not be practical to modify them.

Wherever possible, the design or upgrade of a facility shall incorporate features that allow easy access for the elderly or people with limited mobility. For features to be recognised as fully accessible they need to comply with national standards.

Objectives:

- *To ensure the public has freedom of entry, access and use of the reserve subject to any necessary conditions, restrictions or limitations of use from time to time, into and through Environmental Reserves where any adverse effects on the environmental values can be minimised.*
- *To ensure pedestrian safety by restricting motorised and non motorised vehicle access on the reserve.*
- *To allow tracks, informal trails and footpaths over reserves unless stated otherwise.*
- *To manage the preservation of the natural environment for future generations.*
- *To improve access to the reserve where practical and feasible to ensure everyone is able to enjoy it.*

- *To allow limited motorised vehicle access on designated car parks and roadways.*

Policies:

- 4.3.1** Environmental Reserves will be open for public access except where restrictions and limitations are necessary for the reserve's protection and management, *exclusive activities* or public safety.
- 4.3.2** Existing car parking shall be maintained to a level which is compatible with the nature of the reserve in a style that does not detract from its aesthetic qualities or recreational use.
- 4.3.3** Motorised vehicles, other than emergency and *authorised* maintenance vehicles are not permitted in the Environmental Reserves other than on areas designated as roadway or parking, without prior written authority from ICC.
- 4.3.4** Where car parking areas are provided for clubs and organisations, all costs relating to the formation and maintenance of the car park shall be borne by the club or organisation concerned.
- 4.3.5** Temporary vehicle access for special events may be granted for specific purposes and then terminated at the completion of the event.
- 4.3.6** *Low powered and non-motorised* vehicles are prohibited from using any of the pedestrian tracks within the Environmental Reserves without prior written authorisation from ICC or unless specifically identified in the individual reserve descriptions and sign posted on site.
- 4.3.7** ICC shall use *the ICC Parks and Recreation Strategy and current New Zealand Standards as guides to developing and maintaining pathways and tracks on Environmental Reserves*. All walking tracks on the Environmental Reserves shall be developed and maintained to the "Walking Track" standard where resources permit.
- 4.3.8** *Cycling on walking tracks is restricted in certain reserves where specifically identified in the individual reserve descriptions and sign posted on site because it causes conflict with the preservation of flora and fauna and other reserve users' activities.*
- 4.3.9** Where practicable, paths and tracks on Environmental Reserves shall be developed to a barrier

free standard for use by people with mobility difficulties or limitations.

- 4.3.10** New walking *or multi use* tracks shall only be developed in Environmental Reserves where the effects on the environmental values (eg native plants) of construction and long term public utilisation can be kept to a minimum.
- 4.3.11** Environmental Reserve buildings, associated facilities and landscaping will be designed or upgraded where practical and feasible, to meet the current national standard and design criteria for access for people with disabilities.
- 4.3.12** ICC will provide the necessary tracks and facilities to allow safe access through Environmental Reserves while protecting their natural values.
- 4.3.13** ICC reserves the right to exclude the public from certain areas of the Environmental Reserves containing significant values or to limit activities that may damage the natural vegetation habitat.
- 4.3.14** *Parks and Recreation Staff will work in collaboration with Roding staff (with delegated authority) when looking at opportunities for access to Environmental Reserves.*
- 4.3.15** To allow development that is appropriate for and generally acceptable for a reserve of its nature. Additional projects will be assessed on a case by case basis.

4.4 Trees and Vegetation

Trees and vegetation contribute to reserve amenity, historical, environmental, cultural and landscape values.

Often the vegetation forms a significant part of these natural values and can become the most visible feature on a reserve. In many cases the remnants of native vegetation found on Environmental Reserves are representative of the vegetation cover that would have been found in surrounding areas prior to human occupation.

It is important to actively monitor, manage and maintain vegetation on reserves where possible. However, exotic vegetation can become a nuisance or danger to reserve users and reserve neighbours. It can also affect the use or enjoyment of the reserve or adjoining properties. ICC will consider remedial action where appropriate to resolve these problems.

People regularly approach the Parks and Recreation Division requesting permission to collect firewood and pine cones from fallen or cut trees on reserves. Firewood permits are generally only given to non-profit community registered organisations. Parks and Recreation's approach is to leave fallen or felled wood, including cones to decompose on site except for threats to trails, infrastructure and public.

Objectives:

- *To ensure this Management Plan aligns with the Tree Plan when implementing tree management and maintenance within Environmental Reserves.*
- *To display a variety of native/locally sourced trees and shrubs on Environmental Reserves.*
- *To maximise the benefits of vegetation on Environmental Reserves while avoiding, minimising or mitigating the adverse effects on reserve neighbours.*
- *To protect and enhance the native vegetation found on Environmental Reserves as important wildlife habitats and as remnants of previous vegetation cover.*
- *To gradually remove all exotic vegetation from Environmental Reserves over a long term period.*
- *To control the removal of exotic wood from felled or fallen trees for safety, landscape or management purposes.*
- *To control the unauthorised removal of vegetation from reserves.*
- *To ensure the integrity of shelter is maintained into the future.*

Policies:

- 4.4.1** Planting and maintenance of vegetation on Environmental Reserves shall be planned *strategically in line with the ICC Tree Plan and Environmental Planting Plan²* and designed to enhance and protect the scenic and horticultural qualities and natural character of Environmental Reserves.
- 4.4.2** Wherever possible and practical, only native species sourced locally, or those most suitable to the area, shall be planted and maintained in the Environmental Reserves.

² *Environmental Planting Plan is an internal Parks and Recreation Live Document*

- 4.4.3** Vegetation shall be planted where it will not cause harm or is not likely to spread, or as a part of any re-vegetation programme to protect the genetic health and purity, stabilisation, amenity and enhancement of the environments.
- 4.4.4** Planting and management of vegetation on Environmental Reserves will take into account:
- (a) Management objectives and policies for the reserve.
 - (b) Any landscape plans for the reserve.
 - (c) The effect the vegetation will have on adjacent properties at the time of planting and in the future.
 - (d) The effect the vegetation will have on underground and overhead network utility infrastructure and its future maintenance.
 - (e) Horticultural, landscape and ecological considerations.
- 4.4.5** ICC will support local initiatives to re-vegetate areas within the Environmental Reserves to an approved planting programme. *Planting preference for re-vegetation is to be native/locally sourced so it is in keeping with the natural and surrounding vegetation most appropriate to the reserve's vegetation zone and character of the area.*
- 4.4.6** Maintenance, adding or removal of vegetation will only be undertaken by ICC, or ICC approved contractors.
- 4.4.7** Before making any decision on complaints received about trees on Environmental Reserves, ICC will consider and assess the effect of the alleged nuisance/issue by, in addition to ensuring the Tree Plan is followed:
- (a) *Visit and discuss the issue(s) with the alleged party(s).*
 - (b) *Assess the effect of the alleged nuisance.*
 - (c) Considering the actual or potential danger to life and property.
 - (d) Considering the interests of the public and park users.
 - (e) Considering the value and protection of the tree.
- (f) Considering the purpose and classification of the reserve.
- (g) *Considering the safety and structural integrity of the tree.*
- 4.4.8** Where appropriate, planting programmes shall be developed and maintained to further enhance the native vegetation in the Environmental Reserves.
- 4.4.9** Environmental Reserve vegetation shall be monitored at regular intervals to detect changes over time and to help identify the success of work programmes and initiatives.
- 4.4.10** *Native vegetation will not be cut or removed unless it is causing some form of hazard or danger and only then it will be under Parks and Recreation supervision. Groups with prior approval from the GM – Leisure and Recreation as per their memorandum of understanding agreements are an exception.*
- 4.4.11** *The size of the reserve is to be maintained and no further development is to occur where any native vegetation is to be removed unless the development will further enhance the reserve and the native vegetation or public safety is at risk.*
- 4.4.12** *Areas will be identified and monitored to detect changes in the native bush.*
- 4.4.13** All exotic vegetation shall gradually be removed from Environmental Reserves.
- 4.4.14** Exotic grass growth in the Environmental Reserves shall be controlled and managed in appropriate areas where open space and recreational facilities are required. All other exotic grasses shall be *sprayed or removed by ICC staff or ICC approved contractors to allow more appropriate plantings to develop over time.*
- 4.4.15** *Removal of any felled wood from Environmental Reserves requires a permit and prior approval from the GM – Leisure and Recreation. Firewood permits may be granted to community groups that have proven charitable trust or not for profit status.*
- 4.4.16** No live or standing trees or vegetation are to be removed or damaged during wood removal

operations. *Permits are required for removal of pinecones and can be requested at the Parks and Recreation Office.*

- 4.4.17** Advise private landowners on species suitable to plant adjacent to boundary fence lines or gardens in urban situations for screening purposes.
- 4.4.18** *Parks and Recreation staff will consider assisted passive restoration as a method for ecological restoration in Environmental Reserves where required.*
- 4.4.19** *Environmental Impact Assessments may be requested by Parks and Recreation Staff with delegated authority for activities on reserve land.*
- 4.4.20** *Parks and Recreation Manager will work in partnership with iwi, stakeholders and the wider public to create ecological corridors between reserves to allow for the natural dispersal of plants and animals.*

4.5 Soil Movement, Deposition or Removal

Soil may be required during projects to infill holes or level ground during works as part of maintenance, development and repair or upgrading of an ICC reserve.

Objective:

To ensure movement, deposition or removal of soil in Environmental Reserves meet legislative requirements.

Policy:

- 4.5.1** *The movement, deposition or removal of soil is permitted to be undertaken provided that the following conditions are met:*
- The activity is approved by ICC and is associated with the construction, operation, maintenance and repair or upgrading of an ICC park and reserve.*
 - Any material deposited is done so to a similar site, associated with the construction, operation, maintenance, and repair or upgrading of an ICC park and reserve.*
 - No more than 50m³ shall be extracted from or deposited on land containing high value soils, as shown on the District Planning Maps.*
 - If the material is taken from a SLUS or HAIL site, a site management plan identifying controls on*

potential exposure risks to humans or the wider environment is to be produced prior to any soil disturbance. Transport operators are required to ensure that vehicles are clean as they leave the site, so that contaminated material is not deposited on the road.

- Soil disturbance activities are to be completed within three months of commencement.*
- Accidental Discovery Protocol should be followed by all groups, clubs and organisations, as well as approval obtained by Heritage NZ before undertaking works at Environmental Reserves.*
- Within the airport protection zone or Otatara zone no earthworks shall result in standing bodies of water greater than 10m² in area.*

4.6 Archaeological Sites and Accidental Discovery

The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site without the prior authority of Heritage New Zealand. If you wish to do any work that may affect an archaeological site you must obtain an archaeological authority (consent) from Heritage New Zealand before you begin.

This is the case regardless of whether the land on which the site is located is designated, or the activity is permitted under the District or Regional Plan or a resource or building consent has been granted or whether it is a recorded archaeological site or not. The Act provides for substantial penalties for unauthorised destruction or modification.

An archaeological site is defined in the Heritage New Zealand Pouhere Taonga Act 2014 as any place in New Zealand (including buildings, structures or shipwrecks, above ground and potential for below ground sites) that was associated with pre-1900 human activity, where there is evidence relating to the history of New Zealand that can be investigated using archaeological methods.

Objectives:

- *To protect, in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 or any subsequent legislation, all known historical and archaeological sites on reserves.*

- To direct users to the link: <https://www.heritage.org.nz/protecting-heritage/archaeology/standard-archaeological-authority-process> with regards to accidental discovery on Environmental Reserves.
- To ensure Accidental Discovery Protocol is adhered to before works is undertaken on Environmental Reserves.

Policies:

- 4.6.1** ICC and Community Groups working on reserves are bound by the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 - <https://www.heritage.org.nz/protecting-heritage/archaeology/standard-archaeological-authority-process>
- 4.6.2** Where practical and considered worthwhile, particular historical sites should be interpreted with suitable plaques or similar means of communication.
- 4.6.3** If Koiwi (human skeletal remains), Taonga or other artefact material (eg pounamu/greenstone artefacts) other than Koiwi is discovered, then work shall stop immediately and Te Ao Marama (Inc) advised.
- 4.6.4** They will arrange a site inspection where importance can then be determined and the environment recorded by qualified archaeologists alongside the appropriate Tangata whenua and their advisers, including statutory agencies, who will determine whether the discovery is likely to be extensive and whether a thorough site investigation is required.
- 4.6.5** Materials discovered will be handled and removed by Iwi responsible for the tiakanga appropriate to their removal or preservation.
- 4.6.6** Pursuant to the Ngai Tahu (Pounamu Vesting) Act 1997, all natural state pounamu/greenstone in the Ngai Tahu tribal area is owned by Te Runanga Ngai Tahu. The Ngai Tahu Pounamu Resource Management Plan provides for the following measure:
- Any in-situ (natural state) pounamu/greenstone accidentally discovered should be reported to the Pounamu Management Officer of Te Runanga Ngai Tahu as soon as is reasonably practicable. The Pounamu Management Officer of Te Runanga

o ngai Tahu will in turn contact the appropriate Kaitiaki Papatipu Runanga.

- 4.6.7** In the event that the finder considers the pounamu is at immediate risk of loss such as erosion, animal damage to the site, or theft, the pounamu/greenstone should be carefully covered over and/or re-located to the nearest safe ground. The find should then be notified immediately to the Pounamu Management Officer.

4.7 Engagement/Consultation

It is important ICC Parks and Recreation staff with delegated authority engage with partners and key stakeholders and consult with the community when developing major projects or before making major decisions on the future of Environmental Reserves.

Policy:

- 4.7.1** ICC will collaborate closely with iwi, stakeholders and the wider public regarding issues of sites and matters of high cultural significance and value.

4.8 Education

Environmental Reserves have considerable potential as educational resources for the general public, special interest groups and schools.

"Self educational" facilities including: plant labelling, brochures, signage and interpretation material at specialised feature gardens and historically/culturally significant sites all offer opportunities as educational resources. Other opportunities include guided tours and demonstrations.

Objectives:

To enhance the educational opportunities on Environmental Reserves.

Policies:

- 4.8.1** ICC will continue to distribute and update relevant material to a wide range of users.
- 4.8.2** ICC will continue to keep material relevant when providing educational value to users.
- 4.8.3** ICC will explore different means of telling the "stories" using proven methods as well as the use of new technology available.
- 4.8.4** ICC will collaborate with iwi, stakeholders and the wider public to ensure the best educational

resources are provided for users of Environmental Reserves.

4.9 Fauna

Environmental Reserves often provide significant avifauna and entomological habitat and in many cases act as 'islands' within highly modified environments.

The quality and quantity of vegetation found within the reserves is linked to the quality and quantity of habitats for insects and the numbers of birds visiting and breeding.

Objective:

To protect the habitat of insects and bird life within the Environmental Reserves.

Policies:

- 4.9.1** The habitat for indigenous fauna on Environmental Reserves shall be protected and enhanced wherever possible.
- 4.9.2** Fauna on Environmental Reserves shall be monitored at regular intervals to detect changes over time as resources permit.

4.10 Pest Plants and Animals

Environmental Reserves are often located within highly modified and built up areas making them particularly at risk of invasion of pest plants and animals.

Pest plants and animals are a threat to the health of the environment. Some pest species contribute significant detrimental effects on native plants, animals and ecological processes, or impose an adverse visual impact on the landscape.

Effective control of pest weeds and animals is undertaken to comply with the Regional Pest Management Strategy for Southland.

The control and eradication of weeds on ICC reserves is the responsibility of the ICC Parks and Recreation Division. The effective control of weeds is undertaken to comply with the Regional Pest Management Strategy for Southland.

Natural regeneration within Environmental Reserves shall be encouraged through the control of persistent weed species and pest animals.

Objectives:

- *To protect the habitat of insects and bird life within the Environmental Reserves.*
- *To comply with Predator Free 2050 guidelines.*

Policies:

- 4.10.1** Pest plants and animals on Environmental Reserves shall be controlled in accordance with the 'Regional Pest Management Strategy, 2019' or any subsequent reviews of this strategy.
- 4.10.2** *ICC will strengthen appropriate pest control methods through collaboration to liaise, support, assist and cooperate with Iwi, stakeholders and the wider public to provide for the detection, control and monitoring of pest plants and animals on Environmental Reserves.*
- 4.10.3** ICC will endeavour to remove invasive weed and pest animal species in and around Environmental Reserves by approved control methods.
- 4.10.4** Permits will be required for any pest control works being undertaken that aren't already covered by formalised agreement.
- 4.10.5** Animals and birds deliberately abandoned in Environmental Reserves may be considered a pest and destroyed.
- 4.10.6** ICC will monitor reserves for dumped weeds and promote anti-garden weed dumping to residents generally or in specific locations. Anything found will be referred to the ICC Compliance Division for penalties under the Litter Act.

4.11 Domestic Animal Control

Uncontrolled domestic animals can cause damage to plants and soil structure of reserves, restrict regeneration and may endanger other reserve users.

Objectives:

- *To protect vegetation, waterways and soil structure on Environmental Reserves and to provide a safe and attractive reserve for all users.*
- *To collaborate with iwi and other agencies to ensure consistent management and education regarding management of dogs.*

Policies:

- 4.11.1** All management relating to Dogs on Reserves will be undertaken in accordance with the Dog

Bylaw and Policy and any subsequent versions. Management of dogs with adjoining agencies will be consistently regulated to ensure users are well educated.

- 4.11.2 Uncontrolled animals are not permitted on Environmental Reserves unless otherwise provided with written permission of ICC.
- 4.11.3 ICC will continue to use grazing as a management tool where it does not cause inappropriate adverse effects.
- 4.11.4 Horses are prohibited in Environmental Reserves within this Management Plan without prior written authorisation from the GM – Leisure and Recreation.

4.12 Boundaries and Fencing

ICC reserves adjoin a variety of land uses in settings, from urban to rural, with a range of fencing styles, materials and heights used. The condition of boundaries is an important consideration when protecting Environmental Reserves.

Good quality fences and boundaries that are stock proof and that direct pedestrians to formed entrances and restrict vehicle access are required where appropriate. Fences and barriers may be required within reserves to prevent vehicular access to certain areas or to enclose service areas where appropriate.

While ICC is prepared to meet its Fencing Act 1978 obligations, it is important that ratepayers are not burdened with paying for boundary fencing that exceeds the standard of fence beyond that which is considered a minimum requirement.

If a boundary fence is considered necessary, a contribution from ICC may be made subject to an application being received in writing stating the reason for the fence and requesting assistance. Once it is determined that a new fence is required or the current fence should be replaced, the applicant is advised.

Applications for a fence will be assessed on its design in terms of visual permeability and its contribution to the attractiveness of the reserve.

Over time some reserves have been encroached by adjacent landowners. Encroachments typically range from the minor and easily removed without effect (such as

washing lines and fences), to access driveways and, in the more extreme cases, to parts of dwellings. No new encroachments are permitted without the approval of ICC.

Objectives:

- *To protect the natural vegetation within Environmental Reserves from stock and public entry by adequately fencing boundaries.*
- *To meet boundary-fencing obligations under the Fencing Act 1978 where required.*
- *To protect reserve values and encourage freedom of public movement into and through reserves.*
- *To limit the number of fences or barriers on reserves to those which will protect reserve values, reduce the adverse effects on reserve neighbours, or which will ensure reserves can be used safely.*
- *To provide a unified boundary with plantings.*
- *To stop encroachments on reserve land.*

Policies:

- 4.12.1 Environmental Reserve boundaries shall be maintained to a standard that prohibits stock from entering the reserve, directs people towards formed access points, and restricts vehicle entry.
- 4.12.2 Any stock found on reserve land is causing offence under section 94(1)(b) of the Reserves Act and will be referred to the ICC Compliance Division, with the stock owner being penalised accordingly if the stock are not tended to immediately.
- 4.12.3 Boundary fences shall be kept clear of any invasive weeds, encroachments and of any activities seen as detrimental to the preservation of the reserve.
- 4.12.4 Fencing is not always required around or within Environmental Reserve boundaries, provided there is no risk of stock invading the reserve. Any adjoining land with stock will require stock proof fencing. Occupiers of neighbouring properties need to be aware of the reserve boundaries. This is so there is no encroachment from neighbours onto reserve land at any time.
- 4.12.5 ICC will investigate requests for contribution towards the construction of boundary fences on

Environmental Reserves only when it is deemed necessary and where it is to be established on the correct legal boundary.

- 4.12.6** ICC will meet its fencing obligations under the Fencing Act 1978.
- 4.12.7** Where an Environmental Reserve occupier requests the enclosure of its facilities, the cost of erecting and maintaining appropriate fences to the satisfaction of ICC shall be borne by the reserve occupier and required written approval from the GM – Leisure and Recreation for colour and design prior to construction.
- 4.12.8** Enclosure of an activity or feature within an Environmental Reserve with a fence or barrier will only be permitted if there is a justifiable need, eg protecting other reserve users from the effects of the activity and protecting reserve values.
- 4.12.9** Boundary fences will be inspected annually. They shall be kept clear of invasive weeds, *with adjoining land owners who have stock notified to ensure the fences are stock proof.*
- 4.12.10** Where appropriate, suitable fences along boundaries shall be maintained. Should future development necessitate, fences will be upgraded according to the requirements of the area. Existing and future barriers will be maintained according to ICC policy.
- 4.12.11** Unify fence lines with plantings where necessary.
- 4.12.12** *Where encroachments onto reserve land have been identified, these need to be addressed through formal agreements or stopped immediately.*

4.13 Mining and Exploration

While knowledge of the mineral resources of Environmental Reserves is minimal, the indications are that there are probably no minerals of economic value. Although the likelihood of mining activities cannot be assessed at present, it must be stated that major mining activities are incompatible with the values of the reserves and are contrary to the present day concepts of conservation.

Policy:

- 4.13.1** *To object to any application for mining privileges within Environmental Reserves unless it can be clearly demonstrated that any ensuing activity will cause minimal damage or disturbance to the reserves.*

4.14 Reserve Waters

It is important to liaise with relevant parties connected to the management of marine and foreshore areas to ensure good management of the surrounding ecosystems.

Open spaces and riparian areas along waterways, where managed effectively, can positively contribute to improved stream and river quality outcomes and eventually lead to better habitats for fauna and water activities.

The waters surrounding and within Environmental Reserves are very important to wildlife habitats and management should aim not only to maintain them, but also to enhance their quality.

Policies:

- 4.14.1** *To maintain all necessary liaison with iwi, and any relevant organisation with matters relating to the marine and foreshore areas.*
- 4.14.2** *To manage the inland waters of Environmental Reserves for the benefit of wildlife and the wider environment.*
- 4.14.3** *Encourage community recreational activities, education, research, and art displays along waterways.*
- 4.14.4** *Collaborate with other organisations, communities and agencies to discuss effective ways to manage waterways in both appearance and cleanliness.*
- 4.14.5** *Work with Environment Southland around enhancement options for water corridors.*

4.15 Buildings and Structures

Environmental Reserves are created principally for preserving the indigenous flora and fauna and indigenous associations for the benefit, enjoyment and use of the public. Some buildings and structures such as toilets, boardwalks or bridges are considered necessary for the enjoyment and full utilisation of the reserves.

Providing outdoor furniture on reserves that is appropriately designed and blends in with the surrounding landscape can add to the user's enjoyment and full utilisation of reserves.

Objectives:

- *To provide and maintain well designed and appropriately located buildings and structures in Environmental Reserves to improve utilisation, **preserve historical features** and add to the enjoyment of the reserve by its users.*
- *To ensure that all reserve facilities are maintained to an appropriate standard that enhances amenity values of the reserve.*
- *Public conveniences will be managed through appropriate asset management plan development.*

Policies:

- 4.15.1** Any proposal to develop a building or structure on an Environmental Reserve will be dependent on the availability of resources and the type of reserve of which it is proposed for.
- 4.15.2** Applications for new buildings or changes to existing buildings on Environmental Reserves require ICC approval and shall meet the Objectives and Policies of 6.1 - Requests for Development on Reserves with particular emphasis on Policy 6.1.9 which identifies the requirements of any development plan.
- 4.15.3** The design of any building or structure in Environmental Reserves shall be subject to ICC approval and shall be in keeping with the surroundings to enhance and complement the landscape.
- 4.15.4** Structures for the purpose of predator free and animal pest control must be approved by ICC before they may be installed on reserve land.
- 4.15.5** Buildings and structures on Environmental Reserves shall be maintained to a high standard and, where practicable, designed to limit the opportunity for vandalism.
- 4.15.6** Buildings and structures on Environmental Reserves will be designed or upgraded, where practical and feasible, to meet with the current national standard and design criteria for access for people with limited mobility or pushchairs.
- 4.15.7** The number of buildings and structures in the Environmental Reserves shall be limited to a level that facilitates safe and appropriate use of the reserve.
- 4.15.8** The natural, scenic and recreational values relevant to the Environmental Reserves shall be protected and managed by allowing only those buildings and structures which complement the setting in which they are placed.
- 4.15.9** Applications for extensions to existing buildings shall only be granted where the extension is seen as enhancing the enjoyment and full utilisation of the reserve.
- 4.15.10** Exterior colour schemes of buildings and structures on Environmental Reserves shall be approved by the GM – Leisure and Recreation. The painting and creation of murals (not advertising) on buildings and structures may be considered on submission of a copy of the design and proposed colour scheme to ICC.
- 4.15.11** Where appropriate, buildings on Environmental Reserves shall be shared with other recreation users of the reserve and, when not required for events or gatherings, made available for other non commercial community use. *Preference will be given to activities of a recreation nature.*
- 4.15.12** *When required*, the establishment, design and maintenance of new or existing public toilets on Environmental Reserves shall take into account current New Zealand Standards.
- 4.15.13** The number and location of new or existing public toilets on Environmental Reserves shall be kept under constant review. *Management of public toilets will be directed by the Public Conveniences Asset Management Plan.*
- 4.15.14** Any tenanted buildings are to be maintained to a presentable standard of high quality for visitors to see.
- 4.15.15** Clubs and associations shall be responsible for maintenance of their buildings and facilities on Environmental Reserves to an appropriate standard as determined by ICC.
- 4.15.16** Clubs and associations shall be responsible for the full cost of removal of any building and associated facilities when no longer required.

4.15.17 No application for extensions will be granted to those buildings on Environmental Reserves that are classified as non-conforming buildings.

4.16 Occupation Agreements

The term 'occupation agreement' refers to any lease, license, easement or other agreement granted between ICC and a person, organisation or company that is occupying part of a reserve.

ICC's power to grant an occupation agreement over reserves varies depending on the status of the reserve concerned and the rights transferred from the Crown. Any application will require ICC approval and be subject to the objectives and policies of this plan.

Objectives:

- *To permit the occupation of reserves for approved individuals, groups, users or facilities by the granting of occupation agreements.*
- *To balance the retention of open space with appropriate use and occupation of reserves.*
- *To ensure public accountability of reserve management.*
- *To ensure adequate remedy or mitigation of any adverse effects on reserve values caused by leases, licences, easements or other occupation agreements.*
- *To ensure that all costs associated with the development and implementation of occupation agreements are the responsibility of the applicant.*

Policies:

- 4.16.1** All organisations and occupying landowners with buildings, facilities, easements or grazing on Environmental Reserves shall be required to hold an occupation agreement as provided for by the Reserves Act 1977.
- 4.16.2** Application for any new occupation agreement on the Environmental Reserves will be in writing providing detailed information about the type of occupation. Applications for occupation agreements shall meet the Objectives and Policies of 6.1 - Requests for Development on Reserves with particular emphasis on Policy 6.1.9 which identifies the requirements of any development plan. Information provided will allow ICC to assess all applications in an equitable and consistent manner.

4.16.3 ICC shall draw up leases and licences subject to the provisions contained in the First Schedule, and the Sections of the Reserves Act 1977 relevant to the reserve classification and purpose of the lease or licence.

4.16.4 Easements shall be subject to Sections 48 and 48A of the Reserves Act 1977.

4.16.5 All costs associated with occupation agreements shall be the responsibility of the applicant.

4.16.6 Occupation agreements shall include clear steps to be taken in the event of a reserve facility or building being no longer required by an occupier, lessor or owner before the end of any occupation agreement.

4.16.7 *The approved occupier of any area of an Environmental Reserve shall not sublet, assign, transfer, mortgage or part with possession of any part of the land or building without the prior written consent of ICC.*

4.16.8 *Groups or organisations regularly using reserves to undertake their activities (including use for infrastructure and access) will require a collaborative agreement or legal lease with ICC.*

4.16.9 *Predator Free Activity on leased land will require permission from ICC and lease holders to ensure activities do not conflict one another. This may mean a change to the lease and developing and implementing guidelines to ensure a mutual understanding of what is required.*

4.17 Donations Of Assets

Public and private gifts, bequests and contributions including furniture, various plantings and other amenities that enhance, beautify, improve, supplement, support or otherwise benefit ICC's network system are an important part of the City's fabric.

Objective:

- *To manage donations of assets received through the Donations Guidelines so the process is kept consistent.*

Policies:

4.17.1 *Acquisition and management of donated assets will be undertaken through ICC Donations Guidelines and this management plan.*

4.18 Outdoor Furniture

Providing outdoor furniture on reserves that are appropriately designed and blend in with the surrounding landscape can add to the user's enjoyment of a reserve. Outdoor furniture such as picnic tables, seating and rubbish bins need to be maintained so that they remain an attractive asset to the reserve and do not become a safety hazard.

Objective:

- To provide outdoor furniture that enhances the experience of the reserve user.

Policies:

- 4.18.1** Outdoor furniture on Environmental Reserves shall be designed to a high standard.
- 4.18.2** Outdoor furniture shall be provided in Environmental Reserves where an identified need has been established and where resources permit. The number, design and placement of outdoor furniture shall be in keeping with the purpose and levels of use of the reserves and appropriate to the setting.

4.19 Monuments, Art Work And Sculpture Displays

Invercargill District has a diverse range of monuments, art work and sculpture displays in public places by local, regional and international artists and designers.

Objectives:

- To provide monuments, art work and sculpture displays (where required) to enhance the experience for visitors to the reserve.
- To ensure proposed donations of monuments, art work and sculpture displays align with ICC Donations Guidelines.

Policies:

- 4.19.1** Monuments, art work and sculpture displays will be considered where appropriate and practical so it is in keeping with the natural and surrounding character of the reserve. *Decisions will be directed through the guidance of the Donations Guidelines Document.*
- 4.19.2** Materials and colour schemes of monuments, art work and sculpture displays shall be ap-

proved by ICC. The creation, materials and colours of monuments, art work and sculpture displays may be considered on submission of a copy of the design and proposed colour scheme to ICC.

- 4.19.3** Monuments, art work and sculpture displays will be designed to a high standard and, where practical, be designed to limit the opportunity for vandalism.
- 4.19.4** Permanent monuments, art work and sculpture displays in reserves will need to be robust, weatherproof and long lasting.
- 4.19.5** Maintenance of monuments, art work and sculpture displays in reserves will be undertaken by ICC, or ICC approved operators.
- 4.19.6** The design of any monuments, art work and sculpture displays shall be subject to ICC approval and shall be in keeping with the surrounds to enhance and complement the landscape.
- 4.19.7** Temporary monuments, art work and sculpture displays are allowed on reserves until such time as the purpose for the display is finished and then they will be removed. They will be the responsibility of the event organisers or reserve occupiers.
- 4.19.8** Any proposals for monuments, art work and sculptures will be subject to the siting of them not compromising the other values of the park.

4.20 Network Utility Infrastructure

Utility infrastructure can impact on reserve values, neighbours and users by restricting the current use of a reserve and the potential development of the reserve for future enjoyment. It is not desirable to have network utility infrastructure on reserves, and reserves should not be regarded as infrastructure corridors. Full consideration should be given to alternative locations.

Overhead service lines or structures relating to the provision of essential services detract from the appearance of reserves and place limitations on the *placement of trees, overall landscaping*, and development *of the area* and recreational activities that can occur under the service line.

Objectives:

- To allow network utility operators conditional access to reserves for the purpose of inspection, maintenance, ongoing operation and upgrading of existing utility infrastructure.
- To ensure adverse effects of network utility infrastructure on the reserve values, users and neighbours are able to be avoided, remedied, compensated or mitigated.
- To permit new network utility infrastructure only where it is deemed essential for the reserves or benefits (including wellbeing) to the ratepayer outweigh the costs (impacts to reserves).

Policies:

- 4.20.1** All new network utility infrastructures only deemed essential for a reserve shall be laid underground and only to service the activities and facilities within the reserve. *Proposed infrastructure will be considered by the GM – Leisure and Recreation to ensure it does not conflict with environmental values of the reserve in question.*
- 4.20.2** ICC will permit network utility operators conditional access to reserve land to inspect, maintain, operate or upgrade existing works, subject to the provisions of the relevant empowering Acts, the Reserves Act 1977 and conditions of ICC.
- 4.20.3** The utility provider is responsible for all costs associated with temporary closures of reserves and the costs of reinstatement in the event of damage to a reserve from the network utility infrastructure.
- 4.20.4** Network utility operators must supply a useable and up-to-date 'as built' infrastructure plan, with detail to be agreed by ICC officers *with appropriate delegation*, including information regarding their location on reserves as a condition of any occupation agreement.

4.21 Lighting

ICC recognises that some reserve user groups wish to operate at night. The aim with lighting is to enhance the real and perceived safety of the environment.

There is no intention of providing lighting in Environmental Reserves as there is limited night time use.

Objectives:

- To allow car park and access way lighting where appropriate.
- To enhance the real and perceived safety of the reserve through the provision of lighting along key pedestrian paths.

Policies:

- 4.21.1** ICC will only consider the provision of lighting on Environmental Reserve land where there is a clear public benefit or for amenity, security and safety reasons.
- 4.21.2** Where an identifiable beneficiary from ICC's lighting of car parks and access ways exists, the full operation, maintenance and replacement costs will be passed on to this beneficiary.
- 4.21.3** The reserve occupier is responsible for the provision and maintenance of lighting associated with their activity, with the approval of ICC.
- 4.21.4** ICC shall consider best practise and lighting engineering standards, energy efficiency and appropriate design for the location when establishing new lighting fixtures on Environmental Reserves.
- 4.21.5** The light spill generated from any activity on Environmental Reserves shall not exceed 5 lux at any residential boundary between the hours of sunset and sunrise.
- 4.21.6** *Light spill on reserves will be considered through the District Plan requirements.*

4.22 Signs

Signs inform the public of their responsibilities as users of the reserves and advise users of the management and maintenance responsibilities of the reserve and its facilities.

Signs are also used as a way of educating and informing the public on features of reserves. They should make it easier for users to find their way around reserves and locate areas of interest.

Signs can also dominate and detract from the user experience.

The implementation of the policies on signs on reserves is subject to the appropriate provisions of ICC Bylaws,

District Plan rules and the requirements of the Reserves Act 1977.

They are bilingual and reflect the historical and cultural narrative of the reserve.

Objectives:

- *To minimise the adverse visual effects of signs while maximising useful information to reserve users.*
- *To ensure consistent sign information, styles and types are consistent across all reserves.*
- *To provide signs that assist in user orientation and reserve legibility.*
- *To use signs as a way to enhance educational opportunities in reserves.*

Policies:

- 4.22.1** ICC shall use current NZ Standards as a guide when providing and maintaining signs on Environmental Reserves.
- 4.22.2** Signs shall be for the purpose of proper and beneficial management, administration and control of the Environmental Reserves. *Educational and interpretation facilities shall be provided in key areas of reserves.*
- 4.22.3** Environmental Reserve interpretational signage and promotional brochures may be developed as required to inform and educate the reserve visitors.
- 4.22.4** The number of signs on Environmental Reserves shall be kept to the minimum number required to meet the needs of users.
- 4.22.5** No trade sign or any other form of advertising shall be permitted in the Environmental Reserves or on structures within the reserves.
- 4.22.6** Permanent advertising signs are not permitted on Environmental Reserves.
- 4.22.7** Temporary advertising intended to alert or inform the public about a forthcoming event or attractions on the reserve may be permitted at the discretion of ICC. The position of all temporary advertising shall be approved by ICC. All costs shall be the responsibility of the applicant and temporary signs shall remain in place for a maximum of 14 days.
- 4.22.8** No reserve occupier with an occupation agreement on an Environmental Reserve shall erect any sign unless prior written approval from ICC has been received.
- 4.22.9** Reserve occupiers must apply to ICC to place signage on their *buildings or structures*. The size, style and scale of signage will be taken into consideration and in particular, the effect or visual impact the sign will have on reserve users and reserve neighbours. All signs on *buildings or structures* shall be limited to the name of the club or organisation and shall be within the dimensions of 3m long by 1.2m deep and to a maximum area of 1.5m². Any requests for signage outside these dimensions must be approved by way of Council resolution.
- 4.22.10** Reserve occupiers will be responsible for meeting the costs of producing, erecting, maintaining, removing and replacing signs relating to their activity to be located on or adjacent to their buildings.
- 4.22.11** *ICC will provide standard identification signage at the entrance to each lease activity.*
- 4.22.12** *Parks and Recreation staff with delegated authority will, when planning, incorporate signs that are bilingual and reflect the historical and cultural narrative of the reserve where required and there is a need or desire.*
- 4.22.13** *Collaborate with other agencies to incorporate other forms of communication in signage e.g. brail and sign language.*
- 4.22.14** *Include opportunities for other cultures that also have interests and history with the parks and recreation network.*

4.23 Disposal of Rubbish

ICC is committed to reducing the amount of litter that is deposited on ICC Land. The dumping of rubbish on reserves or the inappropriate use of existing rubbish disposal facilities can detract from the reserve values and the proper functioning of reserves.

ICC's general policy is to not provide rubbish bins on public parks except in high use/high profile areas. Visitors are therefore encouraged to take their rubbish home with them.

ICC is also concerned about the impact garden escapees can have on areas of environmental importance. Garden escapees, or weeds, often come from garden waste being dumped onto neighbouring reserve land.

Objectives:

- *To preserve reserve values through appropriate disposal and collection of rubbish and garden waste.*
- *To encourage reserve users on reserves to act responsibly by requiring them to take home their rubbish.*

Policies:

- 4.23.1** Dumping of domestic refuse, trade waste, garden refuse, rubble or other debris in the Environmental Reserves is not permitted.
Penalties will be incurred once identified where it has come from.
- 4.23.2** Reserve user groups are responsible for ensuring the area of their responsibility is kept clear of rubbish.
- 4.23.3** Litter bins may be provided in few individual Environmental Reserves for the reserve users.
Litter bins shall be designed for only litter incidental to reserve use. Household rubbish is not permitted to be placed in these litterbins.
- 4.23.4** *Event organisers are responsible for collection and disposal of rubbish when the reserve is booked for events.*

4.24 Camping

Camping is only permitted on reserves administered under the Reserves Act 1977 in the Invercargill District in camping grounds specific to that purpose. Potential problems resulting from freedom campers on reserves include toilet waste disposal, rubbish and damage to reserves.

There is a registered camping ground on a reserve at Bluff, as well as other private facilities, that provide adequate camping grounds for visitors to the City.

Freedom camping is not permitted on Environmental Reserves given their importance as reserves with significant natural values, and the potential damage that freedom campers may have on these natural values.

Objectives:

- *To conserve the public health, well being and safety of the public while on reserves.*
- *To ensure the public have equity of use over reserves under the ICC's control.*
- *To prohibit camping in reserves.*

4.25 Nuisance

Certain activities on reserves including vegetation, loud noise or extreme glare have the potential to disturb other reserve users, reserve neighbours or cause damage to indigenous species and wildlife habitats.

Objective:

- *To protect and enhance environmental values, while at the same time, reducing the impact of any potential nuisances.*

Policy:

- 4.25.1** Activities on the Environmental Reserves that cause ongoing and extreme annoyance to other reserve users, neighbouring properties, or which are likely to cause damage to indigenous species and wildlife habitats are not permitted.

4.6 Flying Model Aircraft and Unmanned Aerial Vehicles

Model aircraft enthusiasts use parks and reserves for the operation of their aircraft. This can either be for personal recreational use for club and competition use.

The persistent and uncontrolled use of model aircraft can have negative effects on neighbours and other park users including noise and potential for injury.

The recreational and commercial use of unmanned aerial vehicles (UAV) is becoming more common place and will no doubt increase as technology improves, demand increases and UAVs reduce in cost.

While UAV use has similar impacts to those of model aircraft with respect to noise and potential for injury, the frequent inclusion of on-board cameras also introduces issues of privacy which park users have a right to expect. Reserves may also be ideal places for commercial UAV photographers and surveyors to launch UAV from, given their generally open nature.

Objectives:

- To prohibit use of flying model aircraft on Environmental Reserves and work with model aircraft enthusiasts for alternative locations.
- To control the use of flying unmanned aerial vehicles, while ensuring other members of the public are safe and enjoying the use of the reserves.

Policies:

- 4.26.1** Use of UAVs on Environmental Reserves will be managed through the ICC Unmanned Aerial Vehicles Policy and require a permit.
- 4.26.2** Use of model aircraft on Environmental Reserves is prohibited unless required for reserve management purposes, or as provided for in specific individual or omnibus management plans.

4.27 Filming and Photography on Public Land

Film companies, organisations, interest groups, schools and other members of the community like to or are required as part of studies, events or memories to film or photograph others or landscapes on public land.

Objectives:

- To ensure legislative requirements are met when considering the use of filming in public spaces.
- To conserve the public health, well-being and safety of the public while on Environmental Reserves.

Policies:

- 4.27.1** Commercial Filming requires permission from Parks and Recreation Manager.
- 4.27.2** It is generally unlawful to take photographs of or film people in public places without their consent. However, you must not film or take photos of people if they are in a place where they can expect privacy (such as a public changing area or toilet) and that person:
- is naked, in underclothes, showering, toileting etc
 - is unaware of being filmed or photographed
 - has not given consent to be filmed or photographed.
- 4.27.3** You should not take photos of people if:
- they are in a place where they would expect reasonable privacy and publication would

be highly offensive to an objective and reasonable person

- *it has potential to stop other people's use and enjoyment of the same place*
- *you have no legitimate reason for taking the film or photos.*

4.28 Playgrounds and Play Equipment

The provision of a variety of well-maintained and safe play equipment throughout the District is important for the development of children. Play equipment complements the areas of open space available to children for informal play.

Management of Environmental Reserves focuses on the preservation of the natural amenities. Playgrounds are not compatible with the conservation objectives unless there is a strong need for them and they are appropriate to the reserve's natural setting.

Community interest in nature play is increasing and has opportunities in specific Environmental Reserves to be incorporated through planning design when driven by community need.

The Play Strategy will inform the objectives for play spaces in the long term.

Objectives:

- *Play spaces will only be considered on Environmental Reserves if there is a public need and if they are compatible with the reserve's conservation objectives.*
- *To ensure an acceptable level of health and safety is provided for playground users.*
- *To maintain plays spaces that are stimulating and fun, and to encourage children to engage in physical activity.*
- *To limit the development of any new playgrounds on Environmental Reserves.*

Policies:

- 4.28.1** ICC will only consider the provision of play equipment on Environmental Reserve land where there is a clear public benefit or a high public demand for it. Proposal of play equipment will also be dependent on the type of reserve it is requested for.

- 4.28.2** All new or upgraded playgrounds and play equipment constructed on Environmental Reserves shall be directed by the *Play Strategy* and comply with the New Zealand Safety Standard for playgrounds - NZS: 5828:2015 or any subsequent review of this standard.
- 4.28.3** All playgrounds and play equipment on Environmental Reserves shall be given a monthly maintenance check and a six monthly safety check to ensure all pieces of equipment are maintained to a safe standard and meet the current New Zealand Safety Standard for Playgrounds.
- 4.28.4** Informal play opportunities (eg nature play) shall be encouraged, through the design of open spaces within Environmental Reserves, using the natural landforms and existing features.

4.29 Smoke Free Parks and Reserves

The Government has set a goal to make NZ smokefree by 2025. One way to achieve that goal is to make more community spaces smokefree. ICC encourages health and active lifestyles for Invercargill residents in public spaces.

Objectives:

- *To encourage healthy and active lifestyles for Invercargill residents through the use of parks and reserves as Smoke Free areas.*
- *To align smokefree regulatory processes with the ICC Wide Smokefree Policy.*

Policies:

- 4.29.1** *ICC Parks and Recreation will follow the ICC wide Smokefree Policy and subsequent versions of this policy as guidelines for managing Environmental Reserves.*
- 4.29.2** *Groups booking events on Environmental Reserves will be encouraged to actively promote their event as smoke free.*

4.30 Healthy and Active Parks

ICC has a role to play in providing public spaces that offer healthy and active opportunities for the public.

Objective:

To encourage healthy and active lifestyles for Invercargill residents through the use of parks and reserves.

Policies:

- 4.30.1** ICC will consider the cultural needs and physical abilities of potential users when designing environments in Environmental Reserves to ensure the area is welcoming and functional for all.
- 4.30.2** *ICC will collaborate with iwi, health organisations and agencies with regards to managing healthy and active spaces and activities being undertaken on them.*

4.31 Liquor Consumption and Sale

Reserve users can request consent for special or one off events where liquor is sold or supplied incidental to the principal purpose of the occasion or event being held.

Objective:

To allow the consumption of liquor on reserves where the effects on the reserve, reserve values, reserve users and reserve neighbours can be avoided, remedied or mitigated and the relevant statutory and Bylaw requirements are met.

Policy:

- 4.31.1** ICC will not oppose the granting of liquor licenses for premises located on reserves or special licenses in defined areas for one off types of events where:
- (a) The granting of permission is consistent with the purposes of the reserve.
 - (b) The effects on the reserve, reserve values, reserve users and reserve neighbours can be avoided, remedied or mitigated.
 - (c) Applicants can provide evidence they have met the requirements of relevant legislation, regulations, codes and permits.

4.31 Liquor Consumption and Sale

Reserve users can request consent for special or one off events where liquor is sold or supplied incidental to the principal purpose of the occasion or event being held.

Objective:

To allow the consumption of liquor on reserves where the effects on the reserve, reserve values, reserve users and reserve neighbours can be avoided, remedied or mitigated and the relevant statutory and Bylaw requirements are met.

Policy:

- 4.31.1** ICC will not oppose the granting of liquor licences for premises located on reserves or special licenses in defined areas for one off types of events where:
- The granting of permission is consistent with the purposes of the reserve.
 - The effects on the reserve, reserve values, reserve users and reserve neighbours can be avoided, remedied or mitigated.
 - Applicants can provide evidence they have met the requirements of relevant legislation, regulations, codes and permits.

4.32 Fireworks Displays

Groups occasionally wish to use reserves for fireworks displays. These displays are controlled by legislation other than the Reserves Act 1977 but require permission from ICC when the activity is to occur on a reserve.

Objective:

To allow fireworks displays on reserves if adverse effects on reserve values, reserve users and reserve neighbours are able to be avoided, remedied or mitigated.

Policies:

- 4.32.1** Fireworks displays are prohibited on Environmental Reserves *unless otherwise permitted with prior written authorisation from the GM – Leisure and Recreation.*
- 4.32.2** Applicants wishing to use Environmental Reserves for fireworks displays must provide evidence they have met the requirements of relevant legislation, regulations, codes and permits and provide an acceptable Risk Management Plan before final permission will be granted.
- 4.32.3** Proof of adequate public liability insurance is required for permission to be granted for fireworks displays on Environmental Reserves.

4.33 Fires on Reserves

Fires on reserves have the potential to cause significant damage to indigenous wildlife habitat, buildings on reserves and to adjacent property and people.

Objective:

To protect natural habitat, buildings and structures on

parks and reserves from the damage and destruction of uncontrolled fires.

Policy:

- 4.33.1** The lighting of fires on Environmental Reserves outside of a contained gas barbeque is not permitted without the prior written authorisation from ICC.

4.34 Administration

Environmental Reserves are vested in ICC for the protection and enhancement of the recreational, environmental and scenic values.

Objectives:

- To ensure Environmental Reserves are managed appropriately and consistently in a way that meets the Reserves Act 1977 requirements.*
- To comply with the Reserves Act 1977 requirements for administration and management.*

Policies:

- 4.34.1** The ICC, through the GM – Leisure and Recreation, shall carry out the day to day administration and management of the Environmental Reserves, using Parks and Recreation staff and contractors.
- 4.34.2** *ICC Parks and Recreation will collaborate and engage closely with Iwi and local runanga, stakeholders and the wider public for a systematic, holistic and consistent approach to managing Environmental Reserves.*

4.35 Plan Amendment and Review

The Reserve Act 1977 sets out clear requirements for the preparation, amendment and review of Reserve Management Plans.

Objective:

To ensure the Environmental Reserves Management Plan is kept under review to reflect the needs of current and future users through consultation with local iwi, runanga the community and user groups and to be consistent with current best practice management procedures.

Policies:

- 4.35.1** Any change or amendment, not involving a comprehensive review of the Environmental

Reserves Management Plan, shall be made by adopting the procedures specified in Section 41(9) of the Reserves Act 1977.

- 4.35.2** The Environmental Reserves Management Plan shall be kept under continuous review as laid down in Section 41(4) of the Reserves Act 1977 and shall be operative from the date of signing for a period of ten years, at which time it will be completely reviewed.

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5.0 Individual Reserves

Recorded information on the *thirty four* reserves featured in this management plan has been limited due to the minimal amount of research. Therefore the reserve descriptions in this management plan should be treated as a basic summary and starting point only.

5.1 Bluff Hill/Motupōhue (Scenic)

The purpose of this section is to identify soils and their characteristics across the District.

5.1.1 Introduction

Bluff Hill/Motupōhue is an area rich in biodiversity, cultural and historic values. Oral traditions say that Māori leaders are buried on the hill and the site has been given a tōpuni status, a legal recognition of its importance to Ngai Tahu people.

Bluff Hill Reserve lies within a very scenic part of the southern coastline.

The popular Millennium Track runs through the Bluff Hill Reserve linking the Foveaux Walkway with the Bluff Hilltop / Motupōhue and offering panoramic views of Foveaux Strait.

The reserve lies within a relatively large area of regenerating coastal forest vegetation considered to be of national importance. sands with coastal sand flats and undulating sand dunes in relatively sheltered or moist situations.

5.1.2 Location and Access

Bluff Hill/Motupōhue is located at the south west area of Bluff, which is 25km southeast of Invercargill on State Highway 1 (SH1).

The main point of access to the Bluff Hill Reserve is gained from Flagstaff Road, (signposted off SH1, via Lee Street) which terminates at the Bluff Hill car park and platform.

The platform, officially opened in 2001 provides interpretation signage and panoramic views of Rakiura/Stewart Island, the south coast and Southland Plains.

The Millennium Track provides pedestrian access through the Bluff Hill Reserve and links up with the Topuni Track and Foveaux Walkway to Stirling Point.

The Glory Track can be accessed via Walker Street and Gunpit Road, and the other tracks start at Stirling Point from the end of SH1.

There are multiple Mountain Bike Access Points including Pearce Street, access tracks from Flagstaff Road and top of Bluff Hill. The Southland Mountain Bike Club can be contacted for more information (www.southlandmtbclub.co.nz).

A newly developed Te Araroa Trail will soon link these trails as the main ending of the South Island which may attract many tourists to the area.

5.1.3 Adjoining Land Use

Bluff Hill adjoins many land areas including: DOC, ICC Cemetery and other ICC land, Ocean Beach Properties Ltd and RSA Memorial Grove. Careful collaboration and partnerships for consistent messaging will be beneficial for effective management of Bluff Hill.

Residential houses adjoin the north boundary.

5.1.4 History

Māori History

Bluff Hill holds a special place in the history of Māori, and has been recognised under the Ngai Tahu Claims Settlement Act 1998 as a site with statutory acknowledgement. The Act acknowledges Ngai Tahu's cultural, spiritual, historic and traditional association to Motupōhue (Bluff Hill).

The Māori name for Bluff is Motupōhue; motu - because of its island-like appearance from the sea; and pōhue because of the white convolvulus that flowers in the forest.

'The name Motupōhue is an ancient one, brought south by Ngati Mamoe and Ngai Tahu from the Hawkes Bay region where both tribes originated. The name recalls a history unique to the Ngai Tuhaitara and Ngati Kuri hapu that is captured in the line, 'Kei kora kei Motupōhue, he pareka e kai ana, na to tutae' ('It was there at Motupōhue that a shag stood, eating your excrement').

'Oral traditions say that the Ngati Mamoe leader, Te Rakitauneke, is buried upon this hill. Te Rakitauneke's saying was: 'Kia pai ai taku titiro ki Te Ara a Kiwa' ('Let me gaze upon Foveaux Strait'). Some traditions also place another Ngati Mamoe leader, Tu Te Makohu, on this hill'.



Aerial of Bluff Hill/Reserve, adjoining DOC land and Bluff Cemetery

'For Ngai Tahu, histories such as this represent the links and continuity between past and present generations, reinforce tribal identity and solidarity, and document the events which shaped Ngai Tahu as Iwi'.

'The mauri of Motupōhue represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with Motupōhue' (ICC; 2002).

European History

Bluff is the oldest European town in New Zealand, having been settled since 1824. James Spencer was the first European settler on the Southern mainland. Spencer landed at Bluff in January 1824 and his house is said to be the first European house in Southland. Spencer obtained permission from the local Māori to settle on some of the land now known as Bluff Hill.

Spencer obtained permission from the local Māori to settle on the land, paying for it later and finally receiving a title deed in 1839. The land currently known as the Bluff Hill Reserve is on part of the land originally purchased by Spencer, 'Tiger' McGibbon and George Green (Spencer owned two blocks, however only one forms part of the Bluff Hill Reserve). The original sections purchased by these settlers fronted on to the harbour and extended over the hill to the south coast. Spencer paid goods to the value of 15 pounds for his western section.

Bluff Hill played a critical role in the early days of shipping with a signal station established there in 1862. The flagstaff was for signalling ships and also to hoist a light for vessels coming into port at night. With the advent of modern wireless, however there was no need to maintain the lookout at the top of Bluff Hill and this station was closed down in 1938 – only to be re-opened for the duration of World War II. Today, a VHF mast is located on top of Bluff Hill – the highest point in the area (Hall Jones; 1976).

During World War II, Bluff Hill had the role as Southland's main coastal defence. The army

selected the area on Bluff Hill (currently on DOC land) and construction started in April 1942.

Work was completed in September 1942 and the army moved in during December 1942. The battery was closed in August 1944. Remains of the gun battery and concrete bunkers still remain from their days as Southland's main coastal defence during World War II. They can still be seen with access from the end of Gunpit Road.

Classification/Land Management History

The Bluff Scenic Reserve lies to the east of the Bluff Hill Reserve. This neighbouring reserve was originally called the Bluff Domain, under the control and management of the Bluff Borough Council. In 1989 by Gazette notice 1989 No 62 p1440, the control and management appointment was revoked and the then Department of Lands and Survey took over management of the land as a reserve for scenic purposes. Bluff Scenic Reserve is now managed by DOC.

On May 4 1970 the Minister of Lands approved the creation of a Scenic Reserve on Bluff Hill by the change of purpose of both the Bluff Domain and of a water conservation reserve to a scenic reserve, under the control and management of the Bluff Borough Council. In May 1971 a further 140 acres of land on the eastern faces was added to the reserve, making a total of about 362 acres.

A Gazette Notice was published in 1994 for 4 Ward Parade, 2 Ward Parade and 26 Gunpit Road vesting on appointment of Bluff Borough Council to control and manage the reserve. This is now managed by DOC.

In 2003 ICC declared the sections forming the Bluff Hill Reserve to be worthy of greater protection as a scenic reserve. This change of classification to scenic reserve signals recognition of both the botanical and scenic value of the area and ensures that almost 230 hectares of the Bluff Hill are protected from grazing and development for future generations.

A Gazette Notice was published in 2003 declaring land as reserve – part sec 6, lot 3 DP 3037 and lot 4 DP 3037 which is managed by ICC.

Bluff Hill Viewing Platform

The Bluff Hill Viewing Platform was built in the late 1970s by the Bluff Harbour Board. A wheelchair ramp was later added by the Department of Lands and Survey together with information panels and a gazebo.

In 1995 DOC began planning work to replace the viewing platform structure with a vandal resistant, safer and more easily maintained facility. Invercargill Sculpturer Stephen Mulqueen was commissioned to prepare preliminary drawings and concepts for replacement of the viewing platform.

The first stage of the new platform was officially opened in 20 Sep 1998 by Invercargill MP Mark Peck which was watched by about 200 invited guests. Plans and specifications were drawn up for stage two, which involved the installation of information panels and a decorative stone entrance. Three Motupohue panels were installed at the bottom of the lookout in 2001.

The Bluff Community Charitable Trust developed on DOC land the "Koru" viewing platform and interpretation at the top of Bluff Hill/ Motupohue. This is complemented by a sealed car park currently managed by ICC and walking tracks managed by DOC and ICC.

The \$300,000 stone and concrete structure replaced the old wooden platform demolished in 1995.

Walking Track Construction

Construction of the Foveaux Walk began at the turn of the century using mainly unemployed labour.

