CHAPTER 6 RESOURCES OF THE DISTRICT

LAND AND SOILS

The District covers 107,597 hectares. The relief of the District is dissected and hilly with level land confined to coastal valleys.

Most soils in the valleys and lower slopes are derived from loess with pale coloured, compact subsoils. Deep, fertile alluvial soils are found in many valley floors. The soils on valley slopes are moderately fertile but tend to be prone to the effects of drought and tunnel-gully erosion is common. On more elevated land, transported volcanic soils result from the weathering of bedrock. However, on the high slopes, soils are mostly derived from loess, basalt or a mixture of both. Basaltic soils are susceptible to slip erosion.

The mineral resources of the Peninsula have not been extensively researched or exploited. Clays, aggregate and rhyolite may, however, be present in commercial quantities.

VEGETATION

The variety of topography, aspect, micro-climate, altitude and soils has created a wide range of natural habitats on the Peninsula. In pre-human times, the Peninsula was almost completely covered in forest. By 1900, successive waves of human occupation had reduced forest cover to approximately 1% of the original coverage. Forest regeneration this century has increased the indigenous forest cover to approximately 10% of original ground cover.

Indigenous forest is now confined to small remnants, mainly located in reserves or in gullies. Areas of native scrub are also scattered across the District in gullies and in other areas, some of which is land of moderate to high fertility.

Broom and gorse are the most common exotic scrub species in the district. They are classed as noxious weeds and their management is the responsibility of the Canterbury Regional Council. These species can have a beneficial effect by acting as a nursery for native plants in particular locations.

Tussock and grasslands are the most extensive vegetative cover of the District and extend from the highest ridges of the interior to the coastline. The large areas of tussock and grassland contribute strongly to the open character of the Peninsula today with the discontinuous areas of remnant forest and scrublands providing a visual counterpoint.

CLIMATE

The rugged topography of the Peninsula contributes to marked variations in climate over the District. The western parts of the District tend to be relatively dry (400-700 mm of precipitation per annum) with warm summers and cool winters. There are frequent frosts and occasional snowfalls on the ridge tops.

The microclimate of the Kaitorete Spit makes it the driest part of Canterbury. The remainder of the District tends to have a moister, milder climate and precipitation varies between 650 mm and 1600 mm per annum. The dissected topography creates a number of micro-climates with conditions in sheltered valleys contrasting markedly with the exposed uplands of the interior.

WATER

There are limited fresh water resources on the Peninsula. Few high yielding wells from aquifers have been found. Most valleys and gullies carry a stream but, although consistent, discharges are generally low. The streams are often found in conjunction with forest and scrub remnants and are important to the long-term conservation of the vegetation. The only significant bodies of fresh water in the District are Te Waihora and Wairewa.

HABITATS

The variety of vegetation and landforms provides a range of habitats for native and introduced species. Much of the indigenous fauna which exists today is limited in comparison to that which existed when the Peninsula was forested.

The indigenous forest remnants are important as wildlife habitats and as refuges for rare and endangered plant species. Despite their limited size and location, forest remnants have been found to support a diverse range of native fauna and also make an important contribution to the landscape character of the District.

Wetlands, sandy/shingle dune environments and the lakes provide a variety of breeding sites for birds, waterfowl, fish, invertebrates and insects. The rocky coastline and cliffs are specialist habitats for a number of birds. In some of the isolated outer bays, species such as the white-flippered and yellow-eyed penguins breed. Tussock and grassland also support a range of bird species, or adaptable species such as fantails and introduced species which are able to live in orchards and pasture.

THE BUILT ENVIRONMENT

This includes all the settlements of the District within which the most common structures are dwellings. As at March 1995 there were 3160 dwellings in the District housing 7420 people. Department of Statistics projections indicate there will be approximately 3000 more people in the District by the year 2011. Based on a household size of 2.34 persons, some 1300 more homes will be required within the District by 2011.

While the greater proportion of those will be accommodated within the existing settlements there is an increasing demand for residential opportunities in rural areas and the District Plan makes some provision for this through the Rural-Residential Zone.

Within the settlements, business premises form an important part of the physical resources of the District.

There are also a large number of structures within the District which have cultural and heritage significance. These include many historic buildings of European origin and also a large range of settlements, gardens and fortifications of heritage significance to tangata whenua.

INFRASTRUCTURE (Updated 2 July 2011)

Infrastructure includes all of those services which are basic to economic activity. They include roads, ports, power supplies, communications, and water and sewage disposal systems.

State Highways 74 and 75 are the principal road links to the District. In addition, there are 647 kilometres of local road which are maintained by the District Council.

The Port of Lyttelton is a facility of national importance. It is the principal port for exports and imports to and from Canterbury and the South Island.

Power and communications services are now provided by companies operating in a market environment and the District Plan must make appropriate provision for further expansion of those utilities.

The District Council is responsible for the reticulated sewage systems in the District. Settlement growth, particularly in Akaroa and Lyttelton is potentially constrained by the capacities of the public water and sewage disposal systems and this is recognised in plan provisions which relate to the growth of those settlements. Because the expansion and upgrading of these utilities is constrained by the cost involved it is considered that the Long Term Council Community Plan, the Development Contributions Policy within that Plan and the Annual Plan for the District are the most appropriate documents for identifying and prioritising the further provision of these services.