

the city's environment

Natural and physical resources, the life supporting processes they contribute to, people, the mauri or life force that binds them all together, and the value placed by humans on these things - all these are the City's environment. This part of the Policy Section discusses these elements as a preliminary to identifying the key resource management issues facing the City.

3.1 NATURAL RESOURCES

The land, the air, water, plants and animals - these are the basic elements of any environment. This section discusses each aspect briefly. A more comprehensive analysis of the state of the City's resources can be obtained from background research papers prepared as the basis for developing the District Plan. A list of these reports can be found in Appendix A.

Land

The shape of the City and its coastline, comprising the harbours, the Tasman coast, the Waitakere Ranges, the eastern lowlands and streams, was established around 6,500 years ago, when the sea rose to its present level after the last ice age.

Waitakere City contains six distinct landforms - the western and Manukau coastlines, the Ranges with their upland plateaus and stream valleys, the foothills and the alluvial lowlands. (See Map 3.1(a) at the end of Part 3.) The Waitakere Ranges were formed by the extensive erosion of a large ancient volcano, whereas the lowlands were created from young, consolidated alluvium. Bedded sandstone and siltstones are found throughout the lower foothills and around the Manukau Harbour. Streams run through steep valleys in the Ranges



LANDFORMS AFFECTED	PROCESSES
<p>The coastal margins of the City</p>	<ul style="list-style-type: none"> • <i>Coastal erosion in the low-lying coastal areas and beaches:</i> This process occurs most commonly on the north side of Herald Island, the east and northwest sides of Te Atatu Peninsula, and to a lesser degree the northern end of Cornwallis Beach and the upper reaches of some estuaries and inlets (eg. Huia Bay, Little and Big Muddy Creeks, Lawson Creek). • <i>Cliff erosion:</i> This occurs to varying degrees around the coast. The areas where these processes are most noticeable are: <ul style="list-style-type: none"> - the small coastal cliffs on the north Waitemata Harbour from Brigham's Creek to Oretaiapu Point (Whenuapai), the north and south side of Herald Island, the east and north side of Te Atatu Peninsula, and Scott Point to Limeburner's Bay on the Waitemata Harbour; - the coastal cliffs from Green Bay through to Laingholm Point, Tokoroa Point to Taumatarea Point, Cornwallis Beach to Daniel Bay, Kakamatua Point to Kaitarakahi Point, and Western Huia Bay on the Manukau Harbour; and - the coastal cliffs of the west coast. • <i>Sand dune migration:</i> This process of inward movement of the dunes occurs most noticeably on those parts of the west coast that do not have a large amount of plant cover on the back dunes.
<p>The inland parts of the City</p>	<ul style="list-style-type: none"> • <i>Slope Instability:</i> This occurs mainly as small-scale slips on shallow slopes of highly weathered or unconsolidated rock. This kind of process is most noticeable in the foothills of the Waitakere Ranges. • <i>Subsidence:</i> This happens mainly on areas of soft peat within unconsolidated sediments, particularly in the Henderson area. • <i>Soil erosion:</i> Erosion occurs mainly from water run off during and after rain and can occur anywhere in Waitakere City, particularly in those areas where there is little tree or bush cover. • <i>Flooding:</i> This occurs primarily in the catchments of the streams running from the eastern foothills.

Table 3.1 (a) Processes Affecting Land Stability.



and down to the Waitemata Harbour. The West Coast is dominated by high, straight cliffs, sandy beaches and dunes. The Manukau Harbour has steep hillside cliffs with narrow bays.

Landforms are also subject to a number of natural processes. These are set out in Table 3.1(a). A map of natural hazard areas in the City is also available from the Council.

Soils

The City has a mosaic of soil types dominated by clay soils with low natural fertility, but with generally good structure and drainage. Some areas of drained loams of high natural fertility are found in the City's lowlands. There is one small area of representative soils in the City - the Huia soils at Lake Wainamu.

For a time, much of the Waitakere Ranges was developed for farming, but the absence of fertile soils and the steep country resulted in most of the farms going out of production by the 1930s. This process has continued to the current day. There are also relatively poor soils in the Henderson Valley and Oratia areas but hard work by early settlers established a major orchard industry. Better soils (in terms of productivity) exist in parts of the Whenuapai/Hobsonville area. Some of this area has been established with productive horticultural enterprise, although water supply and land values are constraints to further horticultural ventures, while changing horticultural techniques often do not use the underlying soils in production.

Minerals

There is an interesting history of attempts to prospect for and mine gold and manganese in west coast areas in the late 1800s. Iron sands cover many west coast beaches and for a time sands were extracted from the Whatipu area. Major usable mineral resources include andesite and conglomerates. One quarry (Waitakere Quarry) still operates, primarily as a source of roading material. Clay has been an important resource in the past with many clay extraction sites centred on Hobsonville and New Lynn.