Creation of tracks and structures were undertaken through periodic detention workers and helicopters flying in gravel to assist with the base formation of the track.

In 1998 Bluff Hill was one of nine major community projects in Invercargill recommended to share 1.1 million in amenities grants from the Community Trust of Southland which was \$175,000 for the Bluff Hill Walkway.

Foveaux Track and Glory Track (managed by DOC) were completed first, followed by Millen-

nium (completed 2000) and Tōpuni (managed by ICC). Tracks were constructed in stages – Stage 1 was the walking track connecting the summit of Bluff Hill with Lookout Point (Millennium) which started in 1999. Stage 2 was the walking track connecting Bluff Hill summit with the Glory Track.

In 2001 construction of walking tracks on ICC land adjacent to the summit of Bluff Hill was completed. In conjunction with DOC and the Bluff Community Board, walking tracks were named Tōpuni Track, Millennium Track and Gunpit Track, with permission from the Southland runanga.

In November 2001 a seat was donated for the Glory Track by Cliff Broad in memory of his father, Maurice Broad, who had long time connections with Bluff.

Mountain Bike Trails

From 1998-2000 the Southland Mountain Bike Club (SMTB) was working closely with ICC to establish trails and with the first stage completed, experienced riders were encouraged to come and check out the new area.

SMTB was approved access to the land by ICC and with the assistance of funds donated by community trusts (Community Trust of Southland, ILT Foundation, Pub Charity and Lion Foundation) the club raised more than \$50,000 and employed Queenstown contractors Graeme Morgan and Nathan Greenwood to design the trails.

Covering 4.5km, the single track near the top of Bluff Hill was created in an area which was previously home to wilding pines and exotic vegetation.

Members of the club put in hundreds of hours clearing the scrub to make way for the new trail.

Since 2000, SMTB and ICC are still working together to manage, develop and maintain mountain bike trails for public use and events.

A Memorandum of Understanding between ICC and SMTB has been signed and aims to ensure consistent and more effective management of Mountain Bike Trails on Bluff Hill.

Tree and Forestry History

First of the Millennium Forest Tree Plantings was undertaken on Bluff Hill 29 July 2000. A grant from the Lottery Grants Board Millennium Sub Committee was given later to assist with Millennium Forest as a \$15,000 Bluff Millennium Forest Project.

50 hectares of trees were planted during 1980s by Bluff Borough Council using a government loan targeted at encouraging Councils and organisations to plant more trees nationwide.

They overestimated the growing ability of the land at the time and so it was more of an unsuccessful loan where the trees were taken down and sold during 1999 -2011 but because of rugged coastal conditions and tough terrain, they failed to grow to full size and fetch enough money to cover the interest.

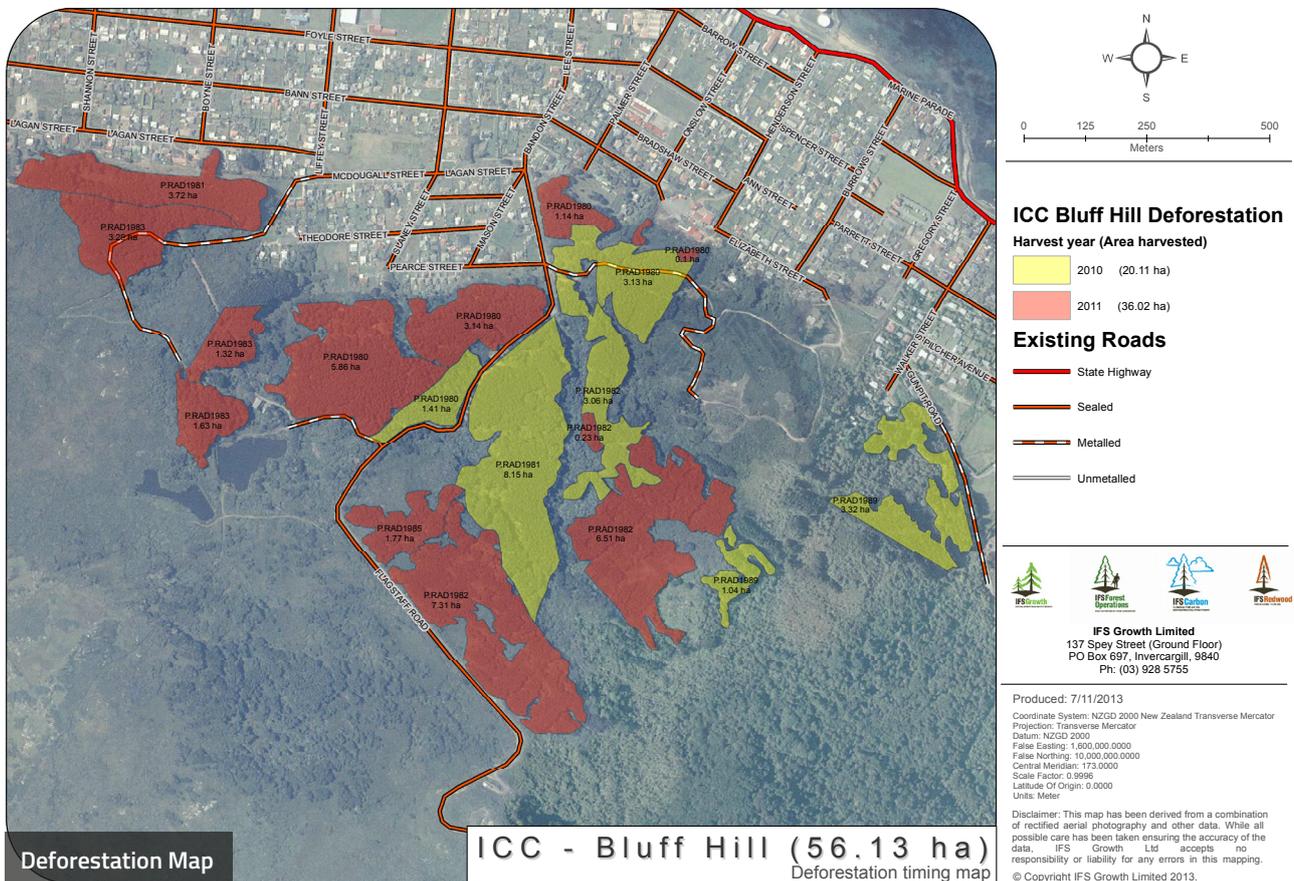
In late 2013 an application was made to deforest the site that was marked as forestry from pre

-1990 ETS obligations as a result 56.2 hectares was deforested and 40,566 NZU returned to the Crown (liabilities paid) as shown in map on the following page.

The area was allowed to naturally regenerate bush, with minimal pest weed control until 2019, where \$30,000 was spent by ICC to start the removal of wilding pine control, a consequence of the pine plantation.

Other History

In 1999 a granite stone about 235 million years old was taken from Bluff Hill as part of the Southern Cross Touch Tour. The Bluff stone was chosen from the southern area for a millennium project to link the four points of NZ. Before the stone was cut in two and taken on a national tour with stones from three other regions, it was blessed by the Rev Miki Thompson at a ceremony on Bluff Hill 27 Oct 1999. The stone was about 45cm long, 30cm wide and 20cm deep, and carried in a woven flax basket.



After the tour the stone was returned to Bluff while the other half went to Wellington. TVNZ had organised the tour as part of its millennium project and filmed the Southland launch on Bluff Hill.

In September/October 2011 a public meeting was held by ICC with the Bluff Community to discuss future developments of Bluff Hill – many ideas came from this – i.e. reservoir site restoration, parking bays on Bluff Hill Road, gorse control, walking tracks and restoring vegetation.

An amenities grant of \$175,000 was approved by Community Trust of Southland in 2002 which contributed towards the development and construction of tracks including materials, transport, labour, signs, fencing and plantings at Bluff Hill.

5.1.5 Classification and Tenure

Reserves are classified under the Reserves Act 1977 according to their dominant characteristics, use and current and future values. Reserves are classified to ensure their control, management, development, use and preservation is for the appropriate purposes.

Bluff Hill Reserve (Scenic Reserve)

This land is subject to the Reserves Act 1977 under the Scenic Reserve classification. Its status grants it protection as an area of land possessing significant qualities of scenic interest or environmental value. This land is located adjacent to DOC's Scenic Reserve and, together with the DOC land, provides a large expanse of protected coastal forest on the south east of Bluff Hill.

Bluff Hill Area (Freehold, Local Purpose)

Most of the remaining ICC land on Bluff Hill is held freehold and is currently not protected under the Reserves Act 1977. While some of the land on the northern slopes is planted in *Pinus Radiata*, much of this land supports a large area of regenerating coastal vegetation. This important vegetation complements the adjacent scenic reserve and adds to the unique coastal environment of Bluff Hill.

Local Purpose - Quarry Reserve is located on the southern slopes of Bluff Hill. Nearby is another Local Purpose Reserve set aside for water works.

5.1.5.1 Classification

Bluff Hill is classified as the following:

- Scenic Reserve.
- Local Purpose Reserve (Quarry Site)

It shall be managed in accordance with these classifications.

ICC would like to create reserve status classifications to land that is currently freehold.

5.1.5.2 Tenure and Area

The total area of Bluff Hill is 278.5888 hectares. The tenure is as follows:

Record of Title: SL142/248

Legal Description: Lot 3 DP 3037

Area: 10.4712 ha

Classification: Scenic Reserve

Record of Title: SL142/250

Legal Description: Lot 4 DP 3037

Area: 10.3701 ha

Classification: Scenic Reserve

Record of Title: SL28/100

Legal Description: Part Section 6 Block I Campbelltown Hundred

Area: 57.2252 ha

Classification: Scenic Reserve

Classification: Freehold

Record of Title: 6/121

Legal Description: Section 24 Block I Campbelltown Hundred

Area: 23.4726 ha

Classification: Local Purpose Reserve (Quarry Site)

Record of Title: SL143/63

Legal Description: Part Section 8 Block I Campbelltown Hundred and Defined on DP Red396

Area: 7.8281 ha

Classification: Freehold

Record of Title: SL144/242

Legal Description: Part Section 7 Block I Campbelltown Hundred

Area: 24.1977 ha

Classification: Freehold

Record of Title: SL164/127

Legal Description: Section 10 Block I

Campbelltown Hundred SO 2577
 Area: 3.9634 ha
 Classification: Freehold
 Record of Title: SL26/26A
 Legal Description: Country Section 11 Block I
 Campbelltown Hundred SO 2577
 Area: 19.9459 ha
 Classification: Freehold
 Record of Title: 114696
 Legal Description: Part Section 7-8 Block I
 Campbelltown Hundred and Closed Road Block I
 Campbelltown Hundred
 Area: 72.7071 ha
 Classification: Freehold
 Record of Title: SL135/177
 Legal Description: Part Section 9 Block I
 Campbelltown Hundred
 Area: 3.9540 ha
 Classification: Freehold
 Record of Title: SL135/178
 Legal Description: Part Section 9 Block I
 Campbelltown Hundred
 Area: 0.0726 ha
 Classification: Freehold
 Record of Title: SL135/42
 Legal Description: Section 12 Block I
 Campbelltown Hundred
 Area: 4.0747 ha
 Classification: Freehold
 Record of Title: SL5B/994
 Legal Description: Lot 2 DP 8912
 Area: 1.3559 ha
 Classification: Freehold
 Record of Title: SL7B/720
 Legal Description: Part Lot 2 DP 3368
 Area: 5.9335 ha
 Classification: Freehold
 Record of Title: 134/219
 Legal Description: Lot 26 Deeds 25
 Area: 0.2125 ha
 Classification: Freehold
 Record of Title: 10/106
 Legal Description: Lot 31 DP 15, Lot 35 DP 15
 Area: 0.6374 ha
 Classification: Freehold
 Record of Title: 10/22
 Legal Description: Lot 32 DP 15, Lot 33 DP 15,
 Lot 34 DP 15, Lot 36 DP 15
 Area: 1.2546 ha
 Classification: Freehold
 Record of Title: 134/222
 Legal Description: Lot 24 Deeds 25, Lot 29
 Deeds 25
 Area: 0.4250 ha
 Classification: Freehold
 Record of Title: 10/23
 Legal Description: Lot 25 DP 15, Lot 27 DP 15,
 Lot 28 DP 15, Lot 20 DP 15
 Area: 0.8500 ha
 Classification: Freehold
 Record of Title: 189/192
 Legal Description: Lot 1 DP 4768, Lot 1 DP 4767
 Area: 2.6042 ha
 Classification: Freehold
 Record of Title: Gazette Notice 21974/0
 Legal Description: Part Section 13 Block I
 Campbelltown Hundred
 Area: 0.4598 ha
 Classification: Freehold
 Record of Title: 9C/258
 Legal Description: Part Section 13 Block I
 Campbelltown Hundred
 Area: 6.8270 ha
 Classification: Freehold
 Record of Title: 8D/733
 Legal Description: Part Section 14 Block I
 Campbelltown Hundred
 Area: 7.7400 ha
 Classification: Freehold
 Record of Title: A3/1031
 Legal Description: Lot 24 DP 6924
 Area: 0.0673 ha
 Classification: Freehold
 Record of Title: A3/1032
 Legal Description: Lot 25 DP 6924
 Area: 0.0673 ha
 Classification: Freehold
 Record of Title: A3/1035
 Legal Description: Lot 28 DP 6924
 Area: 0.0673 ha
 Classification: Freehold

Record of Title: 3A/798
 Legal Description: Lot 1 DP 8322
 Area: 0.0574 ha
 Classification: Freehold
 Record of Title: 3A/870
 Legal Description: Lot 2 DP 8322
 Area: 0.0771 ha
 Classification: Freehold

Record of Title: 198/226
 Legal Description: Lot 6 DP 1483, Lot 7 DP 1483,
 Part Section 7 Block I Campbelltown Hundred
 SO 2577, Part Section 8 Block I Campbelltown
 Hundred SO 2577
 Area: 11.6789 ha
 Classification: Freehold



Bluff Hill Land Tenure

5.1.5 Land Occupation

- Southland Mountain Bike Club
- ICC Water Management
- Department of Conservation
- Bluff Environment Charitable Trust

5.1.6 Flora

Sawmilling, burning and exposure to salt-laden winds have all influenced today's vegetation. Forest remnants of rimu, Miro, kamahi and rata along the Glory Track are protected by wind-battered coastal shrubs.

They, in their turn, are replaced in particularly exposed places, by ground-hugging plants more usually associated with subalpine conditions.

The Bluff Hill Reserve represents part of an entire ecological succession from coastal shrub land to podocarp/kamahi forest. The vegetation mosaic evident across Bluff Hill is a result of past burning. This is a fine example of regeneration and the areas of manuka shrub land are likely to revert to manuka-five finger forest, found on other areas on the hill (Bill; 1999).

The vegetation in this area is floristically similar to Stewart Island forests and has limited extent on the mainland. It is therefore important to recognise and protect the remaining areas, which are representative of the pre-human natural landscape character (Bill; 1999).

Bluff Hill Reserve lies within a relatively large area of coastal forest considered to be of national importance. The forest and least disturbed vegetation mosaics occur on the south-west side of the Bluff Hill (within the Bluff Scenic Reserve managed by DOC). Within the Bluff Hill Reserve and other ICC land to the west, manuka mixes predominate. This includes manuka five-finger forest (in gully slopes and depressions) manuka shrubland and Manuka - *Cyathodes juniperina* (prickly mingimingi) shrubland. Other low shrubs frequently present include – mingimingi, *Olearia arborescens kohuhu*, *inaka* and *Hebe elliptica*. Flax is a common inter-shrub species and at the most western edge provides up to 80% cover. Bracken, coastal hard fern and kiokio (palm lead fern) are common ferns. Areas of coastal shrubland are also common (Bill; 1999).

The Bluff Hill Reserve shows disturbance from past stock grazing (both cattle and sheep) and a higher proportion of weedy species – gorse, blackberry, bullabulla, foxglove and flame flower, than the Scenic reserve adjacent that has been protected for a much longer period (Bill; 1999).

The Bluff Hill Reserve forms part of a large area of significant indigenous vegetation and significant habitat for indigenous fauna. This land, along with DOC's Scenic Reserve and the ICC land that surrounds the reserve, make up an exceptional example of regenerating forest showing its successional stages.

Botanically and visually the entire area rates very high. There is, because of the geography of the area, a predominance of intact (relatively undisturbed) subalpine scrub close to sea level. The forest on the south slope (currently included in the scenic reserve) contains one of the largest and most accessible patches of coastal rimu, rata and kamahi forest in Eastern Southland (*Report in ICC file 1.9.14.7.3*).

Below is a list of flora known to be present in the forest remnant of the Bluff Hill and especially in the adjacent Bluff Hill Scenic Reserve. Not all of these species will necessarily be present in Bluff Hill Reserve (Allen et al; 1989; Brian Rance 2002, 2004, 2005; DSIR Biological Survey of Reserves).

Botanical Name	Common Name
<i>*Introduced/Exotic Species.</i>	
<i>Aceana anserinifolia</i>	Bidibidi
<i>Aceana pallida</i>	Bidibidi
<i>Aceana novae-zelandiae</i>	Bidibidi
* <i>Agrostis capillaris</i>	Browntop
<i>Agrostis muscosa</i>	Dwarf grass
* <i>Agrostis stolonifera</i>	Creeping bent
* <i>Aira caryophylllea</i>	Silvery hair grass
* <i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Anaphalis bellidioides</i>	Ever-lasting daisy
<i>Anaphalis (gnaphalium) hookerii</i>	Creeping daisy
* <i>Angelica pachycarpa</i>	Angelica
* <i>Anthoxanthum odoratum</i>	Sweet vernal

<i>Apium prostratum</i>	Native celery	<i>Carex dissita</i>	Sedge
<i>Apodasmia similis</i> (= <i>leptocarpus similis</i>)	Oioi	<i>Carex fretalis</i>	Sedge
<i>Aristotelia serrata</i>	Wineberry	<i>Carex sp.</i>	Cutty grass / sedges
<i>Asplenium bulbiferum</i>	Hen and chicken fern	<i>Carex trifida</i>	Sedge
<i>Asplenium falcatum</i>	Drooping spleenwort	<i>Carex virgata</i>	Sedge
<i>Asplenium flaccidum</i>	Hanging spleenwort	<i>Cardamine unicaulis</i>	Bittercress
<i>Asplenium lyallii</i>	Fern	<i>Carpodetus serratus</i>	Marbleleaf
<i>Asplenium obtusatum</i>	Coastal spleenwort	<i>Cassinia vauvilliersii</i>	Cottonwood
<i>Asplenium polyodon</i>	Fern	* <i>Centuary erythraea</i>	Centuary
<i>Asplenium scleroprium</i>	Fern	<i>Centella uniflora</i>	Herb
<i>Astelia fragrans</i>	Bush flax/bush lily	* <i>Cerastium fontanum</i>	Mouse-ear chickweed
<i>Austrodiera richardii</i> (<i>cortadieia richardii</i>)	Toetoe	* <i>Cerastium glomeratum</i>	Annual mouse- ear chickweed
<i>Bauma tenax</i>	Sedge	<i>Chaeophyllum</i> (<i>oreomyrrhis</i>) sp "coastal"	Herb
* <i>Bellis perennis</i>	Lawn daisy	* <i>Cirsium arvense</i>	Californian thistle
<i>Blechnum banksii</i>	Fern	* <i>Cirsium vulgare</i>	Scotch thistle
<i>Blechnum capense</i>		<i>Clematis paniculata</i>	White flowering clematis
<i>Blechnum chambersii</i>	Fern	<i>Colobanthus meullerii</i>	Herb
<i>Blechnum colensoi</i>	Fern	<i>Coprosma areolata</i>	Small leaved shrub
<i>Blechnum discolour</i>	Crown fern	<i>Coprosma colensoi</i>	Coprosma
<i>Blechnum durum</i>	Fern	<i>Coprosma foetidissima</i>	Stinkwood
<i>Blechnum lanceolatum</i>		<i>Coprosma lucida</i>	Karanga/glossy karamu
<i>Blechnum minus</i>	Swamp kiokio	<i>Coprosma parviflora</i>	Small leaved shrub
<i>Blechnum novae-zelandiae</i>	Kiokio	<i>Coprosma propinqua</i>	Mingimingi
<i>Blechnum procerum</i>	Hard fern	<i>Coprosma repens</i>	Taupata
<i>Brachyglottis rotundifolia</i>	Muttonbird shrub	<i>Coprosma rhamnoides</i>	Coprosma
<i>Callitriche stagnalis</i>	Starwort	<i>Coprosma rigida</i>	Coprosma
<i>Calysteis sylvatica</i>	Great bindweed	<i>Coprosma rotundifolia</i>	Coprosma
<i>Calystegia turgoriorum</i>	Native bindweed	<i>Coprosma tayloriae</i>	Coprosma
<i>Carex appressa</i>	Sedge	<i>Cordyline australis</i>	Cabbage tree
<i>Carex coracea</i>	Cutty grass	<i>Coriaria arborea</i>	Tree tutu
* <i>Carex comans</i>	Sedge		

<i>Coriaria sarmentosa</i>	Tutu	* <i>Euphorbia peplus</i>	Milkweed
<i>Corybas oblongus</i>	Spider orchid	<i>Ficinia nodosa (isolepis nodosus)</i>	Clubrush
<i>Corybas trilobus</i>	Spider orchid	<i>Fuchsia colensoi</i>	Hybrid fuchsia
<i>Cotula coronopifera</i>	Bachelors button	<i>Fuchsia excorticata</i>	Tree fuchsia
<i>Cotula australis</i>	Soldiers button	<i>Fuchsia perscandens</i>	Climbing fuchsia
<i>Cotula sp.</i>		<i>Gahnia sp.</i>	Sedge
<i>Crassula kirkii</i>	Coastal herb	<i>Gastrodia cunninghamii</i>	Black orchid
<i>Crassula moschata</i>	Coastal herb	<i>Gaultheria antipoda</i>	False beech
<i>Ctenopteris heterophylla</i>	Fern	<i>Gaultheria macrostigma</i>	Prostrate shrub
* <i>Cupressus macrocarpa</i>	Macrocarpa	<i>Gentiana saxosa</i>	Shore gentian
<i>Cyathodes empetrifolia</i>	Prostrate shrub	<i>Gnaphalium hookeri</i>	
<i>Cyathodes juniperina</i>	Prickly mingimingi	<i>Gonocarpus aggregatus</i>	Herb
* <i>Cytasus scoparius</i>	Broom	<i>Gonocarpus micranthus</i>	Creeping herb
<i>Dacrydium cupressinum</i>	Rimu	<i>Grammitis billardierii</i>	Strap fern
* <i>Dactylis glomerata</i>	Cocksfoot	<i>Griselinia littoralis</i>	Broadleaf
<i>Dichelachne crinita</i>	Native grass	<i>Gunnera dentata</i>	Creeping herb
* <i>Digitalis purpurea</i>	Foxglove	<i>Gunnera monoica</i>	Creeping herb
<i>Dicksonia squarrosa</i>	Wheki (a tree fern)	* <i>Gunnera tinctora</i>	Chilean rhubarb
<i>Disphyma australe</i>	Native iceplant	<i>Haloragis erecta</i>	Shrub
<i>Dracophyllum longifolium</i>	Inaka / inanga	<i>Hebe elliptica</i>	Kokomuka/ coastal hebe
<i>Drosera binata</i>	Sundew	<i>Hebe salicifolia</i>	Koromiko
<i>Drosera pygmaea</i>	Pygmy sundew	<i>Helichrycum filicaule</i>	Daisy
<i>Drosera spathulata</i>	Sundew	<i>Hieochloa fusca</i>	Holy grass
<i>Earina mucronata</i>	Bamboo orchid	<i>Hierochloe redolens</i>	Holy grass
<i>Elaeocarpus hookeri-anus</i>	Pokaka	<i>Histiopteris incisa</i>	Water fern
<i>Epilobium alsinoides</i>	Willow herb	* <i>Holcus lanatus</i>	Yorkshire fog
<i>Epilobium brunnescens</i>	Willow herb	<i>Hydrocotyle americana</i>	
* <i>Epilobium ciliatum</i>	Willow herb	<i>Hydrocotyle heteromera</i>	Pennywort
<i>Epilobium komarovianum</i>	Willow herb	<i>Hydrocotyle novae-zelandiae</i>	
<i>Epilobium nummularifolia</i>	Willow herb	<i>Hydrocotyle novae-zelandiae var. Montana</i>	Pennywort
<i>Epilobium pendunculare</i>	Willow herb	<i>Hydrocotyle novae-zelandiae var. Novae-zelandiae</i>	Pennywort
<i>Epilobium sp.</i>		<i>Hymenophyllum demissum</i>	Filmy fern
<i>Erechtites minima</i>			
<i>Euchiton (gnaphalium) audax</i>	Cudweed		

<i>Hymenophyllum dilatatum</i>	Filmy ferns	<i>Leptopteris hymenophyllum</i>	Crape fern
<i>Hymenophyllum flabellatum</i>	Filmy fern	<i>Leptospermum scoparium</i>	Manuka
<i>Hymenophyllum minimum</i>	Filmy fern	<i>Leucopogon fraseri</i>	Prostrate shrub
<i>Hymenophyllum multifidum</i>	Filmy fern	<i>Libertia peregrinans</i>	Native iris
<i>Hymenophyllum rarum</i>	Filmy fern	<i>Limosella lineata</i>	Herb
<i>Hymenophyllum revolutum</i>	Filmy ferns	<i>Linum monogynum</i>	Herb
<i>Hymenophyllum sanguim lentum</i>	Filmy ferns	<i>Lobelia (pratia) angulata</i>	Creeping herb
<i>Hypericum pusillum</i>	Native hypericum	* <i>Lotus pedunculatus</i>	Birdsfoot trefoil
* <i>Hypochaeris radicata</i>	Catsear	* <i>Lupinus arboreus</i>	Tree lupin
<i>Hypolepis ambigua</i>	Fern	<i>Luzula banksiana var. Acra</i>	Wood rush
<i>Hypolepis millefolium</i>	Fern	<i>Luzuriaga parviflora</i>	Lantern berry
<i>Hypolepis rufo-barbata</i>	Fern	<i>Lycopodium varium</i>	Club moss
<i>Ileostylis micranthus</i>	Green mistletoe	<i>Lycopodium volubile</i>	Club moss
<i>Isolepis aucklandica</i>	Dwarf slender sedge	<i>Mazus arenarius</i>	Creeping herb
<i>Isolepis cernuus</i>	Coastal slender sedge	<i>Melicitytus lanceolatus</i>	Mahoewao/ narrow-leaved mahoe
<i>Isolepis habrus</i>	Slender sedge	<i>Melicitytus ramiflorus</i>	Mahoe
<i>Isolepis praetextatus</i>	Slender sedge	<i>Metrosideros diffusa</i>	Climbing rata
<i>Isolepis sp.</i>	Slender sedge	<i>Metrosideros umbellata</i>	Southern rata
* <i>Juncus articulatus</i>	Jointed rush	<i>Microlaena avenacea</i>	Bush rice grass
* <i>Juncus bufonus</i>	Toad rush	<i>Microtis oligantha</i>	Dwarf onion orchid
<i>Juncus gregiflorus</i>	Native rush	<i>Microtis unifolia</i>	Onion orchid
<i>Juncus pallidus</i>	Native rush	* <i>Mimulus guttatus</i>	Monkey musk
<i>Juncus pauciflorus</i>	Native rush	* <i>Mimulus moschatus</i>	Musk
<i>Juncus planifolius</i>	Leafy rush	<i>Mosotus pygmea var. Pygmea</i>	Forget-me-not
<i>Juncus pusilla</i>	Dwarf rush	<i>Muehlenbeckia australis</i>	Pohuehue
<i>Kelleria lyallii</i>	Prostrate shrub	<i>Muehlenbeckia complexa</i>	Vine
<i>Lastreopsis hispida</i>	Fern	<i>Myosotis sp.</i>	
* <i>Lepidium didymium</i>	Twin cress	<i>Myosotis rakiura</i>	Forget-me-not
<i>Lepidosperme australe</i>	Four square sedge	<i>Myrsine australis</i>	Red mapou
<i>Leptinella dioica</i>	Creeping daisy	<i>Myrsine divaricata</i>	Weeping mapou
<i>Leptinella traillii ssp. Pulchella</i>	Creeping daisy	<i>Neomyrtus pedunculata</i>	Rohutu
<i>Leptocarpus simplex</i>			

<i>Nertera depressa</i>	Creeping herb	<i>Polystichum vestitum</i>	Prickly shield-fern
<i>Nertera dichondraefolia</i>		<i>Prumnopitys ferruginea</i>	Miro
<i>Nertera setulosa</i>	Herb	* <i>Prunella vulgaris</i>	Selfheal
<i>Nertera villosa</i>	Creeping herb	<i>Pseudognaphalium luteo-album</i>	Jersey cudweed
<i>Nothofagus menziesii</i>	Silver beech	<i>Pseudopanax c olensoi</i> var. <i>Fiordense</i>	Coastal three finger
<i>Olearia arborescens</i>	Tree daisy	<i>Pseudopanax colensoi</i> var. <i>Ternatus</i>	Three finger
<i>Olearia oporina</i>	Titi-a-weta	<i>Pseudopanax crassifolium</i>	Lancewood
<i>Oxybasis glauca</i> ssp. <i>Ambigua</i> (= <i>chenopodium glaucum</i> ssp. <i>Ambiguum</i>)	Goosefoot	<i>Pseudopanax simplex</i>	
<i>Ozothamnus vauvilliersii</i>	Cottonwood	<i>Pseudowintera colorata</i>	Pepper tree or horopito
<i>Paesia scaberula</i>	Pig fern	<i>Pteridium aquilinum</i>	Bracken
<i>Parnettia macrostigma</i>		<i>Pteridium esculentum</i>	Bracken
<i>Parsonsia heterophylla</i>	Native jasmine	<i>Pterostylis</i> sp	Green hooded orchid
<i>Phormium tenax</i>	Flax	<i>Ranunculus glabrifolius</i>	Buttercup
<i>Phymatosorus diversifolium</i>	Hounds tongue fern	<i>Ranunculus membranifolis</i>	Buttercup
<i>Pimelea lyallii</i>		* <i>Ranunculus repens</i>	Creeping buttercup
<i>Pimelea ventosa</i>	Native daphne	<i>Raukawa edgerleyii</i>	Raukawa
* <i>Pinus radiata</i>	Radiata pine	<i>Raukawa simplex</i>	Haumakoroa
<i>Pittosporum comensoi</i>		<i>Ripogonum scandens</i>	Supplejack
<i>Pittosporum eugenoides</i>	Lemonwood or tarata	<i>Rubus australis</i>	Bush lawyer/vine
<i>Pittosporum tenuifolium</i>	Kohuhu	<i>Rubus cissoids</i>	Bush lawyer/vine
* <i>Plantago australis</i>	Hairy plantain	* <i>Rubus fruticosus</i>	Blackberry
* <i>Plantago coronopus</i>	Buck's horn plantain	<i>Rubus schmidelioides</i>	Lawyer vine
<i>Plantago raoulii</i>	Native plantain	<i>Rumex neglectus</i>	Coastal dock
<i>Plantago triandra</i>	Native plantain	* <i>Rumex obtusifolius</i>	Broad dock
* <i>Poa annua</i>	Annual poa	<i>Rumohra adiantiformis</i>	Plastic fern
<i>Poa astonii</i>	Coastal tussock	<i>Rumohra hispida</i>	
<i>Poa cita</i>	Silver tussock	<i>Rytidosperma gracile</i>	Bristle grass
<i>Poa colensoi</i>	Blue tussock	* <i>Sagina procumbens</i>	Pearlwort
<i>Poa laevis</i>	Silver tussock	<i>Samolus repens</i>	Coastal herb
<i>Poa pusilla</i>	Native grass	<i>Schefflera digitata</i>	Pate or seven finger
<i>Podocarpus ferrugineus</i>	Monkey musk		
<i>Podocarpus hallii</i>	Hall's totara		

Schoenus maschalinus	Dwarf sedge
Scirpus nodosus	
Scirpus sp.	
Selliera radicans	Coastal herb
Senecio biserratus	Native groundsel
Senecio glomeratus	Native groundsel
* Senecio jacobaea	Ragwort
Senecio minimus	Fireweed
* Sonchus asper	Prickly sow thistle
Sonchus kirkii	Native sow thistle
* Sonchus oleraceus	Sow thistle
Solanum laciniatum	Poroporo
Suaeda novae-zelandiae	Coastal herb
Stellaria parviflora	Native chickweed
* Stellaria media	Chickweed
Tetragonia implexicomab	Native spinach
Tetragonia trigyna	
Thelymitra longifolia?	Sun orchid
Tmsipteris elongata	Chain fern
Trichomanes venosum	Filmy fern
* Trifolium dubium	Suckling clover
* Trifolium pratense	Red clover
* Trifolium repens	White clover
Triglochin striatum	Arrow rush
* Tropaeolum speciosum	Chilean flame creeper
* Ulex europaeus	Gorse
Uncinia clavata	Hook grass
Uncinia uncinata	Hook grass
Viola cunninghamii	Native violet
Viola filicaulis	Native violet
Weinmannia racemosa	Kamahi

5.1.7 Fauna

Bluff's richest wildlife is coastal. Fur seals and southern right whales, once hunted almost to extinction, are now regular visitors, particularly

in the winter months. Visitors may expect to see a variety of seabirds including Stewart Island shag, white-fronted tern and during the summer months, sooty shearwater (titi), which breed in their thousands on the offshore islands.

Larval cases of the psychid *Reductoderces* n.sp. are numerous on coastal rocks and tree trunks (in the Bluff Hill area). The species is close to *R. aucklandica* from the Subantarctic Auckland Islands, and occurs on Stewart Island and from Fiordland around to Otago Peninsula. Among the many scopariine moths present here, the day flying *Scoparia autochroa* and *S. ergatis* are perhaps most significant. Both are often found above bushline, with the former exclusively so elsewhere (Patrick; 1994).

The shrublands of Bluff Hill have both coastal and upland moth fauna. *Hebe elliptica* is host to the geometrid *Pasiphila charybdis* and the twig borer *Prothelymna niphostrota* with the normally upland *Ericodesma melanosperma* feeding on *Dracophyllum longifolium* foliage.

Shrubs of *Cassinia vauvilliersii* are host to the colourful larvae of the noctuid *Graphania homoscia* and the leaf rolling larvae of a diurnal tortricid *Harmologa petrias*. The latter is a low alpine species, occurring only at sea level in the study area.

Another often alpine species that occurs on Bluff Hill is '*Xanthorhoe' occulta*. Most of the significant areas for non-forest moths on Bluff Hill are contained in scenic reserve (Patrick; 1994).

Green geckos *Heteropholos* sp. have been found on Bluff Hill (DOC; 1987).

Local birdlife includes New Zealand pigeon/Kereru, Tui, Stewart Island Shag, White fronted Tern and Sooty Shearwater/Titi. The South Island Robin has been translocated here.

5.1.8 Amenity Value

Bluff is an area of rich and diverse cultural, natural and human history.

Bluff Hill Reserve is a significant reserve with very high amenity values. Located in a very scenic part of the District, the reserve forms part of an important vegetation mosaic, complemented by the

neighbouring DOC land. The reserve is becoming increasingly popular for its walking track through regenerating coastal forest providing panoramic views of the southern coastline.

Bluff Hill/Motupōhue is an iconic destination for local, national and international visitors. It is a premier site for short stop travellers and provides an access way to multiple walking tracks (including the start and finish of the Te Araroa Walkway) and spectacular views over the Foveaux Straits and mainland Southland.

The top entails car parking and a spiral walkway to the top for more expansive views and interpretive panels. The summit provides a 360 degree lookout point with views of Stewart Island and Southland areas like Foveaux Strait. Panoramic views of Stewart Island contrast with vistas of nearby islets including Dog Island.

Due to exposure to the weather it tends to be windy and so you can sit in the car and look out at the views if you don't want to get out. Other services are located up there to service Bluff. The Bluff Hill Koru Viewing Platform and signs are maintained by ICC Parks and Recreation on behalf of the Bluff Charitable Trust as noted in the Memorandum of Understanding Agreement. An agreement outlining roles and responsibilities is being reviewed and will continue to be updated when required to ensure the best mutual management of the land

5.1.9 Recreational Use

The Bluff Hill Reserve is a valuable recreational asset for Invercargill and the Southland region, providing opportunities for walking, running, mountain biking and nature watching, and offering panoramic views of the southern coastline. This reserve, when viewed in conjunction with the neighbouring scenic reserve managed by DOC, is a significant resource for recreational activities. It provides a starting and finishing point for the Te Araroa Walkway via the tracks on Bluff Hill.

As one of the few accessible hills with a reasonable elevation in the southern coastal area, tracks on this reserve are used for fitness and endurance training. The Millennium Track and part of the Topuni Track run through the Bluff Hill Reserve.

These, along with the Foveaux Walkway and Glory Track provide opportunities for return loop tracks of varied times up to two hours depending on direction and fitness.

A series of cross country and downhill mountain biking tracks run down the northern and southern sections of the reserve. See the ICC Mountain Bike Trails brochure for more information (located at ICC Parks and Recreation Office), or contact SMTB.

Walking tracks are well marked and range from steep climbs to a track able to be negotiated by wheelchair. The walks provide a range of experiences from native forest of rimu, Miro and southern rata, to tough coastal scrub on the rocky shores. See the Bluff Hill/ Motupōhue brochure for more information (located at ICC Parks and Recreation Office).

5.1.10 Policies

5.1.10.1 Classification

Parts of Bluff Hill are classified as Scenic Reserve and, in addition to the rest of the reserve, are managed for preserving as far as possible its natural state of native flora and fauna, while allowing public access for recreational activities, providing that it is not to the detriment of the natural features, flora and fauna.

5.1.10.1.1

Parks and Recreation aims to manage all areas of Bluff Hill under reserve status pursuant to the Reserves Act 1977.

5.1.10.2 Present Management

Bluff Hill Reserve is under the control and management of the ICC Parks and Recreation Division. The Parks and Recreation Division is responsible for the development, maintenance and general administration of the reserve. The water reservoir is managed by ICC Water Management. It is used as a drinking water catchment system.

The Bluff Community Board advises ICC on the particular needs of their community. This board therefore has an interest in the management of the Bluff Hill Reserve and should be advised of any major changes or developments.

DOC manages the large area of conservation land adjacent and to the east of the Bluff Hill Reserve. Management objectives for Bluff Hill Reserve

should take into consideration any potential impacts on this significant neighbouring reserve. The Bluff Hill Reserve forms a part of a large track network on the Bluff Hill. The balance of the tracks are managed by DOC. It is important that the level of management of the tracks in the Bluff Hill Reserve complements the management of other tracks in the area.

The Bluff Hill Reserve forms part of a large area of significant indigenous vegetation and significant habitat for indigenous fauna. This land, along with the DOC's Scenic Reserve and the other ICC land that surrounds the reserve, make up an exceptional example of regenerating forest showing its successional stages.

It is recommended that the ICC owned land to the west of the Bluff Hill Reserve be declared a reserve to preserve this important vegetation mosaic.

5.1.10.2.1

Bluff Hill shall be managed as a Reserve pursuant to the Reserves Act 1977 for the primary purpose of protecting, preserving and enhancing its intrinsic values as a regenerating forest remnant.

5.1.10.2.2

ICC will be in regular communications and collaboration through partnership with iwi and local runanga, as well as key stakeholders and adjoining landowners, when developing and maintaining Bluff Hill.

5.1.10.2.3

The ICC owned Bluff Hill Area to the west of the Bluff Hill Reserve shall be declared a reserve under the Reserves Act 1977 and be incorporated into Bluff Hill Reserve to protect the indigenous values and to preserve this important vegetation mosaic.

5.1.10.2.4

Management of the vegetation within the Bluff Hill Reserve should complement the management of the adjacent Bluff Scenic Reserve.

5.1.10.2.5

Recreational opportunities shall be encouraged where they do not negatively impact on the natural regeneration processes or the historic water races or water bodies.

5.1.10.3 Administration

Much of the success and popularity of the Bluff Hill Reserve is dependent on the close management relationship with DOC. This reserve is part of a large area of land considered significant for its natural and recreational values. Signage, promotional brochures and the management of tracks are just some of the issues requiring consultation and agreement between the two agencies.

5.1.10.3.1

DOC shall be regularly consulted to ensure management of the Bluff Hill Reserve is complementary to the objectives of the neighbouring conservation land.

5.1.10.3.2

ICC will collaborate closely with iwi, stakeholders and the wider public who have an active interest in the management of Bluff Hill when planning for major developments or changes. Where appropriate an Agreement or similar will be established and maintained.

5.1.10.3.3

ICC will consider the Bluff vision and community group/organisation strategic plans when planning for major projects and works on Bluff Hill.

5.1.10.3.4

ICC Water Manager shall be contacted alongside the GM – Leisure and Recreation regarding any proposals for the water reservoir and water races.

5.1.10.4 Mountain biking

Mountain biking is a popular recreational pursuit on the Bluff Hill Reserve. Provided mountain bikes only use the area and tracks designated as mountain biking tracks, there should be no conflict with other reserve users. Adequate signage should be provided.

5.1.10.4.1

Mountain bikes are permitted within the Bluff Hill Reserve on the designated mountain bike tracks only. All bikes are prohibited from using any of the pedestrian tracks within the Bluff Hill Reserve.

5.1.10.4.2

Adequate signage shall be displayed within the Bluff Hill Reserve on the hazards associated with mountain biking.

5.1.11 Future Development

Management of the Bluff Hill Reserve over the next ten years will focus on maintaining and enhancing the natural values of this reserve. Natural regeneration within the reserve shall be encouraged through the control of persistent weed species and pest animals.

ICC is working in collaboration with DOC and Environment Southland to implement plans for wilding conifer elimination.

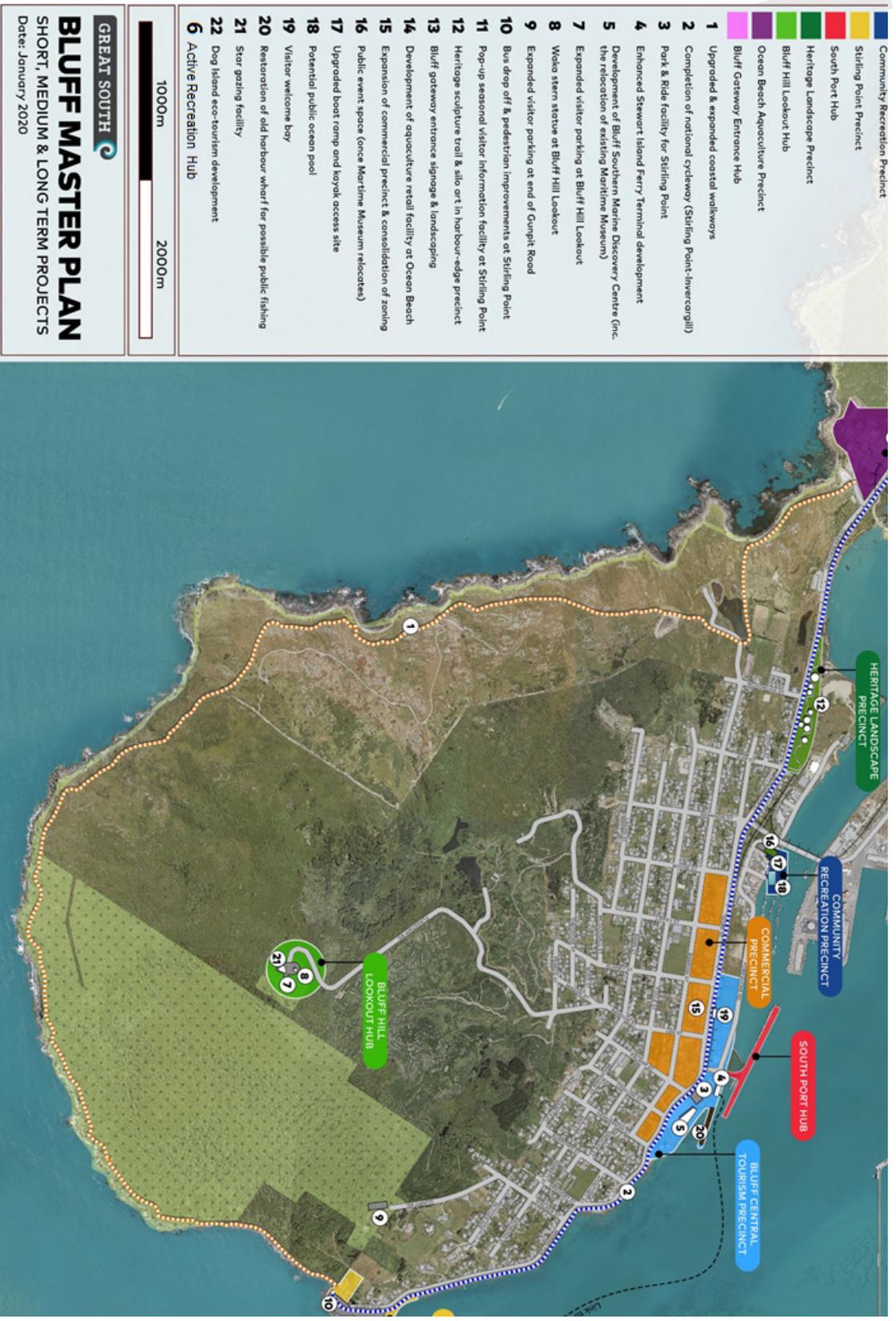
Any plans associated with Regional Development, master planning, tourism and strategic documentation will need to be considered in alignment with Bluff Hill and its activities.

Parks and Recreation supports the potential for further development at the Pearce Street entrance to the Southland Mountain Biking Trails. Development may include improvements to the car park and potential public conveniences as resources and funds permit.

Bluff Tourism Master Planning

Bluff Tourism Master Plan was developed in 2020. It establishes a vision for the future of Bluff. Any developments will need to be in accordance with this Management Plan or by alternative Council resolution.





GREAT SOUTH
BLUFF MASTER PLAN
 SHORT, MEDIUM & LONG TERM PROJECTS
 Date: January 2020

SMTB Master Planning

The SMTB has developed a draft 5 year Master Plan for development at Bluff Hill.

The SMTB see a significant opportunity to develop a range of trails at Bluff to cater for a broader spectrum of riders. Additional trails have the potential to create economic, social, recreational and environmental benefits locally and to the wider region.

Map with key areas shown:

- Proposed Motupōhue / Bluff Hill Mountain Bike Development Zones
- Area 1 – walking track and grade 3, 4, 5 tracks depending on steepness of terrain
- Area 2 – improvements to the lookout sections of trail (link Blue loop to carpark and develop a flow trail from the summit down into Area 3)
- Area 3 – flow trail and easier grade 3-4 trails where terrain permits.

- Area 4 – skills area – highly visible to promote our presence/trail network
- Area 5 – carpark re-development
- Area 6 – ease the grade of existing trail out of car park.
- Area 7 – new green descent from reservoirs down to car park
- Area 8 – improve grade of existing climbing tail

This is conceptual only and any new or redeveloped tracks will require approval of the GM – Leisure and Recreation, Heritage NZ and iwi. Support from the wider community would also be desired. Management focuses on the preservation and enhancement of the ecological, cultural and heritage values of the reserve and therefore will require an understanding that these are not implicated in the development process.



5.2 Bluff Road Quarry Reserve

5.2.1 Introduction

Bluff Road Quarry Reserve is a medium sized wetland reserve located off the Bluff Highway.

5.2.2 Location and Access

Bluff Road Quarry Reserve is located at 1746 Bluff Highway, between Bluff and Invercargill.

Access to the reserve is off the Bluff Highway. Access is difficult as there is no road leading off Bluff Highway to the reserve.

5.2.3 History

The Crown originally acquired this land by way of Proclamation 1698, for the purposes of a gravel pit. In June 1995 the City Council acquired this land from the Crown by way of Transfer 231478.1.

Residents used to use this site as an illegal refuse site and dumped their rubbish.



Aerial of Bluff Road Quarry Reserve



Location of Bluff Road Quarry Reserve

5.2.3.1 Classification and Tenure

Record of Title: SL11A/226
 Legal Description: Section 1 Survey
 Office Plan 12063
 Area: 2.5480ha
 Classification: Nil. *ICC intends to classify this reserve as scenic reserve.*

5.2.4 Flora

Bluff Road Quarry Reserve consists of ponds, flax, toe toe, tussock and other wetland species, including some exotic vegetation.

5.2.5 Fauna

Bluff Road Quarry Reserve attracts wetland species such as waterfowl to the area.

5.2.6 Amenity

Bluff Road Quarry Reserve provides scenic amenity value as a wetland, as well as complimenting Waituna Wetland Project, to the residents of Bluff and Invercargill.

5.2.7 General Use

As there is no formed access, it is tricky to access, and therefore has no recreation use but is instead more valued as an aesthetic value for passers by, including Te Araroa Trail and Bluff to Invercargill Walkway/Cycleway.

5.2.8 Policies

5.2.8.1 To return as much of this site as possible back to its natural environment through the Environmental Planting Plan.

5.2.8.2 ICC intends to classify this reserve as scenic reserve.

5.2.8.3 Plant and Animal Pest Control will be increasingly desirable in Bluff Road Quarry Reserve as ecological values are restored.

5.3 Grant Road Reserve (Scenic)

5.3.1 Introduction

Grant Road Reserve is a medium sized remnant that is part of a series of Otatara forest remnants. Forest composition is made up of regenerating bush, predominantly totara.

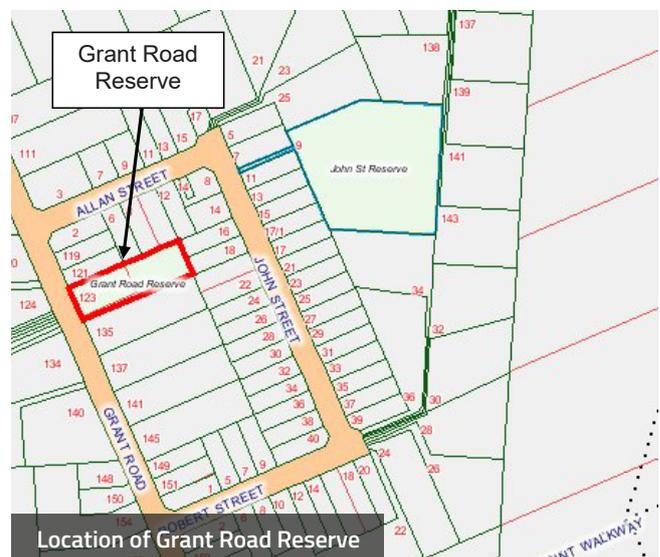
This scenic reserve is largely forested, though it does provide visitors with an open grassed area along the road frontage for picnicking and recreational activities

5.3.2 Location and Access

Grant Road Reserve is located at 123 Grant Road, Otatara.

Pedestrian access to the reserve is off Grant Road. Visitors can park their vehicles outside the front of the reserve on the roadside. The barrier along the front of the reserve ensures visitors can only access the reserve on foot.

Within Otatara, Grant Road Reserve is bounded by residential housing. A number of these properties contain forest remnants. John Street Reserve is nearby to the east.



5.3.3 History

In 1962 Lot 12 DP 4566 was vested in the Southland County Council pursuant to Section 44, Counties Amendment Act 1961, to be held as a reserve set apart for the same purposes subject to the Reserves and Domains Act 1953 (GN 183101).

In 1964 the reserve was vested in fee simple to the Southland County Council. It was to be a reserve for recreation purposes subject to the Reserves and Domains Act 1953.

In 1986 the Southland County Council decided to revoke the reservation status because the reserve was too small and because of its proximity to the John Street Playground.

The Minister of Lands revoked the reservation by NZ Gazette 1986 page 1498 (GN 129050.1) and further declared that the said land may be disposed of by the Southland County Council at current market value the proceeds of any such sale to be paid into the ICC's Reserves account such

moneys to be used and applies in or towards the improvement of other reserves under the control of the ICC or in or towards the purchase of other lands for reserves.

There were plans to sell the reserve land as a residential section.

Although the County Council resolved to revoke the reservation status and dispose of the land, the process was never initiated. This matter was considered by the Otatara Community Board, at its meeting on 14 August 1991. The Board also resolved that the Grant Road Reserve be disposed of with the funds, so derived, to be used for the purchase of other reserve land in Otatara, or to be used for the development of existing reserve land in the Otatara area.

The land was transferred to the ICC by Transmission 206616.1 in 1993.

Updated to Scenic Reserve Classification in 2017.



Cabbage trees and flax at Grant Road Reserve

5.3.4 Classification and Tenure

Classification: Scenic Reserve

Legal Description:

Sections 132 and 133 Block XX

Invercargill Hundred

Area: 0.3035 hectares

Record of Title: SLB1/1109

Subject to: Reserves Act 1977

5.3.5 Flora

Grant Road Reserve is a medium sized discontinuous shape and part of a semi continuous forest landscape. The front portion of Grant Road Reserve contains an open space of grass.

Surrounding the grassy area is a diversity of totara-mixed podocarp forest.

Future development includes restoration work and weed control to preserve the intrinsic and natural values within the reserve. It is hoped to eventually become a scenic reserve, where there will be more preservation of the reserve in the future. Surrounding the grassy area is a diversity of totara-mixed podocarp forest.

Future development includes restoration work and weed control to preserve the intrinsic and natural values within the reserve. It is hoped to eventually become a scenic reserve, where there will be more preservation of the reserve in the future.

Botanical Name

Common Name

**Introduced/Exotic Species.*

<i>Aristotelia serrata</i>	Wineberry
<i>Asplenium bulbiferum</i>	Hen and chicken fern
<i>Astelia fragrans</i>	Bush Flax
* <i>Berberis darwinii</i>	Darwin's barberry
<i>Blechnum discolor</i>	Crown Fern
<i>Blechnum sp "brown scale"</i>	Common Hard Fern
<i>Coprosma lucida</i>	Shiny Karamu
<i>Coprosma propinqua</i>	Mingimingi
* <i>Cotoneaster siminsii</i>	Cotoneaster
* <i>Crateagus monogymna</i>	Hawthorn
* <i>Crocsmia x crocosmiiflora</i>	Montbretia
<i>Dacrycarpus dacrydioides</i>	Kahikatea
<i>Dacrydium cupressinum</i>	Rimu
* <i>Daphne laureola</i>	Spurge-laurel
<i>Dicksonia fibrosa</i>	Ponga
<i>Fuchsia excorticata</i>	NZ Tree Fuschia
* <i>Galeobdolon luteum</i>	Aluminium Creeper



Grant Road Reserve

<i>Griselinia littoralis</i>	Broadleaf
<i>Muehlenbeckia australis</i>	Pohuehue
* <i>Mycelis muralis</i>	Wall's lettuce
<i>Myrsine australis</i>	Red Mapou
<i>Phymatosorus diversifolius</i>	Hounds tongue fern/ Kowaowao
<i>Pittosporum eugenoides</i>	Lemonwood
<i>Pittosporum tenuifolium ssp colensoi</i>	Kohuhu/ Black Mapou
<i>Plagianthus regius</i>	Ribbonwood
<i>Podocarpus totara</i>	Totara
<i>Polystichum vestitum</i>	Prickly Shield Fern
<i>Pteridium esculentum</i>	Bracken
* <i>Ribes sanguineum</i>	Flowering Currant
* <i>Rubus fruticosus</i>	Blackberry
* <i>Sambucus nigra</i>	Elderberry
* <i>Senecio jacobaea</i>	Ragwort
* <i>Solanum dulcamara</i>	Bittersweet
* <i>Tropaeolum speciosum</i>	Flame flower
<i>Weinmannia racemosa</i>	Kamahi

5.3.6 Pest Plants

Within the reserve, there are a high number of weed species including: Blackberry, elderberry, pohuehue, bittersweet, flame flower, aluminium creeper, flowering currant, spurge-laurel, Darwin's barberry, walls lettuce, ragwort, hawthorn, montbretia and cotoneaster.

5.3.7 Fauna

The Otatara area supports many endemic forest birds (bellbirds (*Anthornis melanura*), tui (*Prosthemadera novaeseelandiae*), fantails (*Rhipidura fuliginosa*), greywarblers (*Gerygone igata*) and silvereyes (*Zosterops lateralis*)), as well as nationally threatened species (e.g. fern bird (*Bowdleria punctata*) and wood pigeons (*Hemiphaga novaeseelandiae*)). These are likely to be present at Grant Road Reserve

5.3.8 Amenity Value

Grant Road Reserve is highly visible from Grant

Road. It provides a substantial area of open space through an opening in the vegetation along the front. This offers visual relief for neighbouring properties and for people travelling past the reserve.

Grant Road Reserve is appreciated for its scenic value, as this remnant contributes to the significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area that are considered to be nationally important.

5.3.9 Recreational Use

The grassed area at Grant Road Reserve becomes an open space for public use, enjoyment and recreation at any time. Due to the small size of the reserve there are no formed tracks through the forest or any other part of the reserve.

