

## SECTION 2.2 SIGNIFICANT RESOURCES OF THE DISTRICT

### 2.2.1 INTRODUCTION

The Hastings District covers a land area of over 500,000 hectares, located on the east coast of the North Island of New Zealand. Administered by the Hastings District Council, the Hastings District comprises the main urban centres of Hastings, Havelock North, Flaxmere and Clive, as well as numerous rural service and coastal settlements, and a large number of marae. The Pacific Ocean lies to the east of the Hastings District, with five other territorial authorities sharing its remaining boundaries - Central Hawke's Bay District, Rangitikei District, Taupo District, Wairoa District and Napier City. The area is characterised by numerous significant and unique natural and physical resources which enable the community to provide for its economic, social and cultural well being.

This section of the District Plan provides an outline of both the natural and physical resources of the Hastings District, a thorough knowledge of which is vital in understanding the various planning strategies adopted by Council throughout the District Plan. Such strategies will enable the sustainable use and management of these resources for both current and future generations.

### 2.2.2 NATURAL RESOURCES

#### 2.2.2.1 GEOLOGICAL

The simple and dramatic landscape of the Hastings District is a reflection of the geological processes operating within the area. Such processes have created five distinct landform units, which have been reinforced by different land uses to create five coherent landscape areas. These areas include the Central Ranges, Northern Hills, Lowland Hills, Heretaunga Plains and the South East Coastal Hills.

The Kaweka and Ruahine Ranges were formed by the colliding Australian and Pacific Plates, with the resulting folding and faulting of rocks forming the downwarped valley of the central lowlands, and upwarped hill country on either side.

Forming a major part of the axial range of the North Island, the Ruahine and Kaweka Ranges lie to the north and west of the Hastings District. Varying from 1000-1800 metres in height, the ranges are characterised by a very rugged landscape, covered in native bush and vegetation with a close drainage pattern. The Heretaunga Plains, formed as a result of uplift, erosion and fluvial processes, contains some of the most fertile and productive agricultural and horticultural land in the Hastings District. This low-lying area of river terraces and flat plains is characterised by predominantly very young and soft sedimentary rocks. The Coastal Ranges extend from rolling to moderately steep hill country and consists of predominantly papa rock and is, accordingly, poorly drained. These geological processes which formed the distinct landscapes within the Hastings District have also created numerous dramatic natural landforms, including the Maungahururu Range, Te Mata Peak, and Cape Kidnappers.

#### 2.2.2.2 BIODIVERSITY

The indigenous species within the Hastings District, their genetic diversity and the natural habitats and ecosystems that support them are a significant resource of the Hastings District. The Hastings District has few remaining areas of unmodified natural habitats such as native bush and forest. There is little evidence today within the Hastings District of the native vegetation that once covered the area. The vegetation within the Hastings District is characterised by coverage to a large extent of indigenous vegetation within the central ranges, and its almost complete absence elsewhere. Forest type within the high country varies with increasing altitude, from broadleaf podocarp and beech forests to alpine grasslands and tussock. The remainder of the Hastings District was cleared during the 19<sup>th</sup> to early 20<sup>th</sup> century for pasture, and remains largely cleared today to accommodate the continuing demand for pastureland. Remaining examples of the Hastings District's indigenous

vegetation, native species and their habitats and ecosystems are therefore important for the protection of our natural heritage especially where the community is able to enjoy access to this resource.

### **2.2.2.3 SOILS**

The wide variety of soils found throughout the Hastings District is attributable to differences in topography, land use, geology and climate within the area. The broad soil types found, parallel the distinct landscape and topographic units within the Hastings District. Topography determines soil properties by controlling stability, salinity, sedimentation and fertility. In the Ranges, the soils tend to be yellow-brown earths, that are weakly to strongly leached due to higher rainfall in the area. The soils tend to remain relatively youthful due to periodical renewal by slips and erosion on the steeper slopes. The soils of the hill country are generally lower in natural fertility than the Ranges, yellow-brown in colour, and weakly to moderately leached. Due to the gentle slopes the soils remain relatively stable and old.

The Heretaunga Plains area, built up by sedimentation from rivers consist of recent alluvium soils. Subject to continual renewal by the addition of sediments, the soils on the Plains are accordingly highly fertile. While the removal of vegetation cover in this area has affected the natural fertility of the soils, this has been maintained artificially with fertiliser and grazing.

Overall the mild temperate climate throughout the entire Hastings District has led to the formation of generally moderately weathered soils with silt loam or sandy loam texture. While differences in topography account for the variety of soil properties, the majority of soils throughout the Hastings District have high productive potential. Accordingly they are used for a wide range of agricultural and horticultural production, which significantly contribute to the economic well being of the Hastings District.

### **2.2.2.4 CLIMATE**

The mild temperate style climate of the Hastings District is determined by its topography and by its position in relation to the large scale weather systems affecting New Zealand. The mountain ranges to the west shelter the area from the prevailing westerly winds, which leads to a relatively calm, dry sunny climate, characterised by long hot summers and mild winters. The location of the Hastings District does however make it vulnerable to easterly winds and cyclonic depressions.