While clay is not currently being extracted, a useful resource still remains.

Water

The City has a relatively high rainfall (between 1,200-2,000mm per year). The main water bodies are the six water supply reservoirs in the Ranges, the freshwater lakes at Whatipu, and Lakes Waatarua, Wainamu and Kawaupaku, the water aquifer in the Kumeu/Hobsonville area, the Waitemata and Manukau Harbours and the Tasman Sea. There is also a network of streams, creeks and rivers with a number of sizeable catchments leading into the Tasman Sea, and the Manukau and Waitemata Harbours.

Timber milling last century had a major impact on the water cycle through the removal of major areas of native vegetation. Erosion resulted in siltation of streams and harbours and the natural course of streams was greatly modified through the use of driving dams. Timber milling activities also had major impacts on stream life.

The establishment of the water supply dams also altered natural water systems. For instance, the construction of the Waitakere Dam in 1910 reduced riverflows and, together with erosion from tree clearance, resulted in siltation and the eventual formation of the Waitakere wetlands. During periods of major urban development there has been significant impact on the streams and the Waitemata Harbour, while the piping of many of the smaller streams has also altered their natural form.

(Valued water resources in Waitakere City are shown on Map 3.1(b) at the end of Part 3).

Air and Atmosphere

The City's air quality is relatively good with predominantly westerly winds blowing pollutants away from the district. The main problems arise from the use of fossil fuels and localised issues surrounding the use of sprays in farming and horticulture.



Plants

Before settlement in New Zealand, plant life had been evolving over many thousands and millions of years. Plant life abounded. Map 3.1(c) illustrates how the Waitakere City area may have been covered in vegetation 1,000 years ago. Cultivation and use of fire by Maori caused significant modification to the vegetation of the coastal fringe along the West Coast and the Manukau Harbour. In these areas - such as the lower Waitakere River valley and adjoining the fresh water lakes of Wainamu, Kawaupaku and Waiatarua - the original vegetation has been permanently altered. Native species were not only affected by clearing, but also by planting - particularly in the vicinity of human occupation sites.

The rewarewa and taraire trees were planted to attract birds which were then snared. These trees were also a source of food and dyes. Whau was used to make floats for fishing nets. Kowhai, titoki and kanuka were used to form adze handles, and many large trees - in particular totara and kauri, were felled for use in building construction and the manufacture of canoes. Bush areas would also have been extensively modified by the introduction of the kiore (rat) which influenced regeneration patterns by eating seeds on the forest floor. Some areas were also planted and cultivated for flax, ti trees (cabbage trees), and karaka trees.

In the lowland areas it appears that the original forest cover had substantially disappeared by the time of the arrival of the first Europeans - although how and why this happened is not clear. In the 1840s these areas were mostly covered in stunted manuka and kanuka. It may be that the forests in these areas were destroyed by fire.

Changes to the vegetation over 1,000 years of Maori occupation were insignificant compared to the changes wrought over the 100 years after the arrival of the Europeans in the mid-1830s. The dominant changes resulted from logging. Between 1836 and the early 1940s over 50 logging operations took place throughout the major catchments of the City. In the 19th century, timber millers concentrated on kauri milling, although in the 20th century, kahikatea, totara, rimu, matai and tawa were also milled. The only mature tree that was left standing in any numbers was the northern rata - and many of these were cut in the 1930s and 1940s for



firewood. What forest was left in the lowlands, would have been cut out very early in the European period, and logging progressed systematically through the Ranges from the easier through to the more difficult areas until, by the 1940s, only 2% of the forest area of the Waitakere Ranges had been unaffected by milling, or had been only lightly logged. Milling resulted in the almost total removal of original vegetation.

Part of one ecological district (Tamaki) and most of another (Waitakere) lie in Waitakere City. In the Tamaki Ecological District (the City lowlands) human activity has resulted in the clearance of all but 9% of original vegetation cover. Remaining vegetation types are illustrated on Map 3.1(d).

Agricultural activity resulted in the permanent loss of native vegetation - apart from those areas where farming became uneconomic and regeneration occurred. The introduction of noxious or problem animals - rabbits, domestic pets, introduced birds and, most significantly, the possum, were to have major impacts on the re-establishment and survival of native vegetation.

From the 1920s onward, many farms in the Ranges moved out of production due to economic conditions and/or land purchase for water supply purposes or reserves. This process has continued up to the current day. The former farm areas have been naturally re-established with native vegetation to the point that there is now 80% native vegetation cover over the Waitakere Ecological District (the Waitakere Ranges). The native vegetation is

different from what it was prior to the milling/farming days, but it is nevertheless a major area of ecological character with a complex diversity of habitats and biological communities. This re-established natural environment has become a feature of prime importance to Waitakere City and the region. It is also the most significant event of environmental benefit in the recent history of Waitakere City, and perhaps, the Auckland Region.