5.3.10 Policies

5.3.10.1 Trees and Vegetation

Policy:

5.3.10.1.1 ICC intends to encourage the growth of native vegetation at Grant Road Reserve. The grassed clearing will be phased out by staged re-vegetation plantings of native species *as per the Environmental Planting Plan*.

5.4 Greenpoint Domain Recreation Reserve (Recreation)

5.4.1 Introduction

Greenpoint Domain Recreation Reserve is a large sized coastal shrubland that provides a walkway amongst grasses, flax and cabbage trees, leading to a viewpoint at the edge point of the coastline looking over historic shipwrecks.

5.4.2 Location

Greenpoint Domain Recreation Reserve is located at 2392 Bluff Highway, approximately 27 kilometres south of Invercargill.

5.4.3 Access

The reserve can be accessed from State Highway 1 through the existing entrance at the north end of the reserve. Car parking is available within the reserve for vehicles.

5.4.4 Adjoining Land Use

The reserve is bounded by State Highway 1 to the west and Bluff Harbour to the east. The

north end is bordered by a lagoon, while the land to the south is a private property used for the grazing of stock.

The reserve is divided, east from west, by the main trunk railway line running north-south between Invercargill and Bluff.

Greenpoint Cemetery is located almost opposite the reserve on the other side of the State Highway.

5.4.5 History

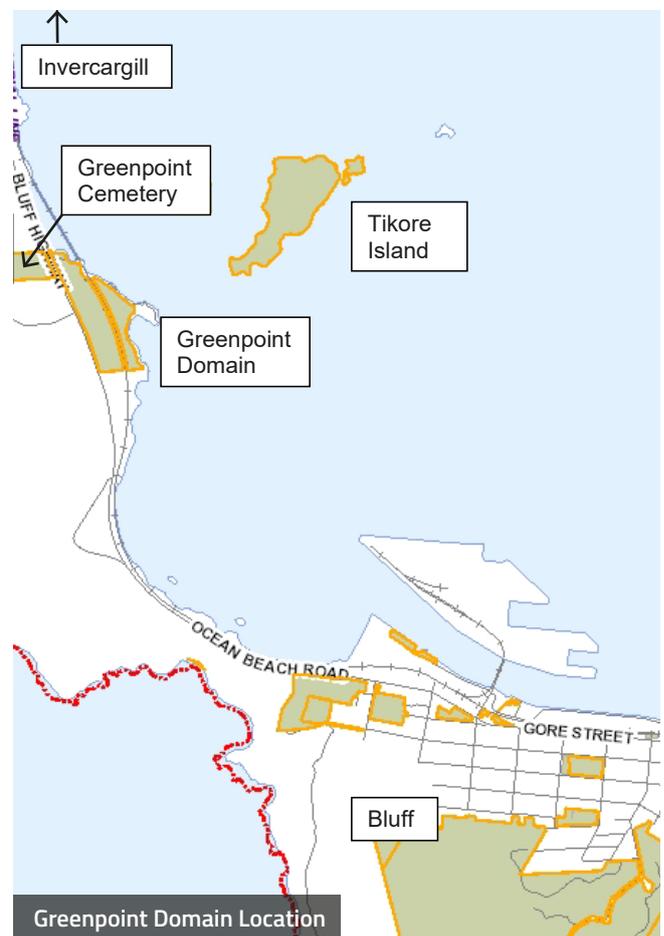
Greenpoint Domain was gazetted as recreation reserve in 1981.

A railway station was once sited to the south of the reserve near where the present day Greenpoint Yacht Club is located, but the station no longer exists and the passenger train between Bluff and Invercargill no longer runs.

Greenpoint Recreation Reserve itself does not have any significant European history, but the waters surrounding the point are rich with the maritime history of Bluff Harbour.

A Greenpoint Domain Landscape Development Concept Plan was developed in 1996 by Corson Associates for the coastal portion of the Domain. It entailed the entrance and carpark, lagoon, railway causeway, regeneration of native plant cover, picnic area and paddock development.

In 2002 an amenities grant of \$180,000 was approved by the Community Trust of Southland which contributed towards plantings, labour, track design and construction, materials, car park furniture and gates.



Shipwreck Bay

Shipwreck Bay, located immediately to the south of the Greenpoint, is most notable for its historic value, where once proud veterans of the Bluff oyster and fishing fleets have been scuttled; with some ships dating back as early as the 1870's.

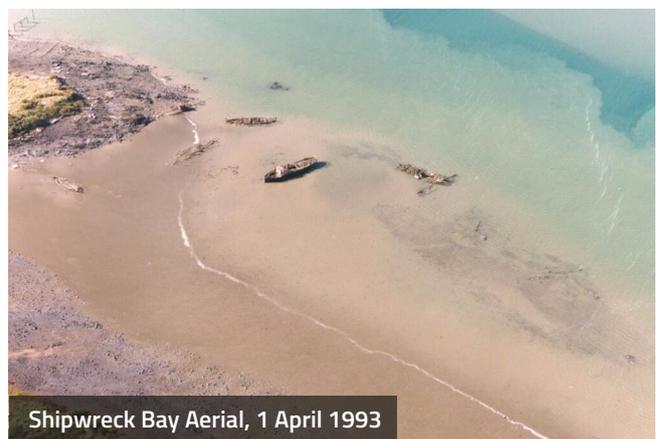
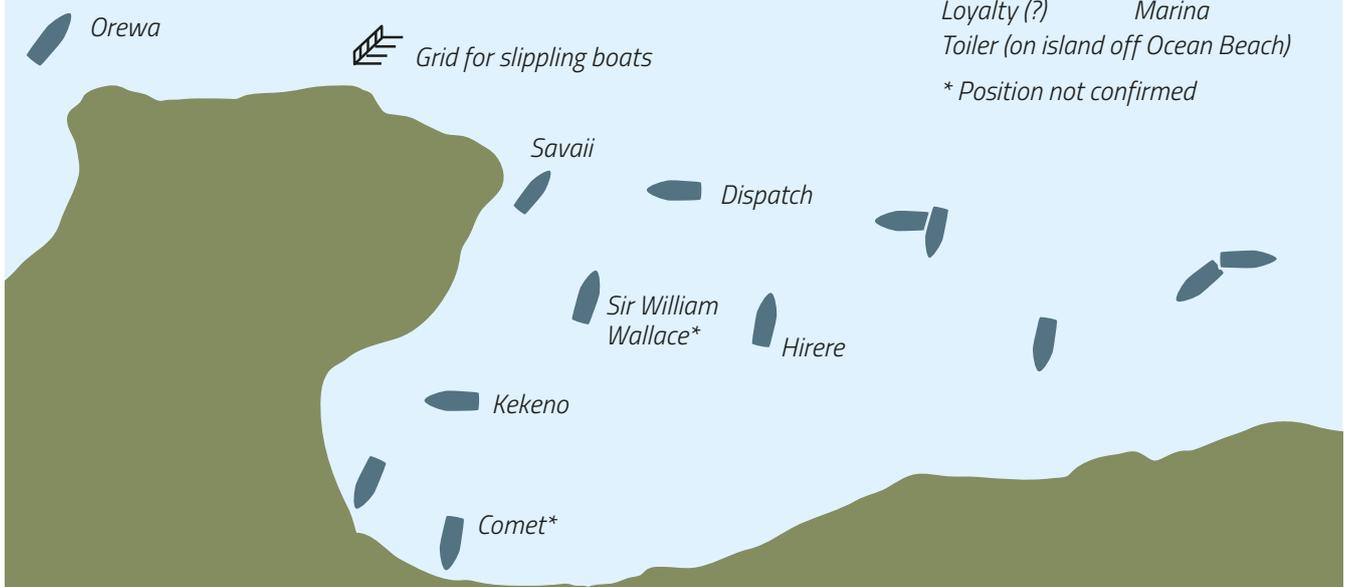
Redundant ships were driven up onto the mudflats at high tide where they were left to wither away. Many of the wrecks are still visible today and at low tide these hulls can be clearly seen.

The following details outline a brief history of some of the ships present in the Bay:

Kekeno

Kekeno was built in Auckland for the New Zealand Government as a training vessel (fore and rigged schooner). Originally launched as *Kohimarama*, it was later renamed *Kekeno* (fur seal) when it began service at Bluff in 1882. In 1904 a six-horsepower steam engine was installed and it ran as a commercial sealing ship until its last voyage around 1947-48. It was beached at Shipwreck Bay in December 1955.

Location of ships in Shipwreck Bay:



Orewa

Orewa was built in Auckland in 1898 as a coastal steamer. It was sold to H&N Roderique in Bluff in 1939 and used as an oyster boat. Its retirement date is undocumented.

Dispatch

Dispatch was a steamer built in Sydney in 1883 and arrived in Bluff in 1889.

It was used for fishing, ferrying between Bluff and Stewart Island (1890-92), and oystering.

Dispatch was beached at Greenpoint in the late 1940's/early 50's. It may have also had a period with the Bluff Harbour Board.

Savaii

Savaii was built in Samoa in 1896 and used in the inter-war years between the first and second Samoan Civil Wars. It joined the Bluff oyster fleet in 1925. It was also used to carry Māori to and from the Titi Islands for the mutton-bird harvest. *Savaii* was scuttled on 10 August 1949.

Loyalty

Loyalty was built in Sydney in 1905 although some sources say it was built in the Pacific Islands.

Loyalty ran as a ferry in Wellington until 1906 when it was sold to the Bluff Fish and Oyster Co.

Between 1923 and 1925 *Loyalty* was owned by a number of people including FC Smith, RA Georgeson and Pasco Bros.

Loyalty was accidentally sunk by explosives on 15 September 1925 and was subsequently

towed ashore at Greenpoint or near the western entrance to the old wharf where it was stripped of gear and the hull left to decay.

Hirere

Hirere commenced its life in Auckland 1896, where it operated as a tug and passenger ferry in Northland. It then joined the Bluff oyster fleet. Although the stern has collapsed, remnants of the wheelhouse can still be seen.

Miro

Completed by Bailey and Lowe as an auxiliary ketch, *Miro* must be one of the last commercial sailing vessels to be built in New Zealand (built in Auckland, 1925). It was employed in carrying explosives until 1948 when it was converted for fishing and, in 1964, it made its way south and was used for oystering. It was decommissioned in the late 1990's after attempts to restore.

Rita

Built in Auckland, 1898, *Rita* started its role in the Bluff fishing scene in 1906. *Rita* managed to survive the harsh conditions, its three skinned kauri hold making it a solid vessel in navigating the southern waters for over a hundred years. After multiple refits and refurbishments, *Rita* retired in 2010 at 112 years old.

Star II or Taratahi

This rusting hull was once a Norwegian whale chaser (built in Norway, pre 1912) working from Alaska to Antarctica between 1912 and the 1920's. It was later used to ship fresh oysters to Wellington and Auckland in saltwater tanks.



Kekeno (front) and Hirere, 21 August 1976



Savaii (front) and Dispatch, August 1946

Sir William Wallace

This wooden steamer (built in Sydney 1891) fished out of Napier before it joined the Bluff oyster fishing fleet under the Rakiura Oyster Company Limited in 1936. By 1951 it was considered 'dismantled and derelict'.

General History

On 16 October 1991 the development of Greenpoint Walkway Project was one of nine projects passed in resolution by ICC Community Services Committee that should be undertaken, if they were accepted as worthy projects by the NZ Employment Services. The employment services had to gauge whether the projects would benefit the community. If so it accepted them as community task force schemes.

In 1994 part Section 52 Block II Campbelltown Hundred, situated between the railway line and SH1, excluding an access strip along the northern boundary, was exchanged for part Section 12 Block II Campbelltown Hundred between the railway and the coast.

Greenpoint Domain track and associated car parks were completed in 2001. The track was officially opened on 7 October 2001. It was funded by Community Trust of Southland.

In September 2001 tenders were called to lease a portion of land.

An Amenities Grant was given in 2002 from Community Trust of Southland.

The construction of the stone entranceway was underway in 2004. Signage, planting, inter-

pretation board and picnic area have all been constructed as well.

5.4.5 Classification and Tenure

5.4.5.1 Classification

Greenpoint Domain Recreation Reserve is classified as recreation reserve pursuant to Section 17 of the Reserves Act 1977. It shall be managed in accordance with this classification. *ICC intends on changing classification to scenic reserve.*

5.4.5.2 Tenure and Area

The total area of is **12.9714** hectares. The tenure is as follows:

Record of Title: Nil *ICC intends on shifting land to ICC ownership and raising title*

Legal Description: Part 52 Block IV Campbelltown Hundred

Area: 12.9714 ha

Land held in the name of: Her Majesty the Queen

Acquired by NZ Gazette Notice 1913, page 3639; Classified as reserve for recreation purposes subject to the Reserves Act 1977 by NZ Gazette Notice 1981, page 2335 (GN 075036.1). Located on a Limited Access Road (GN 066755.1)

5.4.5.3 Land Occupation

Grazing Lease

5.4.6 Amenity Value

There are panoramic views from the highway over the site and across Bluff Harbour and Tikore Island.

5.4.7 Vegetation

Land between the railway line and SH1:



Hirere hulk, 1977



Savaii, 20 May 1977

This section is predominantly covered in low cut grass showing obvious signs of activity and maintenance. The road boundary is marked with plantings of pines and gorse, which have most probably grown from naturalised seedlings. The railway boundary is heavily vegetated with flax bushes which hide the railway tracks, except at the northern end of the property where there is a gap in the flax row. A lagoon is located at the northern end of the reserve causing the land at this end to be relatively damp. Large clusters of flax and gorse dominate here, with the sporadic occurrence of Manuka.

The southern boundary, bordered by private property, is heavily vegetated with gorse. At this end the ground is comparatively higher, and slopes gradually down towards the lagoon at the north. The elevation of the land makes crossing the railway tracks at the southern end difficult, but access across the tracks can be gained at the northern end where the ground is level with the railway tracks.

Coastal, between Bluff Harbour and the Railway Line:

The coastal portion of the reserve is vegetated with gorse, flax, Manuka and cabbage trees showing little sign of any recent human intervention. Thus it provides a good contrast to the land west of the railway line. The water table is relatively high, limiting access to the beaches especially at high tide. In most cases the bush is thick and impenetrable, which also hinders access to the surrounding beaches. The natural vegetation is showing good regenerative qualities and the cabbage trees are fine specimens contrasting well against the flat landscape of the harbour and its surroundings.

Flax dominated the vegetation along the shoreline. The beach is rocky and at high tide it is almost non-existent as the water meets with the vegetation along the reserve's coast. A small peninsular hooks out into the harbour, forming a bay.



5.4.8 General Park Use

Greenpoint Domain Recreation Reserve is used as a public reserve for walking/running along the track, as a picnic area, and for its historic viewpoints of the shipwrecks.

5.4.9 Policies

5.4.9.1 Land Use Considerations

5.4.9.1.1 Iwi Consultation

As a culturally significant site, located adjacent to Bluff Harbour, Greenpoint Domain holds strong cultural and traditional significance to local iwi. It is important that these values are recognised in the management of the Domain.

5.4.9.1.2 Natural Resource Conservation

The conservation of the coastal portion of the reserve should be of a high priority in the management of the reserve. Measures shall be taken to ensure that the natural and physical resources of the reserve are given maximum protection, in accordance with the resources available.

The preservation of the scenic qualities of the reserve (e.g. the vistas of the coast and harbour) are important in the maintenance and enhancement of the area.

It is fair to say that Greenpoint Domain Recreation Reserve is significant to local people and visitors. Its recreational and scenic values are recognised assets and should be conserved and protected for the benefit of present and future users. Resources within the reserve, such as streams, surrounding harbour waters, historical and archaeological remains such as ship wrecks, land, air, open space, vegetation and wildlife, should be maintained and conserved for the enjoyment of all users.

Due to the high value placed on the retention of the natural and physical resources within the reserve, development and use should be controlled and guided at the authority of the GM – Leisure and Recreation.

The development of structures and facilities within the reserve should be kept to a minimum so that that landscape and other resources are not compromised. However, if a development is essential to enhance the experience for users

and for the protection of the site, provision should be given.

5.4.9.1.3 Land between railway line and SH1

To continue vegetation controls (including native forest) that ensure the retention of the reserve's vistas to the coast and harbour and provide protection of the coastal portion of the reserve from adverse human activity that may occur along SH1.

5.4.9.1.4 Development

To provide facilities that will enhance the educational experience of the reserve without compromising its intrinsic values.

5.4.9.1.5 Vehicle Access

Policies:

5.4.9.1.5.1

Vehicular access to Greenpoint Domain Recreation Reserve shall be restricted to one entrance off SH1.

5.4.9.1.5.2

Consent from Transit New Zealand must be sought to open any additional access ways.

5.4.9.1.6 Indigenous Fauna

Many birds, fish and insects are dependent on the reserve and its surrounding waters as their habitat. Protecting and conserving reserve resources should ensure survival for the indigenous fauna populations.

Policy:

5.4.9.1.6.1

To protect, conserve and encourage the presence of all indigenous invertebrates, aquatic life and bird species within the reserve.

5.4.9.1.7 Structures

Policies:

5.4.9.1.7.1

ICC will consult with Environment Southland on any proposed structures that may extend into the harbour.

5.4.9.1.7.2

Ground water levels can cause problems with effluent disposal. Therefore it is necessary to ensure that effluence cannot make its way into waters in the reserve.

5.4.9.1.7.3

Before toilet facilities are installed, a plan showing their siting and method of disposal shall be prepared and submitted to the relevant authority for approval, in collaboration with local runanga and Environment Southland.

5.4.9.1.7.4

Any potential public convenience development will be directed through the ICC Public Conveniences Asset Management Plan.

5.4.9.1.8 Leases

The area of the reserve adjacent to SH1 is currently leased until *30 Sep 2022*.

Activities carried out on this land have minimal impact on native vegetation while controlling the growth of exotic species.

Leasing of the coastal portion of the reserve should not be permitted as it will compromise the management objectives and policies already noted in this management plan.

Parks and Recreation Manager intends to reduce the leased area through an amendment of the lease from 2022 so staff can gradually stage revegetation.

Policy:**5.4.9.1.8.1**

To allow the continuation of current leasing practises of the land adjacent to State Highway 1, provided that the activity carried out on leases land does not compromise management objectives and policies. The coastal portion of the reserve is not to be leased.

5.4.9.1.8.2

The leased area will be reduced from 2022 to allow for revegetation plantings.

5.4.9.1.9 Classification

While Greenpoint Domain is presently classified as Recreation Reserve, it is foreshadowed that as a consequence of this Management Plan, application shall be made for the area to be classified as a Scenic Reserve.

This would not inhibit use of the reserve but would recognise the importance of the preservation of the vegetation to the local community.

ICC will apply for a transfer of ownership from the Minister of Conservation to ICC and raising a title for Greenpoint Domain to acknowledge it in conjunction with the classification change.

Objectives:

- *To protect, preserve and enhance the intrinsic values of Greenpoint Domain.*
- *To apply (to the Minister of Conservation if required, or as delegated authority once transfer of ownership has been undertaken) to have Greenpoint Domain classified as Scenic Reserve as defined in Section 19 of the Reserves Act 1977.*
- *To apply to the Minister of Conservation for a transfer of ownership.*

Policies:**5.4.9.1.9.1**

Greenpoint Domain will be managed as a Recreation Reserve pursuant to section 17 of the Reserves Act 1977.

5.4.9.1.9.2

ICC aims to transfer ownership and to manage Greenpoint Domain as a Scenic Reserve pursuant to Section 19 of the Reserves Act 1977. A request will be made to the Minister/ Ngai Tahu to have ownership transferred from the Minister of Conservation to ICC and have classification changed as delegated authority to Scenic Reserve as defined in Section 19 of the Reserves Act 1977. A title will be raised at the same time.

5.4.10 Future Development

ICC plans to redirect a portion of the Te Araroa Trail over this land and begin the job of returning it to native vegetation as per the Environmental Planting Plan.

A landscape plan for this space will be developed to incorporate this as well as potential recreational picnicking spaces.

5.5 Joeys Island (Scenic)**5.5.1 Introduction**

Joeys Island is considered to be a valuable island reserve both botanically and scenically. It is a small narrow island on a flat gravel bar within an estuarine bay. The island is located just south

of the extensive Awarua Wetland area which contains unique plant communities and fauna.

5.5.2 Location and Access

Joeys Island is situated on the northeast arm of the Bluff Harbour between Tiwai Point and the mainland, in Awarua Bay. The island is low lying and becomes partly submerged at high tide. Pedestrian access to the island is possible at low tide from the mainland, or alternatively visitors can access the island by boat.

5.5.3 History

In about 1838 an American called John Davis arrived in Tiwai as the first European settler. Davis married a Māori and their son, Joseph, was baptised by Bishop Selwyn during his visit to Bluff in 1844.

Joseph grew up to help J T Thomson with his survey of the Oreti Estuary. At the entrance to Awarua Bay, Joey's Island is thought to be named after Joseph.

There is evidence of old camps and huts on the island, indicating there has been some human activity on the island in the past.

A Gazette Notice in 1969 registered the Bluff Borough Council to control and manage the re-

serve as a reserve for Scenic Purposes. In 1981 by Notice in New Zealand gazette 1981 page 2797 the reserve was classified by the Commissioner of Crown Lands as a reserve for scenic purposes.

Ownership of this reserve remains with the Crown, which has in turn appointed the ICC to control and manage the reserve.

A fire which burned 1250 ha of the Awarua Wetland in late October 2005 also damaged vegetation on Joeys Island.

5.5.4 Classification and Tenure

Classification: Scenic Reserve s.19 (1) (b)

Legal Description: Section 12 Block XII Campbelltown Hundred

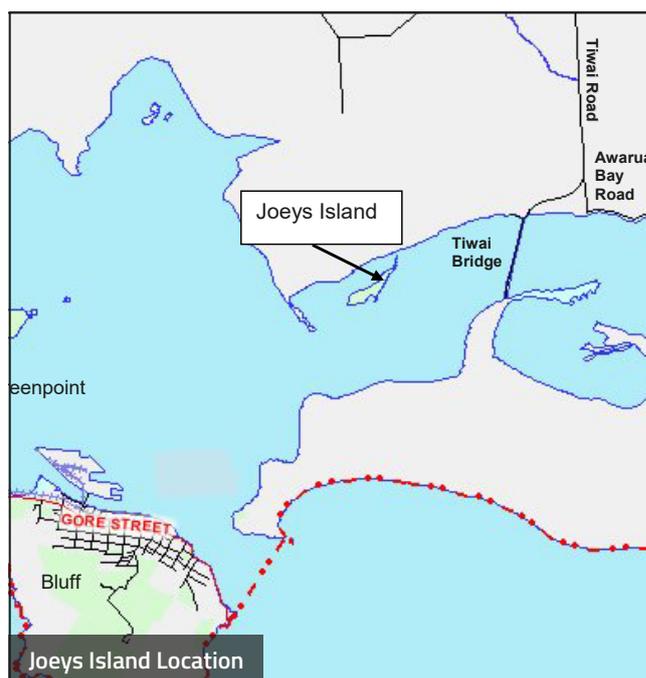
Area: 11.4324 hectares

Record of Title: Nil – pursuant to Gazette Notice 235016

Subject to: Reserves Act 1977

5.5.5 Flora

Prior to the fire in 2005, flora was considered to be a remarkable mosaic of vegetation types. The Island was well covered with native vegetation with the dominant trees being Hall's totara.



Flora can be described as coastal turf communities, as well as red tussock, shrub and totara stands which are intact.

Below is a list of flora that was known to be present on Joeys Island (Allen et al, 1989).

Botanical Name	Common Name	
<i>*Introduced/Exotic Species.</i>		
<i>Aceana sp.</i>	Bidibidi	
* <i>Agrostis tenuis</i>	Browntop	
<i>Apium australe</i>	NZ Celery	
<i>Blechnum capense</i>	Kiokio fern	
<i>Blechnum pennamarina</i>	Alpine hard fern	
* <i>Cerastium glomeratum</i>	Sticky chickweed	
<i>Chionochloa rubra</i>	Red tussock	
* <i>Cirsium arvense</i>	Californian thistle	
<i>Colobanthus spp.</i>		
<i>Coprosma areolata</i>	Small leaved shrub	
<i>Coprosma propinqua</i>	Mingimingi	
<i>Cordyline australis</i>	Cabbage Tree	
<i>Cyathodes fraseri</i>	shrub	
<i>Cyathodes juniperina</i>	Prickly mingimingi	
<i>Erechtites minima</i>	Coastal burnweed	
<i>Galium propinquim</i>	mawe	
<i>Gentiana saxosa</i>	Shore gentian	
<i>Hebe elliptica</i>	Kokomuka	
<i>Helichrysum filicaule</i>	Sub-alpine herb	
<i>Hierochlce redolens</i>	Holy Grass	
* <i>Holcus lanatus</i>	Yorkshire fog	
<i>Hymenanchera alpina</i>	Evergreen woody shrub	
* <i>Hypochaeris radicata</i>	Catsear	
<i>Leptocarpus simplex</i>	Jointed rush	
<i>Leptospermum scoparium</i>	Manuka	
* <i>Lotus corniculatus</i>	Bird's-foot- Trefoil	
<i>Muelenbeckia complexa</i>	Pohuehue	
<i>Myrsine australis</i>	Mapou	
<i>Parsonsia heterophylla</i>	NZ Jasmine or kaihua	
<i>Pernettya macrostigma</i>	Chamaephytic shrub	
<i>Phormium tenax</i>	Flax	
<i>Pimelea prostrata</i>	NZ Daphne	
<i>Plagianthus divaricatus</i>	Shore Ribbonwood	
<i>Poa laevis</i>	Silver tussock	
<i>Podocarpus hallii</i>	Hall's totara	
<i>Polystichum vestitum</i>	Prickly shield-fern	
* <i>Prunella vulgaris</i>	Self heal	
<i>Pteridium aquilinum</i>	Bracken	
<i>Rubus schmidelioides</i>	Bush lawyer	
* <i>Rumex acetosella</i>	Sorrel	
* <i>Rumex crispus</i>	Curled dock	
<i>Salicornia australis</i>	Chicken claw	
* <i>Sambucus nigra</i>	Elderberry	
<i>Samolus repens</i>	Creeping Brookweed	
<i>Schoenus nitens</i>	Shiny bog-sedge	
<i>Scirpus nodosus</i>	Sedge	
* <i>Sedum acre</i>	Goldmoss Stonecrop	
<i>Selliera radicans</i>	Creeping herbaceous plant	
<i>Senecio biserratus</i>	Jagged fireweed	
* <i>Senecio jacobaea</i>	Ragwort	
<i>Senecio wairauensis</i>	Mountain fireweed	
<i>Stellaria parviflora</i>	Dicot Herb	
<i>Tillaea moschata</i>	Vascula Plant	
* <i>Ulex europaeus</i>	Gorse	

Pest plants from the list (*) will need to be monitored and controlled to keep them from spreading.

5.5.6 Fauna

Very little is known of the fauna present on Joeys Island. The estuarine bay may provide a habitat for wetland species, shore birds and waders.

Bird species known to visit estuaries in the Waituna Ecological District include: Far-Eastern Curlew, Golden Plover, Caspian Tern, White-Fronted Tern, Black Billed Gull, Grey Teal, Grey Duck, Paradise Shelduck, Canada Geese and New Zealand Dotterel. These species may also be present on Joeys Island.

In the remaining forest remnants Brown Creeper and Yellow-breasted Tit may be present.

5.5.7 Amenity Value

Joeys Island provides scenic amenity to the Awarua Harbour and is very important in terms of its botanical value. These values should be protected as a representation of the environment that would have existed in the past.

5.5.8 Recreational Use

Due to accessibility issues, Joeys Island offers minimal recreational use.

5.5.9 Policies

5.5.9.1 Access into and through Reserves

Visitors have restricted access to the Island because of fluctuating tide levels. Hence, pedestrian access is only possible at low tide.

Policy:

5.5.9.1.1 Pedestrian access is only possible at low tide. Alternatively, visitors can access the island by

boat. Priority will be given to the protection of the natural resource.

5.5.9.2 General Policies

5.5.9.2.1 *To return as much of this site as possible back to its natural environment through the Environmental Planting Plan.*

5.5.9.2.2 *Plant and Animal Pest Control will be increasingly desirable in Joeys Island as ecological values are restored.*

5.6 John Street Reserve (Scenic)

5.6.1 Introduction

John Street Reserve is a medium sized reserve that is part of a series of forest remnants in the Otatarata area.

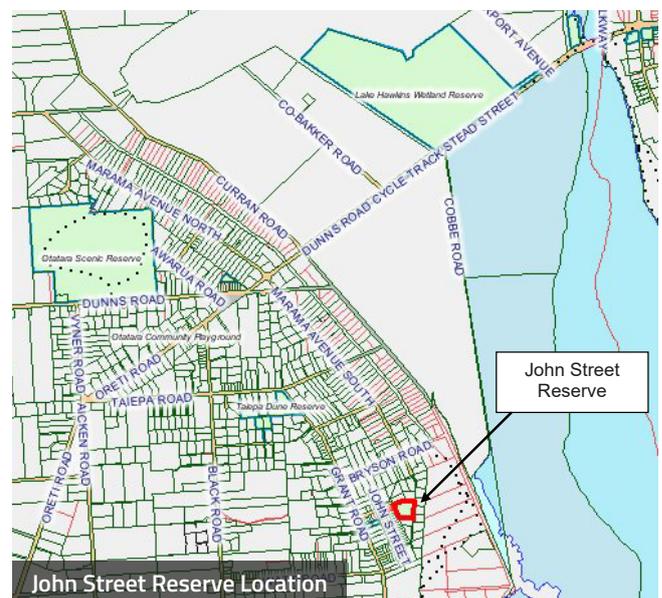
Forest composition is made up of regenerating bush, predominantly totara, and pittosporum plantings.

This scenic reserve provides visitors to the area with swings and a seesaw, and an open grassed space for picnics and recreational activities.

5.6.2 Location and Access

John Street Reserve is located at John Street, Otatarata, approximately six kilometres south of Invercargill.

The reserve is bordered on all sides by residential properties. Several properties have forest



immediately adjoining the reserve. Just beyond housing to the east, is another remnant of forestation which is managed by DOC.

Pedestrian access to John Street Reserve is along an access strip off John Street. Access is unavailable to residents on the eastern side. An informal trail provides access to part of the Reserve. *Any future access from the eastern side would require prior approval from nearby residents, the Roading Manager (if required) and GM – Leisure and Recreation.*

Vehicle parking is along John Street.

The narrow street frontage makes the Reserve hidden from public view.

5.6.3 History

The area of the Reserve was calculated under the Land Subdivision Counties Act 1946 for the total proposed subdivision and consequently the Reserve is a substantially larger size than would usually be expected in such a location.

In 1961 John Street Reserve was created by subdivision of 14 hectares of land south of

Bryson Road and east of John Street. The land subdivision consequentially caused the Reserve to be set apart as a recreation reserve by A I Nicholson. 115 residential sections and a new street (John Street) were proposed but only 40 sections were eventually surveyed off. The residents of John Street and the surrounding neighbourhood developed the reserve between 1982 and 1985.

Development included clearing the centre area and planting it in grass, controlling weeds by spraying, and fencing the boundary.

Some 1,500 native plants were planted with woodchip surrounds.

John Street was issued with a new title and re-classified as Scenic Reserve in 2017.

5.6.4 Classification and Tenure

Classification: *Scenic* Reserve

Legal Description: Lot 113 DP 5968

Area: 1.2087 hectares

Record of Title: 801457

Subject to: Reserves Act 1977



5.6.5 Flora

John Street Reserve is made up of a grassed area in the centre of approximately 1100m² surrounded by bush of varying quality (regenerating bush remnant and plantings).

A report made for the ICC by Bill (1999) indicates this vegetation is still predominant for the Otatara area. This report illustrated the dominant canopy species as totara forest for the area researched along John Street. At the time of research (1998-99) other main tree and shrub species included wineberry, pepperwood, lemonwood, manuka and mingimingi. The groundcover was dominated by bracken, walls lettuce and lupin.

With the Otatara climate being salt laden winds and occasional frosts, growth of plants in the area that are susceptible to these conditions can be limited. Plantation at the reserve is useful as a barrier to wind, aesthetically pleasing and attracts other native birds and insects.

Part of the list below has been referenced from John Street Recreation Reserve Draft Management Plan (*Southland County Council, n.d.*). There are also plants that are commonly found in the Otatara area and those in a study by Bill (1999) included in the list which could be likely to also be found at John Street Reserve.

Botanical Name	Common Name
*Introduced/Exotic Species.	
* <i>Acer pseudoplatanus</i>	Sycamore
<i>Aristotelia serrata</i>	Wineberry
<i>Asplenium bulbiferum</i>	Hen and chicken fern
<i>Astelia fragrans</i>	Bush flax
* <i>Berberis darwinii</i>	Darwin's Barberry
<i>Blechnum capense</i>	Cape fern
<i>Blechnum discolor</i>	Crown fern
<i>Carex coriacea</i>	Cutty grass/Sedge
<i>Carpodetus serratus</i>	Marbleleaf
* <i>Cirsium vulgare</i>	Scotch Thistle
<i>Clematis paniculata</i>	Clematis/ Puawhananga

* <i>Clematis vitalba</i>	Old Man's Beard
<i>Coprosma foetidissima</i>	Stinkwood
<i>Coprosma lucida</i>	Glossy Karamu
<i>Coprosma parviflora</i>	Leafy Coprosma
<i>Coprosma propinqua</i>	Mingimingi
<i>Coprosma rotundifolia</i>	Round Leaved Coprosma
<i>Cordyline australis</i>	Cabbage tree
* <i>Cotoneaster siminsii</i>	Cotoneaster
* <i>Cytisus scoparius</i>	Broom
<i>Dacrycarpus dacrydioides</i>	White Pine/ Kahikatea
<i>Dacrydium cupressinum</i>	Rimu/Red Pine
<i>Dicksonia squarrosa</i>	Tree Ferns
<i>Elaeocarpus hookerianus</i>	Pokaka
<i>Fuschia excorticata</i>	Tree Fuschia
* <i>Galeobdolon luteum</i>	Aluminium/ Artillery Plant
<i>Griselina littoralis</i>	Broadleaf
* <i>Hedera helix</i>	Ivy
<i>Leptospermum scoparium</i>	Manuka
* <i>Lupinus spp.</i>	Lupin
<i>Macropiper excelsum</i>	Pepper tree or Kawakawa
<i>Microsporium diversifolius</i>	Hounds Tongue fern
<i>Moss spp.</i>	Moss
<i>Muehlenbeckia australis</i>	Pohuehue
<i>Mycelis muralis</i>	Wall Lettuce
<i>Myrsine australis</i>	Red Mapou
<i>Parsonsia heterophylla and P capsularis</i>	Native Jasmine
<i>Pellaea rotundifolia</i>	Button Fern
<i>Phormium colensoi</i>	Mountain Flax
<i>Pittosporum eugenioides</i>	Lemonwood
<i>Pittosporum tenuifolium</i>	Black Mapou/ Kohuhu

<i>Podocarpus totara</i>	Totara
<i>Prumnopitys ferruginea</i>	Brown Pine/Miro
<i>Prumnopitys taxifolia</i>	Black Pine/Matai
<i>Pseudopanax arboreus</i>	Five finger
<i>Pseudopanax colensoi</i>	Mountain five finger
<i>Pseudopanax crassifolius</i>	Lancewood
<i>Pseudowintera colorata</i>	Pepperwood/ Horopito
<i>Pteridium aquilinum</i>	Bracken fern
<i>Pteridium esculentum</i>	Bracken
<i>Rubus cissoides</i>	Bush lawyer
* <i>Rubus fruticosus</i>	Blackberry
* <i>Sambucus nigra</i>	Elderberry
<i>Schefflera digitata</i>	Seven-Finger
<i>Sophora microphylla</i>	Kowhai
* <i>Trapaecolium speciosum</i>	Flame Vine
* <i>Ulex europaeus</i>	Gorse
<i>Uncinia uncinata</i>	Hook grass
<i>Weinmannia racemosa</i>	Kamaha

5.6.5.1 Pest Plants

Noxious weeds have always been a problem, as noted in historical findings from previous observations. The centre strip down the centre row separating the John Street Reserve and DOC Reserve to the east allowed for the pene-



tration of numerous amounts of weeds, being particularly abundant along the eastern edge.

Weeds at the Reserve include: blackberry, gorse, broom, Scotch thistle, flame vine, elderberry and Old Man's Beard. They are still currently threats to the Otatara bush, as well as cotoneaster, Darwin's barberry, sycamore, aluminium plant/ artillery plant and ivy.

5.6.6 Fauna

Historical information indicates that the wildlife resource of the Reserve was predominantly its native bird population. The native pigeon/Kereru (*Hemiphaga novaeseelandiae*), bellbird (*Anthonis melanura*), fantail (*Ripidura fuliginosa*), tui (*Prosthemandera novaeseelandiae*) and fernbird (*Bowdleria punctata*) are all known inhabitants or frequent visitors to the reserve.

Little is known regarding other fauna specifically in the reserve. However, it is likely that fauna generally found in Otatara are also found at the John Street Reserve.

5.6.7 Amenity Value

As one of the few remaining protected bush remnants in close proximity to the Otatara urban environment, John Street Reserve offers the Otatara community a recreational and scenic resource, providing opportunities for picnicking, walking, running and use of the playground.



The medium size and close proximity to the DOC reserve to the east will ensure the likelihood of sustainability of John Street Reserve.

5.6.8 Recreational Use

John Street Reserve is used for outdoor recreation by local residents in and around John Street and in the Otatara community.

The grassed area becomes an open space for public use, enjoyment and recreation at any time. An informal grass trail forms a loop through the grassy clearing.

Play equipment at the Reserve includes: two sets of swings - one set of two for older children and a toddler swing beside them - as well as a seesaw. The swings and seesaw are located within the Reserve area, amongst the forestation, next to the open clearing.

5.6.9 Policies

5.6.9.1 Play Equipment

Play equipment complements the areas of open space available to children for informal play.

John Street Reserve provides natural values that are to be protected for future generations.

Play equipment cannot be viewed from John Street. It does not appear well used and offers little play value; therefore ICC sees no future requirement for playground equipment at John Street Reserve.

Policy:

5.6.9.1.1 *John Street Reserve play equipment shall be removed once it no longer meets the New Zealand Safety Standards for Playgrounds. Any potential re-development will follow the Play Strategy and Parks and Recreation Strategy/AMP.*

5.6.9.2 Trees and Vegetation

Policy:

5.6.9.2.1 *ICC intends to encourage growth of native vegetation at John Street Reserve. Part of the grassed clearing will be phased out by staged revegetation plantings of native species as per the Environmental Planting Plan.*

5.6.9.3 Access

Policy:

5.6.3.1 *Formalising access to the eastern side of the reserve requires prior permission from all residents*

using the access road and the Rooding Manager/GM – Leisure and Recreation.

5.7 Lake Hawkins Wetland Reserve (Recreation)

5.7.1 Introduction

Lake Hawkins Wetland Reserve lies in the southern portion of the Southland Plains Ecological District, adjacent to Stead Street between Invercargill and Otatara. It was formally part of the New River Estuary but has been separated from the estuary by an embankment. It is a low lying area being below mean high tide level. It has been farmed, however farming is dependent upon a series of drains, and these require being pumped into the estuary. While this area is dominated by pasture it retains some ecological values (*Brian Rance, 7 October 2008*).

5.7.2 Location and Access

Lake Hawkins Wetland Reserve is located on the north side of Stead Street, adjacent to the Invercargill Airport, approximately 3 kilometres from Invercargill.

It is gazetted as an ICC Reserve.

Much of the area surrounding the Lake Hawkins Reserve has been highly developed for dairy farming.

The reserve is only lightly grazed.

The reserve is bisected by one large drain, with several smaller drains which flow into the main drain. The main drain flows out through a pumping station then under Stead Road. These drains are part of an Environment Southland drainage scheme (*Brian Rance 7 October 2008*).

There is no formed access and limited existing recreational use within the Lake Hawkins Reserve and the drains restrict access within the lease (*Brian Rance 7 October 2008*).

A fencing easement with Invercargill Airport Limited was implemented to allow for security fencing and gain International Status in 2007.

ICC intends to link trail access to this reserve in the long term.

5.7.3 History

This reserve was originally part of CT 10C/220

that was acquired in 1907 by Warrant WS 232 as part of Section 19 Block XXI Invercargill Hundred. This area was reserved for Aerodrome purposes by Section 22 Reserves and Other Lands Disposal Act 1955.

Lake Hawkins was simply part of the upper new river estuary. From about 1912 onwards, after construction of the Stead Street embankment the area north of the embankment, then known as Lake Hawkins after Michael Hawkins, Jailer at Invercargill, who supervised early work on the Otatara Reclamation Scheme.

"Michael Hawkins was born at Bangor, Co. Down, Northern Ireland, in 1862, and trained as a brick-layer. After two years in America, he returned to Ireland and sailed from thence to New Zealand in 1884. He was appointed Assistant Warder at Invercargill, in 1885, served subsequently at Dunedin, Timaru and Lyttelton prisons, and returned to Invercargill as Principal Warder in 1903, Gaoler in 1909 and Supervisor of Works, Wellington in 1914. It was during his service in Invercargill that reclamation of the western (aerodrome and borstal farm) area was undertaken, using prison labour under Hawkins' direction. The large expanse of water enclosed by the first embankments was known somewhat as 'Lake Hawkins' a name which has since descended to the swampy area, north of Stead Street and west of the main airport facilities."

Page 42 - A History of New River Estuary and its Environs, New River Estuary Technical Advisory Committee Invercargill 1973

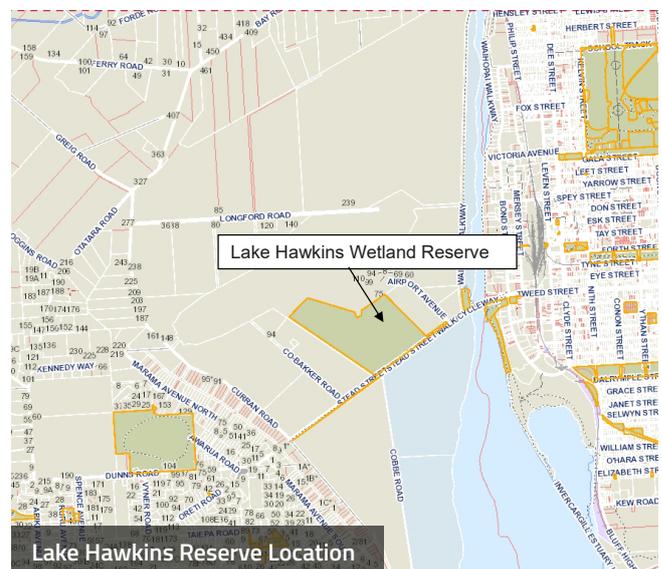
From about 1912 onwards the area was progressive. It reclaimed until it eventually became dryland and the airport was developed on it in the 1930's.

There is no satisfactory gravity outfall for drainage and consequently, water must be pumped from there into the Estuary. As a result the area is constantly wet to marshy with only small areas of higher ground which remain dry. The main drainage channel with the pumping station at Stead Street is particularly important as it helps to drain not only the airport but also quite a large area of Otatara.

The reservation for an Aerodrome and the vesting in ICC was revoked in 1962 by Gazette 1962 page 1620 and the area became Crown Land.

In February 1988 ICC resolved to approve the designation of the Lake Hawkins area as a wetland area. The areas were also designated as a Wetland Reserve in the Scheme Statement of the District Scheme Review 1985. Prior to that it was classified as airport land which had been let out for grazing purposes.

A new appellation was given to the land (Sections 21 to 28 Block XXI Invercargill Hundred)



and a freehold certificate under Section 116 of the Land Act 1948 was issued to the Mayor, Councillors and Citizens of the City of Invercargill.

It was classified as Recreation Reserve in 2001.

5.7.4 Classification

Lake Hawkins Wetland Reserve is classified as Recreation Reserve and it shall be managed in accordance with this classification.

5.7.4.1 Tenure and Area

The total area of Lake Hawkins Wetland Reserve is **54.8792** hectares. The tenure is as follows:

Record of Title: 5673

Legal Description: Lot 2 DP301288

Area: 54.8792 ha

Classification: Recreation Reserve

ICC intends to change classification from recreation to scenic for ecological protection.

5.7.5 Flora

The ecological values of the Lake Hawkins Reserve are limited and largely consist of a small, modified wetland area, a flaxland area and the drain system. The area's wetness and exposure to strong salt laden winds from the sea dictate the species of plants which would successfully grow there (e.g. flax, red tussock, jointed rush, toetoe and shore ribbonwood).

The Lake Hawkins Reserve generally consists of rank, damp pasture, with a wetland area and flax area. There is a shelter belt containing large old pine trees and several other tree species along the western boundary.

Pasture: The pasture is dominated by Yorkshire fog, sweet vernal and cocksfoot with plantain, clover, thistles inter-dispersed with occasional soft rush, sedges and lowland flax (*Phormium tenax*).

Wetland: A wetland is found in the north of the reserve. The wetland occupies a shallow depression that extends parallel to the east side of the main drain and extends into the airport land. The wetland contains a pond that has been artificially dug. The water level in the wetland

fluctuates though the pond is permanent. The wetland is dominated by exotic pasture species, however closer to the pond soft rush; cutty grass and lowland flax become prominent. Near the pond *Carex flagellifera*, *C. virgata* and lone cabbage tree were also recorded. Willow trees (*Salix fragilis*) had been planted around the edge of the pond adjacent to the maimai.

Flaxland: Near the south-west of the block is an area where flax is common. This area does not appear to be a natural flax swamp; however it is visible from Stead Street and does provide some natural character to the block.

Drain: The minor drain that bisected this area supported curly pondweed (*Potamogeton crispus*), water buttercup and duckweed (Brian Rance, 7 October 2008).

Most of the area is rank grass with few native species associated. This area receives limited grazing. The natural features include a wetland area in the north and a flax community in the south-west of the reserve. The wetland is found in a shallow depression extending parallel to and east of the main drain. This depression includes a small artificially created pond in the northern most portion of the lease. The wetland extends beyond the northern boundary of the reserve into land owned by the Invercargill Airport. The pond is of some concern to the airport authorities as it could attract birdlife across the landing strip. The wetland and associated pond contain only a limited number of native plant species. However wetlands are recognised as a national priority for biodiversity protection in New Zealand.

The flax community is visually dominated by scattered to dense flax stands; however the associated vegetation cover is dominated by exotic pasture species.

Along the western boundary, there is an area of flax, a few manuka and *Coprosma sp.* and mixed deciduous trees - mainly alder and poplar and silver willow. Along with the airport owned strip of old pines, this vegetation forms a vertical 'threshold' or 'boundary' between Otatara and the city. While the trees are not of high quality,

the overall effect is of informal rural trees. This is in contrast to the flat, treeless expanse of the airport and surroundings. The large trees of the West Bank Reserve have been lost recently. Anecdotally, there seems to be a cumulative loss of large shelter trees in the landscape of Southland/Invercargill - largely due to changes in land use.

There are flaxes along the eastern boundary and also scattered in the east area, along with some toetoe (Brian Rance, 7 October 2008).

Note 1: Exotic species list not complete.

Note 1: Exotics list concentrates of areas of natural habitat.

Botanical Name	Common Name
*Introduced/Exotic Species (Brian Rance, 7 October 2008)	
Ferns	
<i>Hypolepis ambigua</i>	a fern
Trees, shrubs and vines	
<i>Coprosma propinqua</i>	mingimingi
<i>Coprosma tayloriae</i>	a coprosma
<i>Leptospermum scoparium</i>	manuka
<i>Hydrocotyle heterophila</i>	a pennywort
<i>Hydrocotyle salcata</i>	a swamp pennywort
* <i>Potamogeton crispus</i>	curly pondweed
Monocots/Grasses	
* <i>Agrostis stolonifera</i>	creeping bent
<i>Cortaderia richardii</i>	toetoe
<i>Holcus lanatus</i>	Yorkshire fog
Sedges	
<i>Carex coriacea</i>	cutty grass
<i>Carex flagellifera</i>	a sedge
<i>Carex virgata</i>	a sedge
<i>Eleocharis acuta</i>	a spike rush
Rushes	
<i>Juncus edgariae</i>	a native rush
Other monocots	
<i>Cordyline australis</i>	cabbage tree
<i>Phormium tenax</i>	lowland flax

5.7.6 Fauna

Mallard ducks were seen on the pond and a pukeko was seen in the flax area. Lake Hawkins has less diversity and poorer quality of wildlife habitat than the Rifle Range. The drains provide habitat for native fish, however no survey has been undertaken (Brian Rance, 7 Oct 2008). Some troublesome species noted by the airport include the oystercatcher, spurwing plover, sea-gulls and ducks.

5.7.7 Amenity Use

Lake Hawkins Reserve has limited ecological value, though it does retain some natural landscape character and restoration potential. Both the landscape character and restoration potential are worthy of further consideration because of their visibility from Stead Street.

Lake Hawkins Reserve is highly visible from Stead Street. The rank grassy fields and flaxland retain a degree of natural character. The character of the "airport straight" (Waihopai River Bridge to Currans Road) along Stead Street has also changed with the advent of more intensive dairy farming. The potential change in land status could be followed by the development of this area into dairy farm.

Although this land is highly modified it has an appealing, open rural character.

It is classified as a recreation reserve, rather than a scenic reserve, suggesting that environmental values were not considered high when classified.

Historic resource: Lake Hawkins Reserve occupies land that was reclaimed from the New River Estuary.

5.7.8 General Use

Part of the reserve is currently leased for grazing purposes,

The only known recreational use is for duck shooting along the drains.

In a report by David Fraser, Classifier to the Southland Catchment Board in 1987, it states: The City itself maintains a ring drain system of approximately 5km in length which provides all of the drainage for the airport complex and

discharges the water through its own pump station into Lake Hawkins 360m upstream of the Lake Hawkins district pump house on Stead Street, relying on these latter pumps to discharge water into the New River Estuary.

It was proposed In Parks Strategy 2013 to dispose part of the land or exchange it in the future and keep native wetland vegetation area.

5.7.9 Policies

5.7.9.1 General

5.7.9.1.1 ICC encourages pocket plantings to build ecological value while still ensuring grazing and public access trails.

5.7.9.2 Classification

While Lake Hawkins Wetland Reserve is presently classified as Recreation Reserve, it is foreshadowed that as a consequence of this Management Plan, application shall be made for the area to be classified as a Scenic Reserve.

This would not inhibit use of the reserve but would recognise the importance of the preservation of the vegetation to the local community.

Objectives:

- *To protect, preserve and enhance the intrinsic values of Lake Hawkins Wetland Reserve.*
- *To apply (to the Minister of Conservation if required, or as delegated authority) to have Lake Hawkins Wetland Reserve classified as Scenic Reserve as defined in Section 19 of the Reserves Act 1977.*

Policies:

5.7.9.2.1 Lake Hawkins Wetland Reserve will be managed as a Recreation Reserve pursuant to section 17 of the Reserves Act 1977.

5.7.9.2.2 ICC aims to manage Lake Hawkins Wetland Reserve as a Scenic Reserve pursuant to Section 19 of the Reserves Act 1977. Classification will be requested through ICC's delegated authority to Scenic Reserve as defined in Section 19 of the Reserves Act 1977.

5.7.10 Future Development

Parks and Recreation staff with delegated authority would like to create a walking or shared use track on the high ground so recreation

access can be created and provide a connection with the existing trail network if there is a shown need for it.

As there is no space for any significant amenity plantings on the estuary side of the causeway, a beautification strip should be allowed for. This may also be needed for drain maintenance (Brian Rance, 2008).

Any future developments with the reserve will require close collaboration during planning with adjoining landowners' including Invercargill Airport and Environment Southland.

Infrastructural requirements proposed to run through the reserve will need prior approval from the GM – Leisure and Recreation in collaboration with other ICC Departmental Managers.

5.8 Matua Road Reserve (*Scenic*)

5.8.1 Introduction

Matua Road Reserve is a medium sized remnant that is part of a series of forest remnants in the Otatara area. It is a small piece of forest that contributes to the larger forest composition adjoining to the south. Forest composition is made up of regenerating bush, predominantly totara.

The Reserve is made up of two blocks of bush to the north and south with a grassy strip separating them. The open grassed area provides informal recreational activities and includes a swing.

5.8.2 Location and Access

Matua Road Reserve is located at 37 Matua Road, Otatara. Residential properties surround the north, east and western parts of the reserve and vegetation continues to spread as it backs onto Matua Grove to the south.

Visitors can access Matua Road Reserve by foot along the mown grass access strip of the western boundary from Matua Road. Vehicles can be parked on the roadside.

5.8.3 History

Matua Road Reserve was acquired by the Southland County Council in 1976 by Transfer 009590.1 (from James Wallace Paterson) as a reserve, subject to the Reserves and Domains

Act 1953 when the area was subdivided.

In 1992, the land was declared a Recreation Reserve by NZ Gazette Notice 1992 page 1060 (GN 206785.1).

The land was transferred to the ICC in 1993 by Transmission (GN 206616.1).

The reserve status was re-classified to scenic reserve in 2017.

5.8.4 Tenure

Classification: Recreation *Scenic* Reserve

Legal Description: Lot 9 DP 9157

Area: 0.5013 hectares

Record of Title: SL10C/ 259

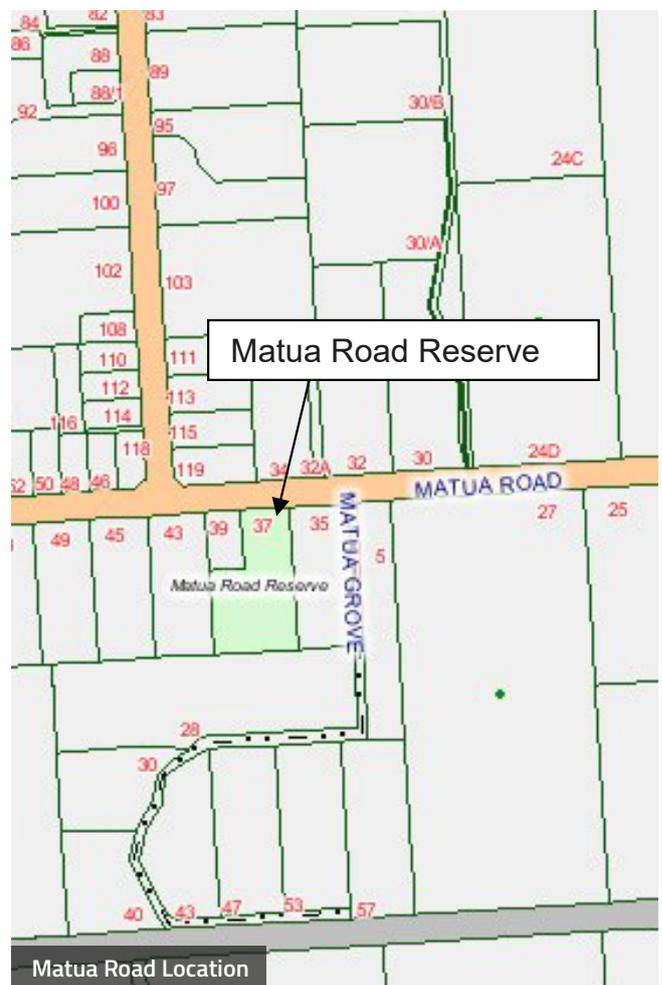
Subject to: Reserves Act 1977 and Building Line Restriction 007152.1

5.8.5 Flora

There have been no specific recordings of flora currently present at Matua Road Reserve. It is likely that, because the reserve is located within the Otatarata area, the vegetation type of the reserve may also be similar.

Totara forest is noted to be the dominant canopy. Kahikatea and Matai are also present within the canopy. The under storey is made up of tree fuchsia, lemonwood and wineberry. Manuka is still present occasionally. Pohuehue is abundant in the area.

The mown area of grass between the two forest fragments provides an open space for recreational activities.



Below is a list of flora known to be present in the existing forest remnants in the Otatara area (Bill, 1999).

Botanical Name	Common Name
*Introduced/Exotic Species	
* <i>Acer pseudoplatanus</i>	Sycamore
<i>Aristotelia serrata</i>	Wineberry
* <i>Berberis darwinii</i>	Darwin's Barberry
* <i>Betula pendula</i>	Silver Birch
* <i>Cirsium arvense</i>	Californian Thistle
<i>Dacrycarpus dacrydioides</i>	Kahikatea
* <i>Eucalyptus spp.</i>	Eucalyptus
<i>Fuschia excorticata</i>	Tree Fuschia
* <i>Hedera helix</i>	Ivy
* <i>Hydrangea spp.</i>	Hydrangea
* <i>Ilex aquifolium</i>	Holly
<i>Leptospermum scoparium</i>	Manuka
* <i>Muehlenbeckia australis</i>	Pohuehue
* <i>Mycelis muralis</i>	Wall's Lettuce
* <i>Pinus spp.</i>	Pine
<i>Pittosporum eugenioides</i>	Lemonwood
<i>Podocarpus totara</i>	Totara
<i>Prumnopitys taxifolia</i>	Matai
* <i>Rhododendrons spp.</i>	Rhododendrons

- * *Rubus fruticosus* Blackberry
- * *Salix species* Weeping Willow
- * *Sambucus nigra* Elderberry

5.8.5.1 Pest Plants

Even though this may not include all plants in the reserve, this list indicates that there are a lot more of introduced/exotic species than native plant species.