Discharges of greenhouse gases may have a significant impact on climate and air quality. Land use activities such as appropriate tree planting can help to mitigate the effects of such climate change by increasing carbon absorption.

### **2.2.2.5 WATERBODIES**

The Hastings District is bounded by the Pacific Ocean to the east, and its coastal environment provides an important social, recreational, cultural and economic resource. The many lakes, rivers, streams and wetlands throughout the Hastings District were traditionally valued by the early settlers and tangata whenua as rich food gathering areas, with many small settlements forming around such resources. Today such waterbodies are also highly valued, providing water for domestic and farm supply, irrigation and industrial use, as well as providing important amenity values, recreational opportunities and habitats for aquatic flora, fauna and wildlife.

The Heretaunga Plains aquifer system constitutes a major water resource within the Hastings District. The aquifer system is known to be in excess of 200m deep and extends some 20km out into Hawke Bay. The aquifer is the main ground water resource for the Heretaunga Plains, Hastings and Napier communities, providing 85% of their water requirements. The water drawn off the aquifer is used for public water supply, irrigation and industrial uses, with demand for water high, especially during the drier periods of the year.

### 2.2.2.6 MINERAL RESOURCES

There are five basic rock groups found within the Hastings District including the oldest and hardest greywacke, moderately hard cretaceous rocks, old and young sedimentary rocks, and the young soft alluvial deposits. The Ruahine and Kaweka ranges to the west consist of the relatively old (approximately 70 million years) and hard greywacke and argillite rock. The remainder of the Hastings District is underlain by a base comprised predominantly of sedimentary origin, mainly 'papa' mudstones and sandstones, with bands of limestone. The Heretaunga Plains is underlain by alluvial deposits including gravels, sands and muds, with the surrounding hills consisting of the younger and older tertiary rocks of limestones, siltstones and some volcanic ash and pumice. While the limestone is dispersed throughout the Hastings District it is most prominent in the hill country area, where outcrops of relatively resistant limestone have given rise to dramatic landscape features such as the Maungaharuru Range.

The entire Hastings District is tectonically active with earthquakes a relatively common phenomena. Major fault lines are visible within the landscape, seen by their effect of cutting the topography. The disastrous 1931 earthquake caused dramatic changes to the landscape within the Hastings District.

The Hastings District is not regarded as a source of high value mineral deposits, with no known economic metallic mineral, oil or gas deposits. There are however numerous deposits of minerals that are extremely significant to the Hastings District and its local economy, for example, gravel, shingle and sand deposits produce aggregate for roading, construction and concrete manufacture.

## 2.2.3 PHYSICAL RESOURCES

### 2.2.3.1 POPULATION

The population of the Hastings District is 66,280 (New Zealand Census 1996), containing 1.8 percent of the usually resident population of New Zealand. The predominantly European (70%) population is also characterised by a large number of other ethnic groups. The Maori population within the Hastings District is 22%, well above the national average. The majority of the population live in the urban and plains area.

### 2.2.3.2 LAND USE

The land use pattern of Hastings is dominated by three major elements, rural, plains and urban, with some 2,500ha in urban use, 26,000ha in plains, and 470,000ha in rural.

The majority of land within the Hastings District is under freehold ownership and in rural use. Crown owned land is restricted essentially to the Ranges in the west, as Forest Parks administered by the Department of Conservation. Maori Land is scattered throughout the Hastings District in small land parcels, with the majority of larger areas of Maori Land concentrated in the north.

The rural area contains a significant resource for the community. While traditionally oriented towards land based primary production, there is an increasing diversification into forestry, horticulture and other primary land uses. The Heretaunga Plains, covering 5% of the Hastings District, includes some of the most fertile soils in New Zealand, and contains a large aquifer. These resources combined with the favourable climate make this area highly suitable for many intensive horticultural, viticulture and agricultural uses. Orchardng and cropping are the most predominant activities on the Plains.

The horticulture, cropping and viticulture so strongly associated with Hastings is a relatively recent land use in the Hastings District. There were some small scale orchards, market gardens and vineyards during the 19th century, but large scale commercial orchards and cropping did not commence until the early 20th century. From the late 1930s there was large expansion of both cropping and orcharding in the Plains around Hastings, facilitated in particular by the expansion of Watties Canneries. The Hastings District is New Zealand's largest producer of apples, pears and peaches, and the second largest producer of grapes and wines. Continued intensification of agricultural production and the development of downstream processing is vital for the economic well being of the Hastings District.

Forestry is also emerging as a major land use within the Hastings District, with afforestation based upon the export industry through the Port of Napier and supplying the Whirinaki Mill. The first wave of large scale exotic forestry in the Hastings District was for erosion control purposes on the lower slopes of the Kaweka and Ruahine ranges. The second wave of forestry in the Hastings District followed the construction of the pulp mill at Whirinaki in the early 70s, with large scale plantations emerging in the north of the Hastings District. Farm forestry has also expanded in the last decade, largely in response to the high prices for logs, to diversify income and as a management option for sites that are less suitable for pasture.