In the Waitakere Ecological District, 83% of the native vegetation cover has re-established, and a continued improvement in the vegetation of the ranges can be expected if clearance and development is minimised in the future. Such a large area of native bush so close to a large city is very unusual, and while not of a uniformly high standard, is a valuable regional and national resource. Approximately one quarter of New Zealand's native flowering plants (420 species) and two thirds of all native ferns and fern allies (110 species), are found in the Ranges. Species include those which are rare, and even unique in New Zealand. Map 3.1(e) shows the remaining native vegetation in the City.

In a balanced freshwater ecosystem, in-stream vegetation contributes to a number of processes which cleanse the water and contribute to its oxygenation. Similarly, wetlands are important mechanisms for the removal and absorption of contaminants before they enter the waterways. Both types of naturally occurring vegetation have been seriously depleted and have not been adequately managed in the past. Areas of vineyard, farmlands, orchards, market gardens, urban gardens and parks add an important introduced variety to vegetation types in the City. Some of these trees and areas have value because of their uniqueness or special quality, others have important heritage value.

Weeds are a prominent vegetation element in some parts of the City, and some 129 plants have been identified as potential or actual weed threats to the City's native vegetation. Widespread weeds, such as ginger and climbing asparagus, have become major threats to the environment. Map 3.1(f) shows the main locations of environmentally damaging plants, and the main species causing problems are identified in Appendix B.

Animals

At the time of arrival of Maori, wildlife abounded. Maori hunted almost every variety of bird that lived in the forest canopy, and fish,

particularly shellfish, were an important food resource. The moa lived in the area but appears to have been hunted out by the end of the 17th century. The introduction of the kuri (dog) from the Pacific would have affected wildlife, particularly ground dwelling birds.

However, the major impact on wildlife habitat depletion resulted from timber milling. By the mid 1930s the kaka, kiwi and parakeet were rare, the bell bird was declining in numbers and the kokako was no longer present in the City. Introduced farm animals - cattle, pigs and sheep took over from native species as the dominant animal life in the area. Fortunately, with the re-establishment of forests in the Waitakere Ranges, some native fauna populations have returned and expanded.

Native fauna in Waitakere City today is concentrated within the Ranges area. There are 71 species of bird, one marine mammal, five lizard species, one frog species, one bat, 11 freshwater fish species and two freshwater crustacea. Invertebrates include 100 species of land snail. There are also over 800 species of insect. Some of these species are threatened. Many are valued in the environment and Appendix C describes the main wildlife types and species found in the City. Appendix C also indicates the level of rarity and vulnerability). Map 3.1(g) shows the location of the main fauna species, in the City. In addition to valued fauna species there are at least nine species of introduced noxious animals of which the possum, stoat and feral cat are a major environmental threat, along with introduced birds and wasps (described in Appendix B) which compete for food with native fauna.



Ecosystems

An ecosystem is a community consisting of micro-organisms, animals and plants all interacting with each other and the physical environment.

Biological interactions include food webs and interactions, including the cycling of nutrients and elements (such as the cycle of water moving through the landscape). The size of an ecosystem can vary greatly from a whole lake or forest to a small fallen log. Impossible to map because of so many links with the wider environment, these ecosystems are a fundamental part of the natural and physical world. The key principles that can be identified in the City's ecosystems are that:

- they are dynamic - they constantly change in response to a changing physical environment;
- the processes which are found within ecosystems are as important as the individual components;
- interconnections occur between everything - and humans are an integral part of ecosystems;
- human survival relies on the maintenance of healthy ecosystems. Ecosystems sustain vital, life supporting processes and are also highly valued for their productivity, assimilative capacity and their cultural and spiritual significance and beauty.

Living and non-living resources make up ecosystems. Plants, animals and the earth, water and air relate one to another in a complex way, each resource depending on others for survival. Ecosystems are necessary for key life-maintaining processes such as the replenishment of oxygen in air and water and the protection of water quality.



3.2 TE TAIAO: THE SPIRITUAL WORLD

For many people, the environment has a spiritual or metaphysical dimension which goes beyond what can be touched, heard or seen. This dimension is as important as any physical world, and is intimately linked with its health and well-being. Sometimes this metaphysical world is felt and expressed as a sense of wonder. For some people, it is part of religious belief. For many, the survival of this spiritual dimension is as essential as the survival of the natural world. The importance of this spiritual dimension to tangata whenua is discussed in Part 4 of the Policy Section.