The key threats known to affect Otatara forest remnants are: problem plants and weeds, continued clearance and fragmentation, disturbance of normal forest processes and animal pests.

Bill noted at the time that the weeds at Matua Road Reserve included: elderberry, hydrangeas, sycamore, eucalyptus, pine, Darwin's barberry, pohuehue, wall's lettuce, silver birch, rhododendrons, holly, ivy, blackberry, willow (weeping) and Californian thistle. These are still likely to be present.

The entire fragment appeared at the time of Bill's research (1998-99) to be generally well buffered from wind and associated edge effects by the areas of forest that lay outside the boundary.

Damage to vegetation can occur due to people walking through the forested areas of the reserve making informal trails and trampling over ground cover and seedlings. This limits forest regeneration.



Natural regeneration within the reserve shall be encouraged through the control of persistent weed species and pest animals, as well as more plantings that will start out from existing bush.

5.8.6 Fauna

Little is known of the fauna in the reserve. It is likely that fauna generally found in Otatara are also found at the Matua Road Reserve.

This includes: endemic forest birds (bellbirds (*Anthornis melanura*), tui (*Prosthemadera novaeseelandiae*), fantails (*Ripidura fuliginosa*), grey-warblers (*Gerygone igata*) and silvereyes (*Zosterops lateralis*)), as well as nationally threatened species (fern bird (*Bowdleria punctata*), wood pigeons (*Hemiphaga novaeseelandiae*)).

5.8.7 Amenity Value

Matua Road Reserve is appreciated for its scenic value, as this remnant contributes to the significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area that are considered to be nationally important.

5.8.8 Recreational Use

A single swing is the only item of play equipment in the reserve. It is not able to be seen from the road as there is little street frontage of the reserve. The swing has little play value and it receives little use. ICC aims to phase it out in the future. Future play and recreational use will be considered through the Play Strategy and Parks and Recreation Strategy.

5.8.9 Policies

5.8.9.1 Play Equipment

Matua Road Reserve is currently a recreational reserve providing a site of natural values that are protected and managed for future generations.

As a reserve available for public use, it is important that the recreational facilities within Matua Road Reserve are maintained to the standard that provides for the appropriate and safe use of the reserve.

There is minimal equipment provision, it is not able to be viewed from the road and it does not appear to get a lot of use.

Policies:

5.8.9.1.1 Play equipment at Matua Road Reserve shall be removed once it no longer meets the New Zealand Safety Standards for Playgrounds.

5.8.9.1.2 *Future play and recreational use will be considered through the Play Strategy and Parks and Recreation Strategy.*

5.9 McMillan Street Reserve (Recreation)

5.9.1 Introduction

McMillan Street Reserve is a medium sized section of undeveloped grassed land which Parks and Recreation wants to re-vegetate and to protect the orchid currently located there.

5.9.2 Classification and Tenure

Classification: Recreation Reserve
 Legal Description: Section 20 Block II Town Seaward Bush
 Area: 2.034 hectares
 Record of Title: SL1A/290
 Subject to: Reserves Act 1977



5.9.3 Flora

Currently there is a rare sun orchid present here, indicating wetland conditions which the Parks and Recreation Manager wishes to protect.

5.9.4 Amenity Value

McMillan Street Reserve offers visual relief for surrounding residents and for users visiting or passing through the reserve. It currently has no recreational use as it is used for grazing purposes.

5.9.5 General Use

The land is currently leased for grazing purposes.

5.9.6 Future Development

ICC is investigating re-vegetation of the land as per the Environmental Planting Plan and would like to eventually phase out leasing of reserve land.

5.10 Metcalf Bush Reserve (Scenic)

5.10.1 Introduction

Metcalf Bush Reserve is considered an important scenic and botanical bush remnant, forming one of a series of bush remnants in the area. These bush remnants provide important habitats for indigenous plants, animals and invertebrates.

5.10.2 Location and Access

Metcalf Bush Reserve is located approximately nine kilometres from the centre of Invercargill.

Seaward Bush, a large regenerating bush remnant, is located nearby to the south.

Metcalf Bush is surrounded by private property, with legal access from McKellar Road and Mason Road. There is no formed public access into Metcalf Bush.

From the south, a 20-metre wide access strip was purchased in 2001 to provide legal access from Mason Road to the Reserve. There is a deep drain across the Mason Road frontage which forms a barrier to entry.

From the north, access to the reserve is via a shared chip sealed access strip with the adjoining property. It allows for legal access and street frontage from McKellar Road. Physical access is difficult.

Persistent weed species such as blackberry limit movement into and through the Reserve.

The boundary fences of Metcalf Bush are, in places, substandard. Stock is grazed on at least three of the boundaries, and in the past cattle has been grazed along the western boundary.

Fences on the east and western boundaries are generally good. However, a detailed fence inspection is required to ensure the fences are secure, particularly where stock is being grazed on neighbouring properties.

The forest along the northern boundary extends into the neighbouring land. It is difficult to determine where the Reserve boundary begins within the dense vegetation. This section of the forest is considered valuable and, while not formally protected, is not being grazed. Therefore a fence is not necessary.



5.10.3 History

The ICC, with assistance from the Queen Elizabeth II National Trust, purchased Metcalf Bush in 1992 from the McKellar's.

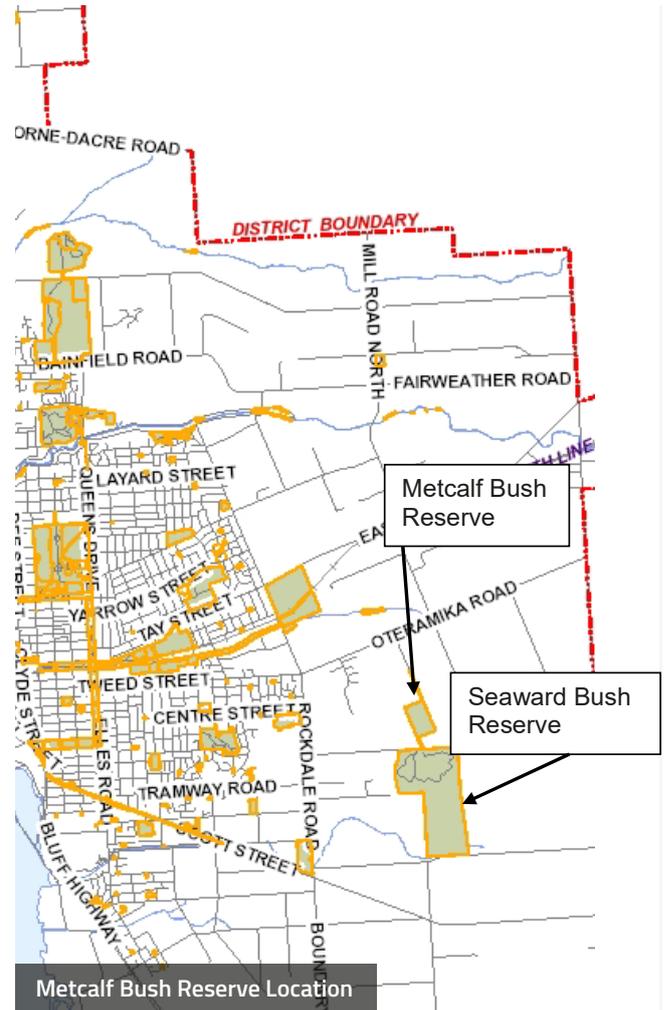
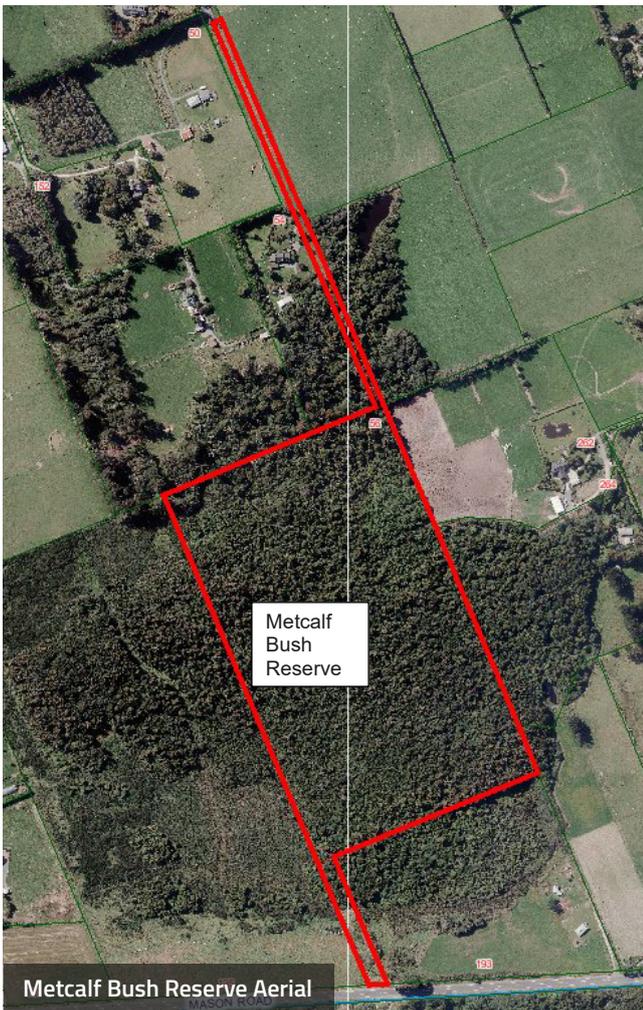
A QEII National Trust covenant was already in place at the time, and this was transferred to the new owners. Lots 1 DP 302275 and 2 DP 10558 are now in the name of the ICC.

Mable Grove is an early name for the area and this pre-dates the more commonly known McKellar Bush name. The bush was renamed Metcalf Bush after the former Parks Manager, Lawrie Metcalf, who was responsible for the overall management of Parks and Recreation from 1977 until his retirement in 1992.

At the time of purchase ICC noted its intention to protect the land as a reserve under the Reserves Act 1977.

In 1999, a narrow strip of land running parallel to McKellar Road was disposed of, following the QEII Covenant being lifted from the title. The land was considered surplus to ICC's requirements and not necessary to gain access to Metcalf Bush Reserve. This was done with the condition that the covenant remains on the Metcalf Bush proper (Lot 2 DP 10558).

In 2001, an agreement was reached between ICC and the owner of 193 Mason Road to purchase a 20-metre strip of land on the western boundary for a price of \$3,500.00. ICC covered the survey and legal costs. This land became Lot



1 DP 302275 and is 0.3220 hectares, following a ICC resolution in 1996 to designate 193 Mason Road (the land between Metcalf Bush and Seaward Bush) for reserve purposes.

The purpose of the designation was to enable the development of a pedestrian link between Seaward Bush Reserve and Metcalf Bush.

The land located between these two reserves contains an area of indigenous vegetation. This request was included in the Proposed District Plan when it was publicly notified on 31 January 2000.

After discussions with the new owner of the land it was agreed that ICC would purchase a portion of the land. ICC agreed to reduce the size of the designation to reflect the area of land to be purchased.

In 2003 the land forming Metcalf Bush proper, plus the recently purchased access land off Mason Road, were declared Scenic Reserve by Gazette Notice 2003 page 2228.

5.10.4 Classification and Tenure

Classification: Scenic Reserve/QEII Trust Covenant

Legal Description:

Lot 2 DP 10558, Lot 1 DP 302275

Area: 14.1890 hectares

Record of Title: SL6C/290, 8925

Subject to: Reserves Act 1977

Rights of Way (Easement Record 081148.1),

Agreement 085612.1., Queen Elizabeth II Open

Space Covenant 201549.2., Reserves Act 1977.

5.10.5 Flora

This podocarp/broadleaved lowland forest on alluvial flats is made up of mainly kamahi and matai in the canopy tier. Also present is totara, as well as rimu and kahikatea emergents.

The middle tier includes wineberry, tree fuchsia, *Dicksonia fibrosa*, round leaved coprosma and pepperwood. Sycamore and holly are also notably present in this middle tier.

Ground Cover includes *Hypolepis tenuifolia*, crown fern and hounds tongue fern.

The areas of bush that lie outside of the reserve boundary provide a valuable buffer to the Reserve.

Below is a list of flora known to be present in Metcalf Bush - (*Cuddihy, 1981*)

Botanical Name	Common Name
*Introduced/Exotic Species	
* <i>Acer Pseudoplatanus</i>	Sycamore
<i>Asplenium falcatum</i>	Drooping spleenwort
<i>Astelia spp.</i>	Perching lily
<i>Blechnum capense</i>	Native fern
<i>Blechnum discolor</i>	Crown fern or Piupiu
<i>Carex sp.</i>	Cutty grass / sedges
<i>Coprosma areolata</i>	Small leaved shrub
<i>Coprosma foetidissima</i>	Stinkwood
<i>Coprosma lucida</i>	Glossy karamu
<i>Coprosma parviflora</i>	Small leaved shrub
* <i>Cytisus scoparius</i>	Broom
<i>Dacrycarpus dacrydioides</i>	Kahikatea
<i>Dacrydium cupressinum</i>	Red Pine or Rimu
<i>Elaeocarpus hookerianus</i>	Pokaka
* <i>Eucalyptus spp.</i>	Eucalyptus
<i>Gleichenia dicarpa</i>	Swamp umbrella fern
* <i>Grasses</i>	English Grasses
<i>Griselinia littoralis</i>	Broadleaf or Kapuka
<i>Histiopteris incisa</i>	Waterfern
* <i>Ilex aquifolium</i>	Holly
<i>Juncus spp.</i>	Rush
<i>Leptospermum scoparium</i>	Tea tree or Manuka
<i>Meliclytus lanceolatus</i>	Mahoewao
<i>Myrsine divaricata</i>	Weeping matipo
<i>Neomyrtus pedunculata</i>	Native shrub
<i>Phyllocladus alpinus</i>	Mountain toa toa

<i>Phymatosorus diversifolius</i>	Hounds tongue fern or Kowaowao
<i>Pittosporum eugenoides</i>	Lemonwood or tarata
<i>Podocarpus ferrugineus</i>	Miro
<i>Podocarpus hallii</i>	Hall's totara
<i>Pseudopanax colensoi</i>	Three finger
<i>Rubus australis</i>	Bush lawyer
* <i>Rubus fruticosus</i>	Blackberry
* <i>Ulex europeus</i>	Gorse
<i>Uncinia uncinata</i>	Hook grass
<i>Weinmannia racemosa</i>	Kamahi

In combination with the surrounding bush, including the nearby Seaward Bush, Metcalf Bush is of considerable significance on the Southland Plains.

Protection of the privately owned forest would improve both its viability and that of Metcalf Bush. It would be an advantage if the management philosophy and practice of Seaward Bush, Metcalf Bush and the surrounding privately owned bush were complimentary.

5.10.5.1 Pest Plants

The main threat to this area is that of invasive weeds. There is extensive kamahi dieback as a result of the 1996 frosts and, where the subsequent light gaps have been created, sycamore seedlings are abundant.

Other problem plants include: gorse, broom, cotoneaster, blackberry, holly, elderberry, barberry, bittersweet and both Scotch and Californian thistles.

A vegetation report prepared in 1981 by the New Zealand Forest Service for the Queen Elizabeth II National Trust noted at that time, that the bush was made up of approximately 55% pole rimu, 30% manuka scrub, 13% scrub and 2% broom.

The manuka scrub and scrub areas were most likely to have been developed from cutover podocarp forest that had been burnt.

5.10.6 Fauna

There is no known information on the fauna found in Metcalf Bush. It is likely that the birds,

invertebrates, mammals, amphibians and reptiles found here would be similar to that which is located at the neighbouring Seaward Bush.

5.10.7 Amenity Value

Metcalf Bush holds real value to the residents of Invercargill as one of the few remaining natural bush areas in close proximity to the City's urban environment.

As an extension to Seaward Bush, this Reserve provides a valuable area of native bush remnant allowing a protected habitat for native plants, birds and invertebrates.

While the Reserve currently offers no recreational value to the community, long term potential of the Reserve includes opportunities for walking and nature watching.

To local residents, it offers visual freedom from the confines of city living.

5.10.8 Recreational Use

With no formed public access into Metcalf Bush, there are currently very little recreational opportunities for the community.

ICC recognises the importance these bush remnants have for the community, providing both a recreational resource for walking or running and as an educational 'classroom'.

A long-term goal is to allow the public access into the Reserve with the construction of a walking track and associated amenities. However, this will only occur if and when resources become available and there is a demand for further walking tracks in the area.

Should there be a development of extended tracks, this would create a link with the existing walking tracks in Seaward Bush.

5.10.9 Present Management

Metcalf Bush has a Queen Elizabeth II National Trust Covenant registered on the title for the purposes of protecting the natural and open space values and the flora and fauna. Consultation and agreement between ICC and the QEII Trust representative is required when considering management issues.

5.10.10 Policies

5.10.10.1

Administration

Metcalf Bush has been recognised as a significant forest remnant in the Invercargill area. Classification as a Scenic Reserve under the Reserves Act 1977 ensures a high level of protection for the future. Metcalf Bush also contains a QEII National Trust Covenant. The Queen Elizabeth II National Trust Covenant agreement highlights the following goals:

Policy:

5.10.10.1.1

Metcalf Bush shall be managed according to the First Schedule of the QE II Covenant agreement. Metcalf Bush shall be managed for the following purposes:

- (a) To protect and maintain open space values of the land.
- (b) To protect native flora and fauna on the land.
- (c) To facilitate the use of the land for recreational and educational purposes.

5.10.10.2

Access Into and Through Reserves

The public currently has no access into Metcalf Bush except with authorisation from the GM – Leisure and Recreation.

Management focuses on the preservation and enhancement of the ecological values of the reserve. This is considered to be an adequate level of management in the interim.

A foreshadowed goal would ideally permit the public access into the reserve. This would require a significant amount of resources, with the construction of a bridge, walking tracks, signage and interpretational signage.

Public access will only be developed if and when resources permit and the demand arises.

Policy:

5.10.10.2.1

Eventually ICC intends to provide the necessary facilities to allow the public safe access into the reserve.

5.10.10.2.2

To return as much of this site as possible back to its natural environment through the Environmental Planting Plan.

5.10.10.2.3

Plant and Animal Pest Control will be increasingly desirable in Metcalf Bush Reserve as ecological values are restored.

5.11 Omaui Reserve (Scenic)

5.11.1 Introduction

Omaui Reserve is of historical significance to the Omaui area ever since it became the first gateway to Invercargill. Omaui Township was originally occupied as a settlement by Māori and European visitors as a base for flax and whaling.

Omaui Reserve complements the adjacent Omaui Scenic Reserve (DOC) that is considered significant as one of the last stands of this type of forest remaining in the Invercargill area.

Omaui Reserve provides visitors to the area with a sheltered picnic area, a walking track and an elevated viewing platform, amongst a regenerating podocarp/broadleaf coastal forest.

5.11.2 Location and Access

Omaui Reserve is located approximately 20 kilometres by road from Invercargill on the outskirts of the Omaui settlement.

The reserve is bounded on the east and western sides by farmland and to the south by Omaui Scenic Reserve (managed by DOC). Mokomoko Road and the New River Estuary form the northern boundary.

A small triangular portion of the Reserve (approximately 0.5 ha) is located north east of the main reserve. They are separated by residential properties, Mokomoko Road and Whalers Crescent. This portion of the Reserve is bounded by Mokomoko Road to the south, farmland to the east and the New River Estuary to the north.

Mokomoko Road provides the only formed access into Omaui Reserve. The car park, picnic area and start of a walking track all adjoin this road. Vehicles are not permitted into the picnic area and a barrier is used to restrict access to

only those vehicles used for maintenance and emergencies.

Neighbouring land to the south is managed by DOC. It has a legal access strip that runs the entire length of the south-eastern boundary of Omaui Reserve. This access strip is fenced within Omaui Reserve (ICC) and is therefore indistinguishable from the rest of the Reserve.

There is no formal access to the northern portion of the Reserve that is separated off from the Reserve proper.

The adjoining landowner, who has land either side of Omaui Reserve, gains access through the Reserve to move stock between farms. This arrangement has been informal in the past and needs to be *formalised through the management plan process*.

5.11.3 History

The township of Omaui was originally a small Māori fishing village and is an important location in Māori tradition. This village was visited by early settlers in search of flax and became a whaling station site for a brief period in the early 19th Century.

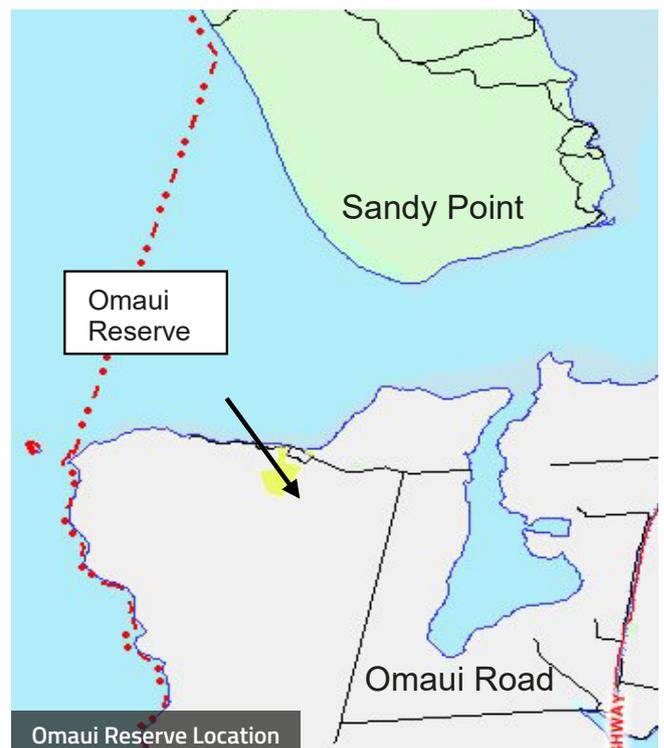
Omaui is in a very strategic location, allowing iwi access to many resources of the region. Resources included mahinga kai (foods) such as flounder, cockles, fish, paua and the famous toheroa.

The Oreti River was a main trail to the hinterland.

A large holding of land in the Omaui area was acquired by the ICC as a consequence of the Reserves and Other Lands Disposal Act 1955.



Omaui Reserve Aerial



Omaui Reserve Location

Section 22 authorised the abolition of the New River Harbour Board and vested certain land, the property of that Board, in the Corporation of the City of Invercargill. That land totalled 1029 acres 1 rood 31.1 perches.

From 1955 much of the original land was sold off. All that remains in ICC management is the area known and managed as the Omaui Reserve.

The land was vested in the Corporation upon trust as an endowment for municipal purposes, subject to the provisions of the Municipal Corporations Act 1954.

Part of the area was developed for holiday homes during the 1950's and was eventually surveyed off and made freehold property after it was subdivided in 1982.

Archaeological and oral traditions suggest Māori have had a long association with Omaui since their earliest arrivals.

A midden/oven site exists near the northern boundary of Omaui Reserve. The site is visible in beach scarp opposite Omaui reserve, with the eastern end opposite Whalers Crescent turnoff,

close to the small triangular portion of Omaui Reserve.

It extends along 60m of eroding (now stabilised by rocks) sea shore and it is not known how far inland it extends (sourced from New Zealand Archaeological Association records January 11, 2011). This site adds to the importance of the historical nature of Omaui.

Māori Urupa or cemeteries are also known to exist in the Omaui area.

In 2003, by Gazette notice 2003 page 797, the land was declared as a Recreation Reserve subject to the Reserves Act 1977 together with a right of way over lot 1 DP 6274, appurtenant to the said Lot 2, created by deed of easement 241/26. As part of this management planning process, ICC resolved that Scenic Reserve status was more in line with the level of protection required for this Reserve.

DOC did not allow this change to be made due to access issues.

Fencing in this area and along the boundary with adjacent Conservation land should be monitored and upgraded to ensure that stock



Midden/Oven site (New Zealand Archaeological Association)

cannot escape into either Omaui Reserve or neighbouring Conservation land.

A self contained toilet was constructed at the entrance to the Reserve in early 2004.

In April 2004 ICC organised the Omaui Coastal Walk - a guided walk for members of the public to experience the Omaui coast, bush and views.

Beginning at Omaui Reserve, the walkers went through DOC's Omaui Scenic Reserve to a lookout where they were able to get 360° views of the surrounding area. The walkers returned to Omaui Reserve via the rugged coastline and farmland.

Easements have been formalised with the neighbouring landowner that will allow stock movement and public access along a grassy lane through the Omaui Reserve near the southern boundary, and with another land owner on Mokomoko Road (historical encroachment) to allow access through the reserve to the property.

The Bluff Community Board developed a concept strategy in 2010 for the Omaui Township illustrating what future development the Bluff community wanted to see happen with Omaui Reserve.

The community would like to see a way of commemorating the ship wreck of the Guiding Star. Restoration of vegetation is also included in the plan. ICC will consider these ideas in any future planning.

Another strategic document was developed by Omaui Landcare Charitable Trust in 2014, and reviewed in February 2020 with the purpose of improving the effectiveness of the Trust's operations within Omaui Reserves.

A new 1.4km track (Omaui Hill Track) was extended over into DOC land by the Omaui Tracks Trust in 2016.

The classification of Omaui Reserve was changed to a Scenic Reserve in 2017.

5.11.4 Classification and Tenure

Classification: *Scenic* Reserve

Legal Description: Pt Lot 2 DP 6780

Area: 14.2730 hectares

Record of Title: SL7C/868

Subject to: Reserves Act 1977

Right of Ways created by Deeds of Easement over Part Lot 1 DP 6274 (CT 241/26).

Rights of way over part lot 2 DP 6780

5.11.5 Flora

The area was originally covered in coastal bush of a similar nature to the remnants that remain in the area. Vegetation was completely cleared in the early days and used initially for grazing.

Regeneration growth in the early 1950's was mainly of manuka which was harvested for firewood in the mid 1960's. Over the past 20 years the area has started to regenerate and now has a diversity of species.



Omaui Reserve is an important continuation of the coastal ecosystem in the area. The vegetation within the reserve is sensitive to change and has been heavily impacted on by climatic events and human intervention.

Omaui Reserve is presently in a stage of natural regeneration and succession, following successive and significant human impact on the forest structure.

It would be an advantage if the management philosophy and practice of Omaui Reserve and Omaui Scenic Reserve were complimentary.

Below is a list of flora known to be present in Omaui Reserve from both the survey and recent observations

Botanical Name	Common Name
*Introduced/Exotic Species	
<i>Aristotelia serrata</i>	Wineberry or Mako
<i>Asplenium bulbiferum</i>	Hen and chicken fern or mauku
<i>Asplenium flaccidum</i>	Hanging spleenwort or Raukatauri
<i>Asplenium lyalli</i>	Lyll's Spleenwort
<i>Astelia fragrans</i>	Bush Lily or Kakaha
* <i>Berberis darwinii</i>	Darwin's barberry
<i>Blechnum discolour</i>	Crown fern or Piupiu
<i>Blechnum fluviatile</i>	Kiwa kiwa
<i>Blechnum minus</i>	Swamp kiokio
<i>Blechnum sp. 'brownscale'</i>	Common hard fern
<i>Carpodetus serratus</i>	Marbleleaf or Putaputaweta
* <i>Cirsium vulgare</i>	Scotch thistle
* <i>Convolvulus</i>	Field bindweed
<i>Coprosma lucida</i>	Glossy karamu
<i>Coprosma spp.</i>	
<i>Cordyline australis</i>	Cabbage tree or Ti
* <i>Crocasmia x crocosmiiflora</i>	Montbretia
<i>Cupressocyparis leylandii</i>	Leylandii
<i>Dacrydium cupressinum</i>	Red Pine or Rimu
<i>Dicksonia squarrosa</i>	Tree fern or Wheki
<i>Fuchsia excorticata</i>	Tree fuchsia or Kotukutuku
<i>Griselinia littoralis</i>	Broadleaf or Kapuka
<i>Hebe salicifolia</i>	Koromiko
<i>Hypolepis distans</i>	Scrambling ground-fern
<i>Hypolepis tenuifolia</i>	Pressed fern
<i>Leptospermum scoparium</i>	Tea tree or Manuka
* <i>Lupinus spp.</i>	Lupin
<i>Meliccytus ramiflorus</i>	Whiteywood or Mahoe-wao
<i>Metrosideros diffusa</i>	Climbing rata or Akatea
<i>Metrosideros umbellata</i>	Ironwood or (Southern) Rata
<i>Muehlenbeckia australis</i>	Pohuehue
<i>Myrsine australis</i>	Red Mapou or Matipou
<i>Olearia colensoi</i>	Leatherwood or Tupare
<i>Parsonsia capularis</i>	Native Jasmine or Akakiore
* <i>Pasture grass spp</i>	
<i>Phormium tenax</i>	Flax or Harakeke
<i>Phymatosorus diversifolius</i>	Hounds tongue fern or Kowaowao
<i>Pittosporum spp.</i>	
<i>Polystichum vestitum</i>	Prickly shield fern or Puniu
<i>Prumnopitys ferruginea</i>	Miro
<i>Prumnopitys taxifolia</i>	Black Pine or Matai
<i>Pseudopanax crassifolius</i>	Lancewood or Horoeka

<i>Pseudopanax simplex</i>	Evergreen plant	<i>Circus approximans</i>	Australasian Harrier
<i>Pseudopanax sp. aff. Colensoi</i>	Fivefinger or Orihou	<i>gouldi</i>	Hawk or Kahu
<i>Pteridium esculentum</i>	Bracken or Rarauhe	<i>Emberiza citronella</i>	Yellowhammer
<i>Ripogonum scandens</i>	Supplejack or Kareao	<i>Finschia novaeseelandiae</i>	Brown Creeper or Pipipi
<i>Rubus cissoids</i>	Bush lawyer Tataramoia	<i>Fringilla coelebs</i>	Chaffinch
* <i>Rubus fruticosus</i>	Blackberry	<i>Gerygone igata</i>	Grey Warbler or Riroriro
* <i>Sambucus nigra</i>	Elderberry	<i>Gymnorhina tibicen</i>	Magpie
<i>Schefflera digitata</i>	Seven finger or Pate	<i>Hemiphaga novaeseelandiae</i>	New Zealand Wood Pigeon or Kereru
<i>Solanum laciniatum</i>	Poroporo	<i>Ninox novaeseelandiae</i>	Morepork or Ruru
* <i>Tropaeolum speciosum</i>	Chilean flame flower	<i>Passer domesticus</i>	Sparrow
'Tussock' spp		<i>Petroica macrocephala</i>	Tomtit or Miromiro
* <i>Ulex europaeus</i>	Gorse	<i>Prothemadera novaeseelandiae</i>	Parson's bird or Tui
<i>Uncinia uncinata</i>	Hook grass	<i>Rhipidura fuliginosa</i>	Fantail or Piwakawaka
<i>Weinmannia racemosa</i>	Kamaha	<i>Sturnus vulgaris</i>	Starling
		<i>Todirhamphus sanctus</i>	Kingfisher or Kotare
		<i>Turdus merula</i>	Blackbird
		<i>Turdus philomelos</i>	Song thrush
		<i>Zosterops lateralis</i>	Silvereeye or Tauhou

Native vegetation along the northern boundary extends into the neighbouring residential properties in places. This section of the boundary is not fenced and as a result there has been some confusion in the past as to where the boundary line lies.

A survey was done in 1999 to define this boundary line. *As there have been issues with stock crossing into the reserve ICC sees stock fencing as necessary to keep wandering stock out.*

5.11.6 Fauna

Below is a list of fauna (including pest animals) known to be present in Omaui Reserve.

Scientific Name	Common Name
Avifauna	
<i>Anthornis malaneura</i>	Bellbird or Korimako
<i>Carduelis carduelis</i>	Goldfinch
<i>Carduelis flammea</i>	Redpoll
<i>Chrysosossyx lucidus</i>	Shining Cuckoo or Pipiwharauoa

Vertebrates and Invertebrates

Apocrita (suborder)	Wasps
<i>Bombus</i> sp	Bumblebees
Chilopoda	Centipedes
Cicadidae sp	Cicadas
<i>Clitarchus hookeri</i>	Stick insects – green and brown
Diplopoda	Millipedes
<i>Orthoclydon praefactata</i>	Flax-Looper Caterpillar
Orthoptera	Wetas
<i>Prionoplus reticularis</i>	Huhu beetles
Pulmonata	Snails
Ranidae family	Tree frogs

Mammals

Bos primigenius	Cattle
Felis catus	Feral cats
Mus musculus	Mice
Mustela furo	Ferrets
Oryctolagus cuniculus	Rabbits
Ovis aries	Feral sheep
Rattus	Rats
Trichosorus vulpecula	Brush tailed possum

5.11.7 Amenity Value

Omaui Reserve has a high amenity value as a naturally regenerating coastal podocarp/ broadleaf forest that has been heavily impacted on in the past by humans. It provides recreational opportunities for residents and visitors to Omaui.

There is a historical link with the Omaui area and nearby archaeological sites that have high significance for Māori tradition and are a reminder of European whaling.

5.11.8 Recreational Use

Omaui Reserve provides visitors to the area with a sheltered picnic area, toilet, a walking track and an elevated viewing platform amongst a regenerating podocarp/ broadleaf coastal forest.

A track, developed in 2002/2003, leads visitors to a high point within the Reserve where a platform has been constructed. From this platform panoramic views of the surrounding coastline and mountains in the distance *can be seen. A 1.4km track, created by the Omaui Track Trust in 2016, extends over into DOC reserve land.*

All potential future developments will be subject to the availability of funding and the provision for any ongoing maintenance of any new assets.

5.11.9 Policies

5.11.9.1 Access

Car parking development will be considered as demand warrants it and funds allow for the increase in use by buses and cars visiting the reserve.



5.11.9.2 Administration

DOC manages a larger area of conservation land that adjoins to the south of Omaui Reserve. Management objectives for Omaui Reserve should complement the management objectives for the neighbouring conservation land.

Iwi and local runanga, the Bluff Community Board, Omaui Steering Committee and Omaui Landcare Charitable Trust advise ICC on the particular needs of their community including the Omaui Township. They should be advised of any major changes or developments to the reserve.

Policies:

5.11.9.2.1

Ongoing consultation will continue with DOC on management objectives to ensure consistent

best practise when managing the reserve and alignment of management procedures.

5.11.9.2.2

Consultation with the iwi, Bluff Community Board, and Omaui Steering Committee and Omaui Landcare Charitable Trust will continue regarding any future developments of Omaui Reserve. Consultation will include formalised collaborative agreements for regular use of the reserve where required and consider the Omaui Landcare Charitable Trust Strategic Documentation where they align with the Management Plan.

5.11.9.3 Buildings and Structures

Policy:

5.11.9.3.1

With this location being increasingly popular with tourists and locals, there is the need for the toilet to be considered through the Public Convenience asset management plan development.

5.11.9.4 Dogs on Reserves

Policy:

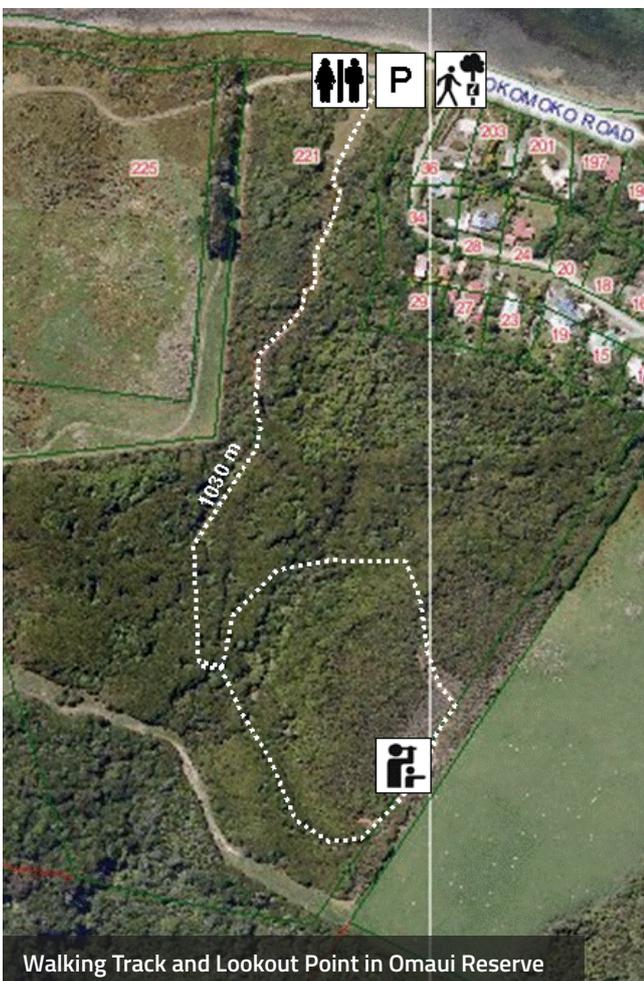
5.11.9.4.1

Omaui Reserve is a "Dogs on Lead Area" as defined by the Dog Control Bylaw and Policy. This means that dogs must be on a lead and under control at all times. DOC and ICC will collaborate to provide consistent messaging regarding dogs on Omaui Reserves.

5.12 Otatara Scenic Reserve (Scenic/ Local Purpose)

5.12.1 Introduction Otatara Scenic Reserve is a native forest remnant being a significant reserve for its scenic features. The forest is a mixture of totara and podocarp forest, together with manuka shrub land. Covering just over 40 hectares of land, this reserve is used informally by visitors for walking, picnicking and recreational activities. Its walking tracks are also used as a thoroughfare by nearby residents and school children.

This reserve has been left to self-develop and regenerate over time, with protection alone believed to preserve the reserve. This has worked well with intervention only being required on the north and south boundaries.



Walking Track and Lookout Point in Omaui Reserve

Otatara Scenic Reserve is categorised as an Environmental Reserve. Environmental Reserves are areas of land held in ICC ownership for the purpose of environmental protection and passive recreation. These reserves are made up of predominantly natural areas and may contain remnants of forest, tussock or grassland, wetlands or sand dunes. They may have special scenic, historic or environmental values that set them apart from other “recreational” type reserves.

5.12.2 Location and Access

Otatara Scenic Reserve is located on the western side of Invercargill City in Otatara and immediately adjoins the northern side of Dunns Road.

Land widely surrounding the reserve is semi-rural.

Otatara Scenic Reserve car parking is located off Dunns Road at the main entry/exit, while pedestrian access is from Dunns Road and Awarua Road.

Future subdivisions to the north-west of the reserve may create potential pedestrian access to the reserve. Future access from surrounding roads will need to be considered in collaboration with the ICC Roading Department.

5.12.3 Adjoining Land Use

Otatara Scenic Reserve is situated in a predominantly semi-rural area. Vegetation and

rural style fencing separates the reserve from adjoining land.

The reserve is bounded by a mixture of activities. Dunns Road bounds the southern side of the reserve. This is an area that is gradually being revegetated. The south-west corner of the reserve is bounded by Otatara School/pre-school, with the Invercargill Golf Club above the school on the western side of the reserve.

The northern and eastern sides of the reserve are bounded by a variety of residential properties.

5.12.4 History

The Otatara Scenic Reserve has been the responsibility of the ICC for many years. For some time this reserve was a unique situation, being vested to and managed by the ICC while being surrounded by the Southland County Council.

The history of the City’s control of this reserve dates back to 1931. At that time, the then Chairman of the Reserves Committee (Councillor Broderick) reported to the ICC on the desirability of the City doing something to preserve the bush, which was then an Education Reserve. Apparently the bush was being badly mutilated by all and sundry. Some time afterwards, ICC planted a shelter belt and erected a fence along the western side of the bush and there the matter lay for the next few years.

In June 1938, the Commissioner of Crown Lands suggested that control of the bush be vested



in the ICC and the bush then be closed off for several years to allow for regeneration without interference. It was agreed that the ICC would have Ranger's rights because, at that time, the Audit Office would not permit expenditure on a reserve outside of the City's boundary. In August of that year, some Otatara residents petitioned the City requesting that the City acquire some 68 acres for a reserve.

In 1948, the area was gazetted as Scenic Reserve and control was vested in the ICC.

In 1963, the Invercargill Golf Club asked about the possibility of purchasing the reserve because it wished to extend the golf course. That same year, following a re-evaluation of similar Scenic Reserves around the country, the classification was changed to that of Recreation Reserve.

The next three decades of management of the reserve were relatively uneventful. Two things were noted during this time. In March 1963, the Department of Lands and Survey offered to clean up the Dunns Road frontage of the reserve, as they believed "the area could be made extremely attractive if this small amount of expenditure and the labour involved is undertaken to clear up the road frontage". This was carried out.

In July 1964, a request was made to ICC by the Department of Education for one and a half acres of the reserve to be added to the adjoining school site. ICC subsequently agreed to this.

In February 1983, in accordance with a request, access along the side of the reserve beside the school was provided in order to get re-locatable buildings on to the school site, as well as provide vehicle access to the playing fields.

Later that year the Southland County Council made a request for the transfer of control of the reserve to go back to the Southland County Council. Following lengthy consideration, a decision was made on 14 August 1984 and ICC resolved to retain control of the Otatara Scenic Reserve. During this time, it became evident that the primary reason for obtaining the land by the Southland County Council was to provide for a

new community hall to be built on the reserve. The community hall became a hot topic, provoking debate on the effects on the reserve from the development of the hall.

In 1985, the ICC proposed to change classification of the reserve from Recreation Reserve to Scenic Reserve. The following year this change was approved and gazetted by the Commissioner of Crown Lands. Late in 1987, the ICC then advertised to classify part of the Otatara Scenic Reserve as Local Purpose Reserve. This would then allow for a community hall to be established on part of the reserve in the south-west corner.

Eleven years later (in February 1998), resource consent was advertised to allow for the construction and use of a proposed community hall. At the same time, the ICC advertised to further reclassify part of the Scenic Reserve (250m²) as Local Purpose Reserve. This would allow an additional area for car parking for the community hall. The community hall was officially opened on 18 October 1999.

In March 1999, approval was given for the construction of a picnic shelter. The shelter was completed in January 2000. The Community Trust of Southland contributed a significant amount towards the cost of the structure. Toilets were constructed in 2004.

The loop track (helped to completion through periodic detention work), started construction in the late 1980s and was completed in the 1990s.

In 2005, a gazette notice was published authorising the exchange of a portion of Otatara Scenic Reserve with a portion of the neighbouring land at 155 Marama Avenue North. The reason was to resolve boundary encroachment issues following historic misinterpretation of the boundary line.

In 2013, part of the Local Purpose Reserve was exchanged with part of the Scenic Reserve so the car park could be extended and a footpath constructed around the outside of the car park.

5.12.5 Classification and Tenure

5.12.5.1 Otatara Scenic Reserve is classified as follows:

- Scenic Reserve pursuant to Section 19 of the Reserves Act 1977;
- Local Purpose (Community Buildings) Reserve pursuant to Section 23 of the Reserves Act 1977.

The reserve shall be managed in accordance with the above classifications and no further changes to the reserve status are anticipated.

5.12.5.2 Area and Land Titles

The total area of Otatara Scenic Reserve is 42.2731 hectares. The land description is as follows:

Record of Title: 608879

Legal Description: Lot 3 Deposited Plan 462072

Classification: Scenic Reserve

Area: 41.8857ha

Record of Title: 617208

Legal Description: Lot 1-2 Deposited Plan 462072

Classification: Local Purpose (Community Buildings) Reserve

Area: 0.0364ha

Record of Title: SL12A/392

Legal Description: Lot 1 Deposited Plan 14970

Classification: Local Purpose (Community Buildings) Reserve

Area: 0.3510ha

Land Occupation

The Otatara Community Hall is leased.

5.12.6 Flora

The Otatara Scenic Reserve is the last remaining sizeable and viable area of bush that once clothed the Otatara Peninsula. Although it has been modified over the years by sawmilling, wood gathering and other activities, sufficient older trees remain to make it a worthwhile example of this vegetation.

Early Otatara was a bush settlement. Totara and matai (both valuable timber trees) dominated the native forest. Local sawmills used tram tracks and bullocks to haul logs from the forest, ferrying them down the estuary to Invercargill as building materials and, later, railway sleepers.

In 1898, before the area became Crown Land, Thos, Amos and Sons managed the sawmill on the present site. These areas have now regenerated into thick manuka stands. Corridors and pockets of mature trees remain with some of the most impressive trees being matai, totara and hinau.

Since 1931, the ICC has had a policy of keeping the bush fenced and allowing it to regenerate without disturbance. This early policy was remarkably successful, with the result that this area of bush is now in good condition and is certainly the best remaining example of such bush in Otatara.

Now it is not presently in the best condition due to community walking off marked tracks and the heavy use of bikes in the reserve off marked tracks.

Due to various vegetation differences, this bush is distinct from that of Sandy Point Domain, Thomsons Bush and Seaward Bush, and thus forms an important link in the series of native bush areas around Invercargill.

Today's small forest remnants are still valued but for different reasons. Otatara and Sandy Point provide the best remaining example in New Zealand of coastal totara and totara-matai sand dune forest. Otatara is based on an ancient sand dune system, up to 60,000 years old. Bush is mixed podocarp/hardwood, typical of the Oreti flood plain, with totara, white pine, miro, lemonwood, broadleaf and putaputaweta predominating.

Small as they are, the forest remnants continue to support a surprisingly rich wildlife community and give pleasure to local residents and visitors alike.

Classification as a Scenic Reserve has helped to protect this piece of bush for all time and because of its distinct qualities, it could well be argued that it is of national importance. It is also superior to the Otatara South Scenic Reserve (DOC land) that in the past has been erroneously listed as the only apparent example of Southland sand dune forest in public ownership.

The significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area have been ranked as nationally representative (Bill, 1999) for the following reasons:

- Nationally, sand dune and sand plain ecosystems have been altered by human activities, resulting in the loss of indigenous vegetation cover, especially forest.
- Otatara has the best remaining example of coastal totara and totara-matai sand dune forests in New Zealand.
- This area has the only example of a sequence of totara, totara-matai and mixed podocarp forest remnants on differently aged sand dune and sand plain surfaces in New Zealand.
- Although fragmented, the forest remnants are large enough and connected enough to ensure their future viability/survival.

The following is the list of flora that can be found at Otatara Scenic Reserve:



Otatara Scenic Reserve Management Plan
2002

Otatara Scenic Reserve

* = naturalised
d = dominant o = occasional
a = abundant r = rare
f = frequent l = local

TREES AND SHRUBS

- * Acer pseudoplatanus o
- Aristolotelia serratus f
- * Berberis darwinii r
- Carpodetus serratus f
- Clematis foetida o
- C. paniculata r
- Corposma areolata a
- C. foetidissima r
- C. lucida r
- C. propinqua f
- C. rhannoides r
- C. rotundifolia a
- C. rubra f
- C. sp. aff. parviflora o
- * Cytisus scoparius o
- Dacrydium cupressinum r
- * Daphne laureola o
- Elaeocarpus hookerianus f
- Fuchsia colensoi r
- F. excorticata f
- F. perscandens r
- Griselinia littoralis o
- Hebe salicifolia o
- * Hoheria sexstylosa n
- * Hypericum androsaenum r
- Leptospermum scoparium d
- * Lupinus arboreus o
- * Malus domestica r
- Melicope lanceolata f
- Metrosideros diffusa r
- Muehlenbeckia australis a
- M. complexa r
- Myrsine australis f
- M. divaricata r
- Neonyrtus pedunculata o
- Parsonsia heterophylla f
- Pennantia corymbosa o
- Pittosporum eugenioides f
- P. tenuifolium f
- Podocarpus hallii f
- P. totara o
- Prumnopitys ferruginea r
- P. taxifolia d
- Pseudopanax colensoi r
- P. crassifolium r
- Pseudovintera colorata a
- Rubus chamaemorus o
- * R. fruticosus agg. a
- * R. laciniatus o
- R. schmidlioides o
- * Salix fragilis o
- * Sambucus nigra f
- Schefflera digitata o
- * Solanum dulcamara f
- Sophora microphylla r
- Weinmannia racemosa r

HERBACEOUS DICOTYLEDONS

- * Acaena novae-zelandiae r
- * Achillea millefolium r
- * Anagallis arvensis r
- * Brassica rapa r
- Callitriche petrici r
- * C. stagnalis o
- * Calystegia silvatica r
- * Cerastium fontanum o
- * Cirsium arvense o
- * C. vulgare r
- * Conium maculatum r
- * Epilobium ciliatum o
- * Crepis capillaris o
- * Glechoma hederacea r
- Gonocarpus aggregatus r
- Gratiola sexdentata o
- Hydrocotyle heteroseria o
- * Hypochaeris radicata r
- Lagenifera strangulata o
- * Leontodon autumnalis o
- * Lotus pedunculatus o
- * Mentha spicata r
- * Mimulus guttatus r
- * Mycelis muralis o

australiana pusilla

- * Myosotis laxa
subsp. caespitosa r
- * Plantago australis r
- * P. lanceolata r
- * P. major r
- * Nasturtium microphyllum o
- Nertera depressa o
- N. dichondrifolia o
- * Pentaglottis sempiternus r
- * Prunella vulgaris f
- * Ranunculus flammula r
- R. glabrifolius r
- * R. repens o
- * Rumex acetosella r
- * R. crispus r
- * R. obtusifolius r
- Schizella trifoliolata r
- * Senecio jacobaea r
- S. ninivus r
- * Sisymbrium officinale r
- * Solanum tuberosum o
- * Sonchus asper r
- * S. oleraceus r
- * Spargula arvensis r
- * Stellaria graminea r
- * S. media o
- S. parviflora r
- * Trifolium pratense r
- * T. repens o
- * Tropaeolum speciosum o
- * Vinca major r

Nertera depressa
depressa

MONOCOTYLEDONS

- * Agropyron repens o
- * Agrostis capillaris o
- * A. stolonifera o
- * Bromus willdenovii r
- Carex diandra r
- C. secta r
- C. ternaria o
- * Crocosmia x crocosmiflora r
- Cordylina australis r
- Corybas triloba r
- * Dactylis glomerata o
- Earina mucronata r
- * Glycerea declinata o
- * Holcus lanatus o
- Isolepis habrus r
- Juncus australis o
- * J. bufonius r
- J. gregiflorus o
- J. pallidus r
- Lerna minor r
- * Lolium perenne r
- Microlaena avenacea o
- Phormium tenax o
- * Poa annua r
- Ripogonum scandens r
- Schoenus maschalinus o
- Uncinia uncinata o

Chiloglottis arnii

Pterostylis montana

FERNS & LYCOPODS

- Asplenium bulbiferum a
- A. flaccidum f
- A. hookerianum r
- A. terrestre o
- Blechnum chamberlainii r
- B. discolor a
- B. fluviatile r
- B. minus o
- B. penna-marina r
- B. procerum o
- Ctenopteris heterophylla r
- Dicksonia fibrosa r
- D. squarrosa o
- * Dryopteris filix-mas r
- Histiopteris incisa o
- Hymenophyllum sanguinolentum r
- Hypolepis ambigua o
- H. millefolium o
- Lycopodium varium r
- Phymatosorus diversifolius a
- Polystichum richardii o
- P. vestitum f
- Pyrrosia serpens r
- Pteridium aquilinum v. esculentum.

diagrammum
H. ...

5.12.7 Fauna

This area supports many endemic forest birds (bellbirds, tui, fantails, greywarblers and silvereyes), as well as nationally threatened species (eg fernbird and wood pigeons).

5.12.8 Amenity Value

Otatara Scenic Reserve is recognised as an area of significant indigenous vegetation in the Otatara community.

Its greatest value lies in its ecological qualities and the conservation of a vegetation type that has become modified elsewhere in the area by subdivision.

With the reserve being in close proximity to the Invercargill City urban environment, it offers the Invercargill community an important recreational and scenic resource.

To local residents, it offers visual freedom from the confines of city living.

5.12.9 Recreational Use

Otatara Scenic Reserve offers an important recreational resource while management of the reserve still prioritises on retaining its indigenous vegetation.

The reserve provides opportunities for outdoor recreation such as walking and running on the formed tracks, taking dogs on a lead, picnicking and recreational activities on the mown picnic area in the south-west part of the reserve.

This picnic area was formerly used as a Guides Southland camp site which has been removed. It is situated off Dunns Road and bookings are now required for use of the area.

The loop walking track winds its way through native bush with links to Otatara School, Otatara Golf Club and Awarua Road. There is a shelter and car park at the Dunns Road entrance, as well as a toilet, rubbish drum and picnic table.

The Otatara Community Hall and parking area is located in the south-west corner of the reserve.

5.12.10 Policies

5.12.10.1

The Otatara Community Hall and associated exterior facilities will be maintained to an appropriate standard. No exterior expansions to the hall will be permitted.

5.12.10.2

ICC Parks and Recreation Staff with delegated authority will maintain access to allow ICC drainage staff to clean the western boundary drain.

5.12.10.3

Cyclists are not permitted along walking tracks.

5.12.10.4

Formalised Agreements will be put in place with community groups undertaking activity on reserve land.

5.12.10.5

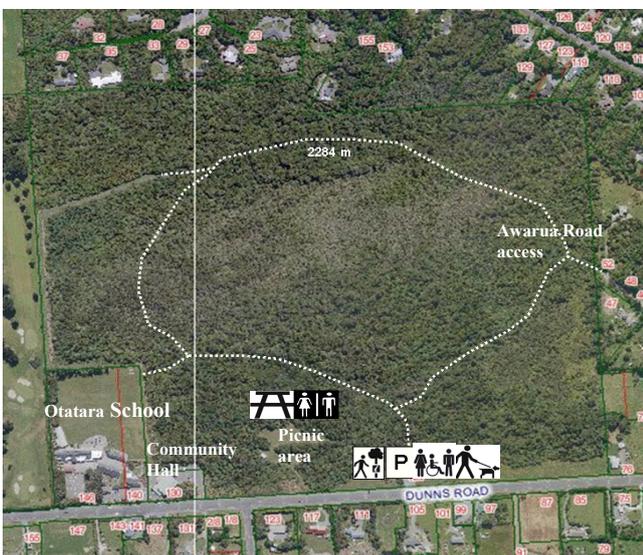
Walking tracks may be developed if there is a demonstrated need for improved access and linkage through the reserve. There needs to be prior approval from the GM – Leisure and Recreation.

5.12.10.6

ICC has a desire to collaborate with Otatara School for future activity proposals on reserve land.

5.12.11 Future Development

Increased use of the reserve will cause repercussions. A review of facilities and services will be required to understand if there is a demand for more parking. Development may be required based on the desire or need for more capacity.



Otatara Scenic Reserve is a significant area of native vegetation. Any activity or proposal for the reserve needs to consider the importance of this reserve.

5.13 Parnell Sanctuary Reserve (Scenic)

5.13.1 Introduction

Parnell Sanctuary Reserve is a relatively small bush reserve, part of a series of forest remnants in the Otatara area.

5.13.2 Location and Access

Parnell Sanctuary Reserve is located at 38 Ariki Avenue, Otatara.

The narrow street frontage hides the extent of the Reserve, which is tucked in amongst residential properties. Adjoining land to the north-west of the Reserve is used for grazing.

The Reserve boundary is virtually indistinguishable where the bush spreads into neighbouring land. The boundary fences of Parnell Sanctuary Reserve are, in places, non-existent. *More consideration should be made to fencing to keep stock and domestic or wild animals out.*

There is no formed public access into Parnell Sanctuary. Legal access can be gained from both the Ariki Avenue street frontage and along the access strip that leads from the eastern bank of the Oreti River. *A walking track would add*

to the trail network connectivity with NZ Forestry Restoration Trust and other nearby trails.

Vehicle parking is along the Ariki Avenue roadside.

5.13.3 History

Parnell Sanctuary Reserve was originally part of the larger Vickery homestead and was more recently owned by Mr and Mrs Parnell. Upon subdivision of the original area, Lot 10 was vested in ICC as reserve.

Ariki Scenic Reserve was the original name for the Reserve when ICC took over management of the land. At the request of the previous owners, ICC resolved to name the Reserve after Mr and Mrs Parnell, along with the original name of the house to 'Sanctuary'.