Hawke's Bay is the oldest established wine growing region in New Zealand and makes a significant contribution to the New Zealand wine industry in terms of quality and quantity. The sunny and warm climate combined with the soils, which are well suited for grape growing, account for the fact that the Hastings District is one of the largest producers of wine in New Zealand. The 1970s saw the rapid expansion of the grape growing industry within the Hastings District most of which was located on rich horticulture land. In the last 5 to 10 years there has been a shift towards growing more specialised varieties, with more selective choice of vineyard site and a shift away from fertile soils.

### **2.2.3.3 URBAN CENTRES**

The Hastings District comprises the major urban centre of Hastings, several dormitory suburbs including Havelock North, Flaxmere, Clive and Whakatu, as well as a number of rural service settlements, coastal settlements and marae.

Hastings has developed a significant processing, manufacturing and commercial centre, handling the production of the region, and providing the service and infrastructure to support the growing community. Significant activities support the food processing industry of the Hastings District, including Heinz Watties, McCains, and ENZA. The commercial and business centre of Hastings provides the principle focal point of the business activity, employment, retailing and entertainment. While the city maintains its strong connections to the rural hinterland for economic well being, it has developed into a substantial urban centre in its own right.

### **2.2.3.4 TRANSPORTATION**

As a major producer of primary produce and manufactured goods, linkages to both domestic and international markets are vital in maintaining the economy of the Hastings District. Accordingly, the Hastings District is well served with a variety of transportation links.

As a community the Hastings District is highly dependent on a well designed roading network as its primary means of physical communication. The roading infrastructure in the Hastings District is therefore seen as an important resource as it provides for the primary movement of people and goods within the community. The principal State Highways (2, 5 and 50) connect the Hastings District with Gisborne, Taupo and to the Manawatu and Wellington. Passenger and freight services operate on most of these routes, with the Taupo and Taihape roads used extensively for logging vehicles. With the proposed extension of the Napier-Hastings motorway from Pakowhai to York Road, the Hastings District will have an improved transportation link to the Port of Napier and to the Hawke's Bay airport.

The Palmerston North to Gisborne railway passes through the Hastings District providing linkages to both Gisborne and Wellington. The rail service operates daily, mostly involving the transportation of freight. Passenger services are only provided by the Wellington link.

The Bridge Pa aerodrome is the only commercial airfield located within the Hastings District, though trunk airline services for Hastings are located outside its boundaries, on the northwestern outskirts of Napier. The Port of Napier also serves Hastings, as one of the major outlets of agricultural and horticultural produce from the orchards and farms and forests of the Hastings District. While neither the Port or Airport are located within the Hastings District, their close proximity to the main urban centres provide the community with vital national and international transport links.

#### **2.2.3.5 INFRASTRUCTURE/SERVICES**

Utilities such as water, sewage and stormwater drainage systems, roading networks, railway lines, telecommunication and radio communication networks and electricity and gas networks are all an essential part of the physical infrastructure of the Hastings District. The effective and efficient supply and maintenance of such resources are vital for the functioning of the Hastings District and aiding and maintaining the general well being of the community.

#### **2.2.3.6 COMMUNITY FACILITIES**

Community facilities are important resources for the social, cultural and economic well being of any District. The Hastings District has a wide range of such facilities, including reserves, parks, recreational facilities and libraries.

Reserves and public open spaces account for 2300 hectares of land within the Hastings District. These reserves range from local neighbourhood parks, esplanade and scenic reserves, to large recreational areas. Within the city centre there are a variety of well maintained parks and gardens, including the old-English style Cornwall Park, Nelson Park, Frimley Rose Gardens, Keirunga Gardens, the historic Oak Avenue and Fantasyland.

The physical and other attractions of the Hastings District are increasing its popularity as a tourist destination. The growth of eco-tourism has the potential to add considerable value to the Hastings District economy, building on the natural resources of the area.

Community facilities, in particular the Marae, are of paramount importance to the Tangata Whenua of the Hastings District, providing both a spiritual and cultural home for hapu and iwi. They are also the place on which all of the significant events in the life of the Maori community occurs. There are numerous Marae throughout the Hastings District, with one, Te Aranga, being of an urban nature and the rest being at the centre of each hapu. These are recognised as being significant community and cultural facilities within the Hastings District.

#### **2.2.3.7 HERITAGE AND CULTURAL**

The Hastings District has numerous sites and areas of cultural, historical and spiritual value and importance to the community, in particular the local Tangata Whenua. Many of these sites are identified within the District Plan to assist such groups in maintaining and preserving the special importance and sacredness of such sites. The numerous archaeological sites throughout the Hastings District are protected by the New Zealand Historic Places Trust. The Hastings District also has a number of buildings and areas of heritage value, many of which are registered and protected with the New Zealand Historic Places Trust. There are strong Spanish Mission and Art Deco themes in the architecture, which predominated the rebuilding of the city following the major earthquake in the District in 1931. A variety of heritage trails have been established throughout the Hastings District which enable the community and visitors alike to experience the scenic, historic, natural and cultural heritage of the area.