3.3 THE HUMAN COMMUNITY

It is estimated that in 2004, 189,300 people lived in Waitakere City, occupying about 60,300 dwellings. At the 2001 census, 72% of residents identified themselves as “European” (nationally 80%), 13% Maori (nationally 15%) and another 15% as Pacific peoples. Individual ethnic groups which are prominent in Waitakere City compared to the national average, include Samoans, Niueans and Cook Island Maoris. Residents of Asian origin make up 11% of Waitakere City’s population (nationally 7%).

The City has a relatively young age structure having, for instance, a younger population than both North Shore and Auckland Cities. However, as with elsewhere in the country, Waitakere has an ageing population, particularly amongst Pakeha. In 1991 the proportion of the City’s population aged 65 and over, was 7.5%. In 2001, the proportion was 8.8%.

The most common household type in Waitakere City is the two person household. In 2001 there were 43,640 families in Waitakere City, and of these there were 13,850 couples without children, 20,400 couples with children, and 9,400 (22%) single parent families. There is also a general trend to smaller household sizes. Between 1971 and 2001 the number of dwellings has increased more rapidly than the number of people, so that the average number of people per dwelling has declined. This decline has levelled off in recent years.

The majority of the adult population work, with about 77,040 in paid work out of a population of 112,200 of “working age” (between 15 and 65 years). Of the rest, a large number also work at unpaid employment (such as housework, care of dependents and voluntary work). Council is, as part of the eco-city and Agenda 21 principles, committed to the recognition of this unpaid, as well as paid, workforce. There were 13,660 part time workers’ jobs in 2001 making up the paid workforce; of these, the majority were held by women.

Not all paid workers living in Waitakere City actually work in the City, and not all jobs in Waitakere City are filled by Waitakere City residents. In 1991, there were 35,092 jobs in Waitakere City; approximately 8,300 of these jobs were filled by people travelling into the area on a daily basis. In 2001, there were 40,710 jobs in Waitakere City with

approximately 10,000 filled by commuters living outside of the city.

Leisure activities play an important part in the lives of Waitakere City residents. A survey of people’s free time activities in 2002 found that sports and physical activities were the most favoured leisure pursuits.

Waitakere City’s population has a wide range of sporting interests which are catered for by schools and sports clubs. The City has many reserves catering for recreational pursuits ranging from bush and coastal walks to gardens and heritage trails. However, research has shown that some areas of the City have a shortage of open space for casual recreation. In the arts, Waitakere City, has regionally-known facilities at Lopdell House and the Glen Eden Playhouse Theatre, together with a number of cinemas and the City’s own library resources. The City has the full range of primary, intermediate and secondary schools, a number of kohanga reo (language nests) and a kura kaupapa (school) at the Hoani Waititi Marae.

Tertiary institutions include the New Zealand Bible College which has courses to Degree level and Unitec which offers diploma courses. The secondary schools within Waitakere City offer a number of adult/interest group education courses, as does Te Whanau O Waipareira Trust. Cultural and religious beliefs and pursuits are catered for in much the same way as in most other New Zealand towns and cities. The Bahai National Centre and the Croatian Centre are located within Waitakere City, and stand out as having significance on a regional and national scale.



been built over the last thirty to forty years - and a railway line that services all of the main town centres (except for Westgate) as well as Waitakere township. The road network is extensive and of a high quality. The urban area also has a comprehensive drainage and water supply network. The water supply network extends into parts of the foothills and the northern countryside of the City.

3.4 BUILDINGS & INFRASTRUCTURE

Structures in the City include houses and other dwellings, community facilities, commercial buildings, factories and marae buildings such as at Hoani Waititi, Kakariki, Kotuku and Massey Marae. They also include power and telecommunications lines, drainage and water supply infrastructure, bridges and roads that are important for the economic and social wellbeing of the community. Houses and other buildings are valued (apart from the obvious benefits in terms of providing shelter and warmth) because of the accumulated economic wealth they represent. For many people, their savings are “stored up” in the house they have chosen to buy. What happens to that house and how well it serves their needs, particularly in old age, can have a major impact on their lives. The ability to extract savings from these structures and to maintain the value of the building, can have an important effect on how willing people are to adopt alternatives to current systems.

The City has a stock of houses ranging from those built in the 1850s to the present. The City also has a stock of relatively new and well built commercial and industrial buildings - most having



3.5 THE VALUED ENVIRONMENT: A NATIONAL PERSPECTIVE

The Resource Management Act places a great emphasis on the environment as a construct of human value and culture, as much as a tangible thing of earth, water and air.

As noted in Part 2, the Resource Management Act requires that particular matters be addressed when Council pursues the wider task of sustainable management. These include, as matters of national importance:

- preserving the natural character of the coastal environment, wetlands, lakes and rivers, and their margins;
- protection of outstanding natural features and landscapes;
- protection of areas of significant native vegetation and significant habitats of native fauna;
- maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers;
- protection of historic heritage from inappropriate subdivision, use and development.