5.13.4 Classification and Tenure

Classification: Scenic Reserve s.19 (1) (b)

Legal Description: Lot 10 DP 12374

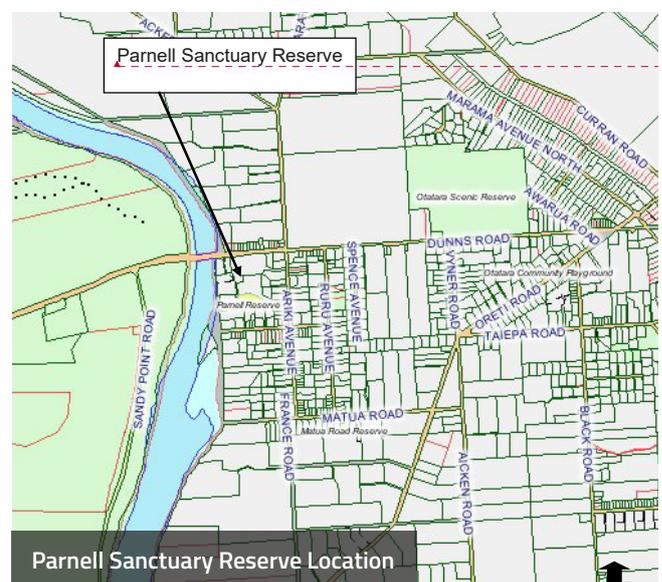
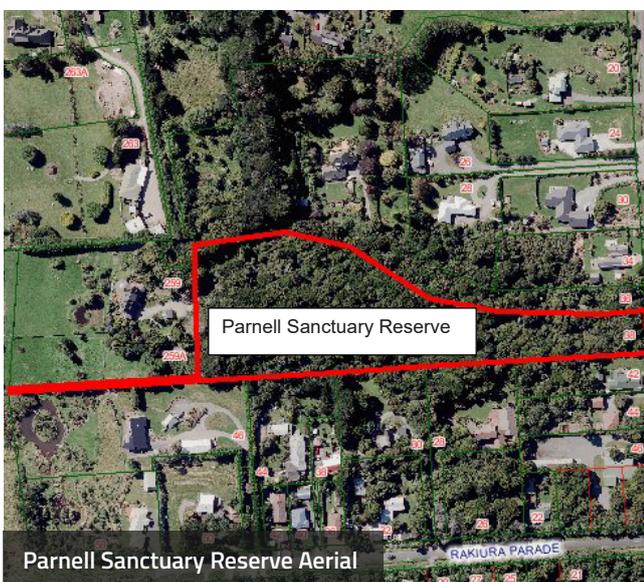
Area: 2.0015 hectares

Record of Title: 40661

Subject to: Reserves Act 1977

5.13.5 Flora

Parnell Sanctuary Reserve is part of the significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area.



The canopy within the reserve is predominantly totara but both matai and kahikatea are also common.

The majority of the sub-canopy layer up of broadleaved/angiosperm, consisting mainly of kohuhu, lemonwood, pepperwood and occasional cabbage trees. Other sub-canopy species include pokaka, seven finger, tree fuchsia and round leaved coprosma.

Groundcover is mainly hound's tongue fern, bush flax, crown fern and Blechnum 'brown-scale'.

Below is a list of flora known to be present in the forest remnants in Parnell Sanctuary Reserve. Not all of these species will necessarily be present in Parnell Sanctuary Reserve (Bill, 1999).

Botanical Name	Common Name		
*Introduced/Exotic Species			
* <i>Acer pseudoplatanus</i>	Sycamore		
<i>Aristotelia serrata</i>	Wineberry		
<i>Asplenium bulbiferum</i>	Hen and Chicken fern		
<i>Asplenium flaccidum</i>	Hanging spleenwort		
<i>Astelia fragrans</i>	Bush flax		
* <i>Berberis darwinii</i>	Darwin's barberry		
* <i>Betula pendula</i>	Silver Birch		
<i>Blechnum discolor</i>	Crown fern		
<i>Blechnum sp. 'brown scale'</i>	Common hard fern		
<i>Calystegia tuguriorum</i>	Native bindweed		
<i>Carpodetus serratus</i>	Putaputaweta or marbleleaf		
* <i>Cirsium arvense</i>	Californian thistle		
* <i>Cirsium vulgare</i>	Scotch thistle		
<i>Coprosma areolata</i>	Small leaved shrub		
<i>Coprosma grandiflora</i>	Kanono		
<i>Coprosma lucida</i>	Glossy karamu		
<i>Coprosma parviflora</i>	Small leaved shrub		
<i>Coprosma rotundifolia</i>	Round leaved coprosma		
<i>Cordyline australis</i>	Cabbage tree		
* <i>Cotoneaster siminsii</i>	Cotoneaster		
* <i>Crateagus monogymna</i>	Hawthorn		
* <i>Crocsmia x crocosmiiflora</i>	Montbretia		
<i>Cyathea smithii</i>	Soft tree fern		
<i>Dacrycarpus dacrydioides</i>	Kahikatea		
<i>Dacrydium cupressinum</i>	Rimu		
* <i>Daphne laureola</i>	Spurge-laurel		
<i>Dicksonia fibrosa</i>	Ponga		
<i>Dicksonia squarrosa</i>	Wheki (a tree fern)		
* <i>Digitalis purpurea</i>	Foxglove		
<i>Elaeocarpus hookerianus</i>	Pokaka		
<i>Fuchsia excorticata</i>	tree fuchsia		
* <i>Galeobdolon luteum</i>	Aluminium/Artillery Plant		
<i>Hebe salicifolia</i>	Koromiko		
* <i>Hedera helix</i>	Ivy		
* <i>Heracleum mantegazzianum</i>	Giant hogweed		
<i>Histiopteris incisa</i>	Water fern		
* <i>Hydrangea spp.</i>	Hydrangea		
<i>Hypolepis rufobarbata</i>	Fern		
<i>Hypolepis tenuifolium</i>	Fern		
* <i>Ilex aquifolium</i>	Holly		
<i>Leptospermum scoparium</i>	Manuka		
<i>Muehlenbeckia australis</i>	Pohuehue		
* <i>Mycelis muralis</i>	Wall lettuce		
<i>Parsonsia heterophylla</i>	NZ Jasmine or kaihua		
<i>Pennantia corymbosa</i>	Kaikomako		
<i>Phymatosorus diversifolius</i>	Hounds tongue fern		
<i>Pittosporum eugenoides</i>	Lemonwood or tarata		

<i>Pittosporum tenuifolium subsp. colensoi</i>	Kohuhu
<i>Plagianthus regius</i>	Ribbonwood
<i>Podocarpus hallii</i>	Hall's totara
<i>Podocarpus totara</i>	Totara
<i>Polystichum vestitum</i>	Prickly shield fern
<i>Prumnopitys ferruginea</i>	Miro
<i>Pseudopanax colensoi</i>	Three finger
<i>Pseudopanax crassifolius</i>	Lancewood
<i>Pseudowintera colorata</i>	Horopito or pepperwood
<i>Pteridium esculentum</i>	Bracken
* <i>Ribes sanguineum</i>	Flowering currant
* <i>Rubus fruticosus</i>	Blackberry
* <i>Rubus laciniatus</i>	Blackberry – cut leaved
* <i>Sambucus nigra</i>	Elderberry
<i>Schefflera digitata</i>	Pate or Seven finger
<i>Senecio minimus</i>	Groundsel
* <i>Solanum dulcamara</i>	Bittersweet herb
<i>Sonchus kirkii</i>	Shore puha
<i>Sophora microphylla</i>	Kowhai
* <i>Tropaeolum speciosum</i>	Flame flower
* <i>Ulex europaeus</i>	Gorse
<i>Weinmannia racemosa</i>	Kamaha

5.13.5.1 Pest Plants

A large range of unwanted exotic species exist at canopy, sub-canopy and ground level in Parnell Sanctuary Reserve. These include pohuehue, blackberry, flame flower, bittersweet herb, wall lettuce, flowering currant, hydrangea, aluminium plant, giant hogweed and sycamore.

5.13.6 Fauna

This area supports many endemic forest birds (bellbirds (*Anthornis melanura*), tui (*Prosthemadera novaeseelandiae*), fantails (*Rhipidura fuliginosa*), greywarblers (*Gerygone igata*) and silvereyes (*Zosterops lateralis*)), as well as nationally threatened species (fern bird (*Bowdleria punctata*), wood pigeons (*Hemiphaga novaeseelandiae*)).

5.13.7 Amenity Value

Parnell Sanctuary Reserve provides significant amenity value to the Otatara community as an important forest remnant.

This Reserve provides a valuable area of native bush remnant allowing a protected habitat for native plants, birds and invertebrates.

5.13.8 Recreational Use

Parnell Sanctuary Reserve currently offers minimal recreational opportunities to the Otatara and Invercargill community. A sign on the street frontage indicates its existence. However, with no formed walking tracks into the Reserve, it receives little public attention.

The size of this Reserve does not lend itself to having a loop track through it. This Reserve could be used to link other areas of open space in the Otatara area if a walkway from Ariki Avenue through to the Oreti River banks is developed *and provide a linkage to land managed by the NZ Forestry Restoration Trust.*

5.13.9 Policies

5.13.9.1 Access Into and Through Reserves

There is no public access into Parnell Sanctuary Reserve. A very preliminary concept for this Reserve is to provide a pedestrian link between Ariki Avenue and the Oreti River while ensuring the natural values of the Reserve are protected.



Policy:

5.13.9.1.1

To provide the necessary tracks and facilities to allow the public safe access through the Reserve in the distant future when the need arises and as resources permit.

5.13.9.1.2

Any planned access will be in collaboration with the ICC Rooding Manager.

5.13.9.2 Boundaries and Fencing

Policy:

5.13.9.2.1

Should public access be developed through to the Oreti River, fencing may be required to separate track users from adjoining properties.

5.14 Paterson Reserve *(Scenic)*

5.14.1 Introduction

Paterson Reserve is a large area of open space comprised of wetland and open grassland. The western boundary of the Reserve is adjacent to Bowman's Bush. Bowman's Bush is a forest remnant owned by the QEII National Trust

and managed by the ICC Parks and Recreation Division.

The Reserve's natural features of predominantly open space and wetland provide a link with Bowman's Bush and offer a variety of environments to walk, run, picnic and partake in other informal recreational activities.

5.14.2 Location and Access

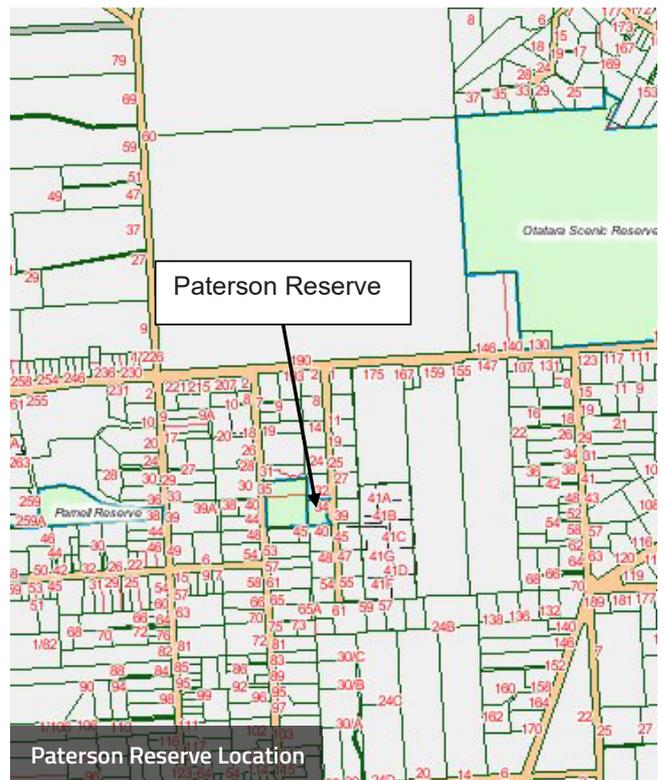
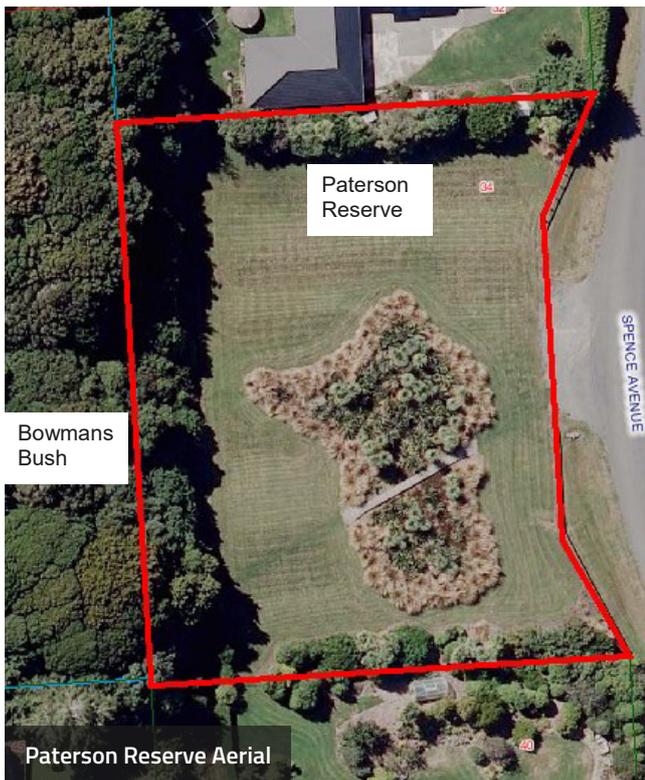
Situated at 34 Spence Avenue, Otatara, Paterson Reserve is one of the only reserves at present in this area with visible street frontage.

Paterson Reserve is located to the west of Spence Avenue and backs onto Bowman's Bush.

Pedestrian access to the Reserve is from Spence Avenue and Ruru Avenue via Bowman's Bush. Vehicle access ends at the Spence Avenue or Ruru Avenue roadsides.

There is a link through to Ruru Ave via an informal grass trail, boardwalk, a bridge and walking tracks through Bowman's Bush.

On the western side of the reserve is a drain managed by ICC Drainage Department. Access must



therefore be maintained to allow any necessary machinery in, along with any necessary trimming of hanging trees from Bowmans Bush.

5.14.3 History

The piece of land that runs through from Dunns Road to Matua Road was owned by John and Isobel Paterson.

The family operated a Post Office from their home for the Otatara District in the early 1900s. They had the only phone in the District so the people of Otatara would come and collect their mail and could use their phone (the phone was probably only used for emergencies in those days).

As part of the Post Office duties, the family also delivered telegrams during World War I to those in the Otatara District who were being informed of the death of their sons at war.

The homestead was passed in to John Paterson Junior after the death of his mother.

When John Paterson (bachelor) died, the entire property was sold by all of the nieces and nephews of the Paterson family to Mr Spence.

Mr Spence subdivided the land and kept one of the sections as a reserve contribution.



As part of the reserve contribution required at the time, it was a condition of subdivision that Lot 22 was to be vested as a reserve. In 1995 Lot 22 DP 13636 was vested as a Local Purpose Reserve by the ICC.

The Reserve was named after a Mr Jim Paterson by the Otatara community.

Reserve Classification was changed to Scenic Reserve in 2017.

A seat was donated in 2019.

5.14.4 Classification and Tenure

Classification: Local Purpose Scenic Reserve

Legal Description: Lot 22 DP 13636

Area: 0.3440 hectares

Record of Title: SL11A/350

Subject to: Reserves Act 1977

5.14.5 Flora

The majority of Paterson Reserve is mown grass with a central wetland area.

Plantings at Paterson Reserve are useful as a barrier to wind, aesthetically pleasing and attract other native fauna.

Areas of wet ground have been planted with native grasses, cabbage trees, flax and pittosporum to create a wetland environment. A boardwalk over the wetland helps to protect vegetation and allow visitors access across the reserve.

Boundaries of the adjoining residential properties have been planted with mixed native species.

A strip of vegetation along the western boundary of Paterson Reserve adjoins with Bowman's Bush. The vegetation type of Bowman's Bush is sand plain mixed podocarp forest, with the dominant canopy species being kahikatea, pokaka, rimu, totara, matai and miro.

The middle tier is dominated by pepperwood, red mapau and Coprosma areolata. A large amount of regenerating ponga and tree fuchsia was noted.

The ground tier is dominated by prickly shield fern, bush flax, hounds tongue fern and crown fern.

5.14.5.1 Pest Plants

Pest plants in Otatara that may also potentially be in Paterson Reserve include: blackberry, gorse, broom, Old Man’s Beard, cotoneaster, Darwin’s barberry, sycamore, aluminium plant/artillery plant and ivy.

Some of these may exist along the Paterson Reserve edge adjoining Bowman’s Bush. They will still cause problems if not managed and controlled.

5.14.6 Fauna

There has been no recorded information of the fauna present at Paterson Reserve. It is likely that, due to the western boundary adjoining with Bowman’s Bush, fauna observed may be similar for both reserves. t

Below is a list of observed native and introduced bird species in the area (*Bowman’s Bush Management Plan, 2005*).

Scientific Name	Common Name	
Native Species		
<i>Anthornis melanura</i>	Bellbird	Regularly present and breeding
<i>Chalcites lucidus</i>	Shining Cuckoo	Summer migrant Parasite breeder
<i>Finschia novaeseelandiae</i>	Brown Creeper	Breeding in general area
<i>Gerygone igata</i>	Grey Warbler	Regularly present and breeding
<i>Hemiphaga novaeseelandiae</i>	NZ Pigeon	Regularly present and breeding
<i>Petroica macrocephala</i>	S I Tomtit	Occasionally present - scarce in general area
<i>Ripidura fuliginosa</i>	Fantail	Regularly present and breeding

<i>Anthornis melanura</i>	Bellbird	Regularly present and breeding
<i>Chalcites lucidus</i>	Shining Cuckoo	Summer migrant Parasite breeder
<i>Finschia novaeseelandiae</i>	Brown Creeper	Breeding in general area

Introduced Species

<i>Carduelis carduelis</i>	Goldfinch	Resident and breeding
<i>Carduelis flammea</i>	Redpoll	Resident and breeding
<i>Fringilla coelebs</i>	Chaffinch	Resident and breeding
<i>Prunella modularis</i>	Hedge Sparrow	Resident and breeding
<i>Sturnus vulgaris</i>	Starling	Occasionally present
<i>Turdus merula</i>	Blackbird	Resident and breeding
<i>Turdus philomelos</i>	Song thrush	Resident and breeding



5.14.7 Amenity Value

Paterson Reserve provides open views and visual relief for the properties that border onto the reserve and for people travelling through the Reserve along the formed trail.

Recent native plantings have created an attractive wetland.

5.14.8 Recreational Use

There are limited recreational facilities provided at Paterson Reserve. The reserve provides natural surroundings and an open space for public use, enjoyment and recreation at any time.

A walking trail links through to Ruru Ave, via Bowman’s Bush. Once crossing the bridge and entering Bowman’s Bush the track becomes a loop.

5.14.9 Policy

5.14.9.1 Allow the ICC Drainage Department to access the reserve to maintain drain and vegetation.

5.14.10 Future Development

5.14.10.1

A trail may be considered to formalise access to Bowmans Bush as resources permit, a desire is there and funds allow.

5.15 Red Tussock Reserve (Scenic)

5.15.1 Introduction

Red Tussock Reserve contains a remnant of red tussock (*Chionochloa rubra*) that is the only one of its kind within the Invercargill City area. Such areas of tussock are uncommon and very fragmented throughout the region, making them locally significant.

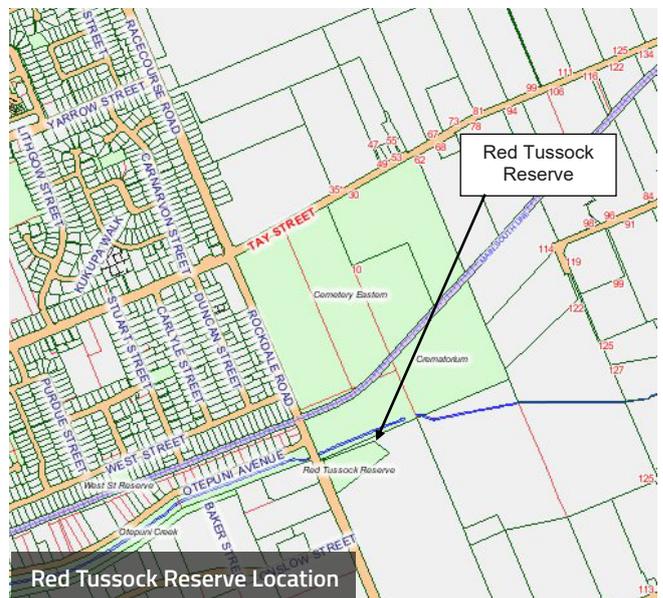
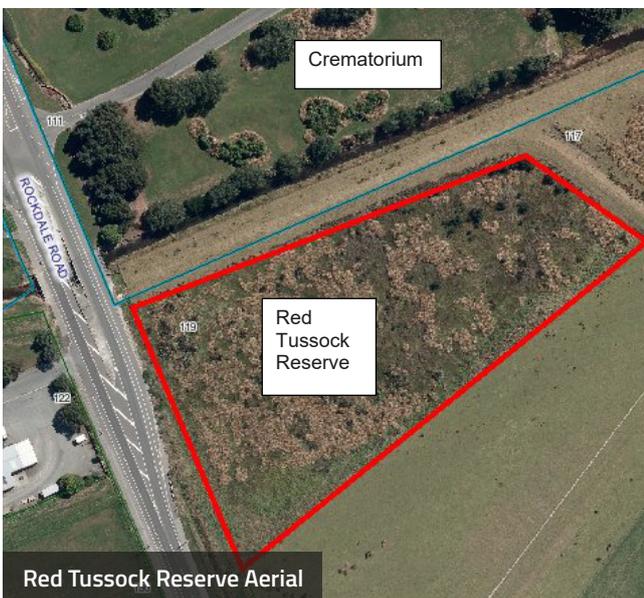
5.15.2 Location and Access

Red Tussock Reserve is located on the eastern edge of Invercargill, adjacent to Rockdale Road. It is south of the Otepunui Creek and the Southland Crematorium.

The Reserve is surrounded to the east and south by farmland and to the west by Rockdale Road, industrial sections and residential housing.

The Reserve is almost surrounded by a flood bank that lies to the north, east and some distance south of the Reserve, separating it from the Otepunui and its floodwaters. This forms a physical boundary to the Reserve. Rockdale Road forms the remaining boundary.

There is currently no formed public access into Red Tussock Reserve. However, unformed pedestrian access can be gained through a gate off Rockdale Road.



5.15.3 History

The vesting of this Reserve by the ICC occurred as a result of a 1996 subdivision. The subdivision was undertaken by the Southland Regional ICC (Environment Southland) for land it acquired for flood protection work.

Vegetation within the Reserve was recognised at the time as being worthy of protection. Therefore, a condition of the subdivision was: 'the low lying land to the south of the crematorium area to vest as local purpose reserve'.

Lot 9 DP 13694 was later classified as a Scenic Reserve, at the recommendation of the Parks Manager at the time, to recognise the special significance of the remnant red tussock and to afford the highest protection to the area.

5.15.4 Classification and Tenure

Classification: Scenic Reserve s. 19 (1) (b)
 Legal Description: Lot 9 DP 13694
 Area: 1.3499 hectares
 Record of Title: SL11A/605
 Subject to: Reserves Act 1977

5.15.5 Flora

The Invercargill District Plan (2019) identifies Red Tussock Reserve as an area containing 'Significant Indigenous Vegetation and Significant habitats of Indigenous Fauna'.

Red tussock is the dominant species within the Reserve and ranges in height from 1-2 metres. Other canopy species include mingimingi, flax and jointed wire rush.

Below is a list of flora known to be present in Red Tussock Reserve (Bill, 1999)

Botanical Name	Common Name
*Introduced/Exotic Species	
* <i>Agrostis stolonifera</i>	Creeping bent
* <i>Agrostis tenuis</i>	Browntop
<i>Blechnum penna-marina</i>	Alpine hard fern
<i>Carex coriacea</i>	Cutty grass
<i>Chionochloa rubra</i>	Red tussock
<i>Coprosma propinqua</i>	Mingimingi
* <i>Cytisus scoparius</i>	Broom
* <i>Holcus lanatus</i>	Yorkshire fog
* <i>Juncus bufonius</i>	Toad rush
<i>Leptocarpus similis</i>	Jointed wire rush
* <i>Lotus pedunculatus</i>	Lotus grass
<i>Phormium tenax</i>	Flax
<i>Ranunculus repens</i>	Creeping buttercup
* <i>Rosa rubiginosa</i>	Sweet briar
* <i>Rubus fruticosus</i>	Blackberry
* <i>Rubus laciniatus</i>	Cut-leaved blackberry
<i>Solanum dulcamara</i>	Bittersweet herb
* <i>Ulex europaeus</i>	Gorse

5.15.5.1 Pest Plants

A high number of introduced/exotic species are present in the reserve. Gorse is the most domi-



nant, as well as blackberry, cut leaved blackberry, bittersweet, broom, and lotus grass. Pasture grasses and sweet briar also exist.

5.15.6 Fauna

A high number of frog calls (species unknown) were heard during the study of 'areas of indigenous vegetation and significant habitats of indigenous fauna' by Bill (1999). Other information on the fauna in the reserve is unknown.

5.15.7 Amenity Value

As this remnant of red tussock (*Chionochloa rubra*) is the only one of its kind in the Invercargill City area, Red Tussock Reserve offers the Invercargill community an important botanical resource.

"It differs from other red tussock land areas, which are either in association with estuarine environments (e.g. Woodend), peat lands of the Awarua Plains, or the pea gravels of Tiwai Peninsular" (Bill, 1999).

Such areas of tussock are uncommon and very fragmented throughout the region, making them significant. They are classed as one of the 'missing' ecosystems in the protected area network.

Control and restoration work will enhance this remnant and protect the natural heritage for future generations. Currently, very few people will be aware of the reserve's existence or importance.

5.15.8 Recreational Use

This is a relatively small reserve and is therefore susceptible to human influences such as trampling and the introduction of exotic species.

Red Tussock Reserve currently provides minimal recreational opportunities in order to control these human influences. The primary purpose is to protect the Reserve's scenic and conservation values for future generations.

An unformed walkway from the gate off Rockdale Road provides a short walk along the flood bank. The flood bank provides views over the Reserve. Future development of access and walkways into Red Tussock Reserve should be limited.

5.15.9 Policies

5.15.9.1 Access Into and Through Reserves

There is no public access into Red Tussock Reserve. Future public access, if there is to be any, should be limited to reduce potential pedestrian or vehicle damage. Widespread public access through the Reserve should be avoided.

Future public access should be limited to a defined area of the Reserve for educational or recreational purposes.

Objectives:

- To prioritise the natural resources within the Reserve when looking at future development of access ways.
- To limit public access into Red Tussock Reserve.

Policy:

5.15.9.1.1

Only minimal public access will be permitted into Red Tussock Reserve in the future. Priority will be given to the protection of the natural resource.

5.15.9.2 Signage

Currently very few people in the Invercargill City know where the Red Tussock Reserve is and are unaware of the significance of the vegetation within it.

Signage will help to raise the profile of this Reserve and educate the public on its importance.

Objective:

- To consider potential interpretational signage for enhancing conservation values at Red Tussock Reserve.

Policy:

5.15.9.2.1

Any interpretational material for the reserve will be considered in the distant future to promote conservation values.

5.16 Seaward Bush Reserve (Scenic)

5.16.1 Introduction

Seaward Bush is a relatively large remnant of regenerating native kamahi forest. It is recognised as an area of significant indigenous vegetation in the Invercargill City District.

Seaward Bush's attractiveness as a natural environment offers an important recreational

resource, providing opportunities for picnicking, walking, running and as an educational 'class-room'.

5.16.2 Location and Access

Seaward Bush is located approximately nine kilometres from the centre of Invercargill.

It is bounded in the north by Mason Road and in the south by Endowment Road.

The Reserve is close to Metcalf Bush Reserve, which adds to its importance as a forest remnant.

Neighbouring land to the east contains forestry plantation, native vegetation and farmland.

An Urupa or Māori burial ground *has been* developed by Murihiku Iwi on land fronting Mason Road on the western boundary. The

unformed Lardner and Murphy Roads also form part of the western boundary.

Visitors can access Seaward Bush off Mason Road. Mason Road frontage provides roadside parking for vehicles. Walking tracks through Seaward Bush start from here.

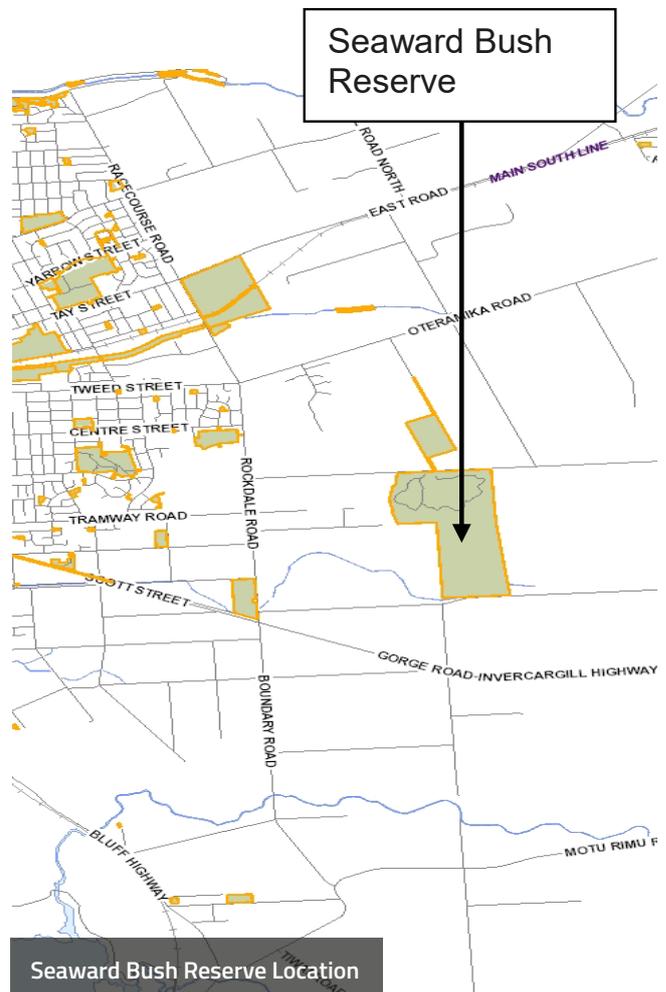
Legal access is also available from Endowment Road, although there is no formal public access.

A subdivision of semi rural properties adjoins the western boundary of the reserve.

5.16.3 History

Seaward Bush was formerly known as Otarewa Bush and comprised of a large tract of native forest lying to the south of Invercargill.

Its northernmost limit extended almost to Tweed Street, and it extended southwards to Woodend



or a little further. To the west it stopped at the swamplands bordering the estuary.

The area, predominantly kahikatea forest in the Southland Hospital grounds at Kew, is the last surviving remnant of the western portion of the Seaward Bush.

The eastern extent of the native bush is less certain, but it appears to have been as far as the settlement of Rimu and Kapuka. South of Seaward Bush was the boggy or swampy Awarua Plains area which was known as Seaward Moss.

A large portion of the Seaward Bush area was classified as Municipal Endowment and was under the ICC's control since the late 1870's.

A map drawn in 1865 shows an area that included much of the later municipal endowment, as being 'Let for Saw Mills'.

The whole area of municipal endowment was let out for timber cutting rights.

Lithographs made from photographs which were taken in the 1880's show that fine timber remained and that extensive felling was in progress at that time.

Following the clear felling of the bush the remaining bush was left to revert to second growth scrub and regenerate.

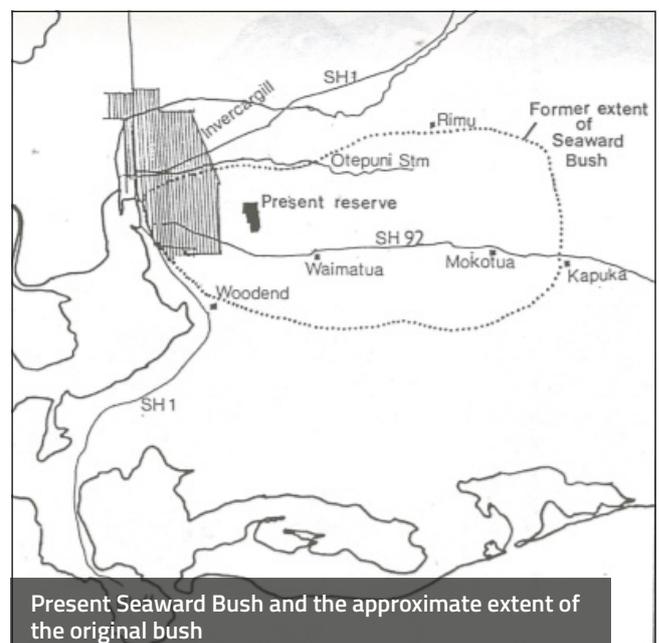
The destruction of the bush, particularly in the area which was later to become the Reserve, must have been fairly complete. This is evidenced by an almost complete absence of any kind of mature trees in the Reserve.

Otarewa Bush was renamed Seaward Bush following the logging.

From early records, it appears that the first person to attach any value to the bush as a reserve area was J. A. McPherson who, in 1927, started referring to it as a scenic reserve.

In 1928, Mr McPherson informed ICC that the bush area had been fenced off and that a new scenic reserve had been formed because of recreational and scenic attributes. At that stage, it was still Municipal Endowment and had no formal recognition as a reserve.

In 1931, the first walking tracks were formed and they were constructed by unemployed workers under the No 5 scheme. Unfortunately this was the era when it was popularly believed that native forest required protection from wind, and it was in 1931 that James McPherson planted the first pines along the western boundary.



When Mr B P Mansfield became Superintendent of Reserves, he had the Mason Road picnic area cleared and formed. He also organised the construction of a new walking track that went out to Lardner Road.

It was reported that on 23 November 1934 a deliberately lit fire spread into the bush a short distance. Fortunately it did little damage.

Mr Mansfield was also responsible for having *Nothofagus fusca* planted along the Mason Road frontage in 1935, with only one or two still remaining.

A picnic shelter was transported from Thomsons Bush and re-erected in Seaward Bush. The exterior was clad with the fern trunks so as to make it 'aesthetically' more pleasing. It was probably demolished during or after World War II.

Up until 1969, the land was classified as Municipal Endowment to be held in trust in aid of city funds.

In September 1969, the Commissioner of Crown lands wrote to the City Council requesting that it give consideration to having the area (255 acres) become a Scenic Reserve under the Reserves and Domains Act 1953.

The proposal suggested that ownership of the land be transferred to the Crown and then control of the Reserve be vested in the City Council. ICC agreed to that proposition but in 1971, after taking legal advice, decided to retain ownership of the land.

Instead of the classification of Scenic Reserve the ICC decided to have it classified as a Recreation Reserve. A notice in the New Zealand Gazette (15 March 1973) proclaimed the 256 acre (103.8423 ha) area of Seaward Bush classified as a Recreation Reserve with the ICC holding the land in fee simple.

Over the years, a considerable amount of work has been carried out in the reserve by volunteer groups. Track work was done by the Y's Men's Club, Awarua Jaycee Incorporated and pupils of Southland Boys High School in the 1960's and through the 1970's.

In 1977 the Awarua Jaycee Inc. erected a picnic shelter and barbecue. That organisation also undertook a major upgrading of the main walking track in 1980. A shingle surface was laid on the track and boardwalks and bridges were constructed over muddy areas.

In 1988-1989, a link to an old disused track in the eastern portion created a substantially longer circular route. Work on that new section and updating the old track was completed by periodic detention labour.

The ICC resolved to incorporate Lot 3 DP 359516 into the reserve for recreation purposes (Transfer 7627253.1) in 2004. In addition to the incorporation of Lot 3, ICC also resolved that the classification of Seaward Bush Reserve be Scenic Reserve.

In 2008, Lots 1 DP 7967 and 3 DP 359516 were gazetted as a Scenic Reserve for the purposes specified in section 19(1)(b) of the Reserves Act 1977. Seaward Bush now covers just over 107 hectares.

A dog off lead trial was undertaken in 2011 following a public request and ICC at its meeting on 5 March 2013 resolved to discontinue this trial on the walking tracks. The area then reverted back to a dog on leash area only.

Recent improvements to the reserve have included updated signage and recycled rubber matting previously used as safety surfacing at playgrounds. Extensive pest and animal and weed control methods as well as re-vegetation undertaken by Parks and Recreation Staff with the help of the community have helped the longevity of the native bush.

5.16.4 Classification and Tenure

Classification: Scenic Reserve s.19 (1) (b)

Legal Description: Lot 1 DP 7967, Lot 3 DP 359516

Area: 107.8933 hectares

Record of Title: 242294

Subject to: Reserves Act 1977

Section 241(2) Resource Management Act 1991 (affects DP 359516)

5.16.5 Flora

Historical evidence, in the form of lithographs made from photographs taken in the 1880's,

illustrate that Seaward Bush was originally dense and a very fine lowland podocarp forest. Rimu and matai appear to have been the two dominant species, although miro, kahikatea, and Hall's totara were also present in reasonable numbers.

Other large canopy trees were kamahi and pokaka. Under story trees were tree fuchsia, kohuhu, tarata, wine berry, putaputaweta, kaimakomako, broadleaf, pate and three finger. Less common were lancewood, and raukawa.

The forest floor was rich in mosses, liverworts and quite a wide range of ferns.

As stated in the historical section, the destruction of the bush must have been fairly complete and virtually no mature trees were left standing. However, the area must have had a reasonable number of young or sapling trees, as well as more mature trees, left on it.

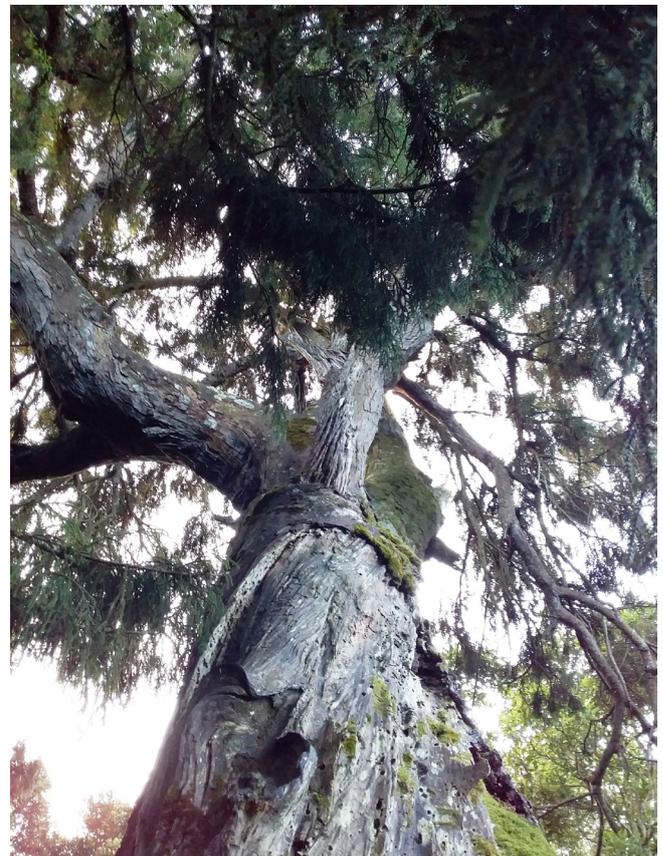
There is a reasonable number of podocarps that were probably saplings at the time of clear felling. Today the bush is an excellent example of the way in which cut over native forest can regenerate. A study by Bill (1999) showed that regeneration of broadleaf, tree fuchsia, kohuhu, kahikatea and miro was noted.

Pine trees have been planted along the Endowment Road boundary and macrocarpa along the western boundary with the cemetery reserve, as was the custom in the 1950's.

To the south of Lardner Road, an irregular line of somewhat scattered old pine trees indicates a much earlier attempt to shelter the forest from the effects of wind. It is now realised that it is better to allow the vegetation to develop its own windproof margin, which is not only more effective and less damaging than a coniferous shelter belt, but also has a more natural appearance.

A small cluster of 200-300 year old rimus (pictured below) tower above the existing canopy. If these trees were to impact on the walking track eventually, Parks and Recreation staff will re-route the walking track and develop a lookout point to educate the public about these trees.

Macrocarpa trees on the south boundary were harvested in 2019 when the land to the south of Seaward Bush was being subdivided, ICC took the opportunity to remove these trees from the reserve before they posed a threat to future houses.



Below is a list of flora known to be present in Seaward Bush (*Seaward Bush Management Plan, 1994*)

Botanical Name	Common Name		
*Introduced/Exotic Species			
* <i>Acer pseudoplatanus</i>	Sycamore	<i>Dicksonia squarrosa</i>	Wheki (a tree fern)
<i>Aristolelia serrata</i>	Wineberry or mako mako	<i>Elaeocarpus hookerianus</i>	Pokaka
<i>Asplenium bulbiferum</i>	Hen and Chicken fern	<i>Epilobium ciliatum</i>	Willow Herb
<i>Asplenium flaccidum</i>	Hanging spleenwort	<i>Fuchsia excorticata</i>	Tree fuchsia or kotukutuku
<i>Blechnum discolor</i>	Crown fern	<i>Fuchsia perscandens</i>	Climbing fuchsia
<i>Blechnum fluviatile</i>	Kiwakiwa	<i>Grammitis magellanica ssp. Nothofageti</i>	Fern
<i>Blechnum penna marina</i>	Alpine hard fern	<i>Griselinia littoralis</i>	Broadleaf
<i>Blechnum procerum</i>	Fern/small kiokio	<i>Histiopteris incisa</i>	Water fern
<i>Blechnum species no. 1</i>	Kiokio	<i>Hydrocotyle heteromera</i>	Pennywort or hydrocotyle
* <i>Calystegia silvatica</i>	Convolvulus	<i>Hymenophyllum bivalve</i>	Fern
<i>Carpodetus serratus</i>	Putaputaweta or marbleleaf	<i>Hymenophyllum demissum</i>	Drooping filmy fern
<i>Cirsium arvense</i>	Californian thistle	<i>Hymenophyllum flabellatum</i>	Fern
<i>Cirsium lanceolatum</i>	Scotch or spear thistle	<i>Hymenophyllum rarum</i>	Fern
<i>Clematis paniculata</i>	Puawhananga	<i>Hymenophyllum revolutum</i>	Filmy ferns
<i>Conium maculatum</i>	Hemlock	* <i>Hypochaeris radicata</i>	Catsear
<i>Coprosma foetidissima</i>	Stinkwood	<i>Hypolepis ambigua</i>	Fern
<i>Coprosma lucida</i>	Karanga	<i>Ilex aquifolium</i>	Holly
<i>Coprosma propinqua</i>	Mingimingi	<i>Leptopteris hymenophylloides</i>	Crepe fern
<i>Coprosma rhamnoides</i>	Divaricating Native shrub	<i>Leptospermum scoparium</i>	Manuka
<i>Coprosma rotundifolia</i>	Round leaved coprosma	<i>Loranthus micranthus</i>	Mistletoe
<i>Crataegus monogyna</i>	Hawthorn	<i>Lotus pedunculatus</i>	Lotus grass
<i>Cyathea smithii</i>	Wheki	<i>Lycopodium varium</i>	Hanging clubmoss
* <i>Cytisus scoparius</i>	Broom	<i>Melicytus lanceolatus</i>	Mahoewao
<i>Dacrycarpus dacrydioides</i>	Kahikatea	<i>Metrosideros diffusa</i>	Climbing rata
<i>Dacrydium cupressinum</i>	Rimu/Red Pine	Muehlenbeckia australis	Pohuehue
<i>Dicksonia fibrosa</i>	Ponga	Myrsine australis	Mapou
		Myrsine divaricata	Weeping matipo
		Neomyrtus pedunculata	Native shrub/rohutu
		Nertera depressa	The bead plant/fruiting duckweed

Nertera dichondrifolia	Dicotyledonous Herb-non composite
Nothofagus fusca	NZ Red Beech
Parsonsia heterophylla	NZ Jasmine or kaihua
Pennantia corymbosa	Kaikomako
Phymatosorus diversifolius	Hounds tongue fern
Pittosporum eugenoides	Lemonwood or tarata
Pittosporum tenuifolium	Kohuhu
Plantago lanceolata	Narrow-leaved plantain
Plantago major	Broad-leaved plantain
Podocarpus hallii	Hall's totara
Polystichum vestitum	Prickly shield-fern
Prumnopitys ferruginea	Miro
Prumnopitys taxifolia	Matai
Pseudopanax colensoi	Three finger
Pseudopanax crassifolius	Lancewood
Pseudopanax edgerleyi	Raukawa
Pseudowintera colorata	Pepperwood or horopito
Psilotaceae tmesipteris spp	Fork fern
Pteridium esculentum	Bracken
* Ranunculus repens	Creeping buttercup
Rubus australis	Bush lawyer
Rubus cissoides	Bush lawyer
* Rubus fruticosus	Blackberry
* Rumex obtusifolius	Broad-leaved dock
Rumohra adiantiformis	Climbing shield Fern, leathery shield fern, leather- leaf fern, iron fern

Schefflera digitata	Pate or Seven finger
* Senecio jacobaea	Ragwort
Senecio minimus	Groundsel
* Solanum dulcamara	Bittersweet
Stellaria gracilentia	Small chickweed
Trichomanes venosum	Veined bristle fern, Veined filmy fern
Trifolium pratense	Red clover
* Tropaeolum speciosum	Flame flower
* Ulex europaeus	Gorse
Viola cunninghamii	Cunningham's violet
Weinmannia racemosa	Kamaha

5.16.5.1 Pest Plants

Any introduced and exotic pest plants, such as pine, macrocarpa and beech, will need to be controlled and monitored to ensure their numbers are at a minimum or be progressively removed to ensure sustainability and viability.

Gradual infill with native plantings will help the viability of the indigenous forest.

5.16.6 Fauna

Unfortunately not much research has been carried out into the fauna of Seaward Bush and very little has been documented.

The species list below has been referenced from the Seaward Bush Management Plan (1994). This is the most recent known research on this area.

Below is a list of fauna a known to be present in Seaward Bush (*Reference: Seaward Bush Management Plan, 1994*)

<i>Scientific Name</i>	Common Name
<i>Invertebrates</i>	
<i>Acearanea sp.</i>	Spider
<i>Anabium punctatum</i>	Common borer beetle
<i>Apis mellifera</i>	Honey bee

<i>Bassaris generilla</i>	Red admiral
<i>Bombus terrestris</i>	Bumble bee
<i>Calliphora quadrimaculata</i>	Native blue bottle
<i>Clubiona convoluta</i>	Spider
<i>Crambus flexuosellus</i>	Common grass moth
<i>Diea sp.</i>	Spider
<i>Dyarcyops orepukiensis</i>	Spider
<i>Eristalis tenax</i>	Dronefly
<i>Forficula auricularia</i>	European earwig
<i>Hanseniella sp.</i>	Bush centipede
<i>Mecodema sp.</i>	Waisted ground beetle
<i>Melanostoma fasciatum</i>	Hoverfly
<i>Musa domestica</i>	Common house fly
<i>Oeceticus omnivorus</i>	Case moth
<i>Oncacontias vittatus</i>	Shield bug
<i>Parasarcophagus milleri</i>	Striped flesh fly
<i>Philaenus trimaculatus</i>	Spittle bug
<i>Pieris rapae</i>	White Butterfly
<i>Porcellia scaber</i>	Common slater
<i>Procordulia smithii</i>	Ranger dragonfly
<i>Protohystrica alcis</i>	Tachinid parasite
<i>Pyrontota festiva</i>	Manuka beetle
<i>Staphylinidae</i>	Rove beetle
<i>Syrphus novaezealandiae</i>	Hoverfly
<i>Tatosoma timora</i>	Common forest looper
<i>Theridiidae sp.</i>	Spider
<i>Trite reauricoma</i>	Spider
<i>Wainuia urnula</i>	Land snail

Zealandotipula novarae Cranefly

Vertebrates - Mammals

Trichosorus vulpecula Brush-tailed possum

Also possibly present: rats, mice, stoats and hedgehogs.

Vertebrates - Amphibians and Reptiles

Hoplodactylus granulatus Forest gecko

Litoria ewingi Whistling brown Australian tree frog

Litoria raniformis Green tree frog

Vertebrates - Avifauna

Anthornis malaneura Bellbird

Athene noctua Little Owl

O.V. *Chalcites lucidus* Shining Cuckoo

R&B *Finschia novaeseelandiae* Brown Creeper or Pipipi

R&B *Fringilla coelebs* Chaffinch

R&B *Gerygone igata* Grey warbler

R&B *Hemiphaga novaeseelandiae* NZ pigeon

Ninox novaeseelandiae Morepork

Prosthemadera novaeseelandiae Tui

R&B *Rhipidura fuliginosa* Fantail

R&B *Turdus merula* Blackbird

R&B *Turdus philomelos* Song thrush

Zosterops lateralis Silveryeye

Key:

R&B Resident and Breeding

O.V. Occasional Visitor

5.16.7 Amenity Value

As one of the few remaining areas of native bush in close proximity to the Invercargill City urban environment, Seaward Bush offers the Invercargill community an important recreational and scenic resource.

The close location of Seaward Bush to Metcalf Bush adds to the botanical importance of this reserve as a significant forest remnant in the Southland region.

To local residents it offers visual freedom from the confines of city living.

5.16.8 Recreational Use

Seaward Bush offers an important recreational resource, while management of the Reserve still prioritises on retaining its indigenous vegetation.

The Reserve provides opportunities for walking and running on the formed gravel tracks, taking dogs on a lead, picnicking, and as an educational classroom.

Many reserve visitors have an interest in its natural values. *Community groups and schools have taken an active part in the development of walking tracks. Maintenance is carried out by workgroups from the Department of Corrections - Community Probation Service and Recreation Division Rangers.*

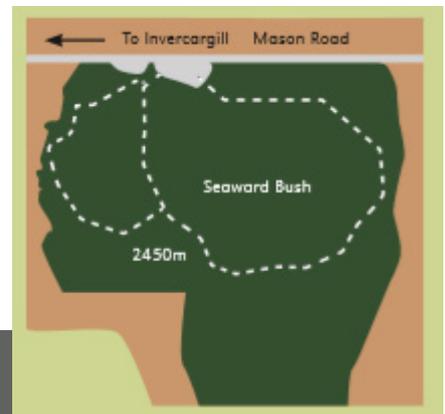
Recreational facilities in Seaward Bush include a walking track and a self contained accessible toilet and rubbish bins. A concrete pad is all that remains of a picnic shelter, removed after it was vandalised in the 1990's. A large open picnic area faces Masons Road and a smaller picnic area located nearby is sheltered from the wind. Interest groups and families take advantage of these areas mainly in the summer months.

It is important that this Reserve be utilised to its full potential while ensuring the natural values are protected. Education, through signage and promotion, will help with this.

Interpretation signage has been provided at the east entrance of the Reserve to educate visitors on the environmental importance. The Reserve is included in the "Short Walks in The Invercargill Area" brochure which will help promote the Reserve.

Future walking track opportunities include: extending the existing tracks further into the reserve to provide a longer track, and linking to any walking tracks developed in the neighbouring Metcalf Bush in the future.

Improved car park facilities would allow safer access for public access, including education groups, to Seaward Bush.



Walking Tracks in Seaward Bush



5.16.9 Policies

5.16.9.1 Classification

Seaward Bush has been recognised as a significant forest remnant in the Invercargill area. Classification as a Scenic Reserve under the Reserves Act 1977 ensures a high level of protection for the future.

The adjoining land on the east side of the Seaward Bush boundary consists of very high value wetland on peaty bog. Wetlands are few in the Invercargill District and, with such natural and scenic importance, this land has the potential to be amalgamated with Seaward Bush in the future.

Policy:

5.16.9.1.1

Adjoining land to the east of Seaward Bush will be amalgamated in the future.

5.16.9.2 Access Into and Through Reserves

Policies:

5.16.9.2.1

Vehicular access to Seaward Bush shall be limited to the Mason Road frontage car park.

5.16.9.2.2

Due to vandalism, vehicle access from Mason Road has been closed. Access for vehicles will only be for maintenance and emergencies, or with the written authority of ICC.

5.16.9.2.3

Access into Seaward Bush from Endowment Road may be considered if there is enough demand for it. All vehicle entrances from Endowment Road shall be secured so that only maintenance and emergency vehicles can gain access.

5.16.9.2.4

Car parking extensions will be considered if demand warrants a need for it and will assist with visitors to Metcalf Bush should a track be developed in that area.

5.17 Stirling Point Reserve (Scenic)

5.17.1 Introduction

Stirling Point Reserve *lies within a very scenic part of the southern coastline and is a relatively*

large area of regenerating coastal forest vegetation considered to be of national importance.

5.17.2 Location and Access

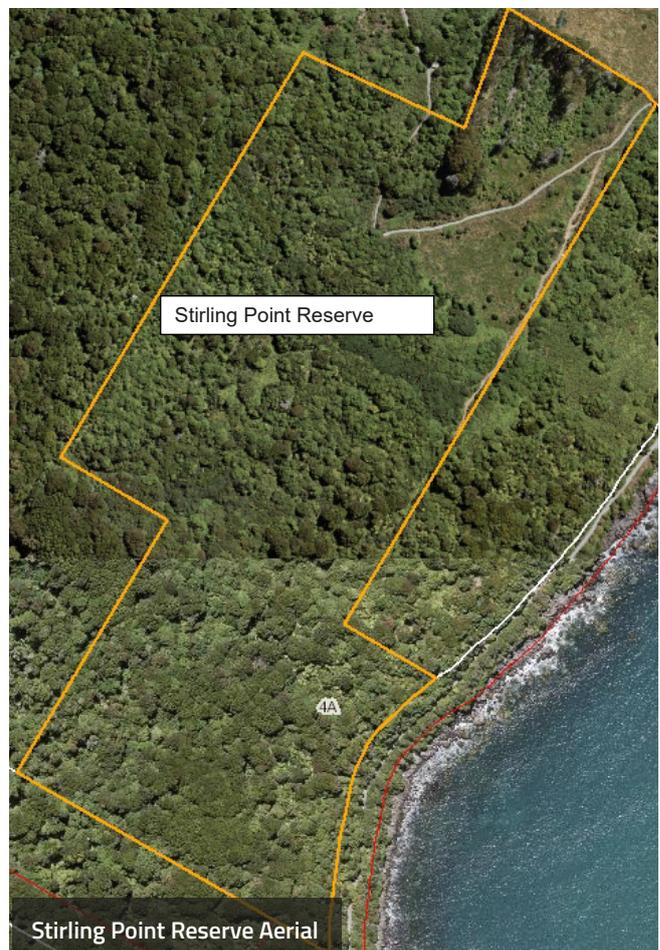
Stirling Point Reserve is located at the eastern coastline of Bluff, at 4A Ward Parade. Stirling Point Pilot Station Esplanade Reserve is nearby.

5.17.3 Access

Pedestrian access to Stirling Point reserve is via the trail from Stirling Point car park to Gun Battery. There are no other walking trails or access ways through the reserve.

5.17.4 Adjoining Land Use

Stirling Point Reserve directly adjoins with DOC and private land. In ICC's District Plan, 6 Ward Parade, which adjoins Stirling Point Reserve, is designated reserve with the ICC.



5.17.5 History

In October 1997 an area of privately owned native bush at Stirling Point was earmarked to be taken for reserve and was later designated reserve under ICC's District Plan 2019.

At the time outstanding rates were owed on the property and ICC was intending to force a rating sale to recover the debt and possibly buy the land.

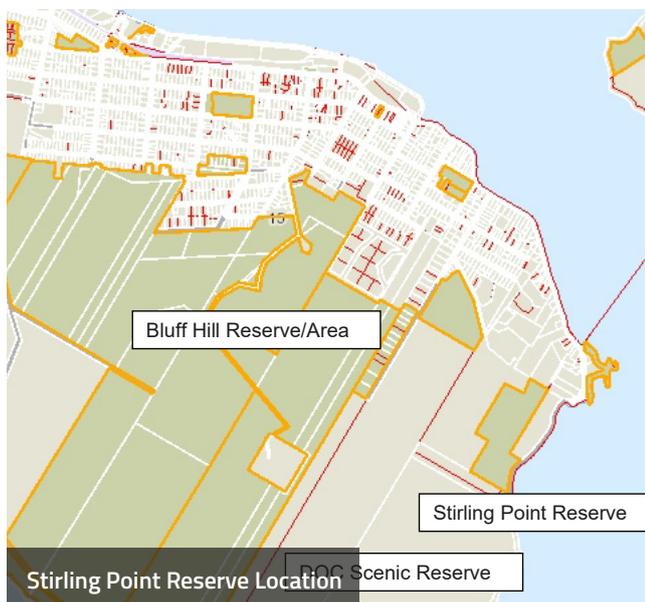
ICC purchased the land at 4A Ward Parade, Bluff in 2006 with the intention of protecting the land as a reserve for environmental and scenic purposes.