Thus a clear duty of Council is to protect and maintain natural and physical resources and landscapes. The above provisions are national “value statements” set out to guide local communities. The Act goes on to acknowledge that amenity and heritage values of the listed heritage items are also important, but primarily leaves these to local communities to identify their significance.

Some heritage items and landscape views in the City, also have regional or national significance.

Considerable work has been carried out to identify these values in the City. Appendix D describes the methodology used.

3.5.1 Significant Native Vegetation

Map 3.5(a) shows four categories of vegetation in the City. These are:

- ecological linkage opportunities;
- restoration areas;
- significant native vegetation;
- outstanding native vegetation.

Areas of native vegetation which are over 300m² in area and have between 20% and 50% native vegetation cover have been classified as restoration areas.

The reasons for assigning significance to these areas are as follows:

- because there has been a major loss of bush in the urban area what does remain, is rare;
- the areas have particular heritage, amenity and intrinsic significance for an urban population, which is generally separated from the native bush areas;
- the potential of these areas for regeneration and increased integrity, if freed of invasive weeds. Areas of bush below 300m² are subject to edge effects from sunlight, wind, weeds and pests, and those with less than 20% of native vegetation are less likely to be capable of successful regeneration;



- the importance of these areas as part of the ecological corridors through the City and as an integral part of the Green Network;
- the value placed by tangata whenua on those native vegetation remnants in the urban, foothills and countryside areas.

The following have been identified as significant native vegetation:

- bush with greater than 50% native species-cover and over 300m² in area;
- native and exotic scrublands with greater than 50% native species and over 300m² in area;
- wetland and duneland vegetation;
- mangroves/saltmarshes;
- coastal shrubland.

The criteria used in the identification process are described further in Appendix D.

The outstanding native vegetation areas were selected from sites identified as priority vegetation sites in the Waitakere and Tamaki Protected Natural Area Surveys. They are areas of significant vegetation that are of special importance to local or national biodiversity; and are the best representative examples of each vegetation community in that ecological district. They also include areas of original vegetation that have never been cut. Appendix E describes the City's outstanding native vegetation.

Ecological linkage areas are land between other areas of native vegetation, where regeneration is desirable to provide links between fragmented bush and fauna habitat.

3.5.2 Significant Fauna Habitat

Waitakere City is unique in the Auckland Region in that it has large areas of continuous native bush (although in many areas it is regenerating bush), which provide a major habitat, for example, for native birds, insects, bats and freshwater fish and marine life.

Areas of significant indigenous fauna habitat have been selected using the former New Zealand Wildlife Service wildlife habitat inventory - (Sites of Special Wildlife Interest). The criteria used in selection are set out in Appendix D.

Significant native fauna habitats that are of special importance to local, regional or national biodiversity in the Waitakere and Tamaki Ecological Districts, have been further selected under the Protected Natural Area Surveys, as outstanding

native fauna habitat. These areas are characterised by their largely unmodified nature, their large area, the presence of threatened wildlife species and/or a diversity of wildlife. The extent of significant and outstanding native fauna habitat is shown on Map 3.5(b). Appendix F describes the City's areas of outstanding native fauna habitat.

Outside the main bush areas the key wildlife habitats are: the wetlands of the Waitakere River catchment, the freshwater lakes, the mangrove areas around Te Atatu Peninsula and Henderson Creek, the estuaries and coastal areas of the Manukau Harbour and Herald Island and the dunes of the Whatipu area.

3.5.3 Coastal and Riparian Areas

The natural character of the coastal environment is defined as: those qualities and values of the coastal environment which derive from the presence of natural features and natural processes. These qualities include the presence of indigenous vegetation and habitats, landforms, landscapes, the historic, aesthetic, cultural and spiritual value of natural features, the functioning of natural processes and the maintenance of water quality. Although not excluding structures and human activities, areas of natural character derive their predominant influence, character or identity from the presence of natural values and processes. The coastal environment is that area in which the coast is a significant element or part. Elements which may characterise the coast include the presence of coastal vegetation habitats, landforms and cultural heritage places or areas which have characteristics which are coastal and which may in themselves or together with other features contribute to the visual and amenity values of the coast. The operation of coastal process, the presence of coastal hazards and the direct discharge of surface runoff in the coastal marine area are indicators of the extent of the coastal environment of Waitakere City. In some areas the coastal environment is clearly identifiable in that it extends inland to the first significant coastal ridgeline, while in other parts of the City, the inland boundary may not be so distinctive. The areas of the Coastal Marine Area that are of regional, national or international significance due to their ecological, landform, or geological values and their degree of vulnerability have been



identified in the Auckland Regional Council's Proposed Regional Plan: Coastal as Coastal Protection Areas. These are considered to be outstanding coastal areas and are:

- the West coast and Manukau coastlines around the Waitakere Ranges, excluding the coastal settlements;
- the Waitemata coastline at Whenuapai and Hobsonville (from Brigham's Creek to Scott Road).

In these areas the landforms are largely intact, although some have undergone modification. Some or all of the native vegetation remains, and generally, except in the Upper Waitemata Harbour, water quality is better than that found elsewhere in the City - mainly due to the relative lack of development pressures and past protection of the coastal landscape. At Whenuapai and Hobsonville the coastal environment is very narrow, being confined largely to the coastal scarp. The mixture of rural, residential and military uses in this location will change over time due to a reduced military presence in Auckland, the construction of SH18 and planned growth at Massey North, Hobsonville Village Centre and the Hobsonville Peninsula. These planned changes will alter the landscape but provide opportunities to enhance riparian areas.

This outstanding coastal area is shown on Map 3.5(c). The City's streams, rivers, wetlands and lakes and their margins, which under the Resource

Management Act require a special protection status, are shown in Map 3.1(b). The Auckland Regional Council's Coastal Protection Areas (Proposed Regional Coastal Plan) are outlined in Appendix G.

3.5.4 Outstanding Natural Features

The City's outstanding natural features include landforms, soils and geological sites. They were selected from sites identified as 'priority landform sites' in the Waitakere Protected Natural Area Survey, the Geopreservation Inventory and the New Zealand Soil Society's soil sites of international, regional and local importance. The selected sites include the dunes and dunelakes, and Lakes Kawaupaku and Wainamu, Lion Rock, the stacks, blow holes and caves at Taitomo Island, the volcanic features at Te Ahua Point and the Piha Gorge. These sites and areas and the representative Huia soils are shown on Map 3.5(d) and are listed in Appendix H.



3.5.5 Public Access

Waitakere City Council has been active in acquiring esplanade reserves for public access along the City's urban streams and coastline. It has been less systematic about the acquisition of land along the edges of the streams and rivers found in the rural foothills and Waitakere Ranges areas. Council also possesses a number of road reserves which are used for public access. Sale of some of these reserves in recent years has meant the loss of areas which could be used for future access and recreation. A number of the City's esplanade reserves have little or no access, as encroachments by adjacent landowners, erosion and the growth of weeds and gorse have occurred. Herald Island, for example, has lost significant areas of the coastal esplanade reserves through erosion. A range of identified accessways for the City are described in Appendix I.



3.6 THE VALUED ENVIRONMENT: THE CITY'S LANDSCAPES

In emphasising the importance of protecting the City's outstanding landscapes, the Resource Management Act recognises yet another layer of the environment. A landscape is generally a broad area which has a unique combination of natural and physical elements and other characteristics that combine together in a coherent way that is understood as a whole. Landforms, waterways such as lakes, streams and wetlands, and the vegetation that grows on the land's surface, ranging from naturally occurring bush to cultivated pasture - combine to form a variety of landscapes. These are further defined by the way buildings, roads and other structures are set amongst them. The combination of natural and built features, the dominance of one over another, or alternatively the merging of the two, and, of course, the sheer number of people, will add layers of complexity, bustle and variety, that further define the City's landscapes.

The following part discusses the broad landscape areas that can be found in the City and goes on to identify those that can be considered as truly outstanding. It then identifies the key landscape elements and landscape characteristics that define each unique landscape.

3.6.1 General Landscape Areas and Outstanding Landscapes

Waitakere City has some of the Auckland Region's most dramatic, varied and momentous landscapes, both natural and modified. Views of the Waitakere Ranges are an important feature of many areas in the wider metropolitan area. Landscapes viewed from Waitakere City contribute to residents' feelings about the City. Some key views are the cliffs surrounding the Upper Waitemata Harbour in North Shore City, the view down the Waitemata Harbour to the Harbour Bridge and Rangitoto; the rural landscape of Awhitu Peninsula in Franklin District, the volcanic cones of central Auckland and the wide expanse of the Manukau Harbour.

Within Waitakere City there are many varied features - ranging from the coastal dunes and beach areas, through to the West coast and Manukau Harbour cliffs, the west coast freshwater lakes and lagoons, the dams, the quiet estuaries along the

Manukau shoreline and, of course, the magnificent landform and vegetation features of the Waitakere Ranges. Below the Ranges, the predominant features are the dissected hill country and green rural areas, the pockets of natural vegetation within the rural and urban areas of the City, the orchards, the vineyards, the streams and their margins, the coastal vegetation, urban trees, suburban housing and the prominent landforms/land features within the rolling landscape.

These features naturally resolve themselves into seven broad landscape areas. These general landscape areas are shown on Map 3.6(a) and are listed below.