In 2007 ICC proposed the area be classified as Scenic Reserve pursuant to section 19 of the Reserves Act 1977 and that the reserve be named Stirling Point Reserve. A Gazette was published in 2008 declaring land as scenic reserve and naming the area as Stirling Point Reserve.

5.17.6 Classification and Tenure

5.17.6.1 Classification

Stirling Point Reserve is classified as scenic reserve pursuant to Section 19 of the Reserves Act 1977. It shall be managed in accordance with this classification.



5.17.6.2 Tenure and Area

Record of Title: 271482

Legal Description: Lot 3 DP 366879

Area: 9.1464 ha

Classification: Scenic Reserve

5.17.7 Flora

Positive working relationships with local community groups have enabled areas to be revegetated with eco-sourced plants from the ICC Donovan Park Nursery and community volunteer labour.

5.17.8 Amenity Value

Stirling Point Reserve provides a backdrop for the land mark - Stirling Point signpost. It offers visual relief for surrounding residents in adjoining properties and for visitors visiting or passing through the reserve.

5.17.9 General Park Use

Stirling Point Reserve is used as an Environmental Reserve for protection of flora and fauna, while allowing limited recreation in the form of a walkway and pest control management.

5.17.10 Policies

5.17.10.1 ICC shall work with Iwi and DOC ensure management of this reserve complements adjoining reserves.

5.17.11 Future Development

There is a desire to continuously improve the ecological values of Motupohue as a whole.

This reserve forms an important part of the area. Bluff Tourism Master Plan also alludes to ecological restoration of the Maunga.

5.18 Taiepa Dune Reserve (*Scenic*)

5.18.1 Introduction

Taiepa Dune Reserve is an irregularly shaped remnant of undulating land.

The southern half of the Reserve is part of a series of podocarp forest remnants in Otatara and also contains regenerating totara forest. At the eastern part of the reserve there are open grassy sand dune landforms.

Taiepa Dune Reserve provides visitors to the area with a walking track, open space for recreational activities and a children's playground.

5.18.2 Location and Access

Taiepa Dune Reserve is located at 83 Taiepa Road, and at 31 and 33 Raeburn Avenue.

The largest portion is situated on the corner of Taiepa Road and Grant Road, with the south end extending to Raeburn Avenue.

Where there is no road frontage the Reserve is adjoined by residential land.

Public access can be gained off Raeburn Avenue, Grant Road and Taiepa Road. Vehicles can be parked on the road side of these three roads.

In 2008 construction of a walking track from Raeburn Avenue through to Grant Road was completed. This provides a thoroughfare for pedestrian access through the reserve to link all three access points.

5.18.3 History

Taiepa Dune Reserve (formerly known as Taiepa Road Reserve) was acquired by the Southland County Council in 1985 from the Crown by freehold Record 4318 (Transfer 117976.1).

The land was originally purchased as a site for a community centre but that idea was later abandoned and another site chosen.

In 1992 the land was declared a Recreation Reserve by NZ Gazette Notice 1992 Page 1060

(GN 206785.1). In 1993 the land was transferred to the ICC by transmission 206616.1.

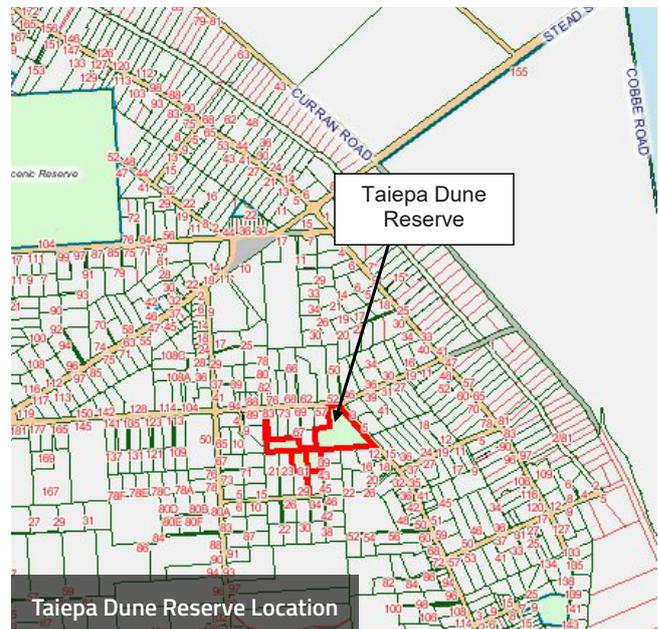
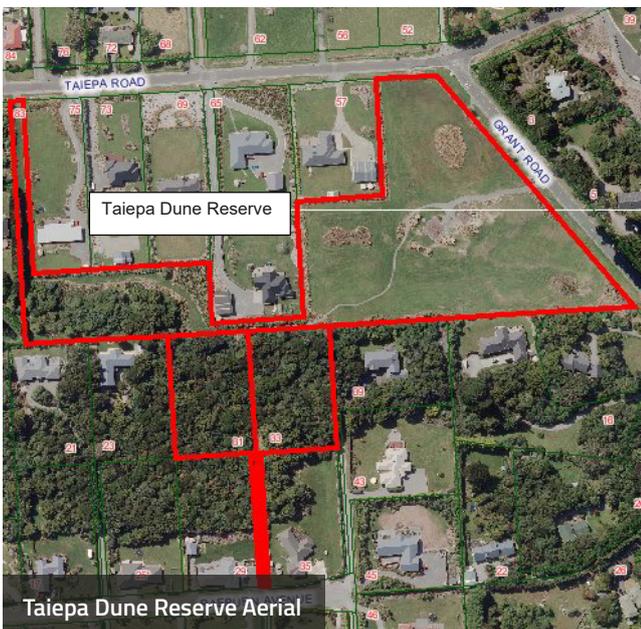
In 2001 land was transferred to Neil James and Yvonne Margaret Jefcoate (Transfer 5067989.1) and in 2003 land was transferred back to ICC (Transfer 5472197.1).

The former Taiepa Road Reserve was originally open grassland, with little native remnant at the north of the boundary that adjoined Raeburn Reserve.

Raeburn Avenue Reserve was acquired by ICC in 2003, following a proposal by the landowner to clear the vegetation for the construction of a residential dwelling and associated buildings. ICC recognised the significance of the vegetation and purchased the land to protect the vegetation from further clearance. At the time ICC recommended the reserve be classified as a scenic reserve.

In 2005, ICC granted consent for Taiepa Road Reserve to be subdivided into Lots 1-6 Section 129, Block XX to create seven new allotments. Lot 7 was retained for the purposes of a Recreation Reserve.

In 2008 Lot 18 DP 13564 and Lot 19 DP 13564



were declared as a Scenic Reserve and further declared that the Reserve be known as Taiepa Dune Reserve. Lots 18 and 19 were originally Raeburn Avenue Reserve.

Since 2008, the Reserve has been developed, with native plantings in low-lying and wet areas of the reserve. A playground, walking tracks, a picnic table and seating have been put in.

In 2017 Lot 7 DP 324202 was re-classified as Scenic Reserve.

In 2019 Derek Gostelow bequested in his will \$90,000 to the ICC to be used as: "One part to the Invercargill City Council for community projects within the Otatara area and community". The Otatara Community are working with ICC Officers to understand Otatara community's preferred development at Taiepa Dune Reserve, its alignment with the Reserve Management Plan and other statutory documents, likely construction and ongoing maintenance costs.

5.18.4 Classification and Tenure

Classification: Scenic Reserve s.19 (1)(b)

Legal Description: Lot 18 DP 13564,
Lot 19 DP 13564
Area: 0.8400 ha
Record of Title: SL11A/71, SL11A/72
Subject to: Reserves Act 1977

Classification: Scenic Reserve
Legal Description: Lot 7 DP 324202
Area: 2.5500 hectares
Record of Title: 97748
Subject to: Reserves Act 1977, Section 8 Mining Act 1971, Section 5 Coal Mines Act 1979

5.18.5 Flora

Lot 7 is made up of grassland and wetland over the undulating sand dunes.

Plants used to develop a wetland environment in the low lying damp ground included: red tussock, cabbage trees, toe toe, flax and Carex secta.

Lots 18 and 19 include existing native vegetation and are located at the south end of the Reserve (originally Raeburn Reserve).

Overall, the forested area is totara dominant, running along a gentle dune (west-east). Other



main canopy species of this forest fragment are pepperwood, manuka, kamahi, matai, rimu and emergent kahikatea.

Species of the sub canopy include wineberry, kohuhu, and kanono.

The groundcover is dominated by hounds tongue fern, prickly shield fern and bracken.

Vegetation at the Reserve is useful as a barrier to wind, aesthetically pleasing and attracts native birds and insects.

Recent plantings have enhanced and connected the forest fragments, adding to the importance of the Otatara remnants.

Extension of plantings using pioneer species from Otatara coastal sand dune forest include: broadleaf, Hall's totara, black pine, black mapau, lemonwood, red mapau, cabbage tree and wineberry.

Below is a list of flora known to be present in the existing forest remnants in the Raeburn Avenue area and in the more recent plantings at Taiepa Dune Reserve. Not all of these species will necessarily be present in Taiepa Dune Reserve (Bill, 1999).

<i>Botanical Name</i>	<i>Common Name</i>
<i>*Introduced/Exotic Species</i>	
* <i>Acer pseudoplatanus</i>	Sycamore
<i>Aristolelia serrata</i>	Wineberry
<i>Asplenium bulbiferum</i>	Hen and Chicken fern
<i>Asplenium flaccidum</i>	Hanging spleenwort
<i>Astelia fragrans</i>	Bush flax
* <i>Berberis darwinii</i>	Darwin's barberry
<i>Blechnum discolor</i>	Crown fern
<i>Blechnum sp. 'brown scale'</i>	Common hard fern
<i>C. virgata</i>	Carex Secta
<i>Calystegia tuguriorum</i>	Native bindweed
<i>Carpodetus serratus</i>	Putaputaweta or marbleleaf
* <i>Chionochloa rubra</i>	Red Tussock

* <i>Cirsium arvense</i>	Californian thistle
* <i>Cirsium vulgare</i>	Scotch thistle
<i>Clematis vitalba</i>	Old Man's Beard
<i>Coprosma areolata</i>	Small leaved shrub
<i>Coprosma grandiflora</i>	Kanono
<i>Coprosma lucida</i>	Glossy karamu
<i>Coprosma parviflora</i>	Small leaved shrub
<i>Coprosma rotundifolia</i>	Round leaved coprosma
<i>Cordyline australis</i>	Cabbage tree
* <i>Cortaderia richardii</i>	Toe toe
* <i>Cotoneaster siminsii</i>	Cotoneaster
* <i>Crateagus monogymna</i>	Hawthorn
<i>Crocsmia x crocosmiiflora</i>	Montbretia
* <i>Cyathea smithii</i>	Soft tree fern
<i>Cytisus scoparius</i>	Broom
<i>Dacrycarpus dacrydioides</i>	Kahikatea
<i>Dacrydium cupressinum</i>	Rimu
* <i>Daphne laureola</i>	Spurge-laurel
<i>Dicksonia fibrosa</i>	Ponga
<i>Dicksonia squarrosa</i>	Wheki (a tree fern)
* <i>Digitalis purpurea</i>	Foxglove
<i>Elaeocarpus hookerianus</i>	Pokaka
<i>Fuchsia excorticata</i>	tree fuchsia
* <i>Galeobdolon luteum</i>	Aluminium/ Artillery Plant
<i>Griselinia littoralis</i>	Broadleaf
<i>Hebe salicifolia</i>	Koromiko
* <i>Hedera helix</i>	Ivy
<i>Histiopteris incisa</i>	Water fern
<i>Hypolepis rufobarbata</i>	Fern
<i>Hypolepis tenuifolium</i>	Fern
* <i>Ilex aquifolium</i>	Holly
<i>Leptospermum scoparium</i>	Manuka

<i>Muehlenbeckia australis</i>	Pohuehue	<i>Pseudowintera colorata</i>	Horopito or pepperwood
<i>Myrsine australis</i>	Red Mapau	<i>Pteridium esculentum</i>	Bracken
<i>Parsonsia heterophylla</i>	NZ Jasmine or kaihua	* <i>Rubus fruticosus</i>	Blackberry
<i>Pennantia corymbosa</i>	Kaikomako	* <i>Rubus laciniatus</i>	Blackberry - cut leaved
<i>Phormium tenax</i>	Flax	* <i>Sambucus nigra</i>	Elderberry
<i>Phymatosorus diversifolius</i>	Hounds tongue fern	<i>Schefflera digitata</i>	Pate or Seven finger
<i>Pittosporum eugenoides</i>	Lemonwood or tarata	<i>Senecio minimus</i>	Groundsel
<i>Pittosporum tenuifolium</i>	Black Mapau	* <i>Solanum dulcamara</i>	Bittersweet herb
<i>Pittosporum tenuifolium subsp. colensoi</i>	Kohuhu	<i>Sonchus kirkii</i>	Shore puha
<i>Plagianthus regius</i>	Ribbonwood	<i>Sophora microphylla</i>	Kowhai
<i>Podocarpus hallii</i>	Hall's totara	* <i>Tropaeololum speciosum</i>	Flame flower
<i>Podocarpus totara</i>	Totara	* <i>Ulex europaeus</i>	Gorse
<i>Polystichum vestitum</i>	Prickly shield fern	<i>Weinmannia racemosa</i>	Kamaha
<i>Prumnopitys ferruginea</i>	Miro		
<i>Prumnopitys taxifolia</i>	Matai or Black Pine		
<i>Pseudopanax colensoi</i>	Three finger		
<i>Pseudopanax crassifolius</i>	Lancewood		

The open north eastern portion of grassy sand dunes is largely weed free due to earlier grazing.

5.18.5.1 Pest Plants

Pest plants in Otatara likely to be in Taiepa Dune Reserve include: blackberry, gorse, broom, Old man's Beard, cotoneaster, Darwin's barberry, sycamore, aluminium plant/artillery plant and ivy.



Pest plants have a detrimental effect on the reserve. Natural regeneration within the Reserve shall be encouraged through the control of persistent weed species and pest animals.

5.18.6 Fauna

The Otatara area supports many endemic forest bird species (e.g. bellbirds (*Anthornis melanura*), tui (*Prosthemadera novaeseelandiae*), fantails (*Rhipidura fuliginosa*), greywarblers (*Gerygone igata*) and silvereyes (*Zosterops lateralis*), as well as nationally threatened species (e.g. fern bird (*Bowdleria punctata*), wood pigeons (*Hemiphaga novaeseelandiae*)).

5.18.7 Amenity Value

Taiepa Dune Reserve contributes to the significant sand dune and sand plain forest remnants of the Otatara-Sandy Point area that are considered to be nationally important.

The north portion of the Reserve provides expansive open views. This area shall be retained for its characteristic sand dune landforms.

The south portion of the reserve provides native forest.

The variation of both open space and native remnant over a geographical variation of undulating and flat land will ensure the likelihood of sustainability of Taiepa Dune Reserve

5.18.8 Recreational Use

Taiepa Dune Reserve is used as a public area for outdoor recreation. It offers visitors and the Otatara community both a recreational and scenic resource, providing opportunities for picnicking, walking, running and play.

A walking track links Grant Road, Raeburn Avenue and Taiepa Road. The undulating track passes through a remnant of coastal and sand dune forest at the south of the Reserve and grassy clearings in the sand dune landforms at the north of the Reserve.

The south portion of the Reserve is predominately forest remnant and visitors can walk through this section along the formed walkway.

The north portion of the Reserve is predominately grassed area which becomes an open space for public use, enjoyment and recreation at any time.

The playground is situated at the north east area of the reserve by Grant Road. Playground equipment includes: two swings, a seesaw, slide and a module. There is also a swing seat, a park bench and a picnic table at the playground area.

5.18.9 Policies

5.18.9.1 Boundaries and Fencing

Fencing exists around and within the Taiepa Dunte Reserve boundaries, including between the north boundary of the area previously known as Raeburn Bush and the narrow mown access strip along Taiepa Dune Reserve.

Fencing consists of fence wire and posts.

Policy:

5.18.9.1.1

Rural style fencing at Taiepa Dune Reserve is currently suitable for defining boundaries around the Reserve.

5.18.9.2 Classification

5.18.9.2.1

If development is required as per the Gostelow Legacy, and the primary use of the reserve is for those activities, ICC may be required to change the classification of part of the reserve from scenic to recreation classification by way of Council resolution pursuant to section 17 of the Reserves Act 1977.

5.18.10 Future Development

Taiepa Dune Reserve is set for development in the future to enhance the public's ability to access the



reserve. This will increase car parking demand in the eastern corner.

Future development by the Parks and Recreation team will be undertaken in relation to growth, needs, partnership and environmental reserves network.

A proposed space with which could potentially hold further development if the Gostelow Legacy was approved is shown.

5.19 Thomsons Bush (Scenic)

5.19.1 Introduction

As one of the few remaining native forest areas within the Invercargill urban environment Thomsons Bush offers the Invercargill community an important environmental and recreational resource providing opportunities for picnicking, play, walking, running and as an educational 'classroom'.

5.19.2 Location and Access

Thomsons Bush is located on the northern side of the Waihopai River approximately 2.5km north of the Invercargill City centre. The reserve

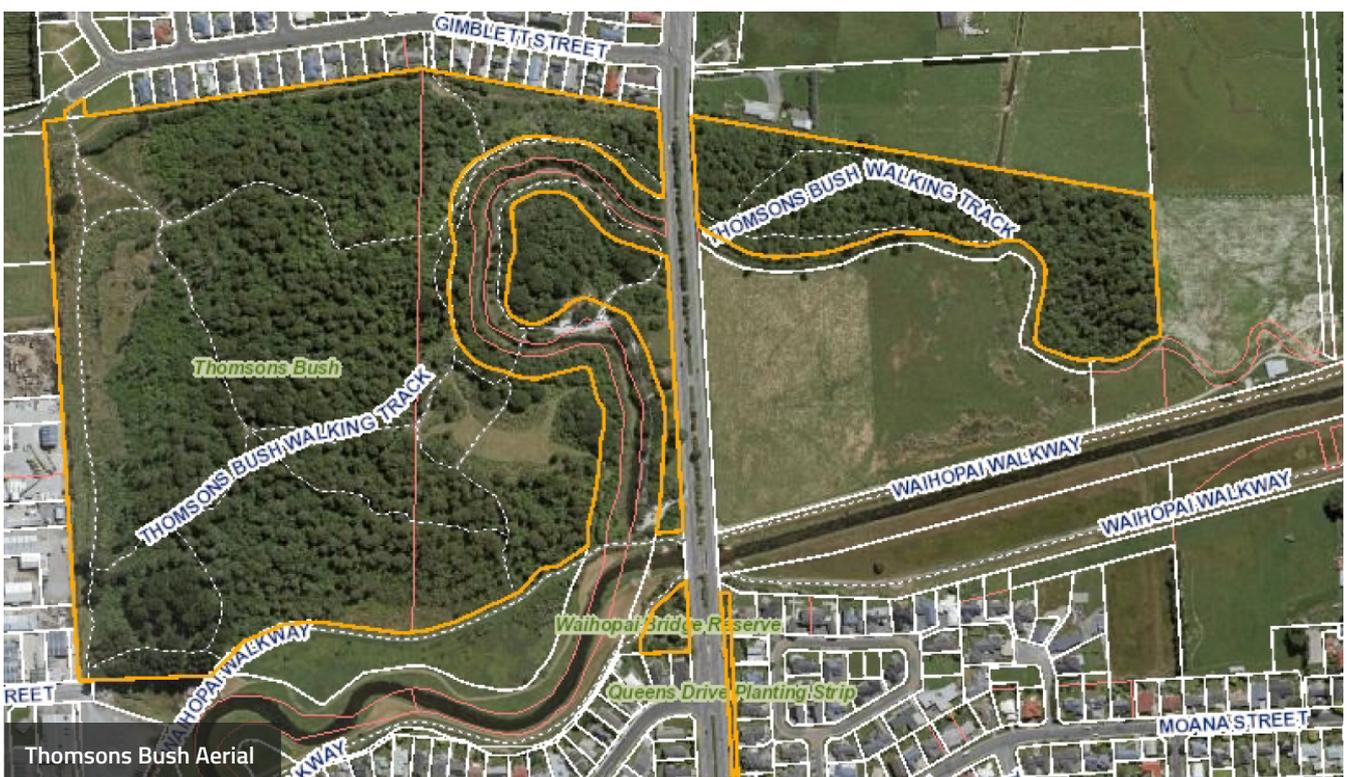
is bisected by Queens Drive and the old watercourse of the Waihopai River forms the southern boundary to the reserve. The Waihopai Walkway has been developed along the top of the stop banks of the Waihopai River. Residential housing, industrial land and semi-rural land form the remaining boundaries to the reserve.

Thomsons Bush has vehicle access into the western section of the reserve from Queens Drive, with formal pedestrian access from the Waihopai Walkway and Queens Drive. Informal car parking is provided within the reserve in several places and there is a one-way vehicular loop road following the old watercourse of the Waihopai River.

Waihopai Bridge Reserve is located south of the Waihopai Walkway Foodbanks beside Queens Drive and provides an environmental space to sit and enjoy the surrounds. It is part of the same title as Thomsons Bush.

5.19.3 Adjoining Land Use

Residential housing, industrial land and semi-rural land used predominantly for the



grazing of sheep, surrounds Thomsons Bush. The intensive development so close to an area of native vegetation such as this creates unique issues requiring special consideration when developing management policy. In particular, the spread of exotic vegetation from private residences into the reserve will be an ongoing issue.

The Waihopai Walkway runs along the top of the stop banks of the realigned Waihopai River, formed for flood protection in the 1990's. This popular walkway managed by Environment Southland provides recreational opportunities for Thomsons Bush by increasing foot traffic into the reserve.

5.19.4 History

Thomsons Bush is one of the few remnants of the kahikatea dominated swamp forest that was characteristic of the southern Southland area prior to European settlement. The local Māori who had strong spiritual ties to the native forest knew this vast forest as Taurakitewaru (Thomsons Bush Management Plan 1991).

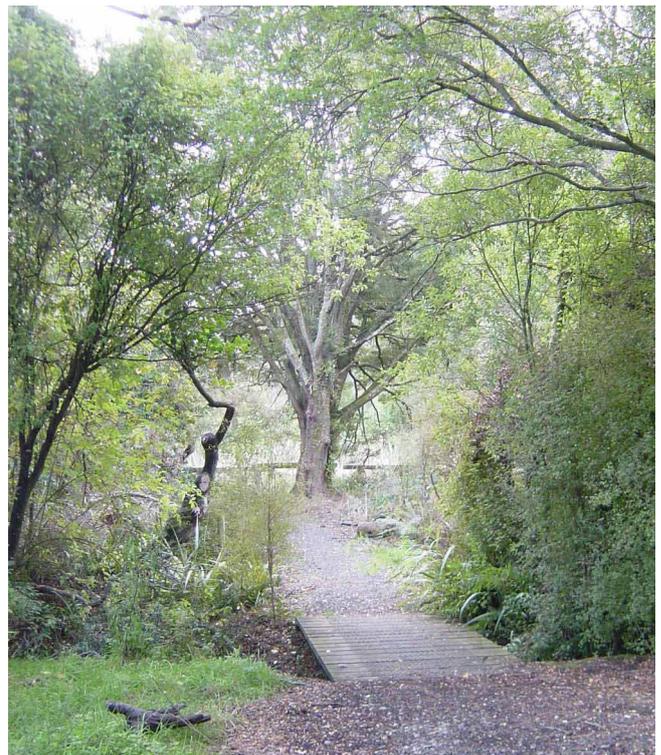
The earliest map prepared by J T Thomson in

1857 illustrates the extent of this forest - however, within 20 years much of the forest had been cleared.

In July 1867 Governor Grey granted Thomas Watson, Thomas M McDonald and George M Williamson title to part of the land. The Governor granted the remaining lots of 'Thomsons Bush' to J T Thomson in 1882. When Thomson died two years later, his parcel of land was transferred to the three owners of the adjacent property.

Over the next thirty years, titles were transferred to the surviving members and next-of-kin. By the early-1900 the Borough was becoming aware of the significance and value of the bush remnant. In 1912, approximately 12 hectares (Part Section 10 and 11) were taken under the Public Works Act 1908, Scenery Preservation Act 1908 and the Scenery Preservation Amendment Act 1908. Payment of £597 pounds was made to Frederick W Bicknell, John Gilkinson and Harold W Rhoys.

A few years after the death of Rhoys in 1927, ICC purchased a further 21 hectares (Lots 1 and



2, DP 2485) from Bicknell and Gilkinson for £1,475 pounds. In 1932 the total area of land (40 hectares) was placed in trust as a Scenic Reserve for the enjoyment and recreation of the public.

From the turn of the twentieth century, the Waihopai River and associated reserve land proved to be popular venues for picnicking, swimming and an annual regatta.

During the 1950's a particularly 'dangerous' swimming hole known as 'Devil's Pool' was filled in at the same time as the backwater was widened.

In 1954 the ICC was appointed to control and manage Part Section 10 and 1, pursuant to the provisions of the Reserves and Domains Act 1953.

In the 1960's the Waihopai River was diverted to provide improved drainage and to lessen the effects of flooding in the vicinity. The resulting backwater remains a part of the Thomsons Bush Reserve.

Water flow through this original water channel is now limited to that which originates from stormwater drainage. As a result, the water tends to be stagnant and unappealing.

On the 20 March 1963, Part Sections 10 and 11 were vested in the Mayor, Councillors and Citizens of the City of Invercargill and the whole area was changed by Gazette notice to

Reserve for Recreation purposes. The change of classification was brought about after the then Department of Lands and Survey had conducted a review of reserves relating to their values and purposes. As with quite a number of reserves around the country, it was adjudged as not having the values that warranted Scenic Reserve status.

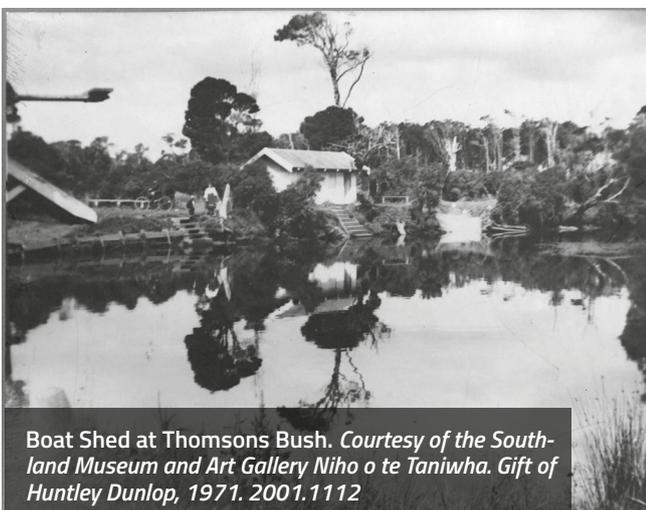
In 1971 the Local Round Table formed a Waihopai Reserve Development Group to support a canoe/boat hire venture. Ideas of building an island did not eventuate. However a playground was formed adjacent to the water-course.

The venture was never a success, partly due to a number of factors that included poor summers and low water tables that exacerbated the waterweed problem in this low semi-stagnant backwater.

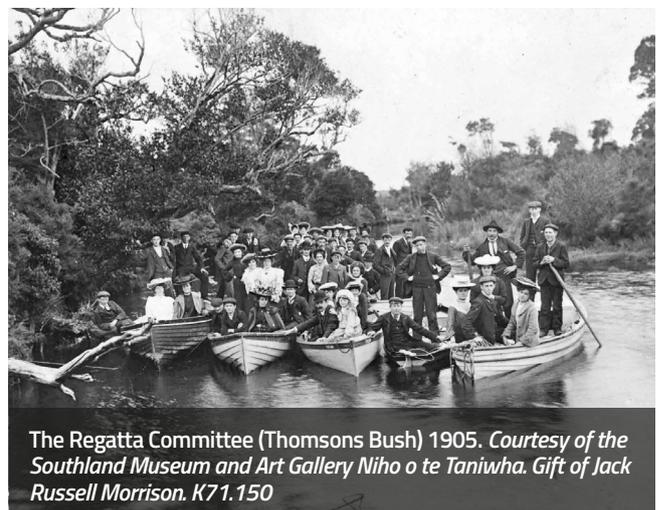
The opening of the Coldstream Pool and the increased mobility of families with motorcars tended to draw people away from Thomsons Bush. Repetitive losses resulted in the dissolution of the group in 1978, with all assets being donated to the Invercargill YMCA.

In 1983 a 10.97 metre strip was taken from Part Section 10 under the Public Works Act for the road widening of Queens Drive.

In 1990 subsequent minor realignments of the Waihopai River near Thomsons Bush resulted



Boat Shed at Thomsons Bush. *Courtesy of the Southland Museum and Art Gallery Niho o te Taniwha. Gift of Huntley Dunlop, 1971. 2001.1112*



The Regatta Committee (Thomsons Bush) 1905. *Courtesy of the Southland Museum and Art Gallery Niho o te Taniwha. Gift of Jack Russell Morrison. K71.150*

in the layout and flood banks as we see them today.

In July 1998 a proposal to close the second loop road in Thomsons Bush was advertised and approved following consultation. The remains of this road are used as one of the walkways within the reserve.

The Waihopai Walkway that extends along the flood banks of the Waihopai River was officially opened in 2003. This provides good pedestrian access and links from the flood banks into Thomsons Bush.

The revocation of the Scenic Reserve status in 1963 by the Department of Lands and Survey was considered a misunderstanding of the true floral and faunal values of Thomsons Bush. While there has been significant pressure on the forest from erosion of the forest edges, changes to the river alignment and invasion of weed species, Thomsons Bush still contains healthy pockets of vegetation providing significant habitat for fauna. The fact that this is one of only four areas of lowland forest of its type remaining in the area indicates the value of placing a higher level of protection on the forest.

In 2004 a Friends of Thomsons Bush Group was formed, with the following aims:

- To lift the profile of Thomsons Bush and to educate the community on the significance of this bush remnant.

- To keep the public informed on the progress of ICC's restoration programme.
- To provide opportunities for people to become involved with the restoration and enhancement of Thomsons Bush.

There were approximately 30 names registered with additional schools, guides and local branches and several service groups indicating their interest and support for the restoration of Thomsons Bush. It soon grew up to 90 people, with a newsletter developed as a means to communication and informing. This group has since then ceased.

ICC held an open day in 2005 at Thomsons Bush for the public to learn more about this important reserve and to express interest in joining the friends of Thomsons Bush group to help ICC, DOC and Environment Southland with the long term goal of forest restoration.

That same year, an operational plan was formed to outline areas in need of attention and give direction on how best to manage the weed species in the future. The plan, developed by Wildland Consultants Ltd, recommended that the restoration of ecological values should be based on two strategies: weed control and the development of a forest sub canopy dominated by the appropriate native tree species.

Some time after 2005, lockable gates were installed with the hope of preventing further vandalism and damage to the reserve from vehicles. The gates are locked at night and opened in the morning. A new speed limit sign for 20km/hour was installed.

In 2007 as part of the Hoffman Court subdivision, an allotment was vested as reserve for access way to the north of Thomsons Bush.

Thomsons Bush was re-classified from recreation to a scenic reserve in 2009 as defined in Section 19 of the Reserves Act 1977.

In 2018 signage was installed at entrances and key intersections to clearly mark wayfinding and types of trails within Thomsons Bush. In 2020 a walking track was installed to link with the trail network of Thomsons Bush and the eastern entrance from Waihopai Walkway



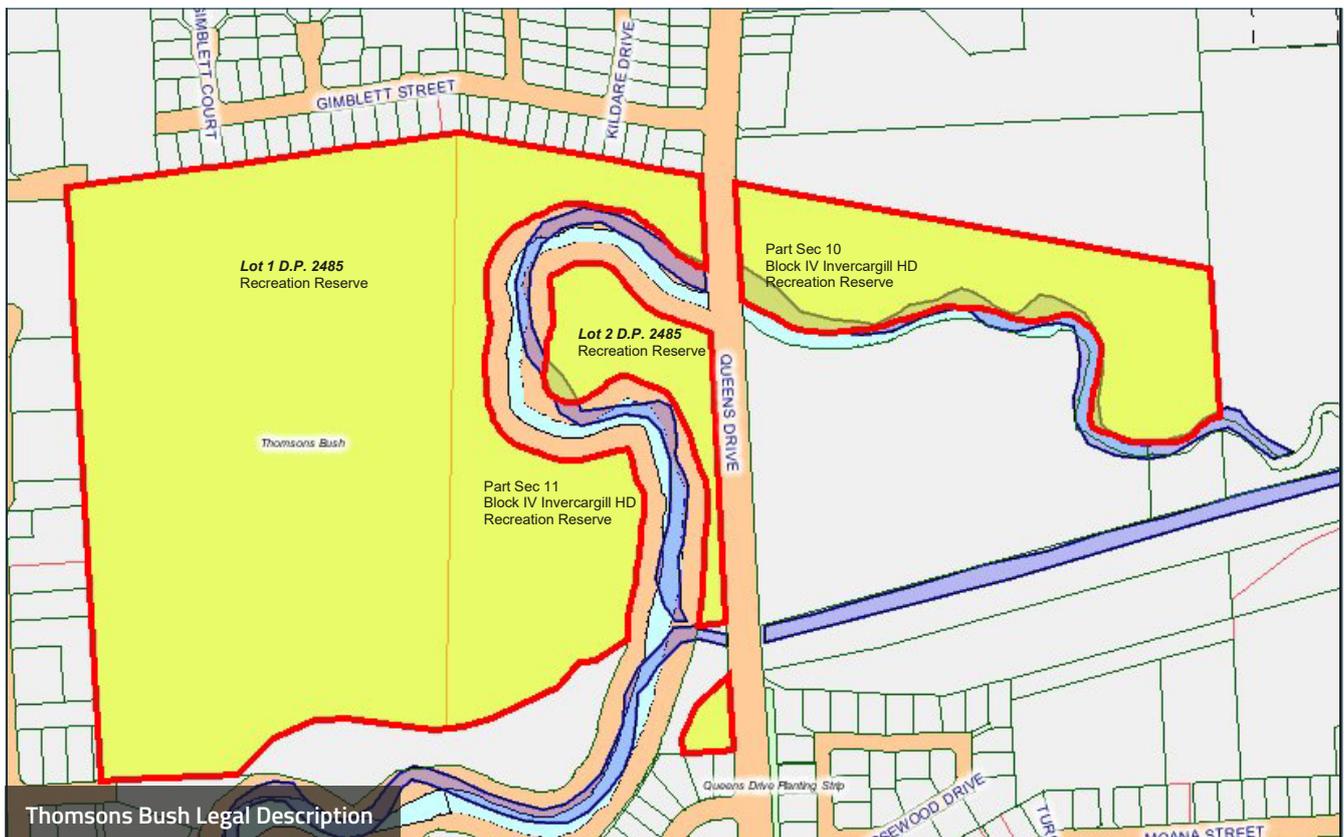
to allow for ease of access along the trail network.

5.19.5 Classification and Tenure

Record of Title: B4/1419 (Part-Cancelled)
 Legal Description: Lots 1 - 2 Deposited Plan 2485
 Area: 21.5267 ha
 Address: 584 Queens Drive, Invercargill
 Land held in the Name of: Invercargill City Council
 Subject to: Reserves Act 1977, New Zealand Gazette Notice 1963 page 310 (GN 189007)
 Classification: Scenic
 Acquisition Details: Acquired as an exchange of land by Section 21, Local Legislation Act 1926, the land being transferred by Transfer 64433 to be held in trust as a Scenic Reserve for the enjoyment and recreation of the public. In 1963, pursuant to the Reserves and Domains Act 1953, the purpose of the Reserve was changed from a reserve for scenic and recreation purposes to a reserve for recreation

purposes by NZ Gazette notice 1963 page 310 (GN 189007).

Record of Title: A1/1153 (Part-Cancelled)
 Legal Description: Part Section 10-11 Block IV Invercargill Hundred
 Area: 12.0900 ha
 Address: 584 Queens Drive, Invercargill
 Land held in the Name of: Invercargill City Council
 Subject to: Reserves Act 1977, New Zealand Gazette Notice 1963 page 310 (GN 189006)
 Classification: Scenic
 Acquisition Details: Acquired by Her Majesty the Queen in 1912 by Gazette Notice Proc 1108 for a Scenic Reserve. In 1963 the purpose of the Reserve was changed from a reserve for scenic purposes to a reserve for recreation purposes pursuant to the Reserves and Domains Act 1953 and vested the reserve in the Mayor Councillors and Citizens of the City of Invercargill in trust for that purpose by NZ Gazette notice 1963 page 310 (GN 189006).



Record of Title: SL5B/447
 Legal Description: Part Lot 1 DP 3497
 Area: 0.0343 ha
 Address: 584 Queens Drive, Invercargill
 Land held in the Name of: Invercargill
 City Council
 Classification: No Reserve Status
 (ICC Foulsewer Property)

Record of Title: 544760
 Legal Description: Lot 1 DP 428606
 Area: 0.0203ha
 Address: 83 Gimblett Street, Invercargill
 Land held in the Name of: Invercargill
 City Council
 Classification: Local Purpose Reserve
 (Access way)

The total area of Thomsons Bush is **31.1839** hectares.

5.19.6 Flora

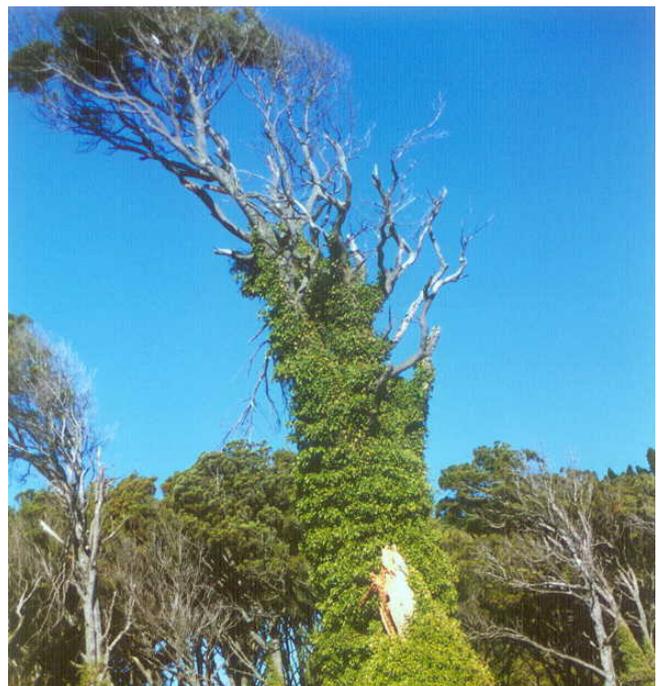
Thomsons Bush is one of the four remaining remnants of the kahikatea dominated swamp forest that was characteristic of the central southern Southland area prior to European settlement. These areas have been identified as being of regional importance as they are

the only remaining examples of what was once dominant vegetation type in the Southland Plains Ecological District (*Bill 1999*).

The native vegetation in Thomsons Bush is dominated by Kahikatea (*Dacrycarpus dacrydiodes*), Matai (*Prumnopitys taxifolia*) and Ribbonwood (*Plagianthus regius*).

History shows that the scenic values of Thomsons Bush were recognised before the turn of the twentieth century. However, over the last hundred years, a number of factors have gradually eroded the size of the remnant and degraded its quality, thereby undermining its scenic and botanical values. Selective milling of timbers (e.g. Rimu) removed a small proportion of the finest trees. Planting of exotics (*Pinus radiata*) and introduced natives (Hoheria) has negatively impacted on natural regeneration and impinged upon the floristic integrity of the forest (*Thomsons Bush Management Plan 1991*).

The forest canopy and edges were badly damaged in July 1996 by snow and severe frosts that followed. The dieback of canopy trees and increasing 'openness' has allowed weed species to flourish. The increasing dominance



of weed species is affecting the existence of Thomsons Bush as a lowland forest remnant (*Environment Southland 2003*).

30 weed species have been recorded in Thomsons Bush. Eight species are widespread. Chilean Flame Creeper (*Tropaeolum speciosum*) is the most common weed and elderberry (*Sambucus nigra*) the most abundant (*Environment Southland 2003*).

Given the widespread distribution and abundance of ecologically damaging weed species, the future of Thomsons Bush as a lowland forest remnant is tentative if the status quo continues (*Environment Southland 2003*).

To ensure viability of the ecosystem, extensive weed control is needed, backed up by restoration planting.

Part of Thomsons Bush has been planted by Westpac volunteers over a period of 10 years. Other organisations, schools and local branches have assisted Parks and Recreation with pest weed control and re-vegetation of other parts of Thomsons Bush.

In addition to recognising the problems with invasive weed species, it is also important to acknowledge that changes to the wider landscape can have a lasting impact on the forest remnant. More detailed studies on the ecology are required to establish how the ecological functioning of the reserve has altered over time. For example how the realignment of the Waihopai River and associated flood control works, along with localised drainage of residential properties, and has changed the hydrological functioning of the system. These changes could impact on forest regeneration and nutrient status of the forest remnant in the long term.

Thomsons Bush has been recognised as being of regional importance as one of the few remaining areas of native vegetation of its kind. One of the objectives of this plan is to protect, preserve and enhance the intrinsic values of the forest remnant. However, ICC acknowledges that it is not possible to return the forest

remnant to the natural condition that would have existed prior to human occupation. The forest remnant has been highly modified over time by human intervention including changes to the water table and the introduction of exotic weed and pest animal species. It is unlikely that these problems can ever be completely solved and ICC accepts that management of the reserve requires continual and ongoing attention.

Weed control and native planting in Thomsons Bush in recent years has focused on the frontage along Queens Drive enhancing the reserve from the street. While this has improved the general appearance of the reserve making it more inviting to visitors, other areas in the reserve require attention to remove aggressive weed species and for the overall future health of the remnant.

Thomsons Bush - Plant Species List

Source: Brian Rance 2002, Nevill Jones 2003

Botanical Name	Common Name
<i>*Introduced/Exotic Species</i>	
* <i>Acaena anserinifolia</i>	Bidibid
* <i>Acer pseudoplatanus</i>	Sycamore
* <i>Achillea millefolium</i>	Yarrow
<i>Alnus glutinosa</i>	Black alder
* <i>Anagalis arvensis</i>	
* <i>Aristotelia serrata</i>	Wine berry
<i>Astelia fragrans</i>	Bush lily/kakaha
<i>Astelia nervosa</i>	Bush lily
<i>Asplenium bulbiferum</i>	Hen and chicken fern
<i>Asplenium flaccidum</i>	Hanging spleen wort
* <i>Bellis perennis</i>	Daisy
* <i>Berberis darwinii</i>	Barberry
* <i>Betula pendula</i>	Silver birch
<i>Blechnum capense</i>	Kiokio, cape fern
<i>Blechnum discolor</i>	Crown fern
<i>Blechnum fluviatile</i>	Kiwakiwa

<i>Blechnum minus</i>	Cape fern (similar to capense)	<i>Dicksonia squarrose</i>	Wheki, brown tree fern
<i>Blechnum membranaceum</i>		* <i>Digitalis purpurea</i>	Foxglove
<i>Blechnum penna-marina</i>	Little hard fern, alpine water fern	<i>Elaeocarpus hookerianus</i>	Pokaka
* <i>Callitriche stagnalis</i>		* <i>Eucalyptus</i>	Eucalypt or gum tree
* <i>Calystegia silvatica</i>	Great bindweed	* <i>Euonymus europaeus</i>	European spindleberry
* <i>Capsella bursa-pastoris</i>	Shepherd's purse	* <i>Festuca arundinacea</i>	Tall fescue
<i>Carex virgata</i>		<i>Fuchsia x colensoi</i>	
<i>Carpodetus serratus</i>	Putaputaweta	<i>Fuchsia excorticata</i>	Tree fuchsia
* <i>Cerastium glomeratum</i>	Annual mouse-ear chickweed	<i>Fuchsia perscandens</i>	Climbing fuchsia
* <i>Cirsium arvense</i>	Californian thistle	* <i>Gallium aparine</i>	Cleavers
* <i>Cirsium vulgare</i>	Scotch thistle	<i>Griselinia littoralis</i>	Broadleaf/Papauma
<i>Clematis foetida</i>	Scented native clematis	<i>Hebe salicifolia</i>	Willow-leaved hebe
<i>Clematis paniculata</i>	Native clematis, Puawhananga	* <i>Hedera Helix</i>	Ivy
* <i>Conium macilentum</i>	Hemlock	<i>Histeopteris incisa</i>	
* <i>Convolvulus arvensis</i>	Field bindweed	<i>Hoheria populnea</i>	Lacebark or houhere
<i>Coprosma lucida</i>	Karama	* <i>Hoheria sexstylosa</i>	Long-leaved lacebark/Houhere
<i>Coprosma propinqua</i>	Mingimingi	* <i>Holcus lanatus</i>	Yorkshire fog
<i>Coprosma rigida</i>	Narrow-leaved snow tussock	<i>Hydrocotyle heteromera</i>	
<i>Coprosma rotunderfolia</i>	Round leaf coprosma	<i>Hypolepis ambiguua</i>	
<i>Cordyline australis</i>	Cabbage tree	<i>Hypolepis rugosula</i>	
* <i>Cotoneaster glaucophyllus</i>	Cotoneaster	* <i>Ilex aquifolium</i>	Holly
* <i>Crataegus monogyna</i>	Hawthorn	* <i>Iris sp</i>	
* <i>Crepis capillaries</i>	Hawksbeard	<i>Juncus gregiflorus</i>	Common rush, wiwi
* <i>Crocsmia x crocosmiiflora</i>	Montbretia	<i>Leptospermum scoparium</i>	Manuka
* <i>Cupressus macrocarpa</i>	Macrocarpa	* <i>Lolium perenne</i>	Ryegrass
* <i>Cytisus scoparius</i>	Broom	* <i>Lupin arboreus</i>	Tree lupin
<i>Dacrydium cupressinum</i>	Rimu	* <i>Malus domestica</i>	Apple
<i>Dacrydium dacrydioides</i>	Kahikatea/white pine	<i>Matricaria matricarioides</i>	Rayless chamomile
* <i>Dactylis glomerate</i>	Cocksfoot	<i>Melicope simplex</i>	Poataniwha
* <i>Daphne lauriola</i>	Green daphne	<i>Melicytus lanceolatus</i>	Mahoe wao

<i>Microlaena avenacea</i>	Bush rice grass	<i>Pseudopanax arboreus</i>	Five finger/ puahou
<i>Muehlenbeckia australis</i>	Bush pohuehue	<i>Pseudopanax colensoi</i>	Orihou
* <i>Mumulus guttatus</i>	Monkey musk	<i>Pseudopanax crassifolius</i>	Lance wood or horoeka
* <i>Mycelus muralis</i>		<i>Pseudowintera colorata</i>	Horopito/pepper tree
* <i>Myosotis caespitose</i>	Water forget-me-not	<i>Pyrrhosia serpens</i>	Creeping felt fern
<i>Myrsine australis</i>	Mapau or matipou	* <i>Quercus sp</i>	Oak
<i>Myrsine divaricata</i>	Weeping matipo	* <i>Ranunculus repens</i>	Creeping buttercup
* <i>Nothofagus fusca</i>	Red beech	* <i>Ribes sanguineum</i>	Currant
* <i>Nothofagus menziesii</i>	Silver beech	* <i>Rorippa microphylla</i>	Watercress
* <i>Nothofagus solandri var cliffortioides</i>	Mountain beech	* <i>Rubus fruticosus</i>	Blackberry
<i>Parsonsia heterophylla</i>	Native jasmine	<i>Rubus schmidelioides</i>	Lawyer
<i>Pennantia corymbosa</i>	Kaikomako	* <i>Rumex obtusifolius</i>	Broadleaved dock
<i>Phormium tenax</i>	Flax	* <i>Salix caprea</i>	Pussy willow
<i>Phymatororus diversifolius</i>	Kowaewao, hounds tongue	* <i>Salix cinerea</i>	Grey willow
* <i>Pinus radiata</i>	Pine	* <i>Salix fragilis</i>	Crack willow
<i>Pittosporum tenuifolium</i>	Kohuhu	* <i>Sambucus nigra</i>	Elderberry
<i>Plagianthus regius</i>	Ribbonwood	<i>Schefflera digitata</i>	Pate
* <i>Plantago lanceolata</i>	Narrow-leafed plantain	<i>Schezeilema trifoliolatum</i>	
* <i>Plantago major</i>	Broad-leafed plantain	* <i>Senecio jacobaea</i>	Ragwort
<i>Poa annua</i>	Meadow grass	* <i>Senecio mikanioides</i>	German Ivy
<i>Podocarpus hallii</i>		<i>Senecio minimus</i>	
<i>Podocarpus spicatus</i>	Matai/black pine	* <i>Solanum nigrum</i>	Black nightshade
<i>Podocarpus totara</i>	Totara	* <i>Solanum dulcamera</i>	
<i>Polystichum richardii</i>	Tutoke, shore shield fern	* <i>Soncus asper</i>	
<i>Polystichum vestitum</i>	Puniu, prickly shield fern	<i>Sophora microphylla</i>	Kowhai
* <i>Populus alba</i>	Silver poplar	* <i>Sorbus aucuparia</i>	Rowan
* <i>Populus nigra</i>	Lombardy poplar	* <i>Stellaria graminea</i>	
<i>Prumnopitys taxifolia</i>	Matai	* <i>Stellaria media</i>	Chickweed
* <i>Prunella vulgaris</i>	Self-heal	* <i>Taraxacum officinale</i>	Dandelion
* <i>Prunus avium</i>	Cherry	* <i>Taxus baccata</i>	
* <i>Prunus cerasifera</i>	Flowering plum	* <i>Tradescantia fluminensis</i>	Wandering willy
* <i>Prunus laurocerasus</i>	Cherry laurel	<i>Tropaeolum speciosum</i>	Chilean flame creeper
* <i>Prunus lusitanica</i>	Portugal laurel	<i>Tupeia antarctica</i>	

* <i>Ulex europaeus</i>	Gorse
<i>Uncinia clavate</i>	
* <i>Uncinia uncinata</i>	Hook grass
<i>Urtica ferox</i>	Ongaonga/tree nettle
<i>Urtica incisa</i>	
* <i>Urtica urens</i>	Nettle
* <i>Vicia sativa</i>	Vetch
* <i>Vinca major</i>	Periwinkle

5.19.7 Fauna

Thomsons Bush provides a quality habitat for bird and insect life.

Thomsons Bush is acknowledged as having significant avifauna and entomological values, particularly in that it acts as an 'island' within the urban setting. The quality and quantity of mature trees and shrubs is linked to the quality of habitat for insects and the numbers of birds visiting and breeding.

The high ornithological values attributable to Thomsons Bush are primarily related to swamp/podocarp forest and backwater of the Waihopai River providing a variety of habitats for native bush birds. The remnant forest is the main reservoir for such species in the north and north-eastern sectors of the city.

Entomologist experts consider Thomsons Bush to have both significant conservation and scientific values. It is reported that around 215 species of native moths have been recorded from Thomsons Bush, many of which are restricted to southern Southland, and these have their largest population in Thomsons Bush. The reserve contains good populations of the common and rare moths and beetles (*Thomsons Bush Management Plan 1991*). Thomsons Bush is important as a 'Type Locality' for many moth species and the large and significant '*Aoraia linodes*' is present. A rare endemic lacewing '*Micromus bifasciatus*' associated with rimu and kahikatea is present and worthy of note (*Patrick, 2004*).

No current information on the fauna in Thomsons Bush was available when this plan was prepared – however, there have been a number of studies done over recent years, which describe the occurrence and distribution of the fauna in this reserve.

Bird Species and Status, Thomsons Bush - February 1991

By Maida Barlow, Regional Representative, Ornithological Society of New Zealand, Southland Region.

Extract from *Thomsons Bush Management Plan 1991*.

* indicates introduced species

	Scientific Name	Common Name
OV	<i>Phalacrocorax carbo novaehollandiae</i>	Black Shag
OV	<i>P. Melanoleucos brevirostris</i>	Little Shag
R & PB	<i>Ardea novae-hollandiae n.</i>	White-faced Heron
R & B	<i>Anas platyrhynchos p. *</i>	Mallard
R & B	<i>Anas rhynchotis variegata</i>	N.Z. Shoveler



	<i>Circus approximans</i>	Australian Harrier
R & PB	<i>Porphyrio p. melanotus</i>	Pukeko
	<i>Haematopus ostralegus finschi</i>	South Island Pied Oystercatcher
	<i>Vanellus miles novaehollandiae</i>	Spur-winged Plover
	<i>Larus dominicanus d.</i>	Southern Black-billed Gull
	<i>Larus bulleri</i>	Black-billed Gull
R & PB	<i>Hemiphaga novae-seelandiae</i>	N.Z. Pigeon
OV	<i>Chrysococcyx lucidus l.</i>	Shining Cuckoo
OV	<i>Eudynamys taitensis</i>	Long-tailed Cuckoo
OV	<i>Athene noctua</i>	Little Owl
OV	<i>Ninox novae-seelandia n.</i>	Morepork
OV	<i>Halcyon sancta vagans</i>	N.Z. Kingfisher
	<i>Alauda arvensis *</i>	Skylark
OV	<i>Hirundo tahitica</i>	Welcome Swallow
R & B	<i>Prunella modularis *</i>	Hedge Swallow
R & B	<i>Turdus merula</i>	Blackbird
R & B	<i>Turdus philomelos *</i>	Song Thrush
R & B	<i>Gerygone igata</i>	Grey Warbler
R & B	<i>Petroica macrocephala m.</i>	South Island Tomtit
R & B	<i>Zosterops lateralis</i>	Silvereye
R & PB	<i>Anthornis melanura</i>	Bellbird
R & PB	<i>Prothemadera novaeseelandia n.</i>	Tui
R & B	<i>Emberiza citrinella *</i>	Yellowhammer
R & PB	<i>Fringilla coelebs *</i>	Chaffinch
R & PB	<i>Carduelis Chloris *</i>	Greenfinch
R & B	<i>Carduelis c. *</i>	Goldfinch
R & B	<i>Carduelis flammea *</i>	Redpoll
R & B	<i>Passer domesticus *</i>	House Sparrow

R & PB	<i>Sturnus vulgaris *</i>	Starling
	<i>Gymnorhina tibicen *</i>	Australia Magpie

Key:

OV	Occasional Visitor
R & B	Resident and breeding
R & PB	Resident and probably breeding

Report on Invertebrates

By P Hamill, 1984

Extract from Thomsons Bush Management Plan 1991

The large aquatic habitat of the backwater of the Waihopai River has numerous water boatmen *Sigara arguta* and backswimmers *Anisops wakefieldi* present. The introduced diving beetle *Rhantus pulverosus* is also present in small numbers. The backwater is also a breeding place for the red damselfly *Xanthocnemis zealandica*, the blue damselfly *Austrolestes colenisonis*, and the yellow spotted dragonfly *Procordulia smithi*.

The Thomsons Bush area is also very rich in spider species. Fifteen species were collected, they were *Trite reauricoma*, *Aorangia obsecura*, *Viridictyna sp.*, *Mamoea rufa*, *Clubiona sp.*, *Rhomphaea sp.*, *Mynoglenes sp.*, *Pholcomma sp.*, *Icona sp.*, *Dyarcycops orepukiensis*, *Allotrochosa schauinslandi*, *Diea sp.*, and an unidentified species from the family *Theridiidae*.

Several species of beetles were also found, including the ground beetle *Mecodema sp.* large black beetle *Cilibe otagoensis*, a weevil *Etnalis spinicollis*, longhorn beetle *Ambeodontus tristis* and a species of rove beetle. Moths found are the common grass moth *Orocrambus flexuosellus*, common forest looper *Tatosoma timora*, porina moth *Wiseana umbraculata* and a Noctuid moth *Graphania sp.*

Ten species of flies were observed in the area; the March fly *Dilphins nigrostigma*, drone fly *Eristalis tenax*, bush fly *Protohystricia alcis*, striped flesh-fly *Parasarcophagus milleri*, house fly *Musa domestica*, and native blue bottle *Calliphora quadrimaculata*.

Other species present at Thomsons Bush are:

<i>Scientific Name</i>	Common Name
<i>Philaenus trimaculatus</i>	Spittle bug
<i>Hanseniella sp.</i>	Bush centipede
<i>Costelytra zealandica</i>	Brown beetle
<i>Forficula auricularia</i>	Earwig
<i>Bombus terrestris</i>	Bumble bee
<i>Vespula germanica</i>	European wasp
<i>Apis mellifera</i>	Honey Bee
<i>Ochlerotatus subalbipennis</i>	Mosquito
<i>Oncaontias vittatus</i>	Shield bug
<i>Melanostoma fasciatum</i> , <i>Syrphus novaezealandiae</i> , <i>Tuberifera tenau</i> and a rat tailed hoverfly	Hover flies

Order Arachnida:

<i>Trite reauricoma</i>	<i>Rhomphaea sp.</i>
<i>Unknown species</i>	<i>Mynoglenes sp.</i>
<i>Aorangia obscura</i>	<i>Pholcomma sp.</i>
<i>Viridictyna sp.</i>	<i>Viridictyna sp.</i>
<i>Mamoea rufa</i>	<i>Dyarcyops orepukiensis</i>
<i>Clubiona sp.</i>	<i>Icna sp.</i>

5.19.8 Amenity Value

As one of the few remaining natural areas within the Invercargill urban environment, Thomsons Bush offers the Invercargill community an important recreational and scenic resource and provides opportunities for picnicking, play, walking, running, and as an educational 'classroom'.

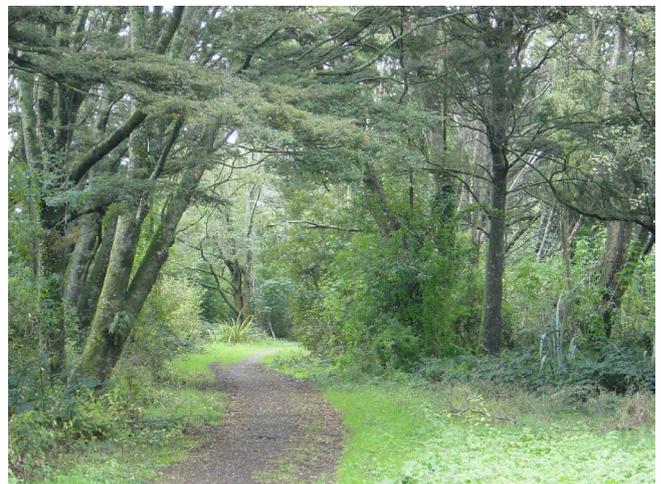
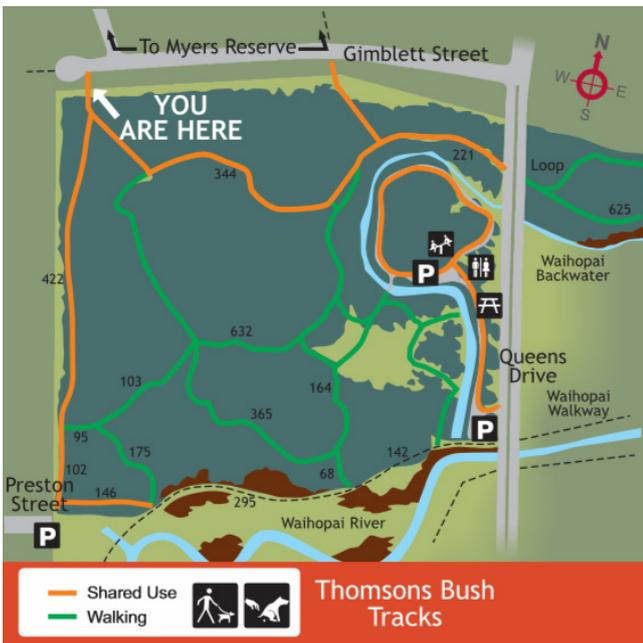
5.19.9 Recreational Use

Most people use Thomsons Bush in an informal manner through walking or running in the reserve.

Many of the reserve users have a strong interest in its natural values. Both individuals and groups, particularly school parties, visit the reserve to observe birds and to study the vegetation. Professional and amateur naturalists acknowledge the value of the bush as offering an easily accessible environment to study insects. Educationalists are aware of the potential to utilise the reserve as a natural classroom to increase awareness and appreciation of New Zealand's flora and fauna.

In the past Thomsons Bush has been used for multisport events and club/community and family events.

Community groups and schools regularly take part in native planting days and in the removal of weeds. The Parks and Recreation Division



encourages this partnership in managing this reserve and it is anticipated these events will continue to provide vital assistance in maintaining and enhancing Thomsons Bush in the future.

As illustrated in an example map below, shared use tracks and walking tracks are permitted along certain tracks. Dogs are to remain on a lead at all times.

5.19.10 Policies

Thomsons Bush contains lowland swamp forest species representative of the forest that covered much of the area prior to European settlement. As one of only four remnants remaining of this forest type in the area, it is important that it is protected and enhanced for future generations.

Only native species sourced locally (wherever possible) shall be planted on Thomsons Bush as part of any revegetation programme to

protect the genetic health of the forest.

ICC will support and encourage local initiatives to revegetate areas within Thomsons Bush to an approved planting programme.

The removal or damage to any tree, shrub or plant material from within Thomsons Bush is prohibited except as part of an approved maintenance programme.

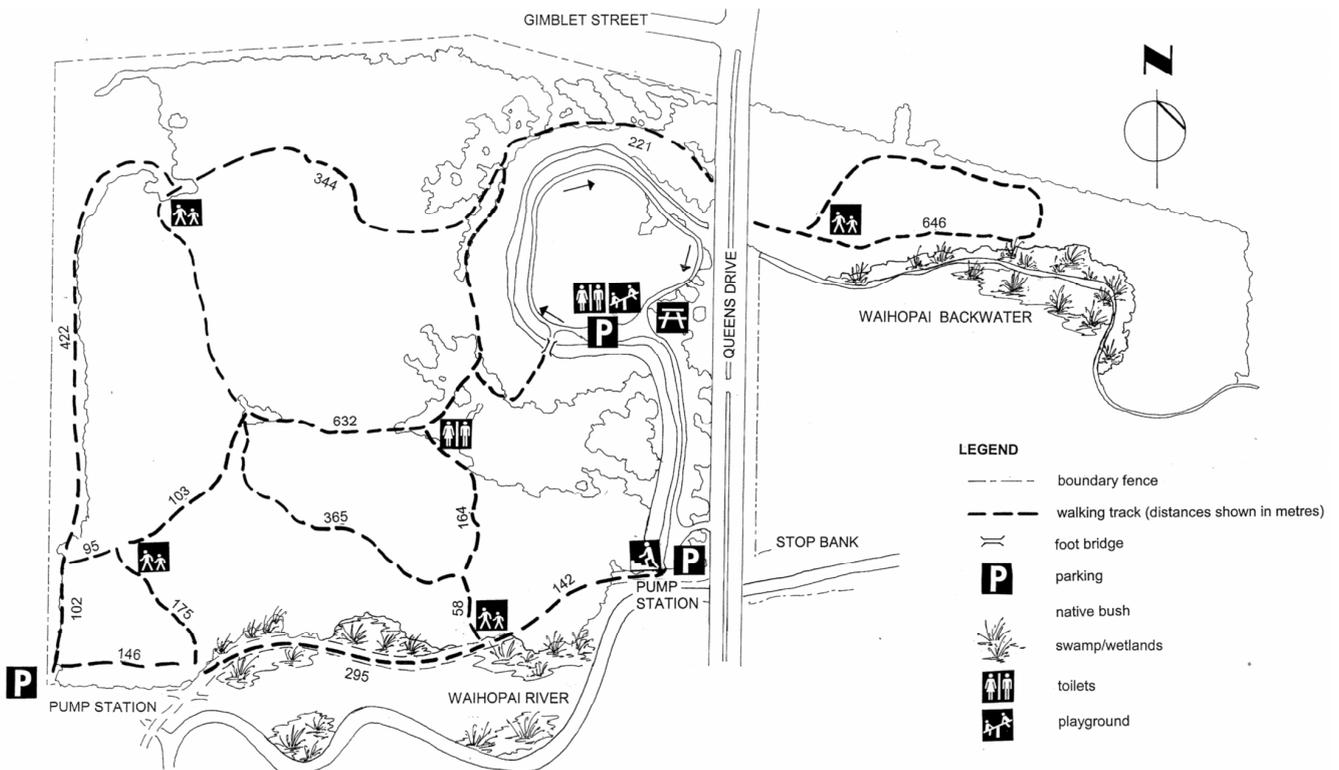
5.19.10.1

The Thomsons Bush vegetation shall be monitored at regular intervals to detect changes over time and to help identify the success of work programmes and initiatives.

5.19.10.2

Exotic grass growth in Thomsons Bush shall be controlled and managed in appropriate areas. All other exotic grasses shall be sprayed or removed as part of an approved planting programme to gradually revegetate areas.

5.19.10.3



THOMSONS BUSH

Planting programmes shall be developed and maintained to further enhance the native vegetation in Thomsons Bush.

5.19.10.4

Specific trails have been identified as shared use trails for mountain biking and walking. Please follow signage indicating this and keep all dogs on a lead at all times.

5.19.11 Future Development

In March 2003, Neville L Jones prepared a 'Plant Species Survey and Vegetation Zoning' study of Thomsons Bush. Twelve zones were identified, highlighting the plant species and status of vegetation growing within those zones. From this report priority areas for future weed control and revegetation have been established.

Priority One areas include those identified as having declining native vegetation with no natural native regrowth, and where there is a major weed infestation. Areas One, Four and Ten (predominantly the western boundary of Thomsons Bush) have been included as Priority One. Area Seven has also been included as a Priority One as it is a high use, highly visible area and continued planting of the stream edge will improve the appearance and health of the stream.

The following priority areas are general guidelines for the future management of the reserve. It is agreed that more specific and detailed information on the plant and animal pests, the ecology of the reserve, and management of the Waihopai backwater is required to assist with the long-term management of Thomsons Bush. These shall be prepared and attached to the Management Plan as appendices prior to any major developments being prepared.

Parks and Recreation staff with delegated authority shall co-ordinate the planting programme and continue to work with community groups and schools interested in the future management of Thomsons Bush.

Priority Areas for future Vegetation Management 2021-2031

PRIORITY ONE

- *Areas One, Four and Ten shall be targeted for infill planting and ongoing weed control, predominantly gorse, broom, darwins barberry and holly*
- *Continued management of Area Seven including native plantings along the riparian zone.*
- *Ongoing management of the vegetation in other areas as required.*

PRIORITY TWO

- *Target Areas Two, Eight, Nine, Eleven and Twelve for exotic weed removal and replanting of native species.*
- *Ongoing management of the vegetation in other areas as required.*

PRIORITY THREE

- *Target Areas Three, Five and Six for exotic weed removal and replanting of native species.*
- *Ongoing management of the vegetation in other areas as required.*

In addition to the control and enhancement of the vegetation in Thomsons Bush, recreational facilities will be maintained and improved as required. ICC supports the use of Thomsons Bush as an 'outdoor classroom' and encourages school groups to use the reserve for this purpose. Directional signage, interpretation signage and the reserve pamphlet shall be kept up to date and relevant.

Walkways, toilets, playgrounds and other facilities that contribute to the recreational amenity of Thomsons Bush shall be maintained and upgraded as required and as finance becomes available.

Priority areas for future weed control and revegetation

Based on Plant Species Survey and Vegetation Zoning - Neville Jones 2003

AREA	VEGETATION	STATUS	CANOPY	WEEDS	GROUND CONDITIONS	PRIORITY LEVEL
Area 1	Modified native vegetation	Declining vegetation without native regrowth	Severe canopy damage	Major weed infestations	Elevated and drier ground conditions	1
Area 4	Unmodified native vegetation	Declining vegetation without native regrowth	Severe canopy damage	Major weed infestations	Elevated and drier ground conditions	1
Area 10	Unmodified native vegetation	Declining vegetation without native regrowth	Severe canopy damage	Major weed infestation	Elevated and drier ground conditions	1
Area 7	Modified native vegetation	Vegetation not declining	Canopy ok	Minor weed infestation	Elevated and drier ground conditions	1*
Area 2	Modified native vegetation	Declining vegetation with native regrowth	Canopy ok	Minor weed infestation	Elevated and drier ground conditions	2
Area 8	Unmodified native vegetation	Declining vegetation without native regrowth	Severe canopy damage	Major weed infestation	Low lying ground and wet conditions	2
Area 9	Modified native vegetation	Declining native vegetation with native regrowth	Severe canopy damage	Minor weed infestation	Low lying ground and wet conditions	2
Area 11	Modified native vegetation	Declining vegetation without native regrowth	Canopy ok	Minor weed infestation	Low lying ground and wet conditions	2

Continued over page

Area 12	Modified native vegetation	Declining vegetation without native regrowth	Canopy ok	Major weed infestation	Low lying ground and wet conditions	2
Area 3	Unmodified native vegetation	Vegetation not declining	Canopy ok	Minor weed infestation	Elevated and drier ground conditions	3
Area 5	Modified native vegetation	Declining vegetation with native regrowth	Canopy ok	Minor weed infestation	Elevated and drier ground conditions	3
Area 6	Unmodified native vegetation	Declining vegetation with native regrowth	Canopy ok	Major weed infestation	Elevated and drier ground conditions	3

* Area Seven has been included as a Priority One as this is a highly visible, high use area. Planting along the edge of the stream will improve the appearance and quality of the water.



5.20 Tikore Island (Scenic)

5.20.1 Introduction

Tikore Island has had an interesting past and features in history books of the area from as early as the first settler to Bluff. Highly visible from the State Highway, Tikore Island is a significant landmark in the Bluff Harbour.

A good place to view Tikore Island is from the Greenpoint Domain walkway. Interpretation signage helps make this area an interesting and inviting area to view.

5.20.2 Location and Access

Tikore Island is located within Bluff Harbour to the north east of Greenpoint Reserve around 500 metres off shore. Rabbit Island is located to the north east of Tikore Island. Access can only be gained by boat.

5.20.3 History

The name Tikore is probably a corruption of its original Māori names: Te Moutere O Te Kaika Kuri (the island where dog was eaten) and Te Kuri (*from interpretation sign at Greenpoint Reserve*).

Tikore Island has been known by at least two other names in its history.

The earliest mention of Tikore Island occurs in Duperry's Atlas of 1824, which includes a number of French names even though the French never reached New Zealand. These include 'I. du Lin', which is the original European name for Tikore Island (and an indication of the flax here).

The island has also been known as 'Spencer Island', named after James Spencer who was the first European settler on the Southern mainland. Spencer landed at Bluff in January 1824 and his house became the first European house in Southland. He purchased land from the Māori and cleared 60 acres for cultivation of wheat, barley, potatoes and vegetables.

Spencer bought 'Spencer's island' from Chief Tuhawaiki and paid goods to the value of 50 pounds. This is where he kept his pigs.

Today, the waters between Tikore Island and Greenpoint have become a ship's graveyard for retired veterans of Bluffs oyster and fishing



fleet. The wrecks are deteriorating rapidly but a few are clearly visible at low tide (sourced from the Interpretation sign at Greenpoint Reserve).

In the Invercargill District Plan (2019) three archaeological sites are identified on or just off Tikore Island in the intertidal zone since they were first recorded in 1969. Since the first recordings, there has been little modification or disturbance observed on Tikore island. Few visits, including ICC staff, for any maintenance work such as plantings (sourced from Southland Coastal Heritage Inventory Project results, 2010).

Permission of the New Zealand Historic Places Trust is required before they can be modified or destroyed.

The sites are described in the ICC District Plan (2019) as two 'workshops' and one 'working floor'. The grid references give a single reference point for the sites but they may extend over a larger area.

All three sites are very similar to each other. The stone is a meta-basalt/argillite and it was used for a range of tools, including adzes, and other types of blades.

There are other workshops/working floors around Bluff Harbour that are more extensive, more complex, and demonstrate more concentrated and longer term stone working activity but the Tikore sites are still important as part of the wider picture of stone use.



E47/ 23 workshop site on Tikore Island (New Zealand Archaeological Association)

Tikore Island holds a part of the high quality and well sought after stone resources originally used in Bluff Harbour and Southland by early Māori. Stone sources were gradually exploited and distributed around the South Island and Tikore Island holds some of those still remaining around the Bluff area.

In addition to the three recorded sites, the original records also indicate that there is sign of stone flaking in other locations around the shore line.

Any unrecorded sites above the tide may be impacted by further plantings.

5.20.4 Classification and Tenure

Classification: Scenic Reserve s.19 (1) (a)

Legal Description: Tikore Island

Area: 19.0202 hectares

Record of Title: SLA3/434

Subject to: Reserves Act 1977

5.20.5 Flora

Scrub or tree species have included: coprosma, leptosperma, cythodes, phormium and muehlenbeckia.

A small area in the south-east corner held a little salt marsh development of crassula, plagi-anthus and leptocarpus.

In 2000, plantings of totara, manuka, cabbage tree, red tussock and broadleaf were carried out. Any further plantings where practical will ensure the viability of the vegetation.

An ecological survey is required prior to any re-vegetation being undertaken.

5.20.5.1 Pest Plants

Vegetation on the Island has been modified by past human activities including an annual burn off and intensive grazing from cattle, sheep, goats, rats and rabbits.

Ongoing maintenance and monitoring of pest plants and animals will be required to ensure regeneration can occur naturally. Cutty grass and exotic grasses covering areas previously grazed by rabbits and birds have since grown. Flax and totara have survived well compared with other natives planted in 1996.

5.20.6 Fauna

There is no recorded information on the fauna of Tikore Island. However, there has been bird species noted that occur on most islands along the Bluff coast. As Tikore Island is located near the Bluff coast, it may provide habitat for these species. Bird species in the vicinity of the area and regionally common include:

<i>Scientific Name</i>	<i>Common Name</i>
<i>Ardea novaehollandiae</i>	White faced heron
<i>Haemotopus ostralegus finschii</i>	Pied oyster catcher
<i>Haemotopus unicolour</i>	Variable oystercatcher
<i>Larus bulleri</i>	Black billed gull
<i>Larus dominicus</i>	Southern Black Backed gulls
<i>Larus novaehollandiae scopulinus</i>	Red billed gull
<i>Leucocarbo carunculatus chalconotus</i>	Stewart Island Shag
<i>Pachyptila turtur</i>	Fairy Prion
<i>Pachyptila vittata</i>	Broad-billed Prion
<i>Pelagodroma marina</i>	New Zealand White-faced storm Petrel
<i>Pelecanoides urinatrix</i>	New Zealand Diving Petrel
<i>Pterodroma inexpectata</i>	Mottled Petrel
<i>Puffinus griseus</i>	Sooty Shearwater
<i>Sterna striata</i>	White fronted tern

5.20.6.1 Pest Animals

Rabbits are present. Any future plantings are subject to the removal of rabbits from the area.

5.20.7 Amenity Value

Tikore Island provides scenic amenity and historical value to the residents of Bluff and Invercargill. These values should be protected as a representation of the environment that would have existed in the past.

This Island is appreciated as a significant landmark in the Bluff Harbour

5.20.8 Recreational Use

Due to accessibility issues, Tikore Island offers minimal recreational opportunities for the residents of the region. The Island is appreciated instead for natural, historical and scenic values. These values take precedence over recreation on the Island.

5.20.9 Policies

5.20.9.1 Access Into and Through Reserves

Visitors have restricted access to the Island primarily because the only way to get there is by boat.

The natural, historical and scenic features are the primary purpose of the Reserve.

Camping and trampling over vegetation or potential damage of archaeological sites can damage the Island's values as a Scenic Reserve.

Access to the Reserve needs to be controlled so that conservation values are protected.

Policies

5.20.9.1.1

Priority will be given to the protection of the natural resource. No person shall visit the Reserve without prior written authority from the GM – Leisure and Recreation.

5.20.9.2 Pest Animal Control

Policy:

5.20.9.2.1

Rabbits and black backed-gulls are considered to be animal pests and will be eradicated with approval from local runanga.

5.20.9.3 Biodiversity

Policies:

5.20.9.3.1

Any proposal for revegetation on Tikore Island will require an ecological survey to have been done prior.

5.20.9.3.2

ICC Parks and Recreation will collaborate with agencies to increase and enhance biodiversity.

5.21 Tiwai Point Reserve

5.21.1 Introduction

Tiwai Point Reserve is a small sized coastal shrubland that holds heaps of history from when Māori and then early settlers habituated the area.

5.21.2 Location and Access

Tiwai Point Reserve is located opposite Bluff Township across the waters at 1730 Tiwai Road, just south of the Tiwai Aluminium Smelter. Pedestrian access to the reserve requires permission from Tiwai Aluminium Smelter in order to access the reserve.

5.21.3 Adjoining Land Use

Tiwai Point Reserve and is situated within DOC land with the shoreline nearby to the west.

5.21.4 History

Tiwai Point was among the first recorded (13th century) Māori settlements in southern New Zealand, known for the manufacture of locally quarried stone adzes and tool.

The area was prized by Māori as a source of argillite rock recognised as being highly suitable for the manufacture of adzes (*Hall Jones; 1976*).

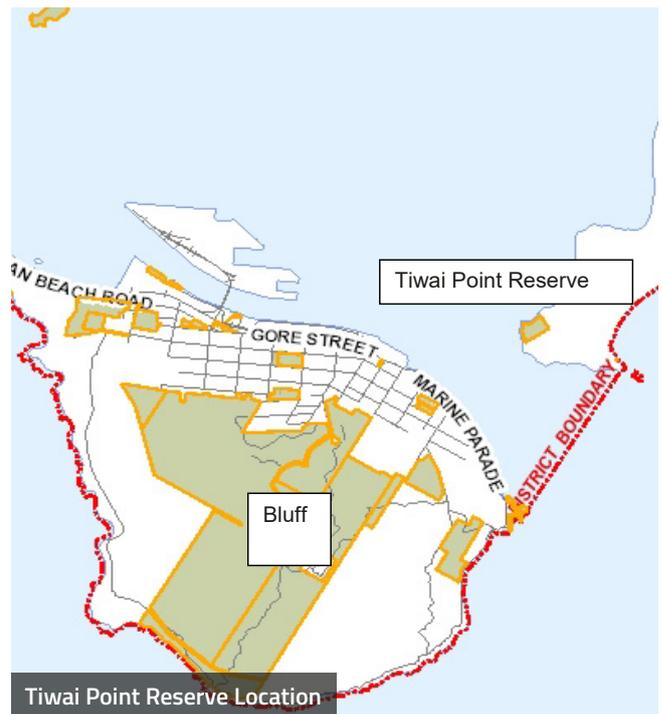
The first European to purchase land at Tiwai was the whaler, Captain James Joss. In 1838, he paid forty pounds to Māori for 2000 acres on the seaward side of the point. The first settler at Tiwai was an American, John Davis who married a Māori and settled in the lee of the hill on the point in about 1838 (*Hall Jones; 1976*).

Tiwai Point was among the first recorded (13th century) Māori settlements in southern New Zealand, known for the manufacture of locally quarried stone adzes and tools. Foveaux Strait, nearby estuaries and forests provided a rich and varied food supply for the first hunters and gatherers.

In 1858 Captain Elle declared a quarantine station for vessels in the northern channel of the harbour.

By the 1860's the immigrant vessels began to arrive.

A number of passengers on the 'Sir William Eyre' had died en route from an epidemic of scarlet fever and it appears that there are (at least) three bodies buried at the Tiwai Point Reserve:



- William Baird 1863 (arrived Bluff April 1863 and survived the six months voyage only to die of pleurisy on arrival in 1863).
- Mrs Gordon 1863 (arrived Bluff April 1863 on the 'Sir William Eyre'. Died of Dysentery).
- Alex Dunlop 1863 (arrived Bluff August 1863 on the 'New Great Britain'. Fatally injured. Grave marked with wrought iron fence).

The remainder of the passengers were placed in quarantine at Bluff for three weeks. Baird and Gordon were both buried at Tiwai Point. Like the others, Dunlop was buried in 1863 at Tiwai Point where an iron fence still surrounds his grave (Hall Jones; 1976).

There is no information on a Captain William Downy Hall - drowned 8 October 1863, and is supposedly buried at Tiwai Point (from information request).

Following a worldwide outbreak of the bubonic plague, a quarantine hospital was erected at Tiwai Point in 1900 close to the site of Davis's Hut. A jetty was constructed on the harbour side of the Point to gain access to the hospital and a road led straight up to the hospital. A shed for fumigating the mail was erected at the foot of the jetty and remains of both of these can be seen today (Hall Jones; 1976). The jetty and

fumigation shed are found on within the Awarua Bay and Tiwai Point Reserve.

Captain William Stirling died here in 1851, after a year of self-imposed exile on discovering he had tuberculosis. William Stirling lay undisturbed on the quiet Tiwai Point for over a century until in 1968 the burial site was disturbed during excavations for the aluminium smelter buildings. The remains were blessed and reinterred in October 1975 by Archdeacon WSL Harbour with descendants of Captain Stirling's family present. The Southland Girl Guide contingent planted trees at Tiwai Point March 1992 to enhance the landscape where he lies.

From Bluff Harbour, John Hall-Jones

ICC proposed in June 2004 that section 5 Block XIII Campbelltown Hundred 2.3902 ha currently freehold become scenic reserve.

In 2011 registered ownership changed from The Southland Harbour Board to Invercargill City Council.

As there were many Māori and European Settlers that occupied Tiwai Peninsula, along with some known burial sites, this could potentially indicate there is the possibility of archaeological sites that remain on Tiwai Point Reserve and therefore need more protection. Some assessments and sites have been recorded.



Alex Dunlop's Gravesite



Captain Stirling and John Davis' Gravesite

In addition to the historic graves of Captain Stirling and Alex Dunlop, there are many more known archaeological sites around the Tiwai Point such as oven/middens, burials, beacons and structures that are protected under the Heritage NZ Pouhere Taonga Act 2014. These sites add to the importance of the historical nature of Tiwai Point Reserve.

A Tiwai Point Treaty of Waitangi Claim was made in 1988.

With respect to Tiwai Peninsula, the District Plan identifies a number of areas of particular cultural importance. Parts of the smelter sub area contain both a Wahi Taoka site and an area identified as a Waahi Tapu.

The area identified as a Waahi Tapu is identified on the western extremity of Tiwai Peninsula and covers most of Tiwai Point, while the location of the Wahi Taoka site is located to the east of this Waahi Tapu area.

Wahi Taoka means all resources that sustain life. Wahi taoka is spiritually, culturally, physically and historically important to Kai Tahu. In some cases there will be similarities to Waahi Tapu.

The area defined as a Waahi Tapu within the District Plan is discussed by Hall-Jones who records that historically, Māori would land on the seaward side of Tiwai Peninsula and this was known as Tapu Beach. The beach was tapu to Māori as it used to be a burial ground.

5.21.5 Classification and Tenure

5.21.5.1 Classification

Tiwai Point Reserve has no classification.

This land was acquired by Section 2 Bluff Harbour Endowment Act 1878. Both Valuation NZ and District Land Registry records this land in the name of the Southland Harbour Board, but it is believed that clause 107 of NZ Gazette 1989 p2441 is applicable and land should be held in ICC.

ICC intends to classify this reserve through the Reserves Act Process.

5.21.5.2 Tenure and Area

Record of Title: SL9A/612

Legal Description:

Section 5 Block XIII Campbelltown Hundred Area: 2.3902 ha

Classification: Freehold – No reserve status-

Subject to: 5521704.1 Subject to Part 9 of the Ngai Tahu Claims Settlement Act 1998 (which provides for certain disposals relating to the land to which this Certificate of Title relates to be offered for purchase or lease to Te Runanga O Ngai Tahu in certain circumstances).

5.21.6 Flora

The coastal shrubland vegetation in this area is one of the best examples of coastal vegetation in the Southland District. The dominant vegetation of the canopy tier is flax. Other species present include cabbage trees and toetoe.

5.21.7 Amenity Value

The natural landscape elements on Tiwai Peninsula are made up of extensive shingle beaches, gravel bars, dunelands and their associated native vegetation. These environmental and historic values should be protected as a representation of the environment that would have existed in the past.

5.21.8 General Park Use

Tiwai Point Reserve is used as an Environmental Reserve for protection of flora and fauna, while allowing limited recreation and pest control management.

5.21.9 Policies

5.21.9.1 Access into and through reserves

Policy:

5.21.9.1.1

Access to Tiwai Point must be arranged through ICC/Tiwai Point Smelter. If the smelter was to close, future arrangements through ICC, iwi, local runanga and relevant agencies would be required to protect the site over the long term.

5.21.9.2 Pest plant and animal management

DOC currently oversees all weed pest management on the peninsula.

Peninsula wide management at landscape scale would be ideal in collaboration with local runa-

nga and DOC so that ICC reserves are covered holistically.

Policies:

5.21.9.2.1

Ongoing consultation will continue with the local runanga, DOC and any other agencies if required on management objectives to ensure consistent best practise when managing the reserve and alignment of management procedures.

5.21.9.2.2

ICC shall work in collaboration with DOC and other agencies if required through a formalised agreement to manage pest plant and animals.

5.21.9.3 Classification

It is foreshadowed that as a consequence of this Management Plan, application shall be made for the area to be classified as a Reserve.

This would not inhibit use of the reserve but would recognise the importance of the preservation of the vegetation to the local community.

Objectives:

- *To protect, preserve and enhance the intrinsic values of Tiwai Point Reserve.*
- *To apply (to the Minister of Conservation if required, or as delegated authority) to have Tiwai Point Reserve classified as Reserve as defined in the Reserves Act 1977.*

Policy:

5.21.9.3.1

ICC aims to manage Tiwai Point Reserve as a Reserve pursuant to the Reserves Act 1977. Classification will be applied through ICC's delegated authority to the classification most suited for its purpose under the Reserves Act 1977.

5.22 Esplanade Reserves

5.22.1 Introduction

Creation of Esplanade Reserves or Strips is generally a condition of subdivision in riverside or foreshore areas since the passing of the Resource Management Act (RMA) 1991.

When land adjacent to the sea, rivers and lakes is subdivided, Sections 229-237 of the RMA requires land to be set aside as either:

- A Local Purpose Reserve to be managed as an Esplanade Reserve under the Reserves Act and administered by the local authority; or
- An Esplanade Strip, whereby the ownership remains with the landholder but public access is usually allowed, subject to conditions (Schedule 10 RMA).

All Esplanade Reserves in this Plan are classified as Local Purpose Reserves and are administered and managed by the ICC Parks and Recreation Division.

Esplanade Reserves and Strips are administered for at least one of the following purposes and these guide their overall management:

- (a) To contribute to the protection of conservation values by, in particular, -
 - (i) Maintaining or enhancing the natural functioning of the adjacent sea, river or lake;
 - (ii) Maintaining or enhancing water quality;
 - (iii) Maintaining or enhancing aquatic habitats;
 - (iv) Protecting the natural values associated with the esplanade or strip;
 - (v) Mitigating natural hazards.
- (b) To enable public access to or along any sea, river or lake.
- (c) To enable public recreational use of the esplanade reserve or esplanade strip and adjacent sea, river or lake where use is compatible with conservation values.

(b) and (c) are more difficult to manage due to the physical restrictions to accessing most of the Esplanade Reserves. Therefore overall management by ICC focuses mainly on (a)(i).

Esplanade Reserves are reserves located adjacent to riverside or foreshore areas, most of which prohibit access due to surrounding private land.

ICC accepts that public access may not always be compatible with protecting natural values, or may not be physically practical. Therefore public

access to some Esplanade Reserves is not encouraged and would require permission from adjoining landowners because they are occupied by those landowners who manage them for grazing and farming purposes.

In some instances ICC will be required to gain permission from adjoining landowners in order to access Esplanade Reserves for maintenance.

Most are small and modified, but they complement other areas of ecological significance and collectively make a valuable contribution in terms of providing buffers and restoration opportunities.

Esplanade Reserves are scattered around three Ecological Districts within the Invercargill City District: Foveaux, Southland Plains and Waituna.

The Foveaux Ecological District comprises of esplanades located in the Bluff area:

- Ocean Beach.
- Stirling Point Pilot Station.

The Southland Plains Ecological District comprises of the flat to gently undulating Southland Plains, formed on Quaternary sediments, with smaller areas of sand dunes and recent alluvial deposits along Waihopai River and Otepuni Creek:

- Liddel Street.
- Beaconsfield Road.
- Forde Road.
- Mclvor Road.
- Mersey Street.
- Mill Road.
- Oteramika Road.
- Racecourse Road.
- Short Road.
- Waihopai River.

The Waituna Ecological District includes extensive wetlands and spit-bounds lagoons and harbours on Quaternary sediments:

- Colyers Island.

5.22.2 History

Portions of land were vested as Local Purpose Reserves for Esplanade purposes in the 1900's as results of subdivisions under the Resource Management Act 1991. These reserves were set aside to be managed for their conservation values, rather than for public access.

5.22.3 Flora

Esplanade Reserves are situated adjacent to rivers and other waterways. The surrounding environments are rural and swampy; most suited for shrubs, grasses, rushes and riparian vegetation.

Eight Esplanade Reserves are located in rural areas where there is farming, three are in the Bluff area by the sea, where vegetation contains coastal scrub and rocky shores, and two are in the residential area of Invercargill.

The Ecological District in which Esplanade Reserves are located may help to give an idea of the similar types of vegetation that may exist.

The **Southland Plains Ecological District** holds lowland red tussock land, swamps (manuka/ flax/*Carex secta*/toetoe, kahikatea-matai/hardwood swamp forest), salt marshes and sand dunes, and alluvial lowlands.

Remnants outside of the urban areas contribute to the rural amenity and are reservoirs of remaining biodiversity.

Original streamside forest, growing on alluvial soils adjoining most of the watercourses across the Southland Plains, would once have lined the Waihopai River and other streams. It is now very rare and demonstrates what forests around Southland used to be like.

Vegetation within the **Waituna Ecological District** comprises of mostly peat swamps, red tussock, seral manuka and flax cushion bogs. Extensive salt marshes fringe the bays and lagoons.

There are underdeveloped lowland forest remnants of podocarp-hardwood (kamahi) forest. There is also sand dune vegetation. Most of the area has been drained and developed for pasture.

Foveaux Ecological District consists of mainly coastal scrub and low forest. There are unique species that are typical of the coastal environment, including turf (*Selliera*, *Samolus*, *Plantago*, and *Cotula*), rock crevice plants (*Asplenium obtusatum*, *Myositis rakiura*) and grassland (*Poa astonii*).

Rural, coastal and streamside environments all contain some form of weed or noxious plants such as broom and gorse. Viability of the reserves would be greatly enhanced by carrying out extensive weed control, as negotiated with private landowners to gain access.

Vegetation on some Esplanade Reserves, including Stirling Point Pilot Station Reserve and Waihopai River, have been highly modified and developed over the years.

Modification has involved grazing, pest plants and animals, and human use.

5.22.4 Fauna

There is a variety of fauna living amongst the esplanades, from the Southland Plains rural remnants, to estuary and wetland terrain, all the way down to the coastal shores.

Southland Plains Ecological District has been highly modified for farming. Birds present include: fern bird, marsh crake, banded dotterel, black-fronted dotterel, black-billed gull, South Island pied oystercatcher and spur-winged plover. These birds are located at rivers, gravelled beds and wet areas.

Waituna Ecological District provides the habitat of marshlands and estuaries which are also suitable for wetland birds, such as: fern bird, scaup, shore birds, waders, marsh crake, spotless crake, bittern, black-backed gull, grey teal, grey duck, paradise shelduck and Canada goose.

Bluff and Greenpoint shorelines, where Ocean Beach, Colyers Island and Stirling Point Pilot Station are located, support a thriving wildlife community for coastal, shorebirds, waders and seawater birds.

These include: white-faced heron and Stewart Island shag. Other local birdlife include: New Zealand pigeon, tui, white fronted tern and sooty shearwater.

Visitors may see fur seals and southern right whales like to visit near the coast in the winter. Fish and molluscs are abundant in the nutrient-rich waters.

5.22.5 Amenity

Esplanade Reserves contain cultural, natural and human history values. These values should be protected as a representation of the environment that would have existed in the past.

5.22.6 Recreational Use

There are only few esplanades with recreational use. This is because Esplanade Reserves have resulted from subdivisions, leaving isolated strips of grassland along waterways, of which some are hard to access.

5.22.7 Policies

5.22.7.1 Access Into and Through Reserves

Due to the locations of the Esplanade Reserves public and physical access will be difficult. There is a lot of private land surrounding the reserves which is fenced and may contain stock. Most of the Reserves are also away from the main roads.

Policy:

5.22.7.1.1

Authorisation from ICC and/or landowners of land surrounding Esplanade Reserves will be required before proceeding.

5.22.7.1.2

The following reserves are recommended to be discussed between ICC and the closest neighbour on the potential for a lease arrangement for the sole purpose of pest weed control, stock movement and prohibit planting on sites: Beaconsfield Rd, Forde Rd, Mclvor Rd, Mill Rd, Oteramika Rd, Racecourse Rd, Short Rd, Waihopai River and Colyers Island.

5.22.7.2 Buildings and Structures

Policy:

5.22.7.2.1

No new structures are anticipated in the future except those required for interpretation or signage. New structures on Esplanade Reserves shall be designed in sympathy with the historical features of the sites. Any required structure

will be discussed with Environment Southland with regard to siting in relation to flood zones.

5.22.8 Beaconsfield Road Esplanade Reserve (Local Purpose)

5.22.8.1 Location and Access

Beaconsfield Road Esplanade Reserve consists of two long parcels of land. They are located on the south side of the Waikiwi Stream in a rural environment at the northern end of the Invercargill District.

The road leading to the Reserve from Beaconsfield Road is unformed road. It is physically restricted to the public and adjoining landowners may fence it for grazing purposes. There is no bridge across the stream. Access for maintenance would be gained through private property to the south of McIvor Road.

The ICC also owns part of the river bed adjoining the reserve. Private land adjoins these reserve strips in all directions.

About half of the Reserve is made of rough grass and cutty grass adjoining the river, along with areas of gorse, thistles and broom. The Reserve also contains a shelter belt of young poplar, willow trees and pasture grasses.

Not a lot can be done with the Reserve due to the high modification of the surrounding land and the Reserve's location.

5.22.8.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lots 3 and 4 DP 13588

Area: 0.7565 hectares

Record of Title: SL11A/215

Subject to: Reserves Act 1977



5.22.9 Colyers Island Esplanade Reserve (Local Purpose)

5.22.9.1 Location and Access

Colyers Island Esplanade Reserve is located approximately 14km from Invercargill City on the northern foreshore of Bluff Harbour. It is approximately 2km east of Greenhills community which is on the Bluff Highway.

Farmland adjoins the reserve inland causing a problem with dogs. This issue needs to be discussed with land owners and agencies to help manage this.

Access is semi restricted. From the end of Colyers Island Road to the east, a private farm track follows the coast, passing through the reserve. Permission is required before accessing the Reserve.



5.22.9.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade
 Legal Description: Lots 2 and 3 DP 12887
 Area: 0.4650 hectares
 Record of Title: 5B/204 (Cancelled)
 Subject to: Reserves Act 1977

5.22.9.3 Adjoining Land Use

The northern beaches of Bluff Harbour are important because they were food gathering and fish areas. The beach also forms part of what was a traditional trail along the Southern Coast. Archaeological sites, including those unrecorded pre-1900 sites, are protected against any disturbance under section 99 of the the Heritage New Zealand Pouhere Taonga Act 2014. Permission of the New Zealand Historic Places Trust is required before they can be modified or destroyed.

An archaeological site (oven) is located very near the Colyers Island Esplanade Reserve boundaries. What was recorded does not cover a large area.

5.22.9.4 Policy

5.22.9.4 Dogs on Reserve

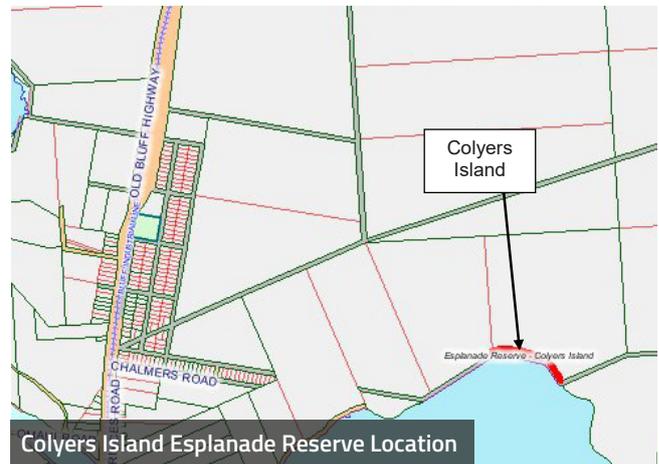
Policy:

5.22.9.4.1

Collaborate with land owners and agencies to ensure best practise management of dogs on reserve land as per the ICC Dog Bylaw.



Colyers Island Esplanade Reserve Aerial



Colyers Island Esplanade Reserve Location

5.22.10 Forde Road Esplanade Reserve (Local Purpose)

5.22.10.1 Location and Access

Forde Road Esplanade Reserve is located between the Waikiwi Stream and a stock bank in a rural area on the western side of the Invercargill District in the vicinity of West Plains School Road.

Land surrounding the Reserve is predominantly in private ownership, with Environment Southland owning a portion adjoining the stock bank.

The land is within the Waikiwi channel and is indistinguishable from the surrounding land.

Permission is required before accessing the Reserve.

The predominant vegetation is pasture grasses and rushes. There are a few small willows establishing along the stream margin, along with areas of blackberry and gorse thistles.

5.22.10.2 Classification and Tenure

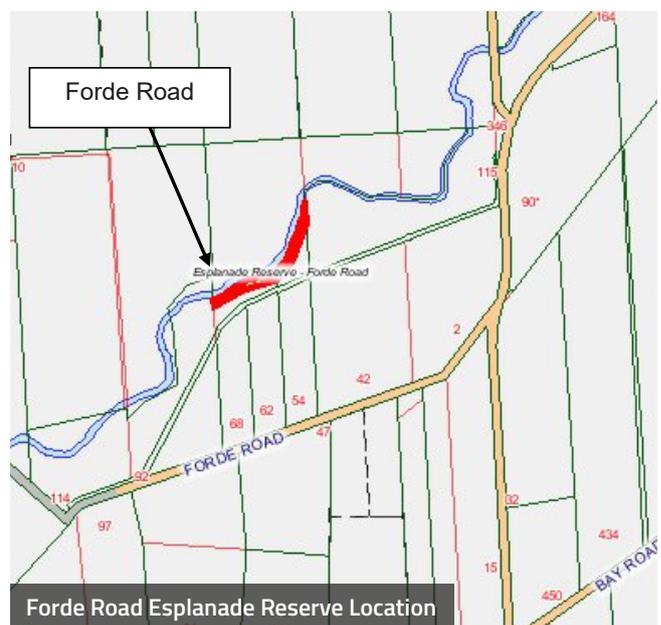
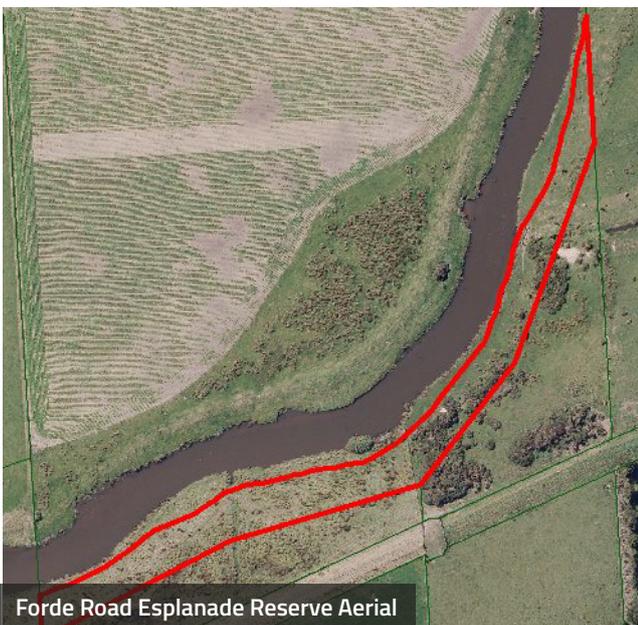
Classification: Local Purpose Reserve - Esplanade

Legal Description: Lot 4 DP 4264

Area: 0.6070 hectares

Record of Title: 157/82 (Cancelled)

Subject to: Reserves Act 1977



**5.22.11 Liddel Street Esplanade Reserve
(Local Purpose)**

5.22.11.1 Location and Access

Liddel Street Esplanade Reserve comprises two lots adjoining the Otepuni Stream in the enterprise area of the Invercargill District. The parcel of land separating the two lots contains the Otepuni Stream and is owned by the Crown.

The Reserve is visible and accessible from Liddel Street. The south part of the Reserve contains concrete beside the YMCA Charitable Trust. This may deter people from wanting to access Otepuni Stream from that side because it looks like it is part of the Trust’s section of land.

The location directly beside the Otepuni Stream indicates that there could be some riparian plantings within the Reserve to make it more appealing. However, rising water levels of the

stream need to be considered which could wipe plantings directly beside the stream out.

Plantings of vegetation more suitable to an industrial area up higher at road level would make the Reserve more appealing to pedestrians and people driving past.

5.22.11.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade
 Legal Description: Lots 5 and 6 DP 13476
 Area: 0.0693 hectares
 Record of Title: SL10D/671
 Subject to: Reserves Act 1977

5.22.11.3 Policy:

Encroachments are not permitted unless by formalised agreement with ICC.

5.22.11.4 Future Development

Parks and Recreation has a desire to work together with Environment Southland and iwi when planning for planting developments here.



5.22.12 Mclvor Road Esplanade Reserve (Local Purpose)

5.22.12.1 Location and Access

Mclvor Road Esplanade Reserve is located alongside the Waikiwi Stream in a rural area at the northern end of the Invercargill District.

Lot 2 (435m²) is situated between Lots 3 and 4 and is recognised as being vested as a stream bed by the ICC under section 237A of the Resource Management Act 1991.

The waterway is cleared and maintained by Environment Southland.

Flora includes grass and rush species, as well as many pest plants. Some of these pest plants are spread from the clearance of the waterway and so should be considered.

Ducks and fish have been seen in the stream.

Private rural land adjoins to all directions of the reserve. The road leading towards the direction of the Reserve is a private road which restricts

public access. Permission would be required by landowners before accessing the Reserve.

5.22.12.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lots 3 and 4 DP 13301

Area: 0.2933 hectares

Record of Title: SL10D/43

Subject to: Reserves Act 1977

5.22.12.3 Adjoining Land use

The fence along the northern boundary crosses onto the reserve. If ICC requires that land in the future then the private landowner adjoining the Reserve can put the fence at the southern end of the boundary.



Mclvor Road Esplanade Reserve Aerial



Mclvor Road Esplanade Reserve Location

5.22.13 Mersey Street Esplanade Reserve (Local Purpose)

5.22.13.1 Location and Access

Mersey Street Esplanade Reserve is located off Mersey Street alongside the Otepuni Stream in an industrial area of the Invercargill District. The Reserve is both visible and accessible to the public from Mersey Street.

Crown land adjoins to the south of the Reserve and private land adjoins to the north and east. The Reserve fronts onto roading to the west.

Features of this Reserve include weeds and grass species. The viability of the Reserve could be improved if there was the continuation of maintenance and some riparian vegetation planted along this wide strip of land.

5.22.13.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lot 3 DP 13743

Area: 0.0789 hectares

Record of Title: SL11A/784

Subject to: Reserves Act 1977



5.22.14 Mill Road Esplanade Reserve (Local Purpose)

5.22.14.1 Location and Access

Four parcels of Mill Road Esplanade Reserves are located alongside the Waihopai River in a rural environment at the north end of the Invercargill District.

Private rural land adjoins to the north and south of these four strips.

Riparian vegetation and grass species exist along and around the water edge.

There are no formed roads leading to the reserve, making physical access difficult. Permission will be required from private landowners to access this Reserve.

5.22.14.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

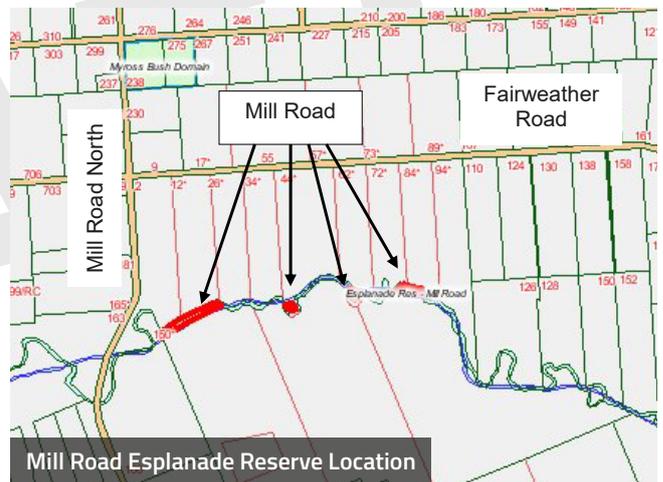
Legal Description: Lots 4-7 DP 7143

Area: 0.6643 hectares

Record of Title: 136/283 (Cancelled),

127/98 (Cancelled)

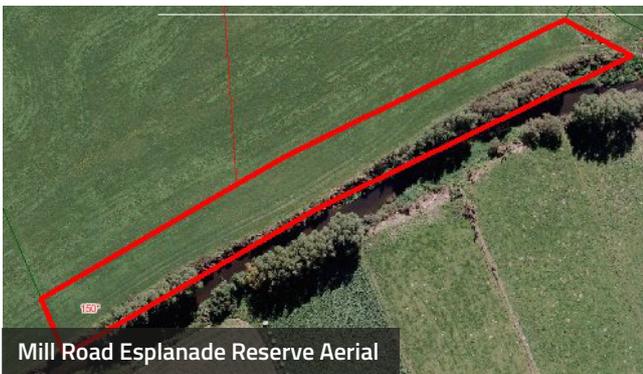
Subject to: Reserves Act 1977



Mill Road Esplanade Reserve Location



Mill Road Esplanade Reserve Aerial



Mill Road Esplanade Reserve Aerial



Mill Road Esplanade Reserve Aerial



Mill Road Esplanade Reserve Aerial

5.22.15 Ocean Beach Esplanade Reserve (Local Purpose)

5.22.15.1 Location and Access

Ocean Beach Esplanade Reserve adjoins the coastal shore of Foveaux Strait at the southern end of the Invercargill District. A partly formed road off Ocean Beach Road leads towards the Reserve making legal access possible. DOC land adjoins to the south, private land adjoins to the north and Ocean Beach Road is to the west. No. 1 Ward Parade adjoins to the east of the Reserve and is also administered by the ICC.

5.22.15.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lot 2 DP 13440

Area: 0.0420 hectares

Record of Title: SL10D/207

Subject to: Reserves Act 1977

5.22.15.3 History

Te Awa Rakau is the bay over which the Esplanade looks.

Te Ara a Kiwa is the original Māori name for Foveaux Strait. This remembers the legend of the whale Kewa who chewed through the sand-bank that once existed between Rakiura and Murihiku. Ngai Tahu under Te Wera lived in this area. Some of his descendents still live in Bluff.

The area was rich in resources both from the coast and the land.

More recently, the Esplanade was used as a car park for the Ocean Beach Freezing Works until its closure in 1991.

5.22.15.4 Archaeological Sites

Location of an archaeological site is very near the southern boundary of the Ocean Beach Esplanade Reserve, on the narrowest part of promontory, above the high water mark.

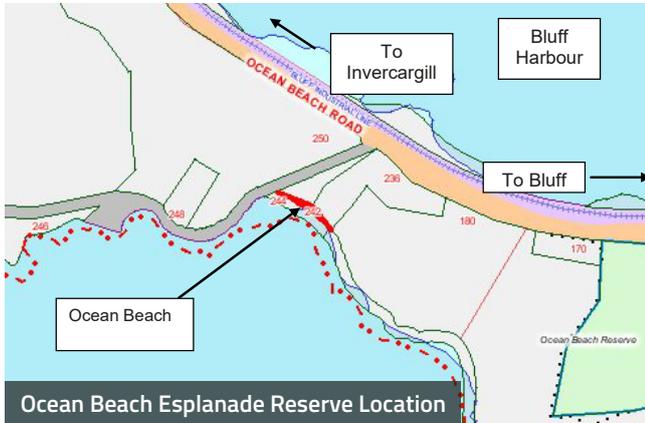
This site is a find spot for dark green argillite adze. Duff type 2 B. It is found together with roughout in cleft in rock.

Adze has matt polish on front and back. It has a quadrangular cross section, with flaking and hammer-dressing on sides and front.

There is nothing on site now but there may be sites nearby that are not recorded because they are not visible (*sourced from New Zealand Archaeological Association Records 11 January 2011*).

5.22.15.5 Future Development

Following the discovery of a historic landfill in 2016, a collaboration with DOC, iwi and key stakeholders work on remediating and protecting the Ocean Beach Esplanade Reserve will continue to align with the principles of this Management Plan.



5.22.16 Oteramika Road Esplanade Reserve (Local Purpose)

5.22.16.1 Location and Access

Oteramika Road Esplanade Reserve is located alongside the Otepuni Creek in a rural environment on the eastern side of the Invercargill District. Otepuni Creek is managed for river control purposes by Environment Southland.

Environment Southland land adjoins to all directions of the reserve. Physical access would be difficult as there are no roads leading directly to the Reserve and it is amongst a private rural environment. Permission will be required from landowners to access the reserve.

5.22.16.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lots 4 and 6 DP 12993

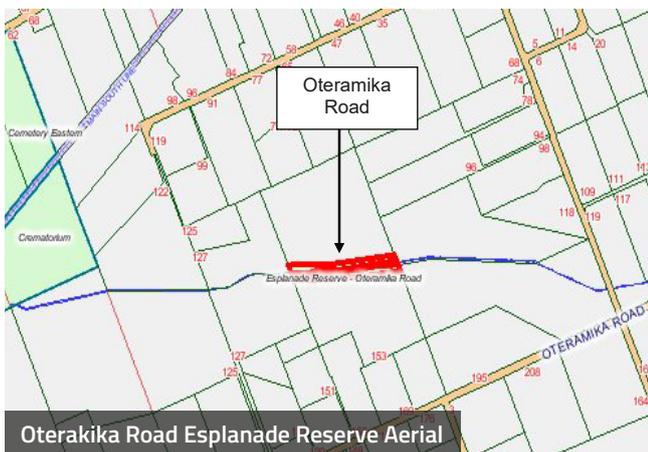
Area: 1.2860 hectares

Record of Title: SL10C/331

Subject to: Reserves Act 1977



Oteramika Road Esplanade Reserve Aerial



Oteramika Road Esplanade Reserve Aerial

5.22.17 Racecourse Road Esplanade Reserve (Local Purpose)

5.22.17.1 Location and Access

Racecourse Road Esplanade Reserve is located along the channel of the Waihopai River in a rural environment near the residential area of Racecourse Road. The Reserve is situated on the eastern side of the Invercargill District.

Pedestrian access to the Reserve can be gained from the end of Racecourse Road and Waihopai Walkway, which continues along a stop bank.

All land adjoining the channel is managed by Environment Southland and maintained for river control and flood protection purposes.

The Reserve is visible from the Waihopai Walkway but it is also indistinguishable from the surrounding landscape.

A streambed separates the two portions of reserve. Environment Southland land adjoins to the north and there is roading to the west, east and south of the reserve, which separates Environment Southland land.

Vegetation consists of pasture grass species which is maintained by the grazing of sheep. Parts of the Waihopai Walkway have low fencing along the stop bank to enable grazing of the channel.

5.22.17.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade



Racecourse Road Esplanade Reserve Aerial

Legal Description: Lots 5 and 6 DP 12822
 Area: 0.4240 hectares
 Record of Title: SL10C/727
 Subject to: Reserves Act 1977

5.22.18 Short Road Esplanade Reserve (Local Purpose)

5.22.18.1 Location and Access

Short Road Esplanade Reserve is located off an unformed road next to the Waikiwi Stream in a rural environment on the western side of the Invercargill District.

Private land adjoins the strip to the west, south and north. Land to the east is administered by roading.

Permission would be required from landowners to access the Reserve.

Vegetation consists of grass species.

5.22.18.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description:

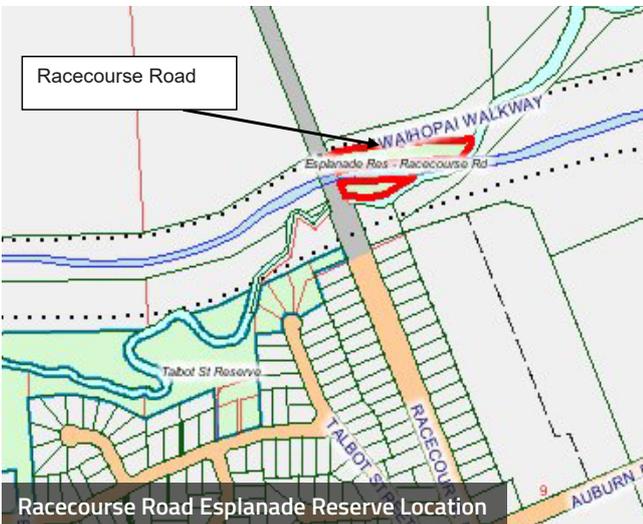
Lot 2 DP 12881

Area: 0.8900 hectares

Record of Title: SL9D/188 (Cancelled)

Subject to: Reserves Act 1977

DRAFT



5.22.19 Stirling Point Pilot Station Esplanade Reserve (Local Purpose)

5.22.19.1 Location

The Stirling Point Pilot Station Reserve is located at the start of State Highway 1, in Bluff.