- the coastal landscape between Bethells/Te Henga and Manukau Heads;
- the coastal and estuarine areas between Whatipu and Green Bay;
- the coastal edge and estuarine areas between the Whau Creek and Brighams Creek;
- the bush landscape including the Waitakere Ranges and the fingers of bush in the upper areas of the eastern foothills catchments;
- the lower eastern foothills with the mixture of pasture and bush;
- the rural pastoral landscape of the northern city and the Redhills/Birdwood area;
- the urban landscape of houses, work areas, urban parks and bush remnants which can be divided into the following distinctive areas:
 - Working (industrial),
 - Community (town centres),
 - Open space (parks),
 - Living (residential).

Of these seven general landscape types, three landscapes have been identified as outstanding.

These are:

- the coastal landscapes between Bethells/Te Henga and Whatipu;

- the coastal estuarine areas between Whatipu and Green Bay;
- the Waitakere Ranges including the fingers of bush in the upper areas of the foothills catchments.

These were identified using a methodology which assessed

OUTSTANDING LANDSCAPE AREA	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
West coast - Bethells/Te Henga to Manukau Heads	<ul style="list-style-type: none"> • dune systems and sandy beaches • freshwater lakes and wetland • streams/stream catchments • steep coastal ridges • headlands • islands • coastal forest • scarps and cliffs 	<ul style="list-style-type: none"> • dominance of natural over built features • natural variety and complexity • unhindered natural forces - especially the action of the sea • quiet • sparse population • limited visitor numbers • sense of wilderness and wildness
Whatipu to Green Bay coastal landscape	<ul style="list-style-type: none"> • inward fingers of estuaries • tidal flats and channels • steep to moderately steep coastal cliffs • coastal forest and shrubland • streams/stream catchments • mangroves and salt marshes • headlands 	<ul style="list-style-type: none"> • dominance of natural over built features • natural variety and complexity • unhindered natural forces - especially the gentle action of the sea • quiet • sense of wilderness • sparse population/some patches of more intensive development to the east
Waitakere Ranges	<ul style="list-style-type: none"> • prominent ridgelines and, in particular, the Scenic Drive scarp • incised stream catchments and streams • indigenous forest • elevated hills and plateaus • scarps and cliffs • peaks • wetlands 	<ul style="list-style-type: none"> • natural variety and complexity • dominance of natural over built features • quiet • sense of wilderness • sparse population/some patches of more intensive development to the east • limited visitor numbers

Table 3.6 (a) Outstanding Landscapes



Waitakere City landscapes relative to other parts of New Zealand, and also by taking into account the value local residents place on these landscapes. Areas identified as outstanding landscapes are shown on Map 3.6(b).

Waitakere City's landscapes involve a gradation westwards from densely inhabited, much modified, lowland, through low density rural land bush living areas to the intact bush in the Waitakere Ranges and ultimately to the dramatic, scenic coastal environment, variously affected by human settlement and development. The outstanding landscapes fit within an overall context which includes the adjacent landscapes of lesser quality, including those landscapes which are no longer of outstanding natural beauty due to the changes wrought by humans. The areas adjacent to the outstanding landscapes act as lead in to the outstanding landscapes, and as buffer areas. The buffer areas fall within their own distinctive landscapes, and are of value in their own right, as well as being contributory as precursors or as an element of contrast to the outstanding natural landscapes they adjoin.

Table 3.6(a) sets out a summary of the landscape elements (natural and physical features) and landscape character (the more intangible "feel" of the landscape) that define these outstanding landscapes. The natural landscape elements are shown on Maps 3.6(c) and 3.6(d) and described in detail in Appendix J. A key aspect of these landscapes are the views across the City. A number of notable views from public places have been identified and are described in Appendix K and illustrated on Map 3.6(e).

3.6.1.1 Landscape & Tangata Whenua

Landscape is the drawing together of a range of elements which are understood as a whole and appreciated as a totality. This concept of landscape is also true for tangata whenua. However, although the visual coherence and landscape elements of the City's landscapes are important to iwi, other aspects are also equally important. The spiritual significance of a particular landform or stream, for example, which is not necessarily visually important, will mean that it becomes an essential landscape element.

In terms of area, iwi have indicated that the key general landscapes are the coastal areas and the Waitakere Ranges - both in terms of natural features, sense of wilderness, bush and streams and, also, the particular way in which iwi have occupied those landscapes in the past. The particular sites, for example, burial areas, places of ritual and battlegrounds, combine to form a web of spiritual significance that lies over these areas and makes them especially important. Therefore, their significance to iwi is seen as being a further major factor in identifying these landscapes as outstanding.