The Reserve is adjacent to the Stirling Point car park, a popular place from which to view Foveaux Strait, Stewart Island and the boating activities centred on the Bluff Harbour entrance. This outlook is also the natural backdrop for many tourists' photo of themselves and the famous Stirling Point Signpost.

Stirling Point Pilot Station Reserve is a long, narrow, irregular shaped reserve that follows the foreshore around Stirling Point.

The north eastern and south eastern boundaries follow the rocky shoreline at the high water mark. Other boundaries are formed by the two residential properties, and State Highway 1 (Ward Parade). The Invercargill District boundary line forms part of the Reserve boundary.

Stirling Point forms the entrance point to the Bluff Harbour from Foveaux Strait and is located to the very east of the Bluff peninsular.

Located on legal road line, this Reserve is maintained by the Parks and Recreation Division but does not form part of the Stirling Point Pilot Station Reserve.

5.22.19.2 Reserve Description

Stirling Point is best known for the distinctive Signal Station building, located right on the point. The white building with the red lantern creates a unique landscape feature set against a backdrop of the blue or grey sea and sky. The building and associated structures have historical importance to Bluff, as the site of an early whaling station established in 1836, and the first pilot station for Bluff established in 1856.

The Signal Station is owned by South Port, which also leases the land immediately surrounding the building. The historical and landscape features of the Point directly influence the management of the remainder of the Reserve. The Signal Station is the reason many people visit the Stirling Point Pilot Station Reserve.



Stirling Point Pilot Station Esplanade Reserve Aerial



Stirling Point Pilot Station Esplanade Reserve

Apart from those structures associated with the Signal Station, the few built structures on the remainder of the Reserve are mainly linked to the roadway and car park. A small area of the Reserve around the car park is mown, and a narrow grassed track leads you to the south-eastern arm of the Reserve.

The reserve is located at the foot of Bluff Hill, significant for its historical, cultural, landscape and environmental values.

5.22.19.3 Access

Stirling Point Pilot Station Reserve is surrounded by either: steep embankments, rocky beach or residential properties.

Formed vehicle access into the reserve is via a narrow gravelled road off Ward Parade. This road runs over a portion of the neighbour’s land and legal right of way has been granted.

ICC has a shared maintenance agreement with South Port NZ Ltd and the property owner over this access way. The access road into the Reserve also serves as vehicular access to the residences that neighbour the Reserve at 29 and 31 Ward Parade.

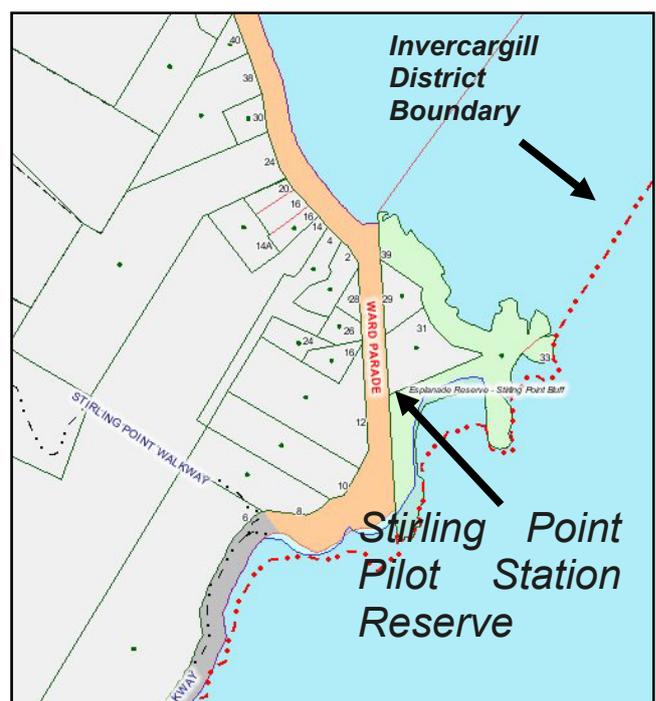
A public car park is located at the end of the drive, providing space for a turning circle and around eight parked vehicles. The car park receives considerable use by people sightseeing, people accessing the beach, fishermen and divers.

A formed pedestrian access links the Pilot Station to Stirling Point toilets and provides views looking back to the Pilot Station and Foveaux Strait. *Resource consent was obtained in 2020 to construct a boardwalk along part of the walkway to fight erosion and protect the surrounding landscape.*

Other informal tracks provide access to the beach and rocks but can be subject to erosion.

The neighbouring Foveaux Walkway is one of the most popular walking or tramping tracks in the southern part of the Southland region receiving thousands of visitors per year.

While the land surrounding the Signal Station is leased, the public can still gain access to the area. Pedestrian access to the Signal Station building is over a timber bridge with a timber handrail to one side.



The Signal Station building is closed to the public. The building now houses the light used as a navigational aid for the harbour, and equipment for satellite navigation and its associated aerial.

5.22.19.4 History

The Stirling Point Pilot Station Reserve is the site of one of the first whaling stations at Bluff, established in 1836. William Stirling set up a whaling station at what is now known as Stirling Point for Johnny Jones. This was located in a small cove to the north of the present Signal Station and included a house, a boat shed and a store house for the whale oil.

The harbour at Bluff had been recognised from an early stage by European sailors as a valuable and welcome refuge from the storms of the Southern New Zealand coast. Its entrance, however, was dangerous with extremely strong rips, tidal currents and narrow access channels.

In 1856 the first pilot was appointed. This was James Smith. Stirling had died in 1851 and the old whaling station at Stirling Point was selected as the launching site for the pilot boat. Smith married Stirling's widow Mary.

In 1862 a signal station was erected, comprising a timber mast with cross tee and watchman's hut on the summit of Bluff Hill, and a similar mast and cross tee on the rocks beside the pilot boat's slipway.

The watchman on the hill would keep lookout for ships out at sea and communicate with them

and the pilot boat by means of different flags. The west yardarm was for vessels out at sea, while the east yardarm was for signalling ships already in port.

Other flags were raised indicating the quarters of the tide. A light was fixed to the top of the mast for access of ships to the harbour after dark.

This system proved to have difficulties in that the top signal station was frequently obscured by low cloud or rain rendering the entire arrangement useless.

In 1865, a lighthouse was erected on Dog Island in response to the ten shipwrecks in the vicinity of Bluff Harbour since 1845. This was designed by the marine engineer, J M Balfour and is the tallest lighthouse in New Zealand. Balfour was extremely innovative and was responsible for most of the new lighthouses built in New Zealand at this time.

In 1912, the signal stations were upgraded. New concrete buildings were erected; one replacing the timber hut on Bluff Hill and one adjacent to the lower mast at sea level. The building on Bluff Hill was rectangular and approximately three metres by two metres. The lower building was octagonal and approximately six metres across and was manned by between two and four men. The watchman in the Bluff Hill station would signal to the pilot in the station at Stirling Point by means of signal flags on the signal mast and the pilot boat would be launched. The boat was a small wooden dinghy and it was rowed out to the waiting ship where the pilot climbed aboard to bring the ship safely to harbour.

The Bluff Hill station was closed down in 1938, re-opening for the duration of World War II, but was not used in peacetime again. It was demolished in 1964.

In 1986, the signal station closed down completely following the advent of UHF radio and satellite communication, and communication between pilots and shipping is centrally located in the South Port offices.



The building now houses the light used as a navigational aid for the harbour and equipment for satellite navigation and its associated aerial.

The remains of shipwrecks off Stirling Point include 'Scotia' (1864), 'Pelham' and 'Maid of Otago' (1886) and Okta (1913). There have also been other shipwrecks in the area.

In 2004, the Stirling Point Signal Station Preservation Trust prepared a report on the Stirling Point Signal Station. The report included a brief historical background to the site as well as identifying its heritage significance:

The Stirling Point Signal Station has heritage significance for the following reasons (Gillies; 2004);

Historical Significance

- Bluff was the earliest European settlement in New Zealand, established by James Spenser in 1824 when he set up a supply station for the whalers.
- The pilot station is built on the site of very early activity related to the maritime history of New Zealand, including one of the first whaling stations in New Zealand in 1836 and the first pilot station for the harbour of Bluff in 1856.

Technical Significance

- The building is a representation of maritime technology which is no longer in use. Since the universal adoption of VHF radios, the system of communication between ships in the harbour or out at sea and the pilot by means of flags has been superseded and the building has become redundant.
- It is an uncommon building and has rarity value.
- The Signal Station is an example of an early reinforced concrete building.

Social Significance

- The Pilot Station was critical to the safe functioning of the harbour. This included both the visiting ships and the local fleet. As such it fulfilled a critical role and allowed the harbour to thrive.

Aesthetic Significance

- The Signal Station is an important element in the dramatic landscape at Stirling Point, extending from the narrow harbour entrance, the tourist signpost at the southern most point of State Highway 1 and the view over the Foveaux Strait. It provides a dramatic contrast between a man-made element and the often wild forces of the sea. The contrast of white walls and red tower against the blue or grey sea and sky is particularly impressive.
- The building is largely in its original architectural form and this is a well proportioned octagonal tower with carefully designed detailing.

5.22.19.5 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lots 3 and 4 DP 12793

Area: 1.2127 hectares

Record of Title: SL10B/443, SL10B/444

Subject to: Reserves Act 1977

Lease: 199636

Lot 3 Deposited Plan 12793 vested in ICC as Local Purpose Reserve (Esplanade) - 0.0460 ha. Stirling Point was leased to South Port New Zealand Limited for a term of 21 years, commencing on 1 January 1992, with a right of renewal. This land contains the Signal Station.

Rights of Way are granted over areas marked A, B, C and D to allow access to Lots 2, 3 and 4 DP 12793. Refer Transfer 199636.6 and Record of Titles 10B/441, 10B/442, 10B/443, 10B/444 for details. Costs for construction and maintenance of the Right of Way is split between Lots 1, 2 and 4 DP 12793

5.22.19.6 Amenity

Stirling Point Pilot Station Reserve has been a whaling station, pilot station and signal station. Despite this, the Reserve is located within an important coastal environment and the nearby Bluff Hill contains significant scenic and environmental values.

5.22.19.7 Present Management

The Signal Station is owned by South Port which also leases the land immediately surrounding the building. Responsibility for maintenance and restoration of the Signal Station building and associated structures lies with the Lessee and in 2001 the Stirling Point Signal Station Preservation Trust in 2001 was established to undertake this.

5.22.19.8 Policies

5.22.19.8.1

Buildings and structures

The Stirling Point Pilot Station Reserve has important heritage significance and landscape values requiring protection and recognition.

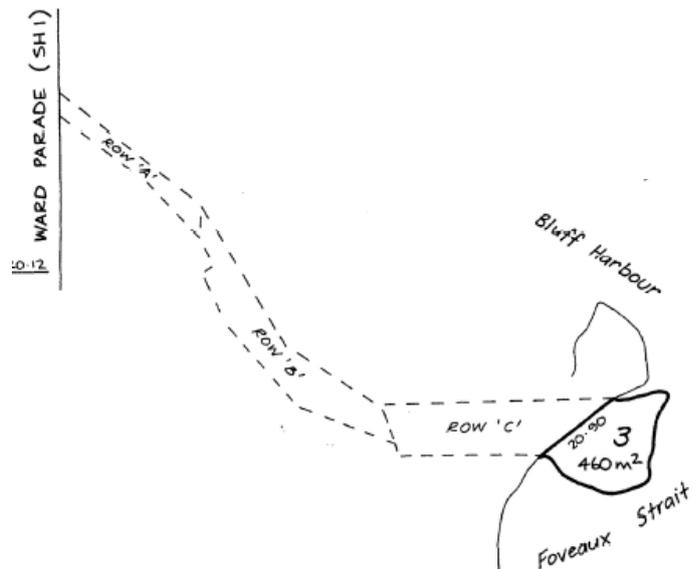
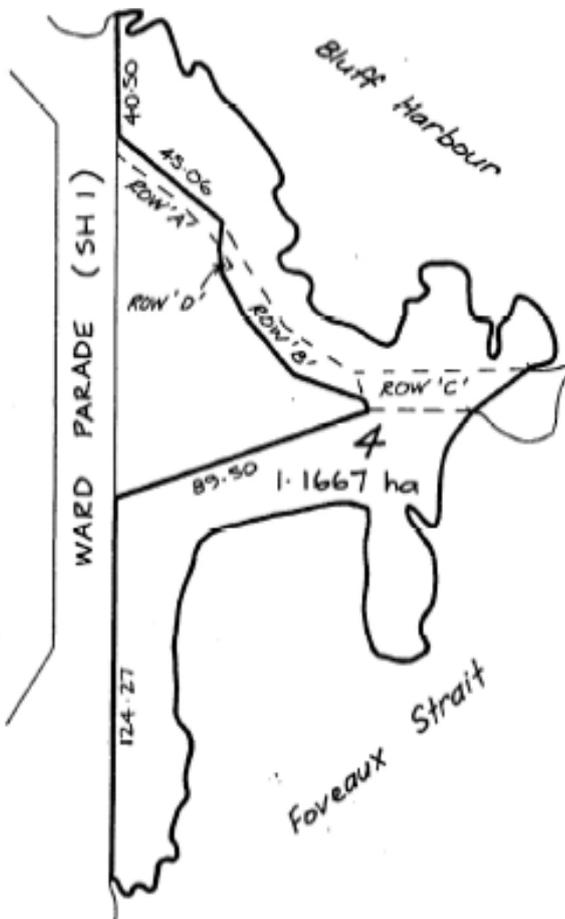
The Stirling Point site was one of the first whaling stations at Bluff established in 1836, and the existing Signal Station sits near the original launching site for the pilot boat established in

1856. The Signal Station building (*owned by South Port*), with its white walls and red tower, contributes to the dramatic scenery of Stirling Point when viewed against the blue or grey sea and sky.

Policy:

5.22.19.8.1.1

The Signal Station and those structures and features of the reserve identified as being historically significant shall be protected and/or restored to the level outlined in the report - Stirling Point Signal Station, Condition Report and Works Specification, 2004 and with approval and/or input from ICC. This level is based on the Statement of Significance within that report, and the philosophy outlined in the NZ ICOMOS Charter for the Conservation of Places of Cultural Heritage Value.



5.22.19.8.2

Leases

Leases on reserves allow organisations to provide recreational facilities for the public. The Reserves Act 1977 clearly indicates that leases and other occupational rights must be considered in relation to the primary purpose of the reserve and the rights of the public.

Lot 3 DP 12793, containing the Stirling Point Signal Station building, is leased to South Port New Zealand for a term of twenty-one years commencing on *1 January 2013*. The lease is for the purpose of protecting the Signal Station, which houses the receiving equipment for the satellite navigation system and the harbour light. Responsibility for maintenance and restoration of the building and associated structures was transferred to the Stirling Point Signal Station Preservation Trust in 2001.

While not specifically identified in the lease agreement, the land surrounding the Signal Station building, which is a local purpose reserve, shall remain available to the public for recreational purposes.

Policies:

5.22.19.8.2.1

Lot 3 DP 12793 of the Stirling Point Pilot Station Reserve, containing the Signal Station building, shall be leased to South Port New Zealand Limited for a period of twenty one years commencing 1 January 2013.

5.22.19.8.2.2

Public access to the Stirling Point Pilot Station Reserve land surrounding the Signal Station shall remain available to the public for recreational purposes.

5.22.19.8.2.3

Responsibility for maintenance and restoration of the building and associated structures on Lot 3, DP 12793 lies with the lessee or their appointed agent.

5.22.19.8.3

Administration

The Stirling Point Pilot Station Reserve is a reserve vested in ICC for esplanade reserve purposes.

A portion of the Stirling Point Pilot Station Reserve is leased to South Port New Zealand Ltd and management of the Signal Station has been transferred to the Stirling Point Signal Station Preservation Trust.

Policy:

5.22.19.8.3.1

South Port New Zealand Limited and the Stirling Point Signal Station Preservation Trust are responsible for the maintenance and restoration of the Signal Station Building and associated structures during the term of the lease.

5.22.20 Waihopai River Esplanade Reserve (Local Purpose)

5.22.20.1 Location and Access

Three Waihopai River Esplanade Reserve parcels are located alongside part of the Waihopai River channel in a rural environment near the Waihopai Dam.

Pedestrian access to the Reserve can be gained from the end of Racecourse Road and Waihopai Walkway, which continues along a stop bank.

Auburn Road (off Racecourse Road) leads to a closed gate where pedestrians can access the formed pathway to the Waihopai Walkway.

The Waihopai Walkway follows both stop banks towards and across the dam, crossing the Reserve. The public can access the Reserve as there are no restrictions if walking or cycling along the track.

The majority of the Reserve is in pasture grasses and is indistinguishable from the river environs. Areas east of the dam in the vicinity of the ponding area have been planted in riparian species. Vegetation includes: flax, red tussock, cabbage trees, carex sp., toetoe, olearia and broom.

Private land is situated between the three reserve strips. Environment Southland owns the remainder of the surrounding land and manages the entire area for flood protection purposes. All areas are grazed periodically.

5.22.20.2 Classification and Tenure

Classification: Local Purpose Reserve - Esplanade

Legal Description: Lots 6, 8 and 9 DP 12882

Area: 2.2900 hectares

Record of Title: SL10C/272

Subject to: Reserves Act 1977



6.0 Development and Change

6.1 Requests for Development on Reserves

Reserves are created principally for the provision and preservation of open space and natural areas. Some buildings and structures such as changing rooms, toilets, clubrooms, car parks and fences are considered necessary for the enjoyment and full utilisation of reserves and are allowed for in the Reserves Act 1977.

The landscape character of a reserve contributes to and enhances the City's environment and impacts on reserve users, reserve neighbours and people passing by. While certain activities and buildings are permitted on reserves it is important to ensure that the effects of any structure or use does not impact negatively on reserve values, reserve users and reserve neighbours.

When considering an application to develop or change part of a reserve, ICC will take into account the existing character of the reserve, including:

- The existing and potential use of the reserve.
- The natural and built environment.
- The surrounding landscape and the use of neighbouring land.
- The purpose and classification of the reserve under the Reserves Act 1977 and the management objectives stated in the current Reserve Management Plan.

Objective:

- *To protect and enhance the open space, landscape and historical values of the reserve while providing adequate facilities for recreation and play.*
- *To ensure that development is appropriate to the reserve and that new developments complement and enhance the existing character of the reserve.*
- *To provide and maintain well designed and appropriately located buildings and structures in the reserve to improve utilisation and add to the enjoyment of the reserve by its users.*
- *To ensure that all reserve facilities are provided and maintained to an appropriate standard that meets public health and safety requirements and contributes to the attractiveness of the reserve.*

To ensure the costs associated with any development by/for a specific user group are met by that group.

Policies:

- 6.1.1** The land within each of the thirty four Environmental Reserves covered by this Management Plan shall be managed in compliance with Sections 17, 19 and 23 of the Reserves Act 1977.
The number of buildings and structures on Environmental Reserves will be limited to a level which facilitates the safe and appropriate use, protects the open space and natural amenity values, while being compatible with the purpose and classification of the reserve.
- 6.1.2** Public safety, public benefit and the character of the environment should be taken into account when planning the development of buildings, structures and associated landscaping.
- 6.1.3** The construction of any new buildings or extensions to existing buildings is not permitted unless anticipated in the current Environmental Reserves Management Plan and may be subject to a review or amendment to the Management Plan.
- 6.1.4** The design of the proposal shall be subject to ICC approval and shall be in keeping with and complement the surroundings. Buildings and structures shall be placed with regard to reserve values, views and proximity to access points.
- 6.1.5** Exterior colour schemes of buildings and structures shall be approved by ICC. The painting and creation of murals (not advertising) on buildings and structures may be considered on submission of a copy of the design and proposed colour scheme to ICC.
- 6.1.6** The development shall be designed in a way that limits the opportunity for vandalism.
- 6.1.7** The development will be designed, where practical and feasible, to meet the current national standard and design criteria for access for people with disabilities.
- 6.1.8** The lease or licence to occupy agreement will define the obligations of the building owners on reserve land when the building is no longer required or the club has disbanded. These include removal or disposal of the building and facilities,

or on-selling of the building to an approved recreational activity. Any outcome of this will be to the approval of ICC.

6.1.9 Development plans are required for all development proposals for structures, facilities or buildings on Environmental Reserves (including alterations and extensions to existing buildings) and will include an assessment of effects. In particular the proposal should address how adverse effects on the values of the reserve will be avoided, remedied or mitigated. The development plan shall include:

- (a) The location and design of proposed buildings, structures and landscaping including any car parking, lighting, fences and signage and the extent of the area required.
- (b) Details of the size, scale, visual impact and relationship of the proposal to the surroundings.
- (c) Any new building requirements as part of the development, or the changed use of existing buildings. Indicate any alterations required for existing buildings.
- (d) Details of any known or potential liabilities associated with any existing building or structure being added to or modified.
- (e) Any likely effects (adverse or otherwise) of the proposal on the landscape, environment and reserve users or reserve neighbours (Environmental Impact Assessment) including visibility into and through the reserve and public safety.
- (f) Details of any change or removal of any existing trees or vegetation.
- (g) Details of any drainage and earthworks required and disruption to drainage patterns. Full restoration of disturbed landform during construction and landscaping and compliance with relevant legislation is the responsibility of the applicant.
- (h) Details of any change or disruption to network utility infrastructure and details of infrastructure required as part of the development.
- (i) Details of any specific landscaping requirements - species, screening or shelter.
- (j) Consideration of existing users (both formal and informal) and the impact of this proposal on them. Any issues of public access, thoroughfare and egress on reserves and into any buildings and the loss of any open space including during construction phase.
- (k) Details of any discussions with existing user groups.
- (l) Anticipated user numbers and the times of use.
- (m) Details of anticipated life of the structure and future maintenance requirements.
- (n) Details as to who will be responsible for all future maintenance and insurance for the buildings and structures. Acknowledgement of the club or group's responsibility if or when the building is no longer required or if the club disbands.
- (o) Details of the anticipated completion date and any plans to stage the development.
- (p) Any other matters arising as determined by ICC.

7.0 References

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- Norton; 1996** Development and Forest Sustainability, Otatara, Invercargill – Report prepared for Invercargill City Council by Dr David A. Norton (1996)
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- Southland Coastal Heritage Inventory Project Results – 2010 –** *Tikore Island*

8.0 Appendices

8.1 Summary of All Environmental Reserves

PARK NAME	ADDRESS	LOCATION	AREA (HA)	CLASSIFICATION/ STATUS
Bluff Hill Area	Bluff Hill	Bluff	85.0848	Part Freehold, Part Local Purpose-Quarry, Part Water Works
Bluff Hill Reserve	13-107, 14 - 107, 22-107 Shannon Street	Bluff	78.0664	Scenic s.19(1)(a)
Bowman's Bush	35 Ruru Avenue	Otatara	1.2813	QEII Trust Covenant
Esplanade Reserve - Beaconsfield Road	69 Beaconsfield Road	Invercargill	0.7565	Local Purpose (Esplanade)
Esplanade Reserve - Colyers Island	217 Colyers Island Road	Greenhills	0.4650	Local Purpose (Esplanade)
Esplanade Reserve - Forde Road	54A Forde Road	Invercargill	0.6070	Local Purpose (Esplanade)
Esplanade Reserve - Liddel Street	21 & 25 Liddel Street	Invercargill	0.0693	Local Purpose (Esplanade)
Esplanade Reserve - McIvor Road	283E McIvor Road	Invercargill	0.2933	Local Purpose (Esplanade)
Esplanade Reserve - Mersey Street	173 Mersey Street	Invercargill	0.0789	Local Purpose (Esplanade)
Esplanade Reserve - Mill Road	150 Mill Road North	Invercargill	0.6643	Local Purpose (Esplanade)
Esplanade Reserve - Ocean Beach	242 Ocean Beach Road	Bluff	0.0420	Local Purpose (Esplanade)
Esplanade Reserve - Oteramika Road	153 Oteramika Road	Oteramika	1.2860	Local Purpose (Esplanade)
Esplanade Reserve - Racecourse Road	680 - 688 Waihopai River	Invercargill	0.4240	Local Purpose (Esplanade)
Esplanade Reserve - Short Road	250 Renfrew Street	Invercargill	0.8900	Local Purpose (Esplanade)
Esplanade Reserve - Stirling Point	33 - 38 Ward Parade	Bluff	1.2127	Local Purpose (Esplanade)
Esplanade Reserve - Waihopai River	781 Waihopai River	Invercargill	2.2900	Local Purpose (Esplanade)
Grant Road Reserve	123 Grant Road	Otatara	0.5174	ScenicRecreation
Greenpoint Recreation Reserve	2392 Bluff Highway	Bluff	12.9714	Recreation
Joeys Island	202 Joeys Island	Awarua Bay	11.4324	Scenic s.19(1)(b)
John Street Reserve	9 John Street	Otatara	1.2087	ScenicRecreation
Lake Hawkins Wetland Reserve	1 Airport Avenue	Invercargill	54.8792	Recreation
Matua Road Reserve	33 Matua Road	Otatara	0.5013	ScenicRecreation

Metcalf Bush Reserve	Mason Road & 56 McKellar Road	Invercargill	14.1890	Scenic / QEII Trust Covenant
Omaui Reserve	221 Mokokoko Road	Omaui	14.2730	Scenic
Otatara Scenic Reserve	104 Dunns Road	Otatara	41.9203	Scenic
Parnell Sanctuary	38 Ariki Avenue	Otatara	2.0015	Scenic
Paterson Reserve	34 Spence Avenue	Otatara	0.3440	Local Purpose Scenic
Red Tussock Reserve	119 Rockdale Road	Invercargill	1.3499	Scenic s.19 (1) (b)
Sandy Point Domain	Dunns Road	Otatara	2072.2786	Recreation
Seaward Bush	166 Mason Road	Invercargill	107.8933	Scenic
Stead Street Beautification Strip	113 Stead Street	Invercargill	0.5260	Endowment for Municipal Purposes
Stirling Point Reserve	4A Ward Parade	Bluff	9.1464	Scenic
Taiepa Dune Reserve (a)	31 and 33 Raeburn Avenue.	Bluff	0.8400	Scenic
Taiepa Dune Reserve (b)	83 Taiepa Road.	Otatara	2.5500	Scenic
Thomsons Bush	584 Queens Drive	Invercargill	33.5015	Scenic
Tikore / Spencer Island	200 Tikore Island	Greenpoint, Bluff	19.0202	Scenic s.19(1)(a)
Waihopai Bridge Reserve	574 Queens Drive	Invercargill	0.2194	Recreation
Total Environmental Reserves = 36 (2575.0750 hectares)				

8.2 List of Plant Names Used in the Text

Botanical Name	Common Name		
* <i>Exotic (introduced) plant</i>			
<i>Aceana anserinifolia</i>	Bidibidi		
<i>Aceana novae-zealandiae</i>	Bidibidi		
* <i>Acer pseudoplatanus</i>	Sycamore		
* <i>Achillea millefolium</i>	Yarrow		
* <i>Agrostis capillaris</i>	Browntop		
* <i>Agrostis stolonifera</i>	Creeping bent		
* <i>Agrostis tenuis</i>	Browntop		
* <i>Alisma plantago-aquatica</i>	Water plantain		
* <i>Allium triquetrum</i>	Three-cornered garlic		
* <i>Alnus glutinosa</i>	Alder		
* <i>Alopecurus geniculatus</i>	Marsh fox-tall		
* <i>Alstromeria aurantiaca</i>	Flower		
* <i>Anagalis arvense</i>	Scarlet pimpernel		
<i>Anaphalis bellidioides</i>			
* <i>Angelica sp.</i>			
* <i>Anthroxanthum odoratum</i>	Sweet vernal		
<i>Apium australe</i>	New Zealand Celery		
<i>Apium prostratum</i>			
<i>Aristolelia serrata</i>	Wineberry or Mako		
<i>Asplenium bulbiferum</i>	Hen and chicken fern or mauku		
<i>Asplenium falcatum</i>	Drooping spleenwort		
<i>Asplenium flaccidum</i>	Hanging spleenwort or Raukatauri		
<i>Asplenium lyalli</i>	Lyll's Spleenwort		
<i>Asplenium obtusatum</i>	Shore Spleenwort		
<i>Asplenium polyodon</i>			
<i>Asplenium scleroprium</i>			
<i>Astelia fragrans</i>	Bush Lily or Kakaha		
<i>Astelia spp.</i>	Perching Lily		
<i>Astelia nervosa</i>			
<i>Atriplex hastate</i>			
* <i>Barbarea intermedia</i>	Winter cress		
<i>Bauma tenax</i>			
* <i>Bellis perennis</i>	Lawn daisy		
* <i>Berberis darwinii</i>	Darwin's barberry		
* <i>Betula pendula</i>	Silver Birch		
<i>Blechnum banksii</i>			Salt spray fern/Shore fern
<i>Blechnum capense</i>			Native kiokio fern
<i>Blechnum chambersii</i>			
<i>Blechnum colensoi</i>			
<i>Blechnum discolor</i>			Crown fern or Piupiu
<i>Blechnum durum</i>			Coastal hard fern
<i>Blechnum fluviatile</i>			Kiwakiwa
<i>Blechnum lanceolatum</i>			Fern
<i>Blechnum minus</i>			Swamp kiokio
<i>Blechnum membranaceum</i>			Fern
<i>Blechnum novae zelandiae</i>			kiokio
<i>Blechnum penna marina</i>			Alpine hard fern
<i>Blechnum procerum</i>			Fern/small kiokio
<i>Blechnum sp. 'brown scale'</i>			Common hard fern
<i>Blechnum species no. 1</i>			Kiokio
<i>Brachyglottis rotundifolia</i>			
<i>Callitriche petrieii</i>			Slender herb
<i>Callitriche stagnalis</i>			Pond water –starwort
* <i>Calystegia silvatica</i>			Convolvulus
<i>Calystegia tuguriorum</i>			Native bindweed
* <i>Capsella bursa-pastoris</i>			Shepard's purse
<i>Cardamine sp aff debilis</i>			Bitter cress
* <i>Cardamine hirsuta</i>			Bitter cress
<i>Carex genus</i>			Tussock
<i>Carex appressa</i>			
<i>Carex comans</i>			
<i>Carex coriacea</i>			Cutty grass
<i>Carex dissita</i>			
<i>Carex littorosa</i>			
<i>Carex secta</i>			Pukio
<i>Carex trifida</i>			
<i>Carex virgata</i>			Sedge
<i>Carpodetus serratus</i>			Marbleleaf or Puta-putaweta
<i>Cassinia vauvilliersii</i>			Cottonwood
<i>Centella uniflora</i>			Angiosperm/flowering plant
* <i>Cerastium fontanum</i>			Mouse-ear chickweed

* <i>Cerastium glomeratum</i>	Sticky chickweed	<i>Cotula spp</i>	Water button/button weed
<i>Chenopodium glaucum ssp</i>			
<i>Ambiguum</i>			
<i>Chionochloa rubra</i>	Red tussock	<i>Cotula coronopifera</i>	
<i>Chionochloa genus</i>	Tussock	<i>Cotula coronopifolia</i>	
* <i>Cirsium arvense</i>	Californian thistle	<i>Crassula moschata</i>	
* <i>Cirsium lanceolatum</i>	Scotch or spear thistle	* <i>Crataegus monogyna</i>	Hawthorn
* <i>Cirsium vulgare</i>	Scotch thistle	* <i>Crepis capillaris</i>	Hawksbeard
* <i>Claytonia perfoliata</i>	Miners lettuce	* <i>Crocoshia x crocosmiiflora</i>	Montbretia
<i>Clematis foetidia</i>	Yellow flowered clematis	<i>Ctenopteris heterophylla</i>	
<i>Clematis paniculata</i>	Puawhananga/white flowered Clematis	* <i>Cupressus macrocarpa</i>	Monterey cypress
<i>Clematis vitalba</i>	Old Man's Beard	* <i>Cupressocyparis leylandii</i>	Leyland cypress
<i>Colobanthus sp.</i>	Cushion plant	<i>Cyathea smithii</i>	wheki
<i>Colobanthus meullerii</i>		<i>Cyathodes empetrifolia</i>	Prickly mingimingi
<i>Conium maculatum</i>	Hemlock	<i>Cyathodes fraseri</i>	Shrub
* <i>Convolvulus</i>	Field bindweed	<i>Cyathodes juniperina</i>	Prickly mingimingi
<i>Coprosma areolata</i>	Small leaved shrub	<i>Cythea smithii</i>	Soft tree fern
<i>Coprosma colensoi</i>	Stinkwood/karamu	* <i>Cytisus scoparius</i>	Broom
<i>Coprosma foetidissima</i>	Stinkwood	<i>Dacrycarpus dacrydioides</i>	Kahikatea/White Pine
<i>Coprosma grandiflora</i>	Kanono	<i>Dacrydium cupressinum</i>	Red Pine or Rimu
<i>Coprosma lucida</i>	Glossy karamu/ka-ranga	* <i>Dactylus glomerata</i>	Cocksfoot
<i>Coprosma parviflora</i>	Small leaved shrub	* <i>Daphne laureola</i>	Spurge-laurel
<i>Coprosma pedicellata</i>	Coprosma	<i>Dichelachne crinita</i>	
<i>Coprosma propinqua</i>	Mingimingi	<i>Dicksonia fibrosa</i>	Ponga
<i>Coprosma rhamnoides</i>	Divaricating native shrub	<i>Dicksonia squarrosa</i>	Tree fern or Wheki
<i>Coprosma rigida</i>	Coprosma	* <i>Digitalis purpurea</i>	Foxglove
<i>Coprosma robusta</i>	Coprosma	<i>Disphyma australe</i>	
<i>Coprosma rotundifolia</i>	Round leaved coprosma	<i>Dracophyllum longifolium</i>	Inaka / Inanga
<i>Coprosma rubra</i>	Coprosma	<i>Drosera pygmaea</i>	
<i>Cordyline australis</i>	Cabbage tree or Ti	* <i>Dryopteris filix-mas</i>	Male fern
<i>Coriaria arborescens</i>		<i>Earina mucronata</i>	
<i>Coriaria sarmentosa</i>	Tutu	<i>Elaeocarpus hookerianus</i>	Pokaka
<i>Cortaderia richardii</i>	Toetoe	<i>Eleocharis acuta</i>	
<i>Cotoneaster glaucophyllus</i>	Cotoneaster	<i>Eleocharis minus</i>	Club rush
* <i>Cotoneaster siminsii</i>	Cotoneaster	<i>Epilobium alsinoides</i>	Willowherb
		<i>Epilobium ciliatum</i>	Willow Herb
		<i>Epilobium komarovianum</i>	
		<i>Epilobium pedunculare</i>	Willow herb
		<i>Erechtites minima</i>	Coastal burnweed
		* <i>Eucalyptus spp.</i>	Eucalyptus
		* <i>Euonymus europaeus</i>	Spindleberry

<i>Festuca genus</i>	Tussock	<i>Hydrocotyle heteromeria</i>	Pennywort or hydrocotyle
* <i>Festuca arundinacea</i>	Tall fescue	<i>Hydrocotyle novae-selandiae</i>	Water pennywort
<i>Fuchsia x colensoi</i>	Hybrid fuchsia	<i>Hymenanchera alpina</i>	Evergreen woody shrub
<i>Fuchsia excorticata</i>	Tree fuchsia or Kotukutuku	<i>Hymenophyllum bivalve</i>	Filmy fern
<i>Fuchsia perscandens</i>	Climbing fuchsia	<i>Hymenophyllum demissum</i>	Drooping filmy fern
<i>Gahnia sp.</i>	Saw-sedge	<i>Hymenophyllum dilatatum</i>	Filmy fern
<i>Galega officinalis</i>	Goat's rue	<i>Hymenophyllum flabellatum</i>	Filmy fern
<i>Galeobdolon luteum</i>	Aluminium/Artillery Plant	<i>Hymenophyllum rarum</i>	Filmy fern
* <i>Galium aparine</i>	Cleaver	<i>Hymenophyllum revolutum</i>	Filmy fern
<i>Galium propinquim</i>	Mawe	<i>Hymenophyllum sanguim lentum</i>	Filmy fern
<i>Gastrodia cunninghamii</i>		* <i>Hypericum androaemumv</i>	Tutsan
<i>Gaultheria antipoda</i>	Snowberry	* <i>Hypochaeris radicata</i>	Catsear
<i>Gaultheria macrostigma</i>		<i>Hypolepis ambigua</i>	Fern
<i>Gentiana saxosa</i>	Shore gentian	<i>Hypolepis distans</i>	Scrambling Ground Fern
<i>Gleichenia dicarpa</i>	Swamp umbrella fern	<i>Hypolepis millefolium</i>	
* <i>Glyceria declinata</i>	Floating sweet grass	<i>Hypolepis rufobarbata</i>	Fern
<i>Gnaphalium audax</i>		<i>Hypolepis rugosula</i>	
<i>Gnaphalium hookeri</i>	Shrub	<i>Hypolepis tenuifolia</i>	Pressed Fern
<i>Gonocarpus aggregatus</i>		<i>Ileostylis micranthus</i>	
<i>Grammitis billardieri</i>		* <i>Ilex aquifolium</i>	Holly
<i>Grammitis magellanica sp. nothofaeti</i>	Fern	* <i>Iris sp</i>	Iris
* <i>Grasses</i>	English Grass	<i>Isolepis cernua</i>	
<i>Griselinia littoralis</i>	Broadleaf or Kapuka	<i>Isolepis carnuus</i>	
<i>Gunnera dentata</i>		<i>Isolepis habrus</i>	
<i>Haloragis erecta</i>		<i>Isolepis praetextatus</i>	
<i>Hebe elliptica</i>	Kokomuka	<i>Isolepis nodosus</i>	
<i>Hebe salicifolia</i>	Koromiko	<i>Isolepis sp</i>	
<i>Hebe sp</i>	Hebe	* <i>Juncus articulatus</i>	Jointed rush
* <i>Hedera helix</i>	Ivy	* <i>Juncus bufonius</i>	Toad rush
<i>Helichrysum filicaule</i>	Sub-alpine herb	* <i>Juncus bulbosus</i>	
<i>Hierochloe redolens</i>	Holy Grass	* <i>Juncus geraldii</i>	
<i>Histiopteris incisa</i>	Water fern	<i>Juncus gregiflorus</i>	Native rush
<i>Hoheria populnea</i>	Lacebark or houhere	<i>Juncus planiflorus</i>	
<i>Hoheria sexstylosa</i>	Lacebark	* <i>Juncus procerus</i>	
* <i>Holcus lanatus</i>	Yorkshire fog	<i>Juncus sarophorus</i>	Native rush
* <i>Hydrangea spp.</i>	Hydrangea	<i>Juncus spp.</i>	Rush
<i>Hydrocotyle americana</i>	Water-pennywort	<i>Kelleria lyallii</i>	

<i>Korthalsella salicormioides</i>		<i>Microlaena avenacea</i>	Bush rice grass
<i>Lachnogrotis sp</i>		* <i>Mimulus guittatus</i>	Monkey musk
* <i>Lagarosiphon major</i>	Lagarosiphon	* <i>Mimulus moschatus</i>	Muskflower
* <i>Lapsana communis</i>	Nipplewort	<i>Moss spp</i>	Moss
<i>Lastreopsis hispida</i>		<i>Mosotus pygmea var pygmea</i>	
* <i>Lemn minor</i>	Duckweed	<i>Muehlenbeckia australis</i>	Pohuehue
<i>Lepidosperme australe</i>		<i>Muehlenbeckia complexa</i>	Pohuehue
<i>Leptinella dioica</i>		* <i>Mycelis muralis</i>	Wall's Lettuce
<i>Leptocarpus similis</i>		<i>Myosotis sp.</i>	Mouse ear/forget-me-not
<i>Leptopteris hymenophylloides</i>	Crepe fern	<i>Myosotis caespitose</i>	Water forget-me-not
<i>Leptospermum scoparium</i>	Tea tree or Manuka	* <i>Myosotis laxa subsp caespitosa</i>	Water foget-me-not
<i>Leptocarpus similis</i>	Jointed wire rush or oioi	<i>Myosotis rakiura</i>	Mouse ear/forget-me-not
<i>Leucopogon fraseri</i>		<i>Myriophyllum propinquum</i>	Water milfoil
<i>Lilaeopsis novae-zelandiae</i>		<i>Myrsine australis</i>	Red Mapou or Matipo
<i>Linum monogynum</i>		<i>Myrsine divaricata</i>	Weeping matipo
* <i>Lolium perenne</i>	Rye grass	<i>Neomyrtus pedunculata</i>	Rohutu
* <i>Lonicera periclymenum</i>	honeysuckle	<i>Nertera depressa</i>	Bead Plant
<i>Loranthus micranthus</i>	Mistletoe	<i>Nertera dichondrifolia</i>	Creeping ground cover
* <i>Lotus corniculatus</i>	Bird's- foot- trefoil	<i>Nothofagus fusca</i>	NZ Red Beech
* <i>Lotus pedunculatus</i>	Lotus grass	<i>Nothofagus menziesii</i>	Silver Beech
* <i>Lupinus arboreus</i>	Tree Lupin	<i>Nothofagus solandri var cliffortioides</i>	Mountain Beech
* <i>Lupinus spp.</i>	Lupin	<i>Nertera setulosa</i>	
<i>Luzula sp</i>		<i>Nertera villosa</i>	
<i>Luzuriaga parviflora</i>	Lanternberry plant	<i>Olearia arborescens</i>	Tree daisy
<i>Lycopodium varium</i>	Hanging clubmoss	<i>Olearia colensoi</i>	Leatherwood or Tupare
<i>Macropiper excelsum</i>	Peppertree/Kawakawa	<i>Olearia nummularifolia</i>	Shrub daisy
* <i>Malus domestica</i>	Apple	<i>Olearia oporina</i>	
* <i>Matricaria matricaroides</i>	Rayless chamomile	<i>Oreomyrrhis sp "coastal"</i>	
<i>Mazus arenarius</i>		<i>Ozothamnus vauvilliersii</i>	
<i>Melicope simplex</i>	Shrub	<i>Paesia scaberula</i>	
<i>Melicytus lanceolatus</i>	Mahoewao	* <i>Parentucella viscosa</i>	
<i>Melicytus ramiflorus</i>	Whiteywood or Mahoe-wao	<i>Pernettya macrostigma</i>	Chamaephytic shrub
* <i>Mentha spicata</i>		<i>Parsonsia capularis</i>	Native Jasmine or Akakiore
<i>Metrosideros diffusa</i>	Climbing rata or Akatea	<i>Parsonsia heterophylla</i>	NZ Jasmine or kaihua
<i>Metrosideros mbellate</i>	Ironwood or (Southern) Rata		

* <i>Pasture grass' sp</i>	Pasture grass	* <i>Populus nigra</i>	Poplar
<i>Patellaea rotundifolia</i>	Button Fern	* <i>Populus sp</i>	Poplar
<i>Pennantia corymbosa</i>	Kaikomako	<i>Pratia angulata</i>	
<i>Pernettya macrostigma</i>	Chamaephytic shrub	<i>Prumnopitys ferruginea</i>	Miro/Brown Pine
<i>Phormium tenax</i>	Flax or Harakeke	<i>Prumnopitys taxifolia</i>	Black Pine or Matai
<i>Phyllocladus alpinus</i>	Mountain toa toa	* <i>Prunella vulgaris</i>	Self heal
<i>Phymatosorus diversifolius</i>	Hounds tongue fern or Kowaowao	* <i>Prunus avium</i>	Cherry
<i>Pimelea lyallii</i>	Southern sand daphne	* <i>Prunus cerasifera</i>	Plum
<i>Pimelea prostrata</i>	NZ Daphne	* <i>Prunus laurocerasus</i>	Cherry laurel
* <i>Pinus radiata</i>	Radiata pine	* <i>Prunus lusitanica</i>	Portugal laurel
<i>Pittosporum colensoi</i>	Evergreen tree, Ko- huhu cultivator	<i>Pseudognaphalium luteo- album</i>	
<i>Pittosporum eugenioides</i>	Lemonwood or tarata	<i>Pseudopanax arboreus</i>	Five finger/puahou
<i>Pittosporum tenuifolium</i>	Kohuhu/Black Mapou	<i>Pseudopanax colensoi</i>	Mountain five finger
<i>Plagianthus divaricatus</i>	Shore ribbonwood	<i>Pseudopanax colensoi var fiordense</i>	
<i>Plagianthus regius</i>	Ribbonwood	<i>Pseudopanax colensoi var ternatus</i>	Three finger
* <i>Plantago australis</i>		<i>Pseudopanax crassifolius</i>	Lancewood or Ho- roeka
<i>Plantago lanceolata</i>	Narrow-leaved plantain	<i>Pseudopanax edgerleyi</i>	Raukawa
<i>Plantago major</i>	Broad-leaved plantain	<i>Pseudopanax simplex</i>	Three finger
<i>Plantago raoulii</i>		<i>Pseudopanax sp. aff. colensoi</i>	Mountain Fivefinger or Orihou
<i>Plantago triandra</i>	Starweed	<i>Pseudowintera colorata</i>	Pepperwood or Horo- pito
<i>Poa genus</i>	Tussocks	<i>Psilotaceae tmesipteris spp</i>	Fork fern
* <i>Poa annua</i>	Annual bluegrass, annual wintergrass	<i>Pteridium aquilinum</i>	Bracken
<i>Poa astonii</i>	Tussock	<i>Pterostylis australis</i>	
<i>Poa cita /Poa laevis</i>	Silver tussock	<i>Pteridium esculentum</i>	Bracken or Rarauhe
<i>Poa colensoi</i>	Blue Tussock	<i>Pucinellia sp</i>	
<i>Podocarpus ferrugineus</i>	Miro	<i>Pyrosia serpens</i>	Leather-leaved fern
<i>Podocarpus hallii</i>	Hall totara	* <i>Quercus robur</i>	Oak
<i>Podocarpus spicatus</i>	Matai/Black Pine	* <i>Ranunculus repens</i>	Creeping buttercup
<i>Podocarpus totara</i>	Totara	<i>Raukawa anomalus</i>	Shrub
<i>Polystichum neozelandica</i>	Shield fern	<i>Raukawa edgerleyii</i>	
<i>Polystichum richardii</i>	Tutoke, shore field fern	<i>Raukawa simplex</i>	
<i>Polystichum vestitum</i>	Prickly shield-fern	* <i>Rhododendron spp.</i>	Rhododendron
* <i>Populus alba</i>	Silver poplar	* <i>Ribes sanguineum</i>	Flowering currant
		<i>Ripogonum scandens</i>	Supplejack or Kareao
		<i>Rorippa microphylla</i>	Watercress

* <i>Rosa rubiginosa</i>	Sweet briar	* <i>Sonchus asper</i>	Prickly sow thistle
<i>Rubus australis</i>	Bush lawyer	<i>Sonchus kirkii</i>	Shore puha
<i>Rubus cissoides</i>	Bush lawyer or Tata- ramoa	* <i>Sonchus oleraceus</i>	Sow thistle
* <i>Rubus fruticosus</i>	Blackberry	<i>Sophora microphylla</i>	Kowhai
* <i>Rubus laciniatus</i>	Blackberry – cut leaved	* <i>Sorbus acuparia</i>	Rowan
<i>Rubus schmidelioides</i>	Bush lawyer	* <i>Spartina sp</i>	
* <i>Rumex acetosella</i>	Sorrel	* <i>Spergula arvensis</i>	Small chickweed
* <i>Rumex crispus</i>	Curled dock	<i>Stellaria gracilentia</i>	Stitchwort
<i>Rumex neglectus</i>		* <i>Stellaria graminea</i>	Chickweed
* <i>Rumex obtusifolius</i>	Broad-leaved dock	* <i>Stellaria media</i>	Dicot Herb
<i>Ruophra adiantiformis</i>	Climbing shield Fern	<i>Stellaria parviflora</i>	Sea blite
<i>Rumohra adiantiformis</i>		<i>Suaeda novae-zelandiae</i>	Dandelion
<i>Rumohra hispida</i>	Hairy fern	* <i>Taraxicum officinale</i>	Yew
<i>Salicornia australis</i>	Chicken claw	* <i>Taxus baccata</i>	Montpellier broom
* <i>Salix spp.</i>	Weeping willow	* <i>Teline mospessulana</i>	Kokihi Beach Spinach, NZ spinach plant
* <i>Salix caprea</i>	Pussy willow	<i>Tetragonia trigyna</i>	
<i>Salix cinerea</i>	Grey willow	<i>Thelymitra longifolia</i>	
* <i>Salix fragilis</i>	Crack Willow	<i>Tillaea moschata</i>	Vascular Plant
* <i>Sambucus nigra</i>	Elderberry	<i>Tmsipteris elongata</i>	
<i>Samolus repens</i>	Creeping Brookweed	<i>Tradescantia fluminensis</i>	Wandering Willy
<i>Schedonorus phoenix</i>	Tall fescue	<i>Trichomanes venosum</i>	Veined bristle fern, filmy fern
<i>Schefflera digitata</i>	Seven finger or Pate	* <i>Trifolium repens</i>	White clover
<i>Schezeilema trifoliolatum</i>	Herb	* <i>Trifolium pratense</i>	Red clover
<i>Schoenus maschalinus</i>		<i>Triglochin striatum</i>	
<i>Schoenus nitens</i>	Shiny bog-sedge	* <i>Tropaeolum speciosum</i>	Chilean flame flower
<i>Scirpus nodosus</i>	Sedge	<i>Tupeia antarctica</i>	Mistletoe
<i>Scirpus sp.</i>	Bulrush	* <i>Ulex europaeus</i>	Gorse
* <i>Sedum acre</i>	Goldmoss stonecrop	<i>Uncinia clavata</i>	Hook grass
<i>Selliera radicans</i>	Selleria	<i>Uncinia uncinata</i>	Hook grass
<i>Senecio biserratus</i>	Jagged fireweed	<i>Urtica incisa</i>	Native nettle
<i>Senecio glomeratus</i>		<i>Urtica urens</i>	Nettle
* <i>Senecio jacobaea</i>	Ragwort	* <i>Vicia sativa</i>	Vetch
<i>Senecio mikanioides</i>	Ragwort	<i>Vinca major</i>	Periwinkle
<i>Senecio minimus</i>	Groundsel	<i>Viola cunninghamii</i>	Violet
<i>Senecio wairauensis</i>	Mountain fireweed	<i>Weinmannia racemosa</i>	Kamaha
* <i>Solanum dulcamara</i>	Bittersweet		
<i>Solanum laciniatum</i>	Poroporo		
<i>Solanum nigrum</i>	Black nightshade		

8.3 List of Fauna Used in the Text

Scientific Name	Common Name		
<i>Acearanea sp.</i>	Spider	<i>Erinacues europaeus occidentalis</i>	Hedgehog
<i>Anabium punctatum</i>	Common borer beetle	<i>Eristalis tenax</i>	Dronefly
<i>Anas gracilis</i>	Grey Teal	<i>Eubalaena australis</i>	Southern right whale
<i>Anas superciliosa</i>	Grey Duck	<i>Felis catus</i>	Feral cat
<i>Anthornis malaneura</i>	Bellbird	<i>Finschia novaeseelandiae</i>	Brown Creeper or Pipipi
<i>Apis mellifera</i>	Honey bee	<i>Forficula auricularia</i>	European earwig
<i>Apocrita (suborder)</i>	Wasp	<i>Fringilla coelebs</i>	Chaffinch
<i>Ardea novaehollandiae</i>	White-faced Heron	<i>Gerygone igata</i>	Grey warbler
<i>Ardeidae family</i>	Bittern	<i>Gymnorhina tibicen</i>	Magpie
<i>Athene noctua</i>	Little Owl	<i>Hanseniella sp.</i>	Bush centipede
<i>Aythya novaeseelandiae</i>	Scaup	<i>Haematopus finschi</i>	South Island Pied Oyster-catcher
<i>Bassaris generilla</i>	Red admiral	<i>Haematopus ostralegus finschii</i>	Pied oyster catcher
<i>Branta canadensis</i>	Canada Goose	<i>Haematopus unicolour</i>	Variable oystercatcher
<i>Bombus terrestris</i>	Bumble bee	<i>Hemiphaga novaeseelandiae</i>	NZ wood pigeon or kereru
<i>Bos primigenius</i>	Cattle	<i>Hoplodactylus granulatus</i>	Forest gecko
<i>Bowdleria punctata</i>	Fernbird	<i>Larus bulleri</i>	Black billed gull
<i>Calliphora quadrimaculata</i>	Native blue bottle	<i>Larus dominicus</i>	Black-backed gull
<i>Carduelis carduelis</i>	Goldfinch	<i>Larus novaehollandiae scopulinus</i>	Red billed gull
<i>Carduelis flammea</i>	Redpoll	<i>Leucocarbo chalconotus</i>	Stewart Island Shag
<i>Chalcites lucidus</i>	Shining Cuckoo	<i>Litoria ewingi</i>	Whistling brown Australian tree frog
<i>Charadrius bicinctus</i>	Banded dotterel	<i>Litoria raniformis</i>	Green tree frog
<i>Chilopoda</i>	Centipede	<i>Mecodema sp.</i>	Waisted ground beetle
<i>Chroicocephalus bulleri</i>	Black-billed gull	<i>Melanostoma fasciatum</i>	Hoverfly
<i>Chrysosossyx lucidus</i>	Shining Cuckoo or Pipi-wharau	<i>Mus musculus</i>	Mouse
<i>Cicadidae sp</i>	Cicadas	<i>Musa domestica</i>	Common house fly
<i>Circus approximans gouldi</i>	Australasian Harrier Hawk or Kahu	<i>Mustela ermine</i>	Stoat
<i>Clitarchus hookeri</i>	Stick insect - green and brown	<i>Mustela furo</i>	Ferret
<i>Clubiona convoluta</i>	Spider	<i>Mustela nivalis</i>	Weasel
<i>Crambus flexuosellus</i>	Common grass moth	<i>Ninox novaeseelandiae</i>	Morepork
<i>Diea sp.</i>	Spider	<i>Oeceticus omnivorus</i>	Case moth
<i>Diplopoda</i>	Millipede	<i>Oncantias vittatus</i>	Shield bug
<i>Dyarcyops orepukiensis</i>	Spider	<i>Orthoclydon praefactata</i>	Flax-Looper Caterpillar
<i>Euseyornis melanops</i>	Black-fronted dotterel	<i>Orthoptera</i>	Weta
<i>Emberiza citronella</i>	Yellowhammer	<i>Oryctolagus cuniculus</i>	Rabbit

<i>Otariidae family</i>	Fur seal	<i>Turdus philomelos</i>	Song thrush
<i>Ovis aries</i>	Feral Sheep	<i>Vanellus miles novaehollandiae</i>	Spur-winged plover
<i>Pachyptila turtur</i>	Fairy Prion	<i>Wainuia urnula</i>	Land snail
<i>Pachyptila vittata</i>	Broad-billed Prion	<i>Zealandotipula novarae</i>	Crane fly
<i>Parasarcophagus milleri</i>	Striped flesh fly	<i>Zosterops lateralis</i>	Silvereye
<i>Passer domesticus</i>	Sparrow		
<i>Pelagodroma marina</i>	New Zealand White-faced storm Petrel		
<i>Pelecanoides urinatrix</i>	New Zealand Diving Petrel		
<i>Petroica macrocephala</i>	Tomtit or Miromiro		
<i>Philaenus trimaculatus</i>	Spittle bug		
<i>Phylum mollusca</i>	Mollusc		
<i>Pieris rapae</i>	White Butterfly		
<i>Porcellia scaber</i>	Common slater		
<i>Porzana pusilla affinis</i>	Marsh crake		
<i>Porzana tabuensis</i>	Spotless crake		
<i>Prionoplus reticularis</i>	Huhu beetle		
<i>Procordulia smithii</i>	Ranger dragonfly		
<i>Prothemadera novaeseelandiae</i>	Tui		
<i>Protohystrica alcis</i>	Tachinid parasite		
<i>Prunella modularis</i>	Hedge Sparrow		
<i>Puffinus griseus</i>	Sooty Shearwater		
<i>Pterodroma inexpectata</i>	Mottled Petrel		
<i>Pulmonata</i>	Snail		
<i>Pyrontota festiva</i>	Manuka beetle		
<i>Ranidae family</i>	Tree frog		
<i>Rattus</i>	Rat		
<i>Rhipidura fuliginosa</i>	Fantail		
<i>Staphylinidae</i>	Rove beetle		
<i>Sterna striata</i>	White fronted tern		
<i>Sturnus vulgaris</i>	Starling		
<i>Syrphus novaezealandiae</i>	Hoverfly		
<i>Tadorna variegata</i>	Paradise shelduck		
<i>Tatosoma timora</i>	Common forest looper		
<i>Theridiidae sp.</i>	Spider		
<i>Todirhamphus sanctus</i>	Kingfisher or Kotare		
<i>Trichosorus vulpecula</i>	Brush-tailed possum		
<i>Trite reauricoma</i>	Spider		
<i>Turdus merula</i>	Blackbird		



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