3.6.2 The City's Other Landscapes

The remaining broad (general) landscapes of the City are also valued to a greater or lesser degree. The key issue with these areas is to identify those elements and characteristics which contribute to the amenity value of an area which residents would wish to see protected. For example, in the foothills, the unique nature of the area is defined by the fingers of bush found in the upper catchments, the streams, the dominance of natural over the built features, the unkerbed roads which follow the ridgelines, the orchards and the vineyards, the quietness of the area, the low levels of traffic, the relatively sparse settlement and the absence of urban type activities. All these features make up the foothills landscape and define the character of the area which, although not considered outstanding, is nonetheless highly valued by both local residents and residents of other parts of the City. These areas are described in Table 3.6(b).

OTHER LANDSCAPE AREAS	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
Coast (Whau Creek to Brighams Creek)	<ul style="list-style-type: none"> tidal flats and channels moderately steep to steep coastal cliffs sparse remnant coastal forest and shrubland along cliff edge mangroves and salt marshes 	<ul style="list-style-type: none"> sense of confined natural features (coastal environment only within cliff faces and estuaries) hindered natural forces in some areas - eg sea walls and causeway at Herald Island. quiet tension between cultivated and modified natural edge
Foothills	<ul style="list-style-type: none"> surrounding bush and pockets of bush within the area pastoral areas, including orchards, vineyards and other horticultural uses prominent ridgelines streams and stream margins unkerbed roads following the ridgelines clustering of buildings along the roads 1-2 storey buildings 	<ul style="list-style-type: none"> quiet community feel and local neighbourhoods but sparse settlement non-urban but sense of fine balance between natural and built dominance of natural features but a sense of variety and complexity between indigenous and exotic, cultivated and wild
Countryside	<ul style="list-style-type: none"> gently rolling hills terraces, pasture and cropping land shelter belts small areas of remnant bush streams coastal edge to the north 1-2 storey buildings scattered housing and farm buildings 	<ul style="list-style-type: none"> dominant pastoral "image" quiet (except around former airbase, SH 16 and SH18)
Urban (Work)	<ul style="list-style-type: none"> large 1-2 storey buildings large lots few natural features 	<ul style="list-style-type: none"> complexity of activities taking place noisy and busy industrial character
Urban (Community)	<ul style="list-style-type: none"> mainly larger buildings mixed with shops along main streets 1-2 storey structures pedestrian routes through a central core emphasis on traffic movement and parking in outer areas some pockets of quiet/ "rest areas" limited natural features 	<ul style="list-style-type: none"> community focus/sense of place complexity/variety constant movement of people and vehicles retail character

Table 3.6 (b) The City's Other Landscapes



LANDSCAPE	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
Urban (Living)	<ul style="list-style-type: none"> residential buildings dominate (mainly post 1945) 1-2 storey detached housing high level of planting on private spaces areas of public open space with moderate levels of planting similar bulk, form and roofline of houses low site coverage, yards around housing especially front yards complex road system and roading hierarchy open streetscape 	<ul style="list-style-type: none"> dominance of residential activities feeling of openness and greenness quiet <p>(relative to other parts of the urban area)</p>

Table 3.6 (b) The City's Other Landscapes

3.7 THE VALUED ENVIRONMENT: THE LOCAL ENVIRONMENT AND NEIGHBOURHOODS

Residents can strongly identify with a number of smaller local landscapes in a way that gives them a sense of belonging and place. There is a hierarchy from general landscapes to local areas which have a unique combination of the general landscape elements and character, down to the neighbourhood and streets immediately adjacent to a property. These local areas and neighbourhoods have a number of distinct elements and characteristics that give them a uniqueness in the eyes of local residents. These local areas are described in Table 3.7(a).

Within the residential parts of the urban area, the differences and distinguishing characteristics arise from two factors:

- section size;
- housing style.

There are definite differences between the eastern/southern suburbs and the suburbs to the west and north. The older suburbs of New Lynn, Green Bay and Glen Eden tend to have larger section sizes, 800m²-1,000m², more trees and a more established “traditional” suburban character. Within these areas, some infill has taken place - more in some suburbs than others. New Lynn in particular has been affected - although there are a number of streets such as Hutchinson Avenue and Seabrook Avenue which still retain a distinctive and open character. The suburbs of Kelston, Te Atatu South and Te Atatu Peninsula are dominated by houses built between 1945 and the 1960s. Section sizes are a little smaller than in New Lynn and Glen Eden, generally ranging between 600m² and 800m².

To the west and north the younger suburbs built since the 1970s have tended to include smaller sections (down to 350m²). Correspondingly these areas often have fewer trees and are less open than the older suburbs - both elements being associated with the larger sections. One result of the smaller sections has been the building of high fences to try and achieve greater privacy.

The style of housing varies across the City, with bungalows and some villas mainly within New Lynn and Glen Eden and scattered through Kelston and Te Atatu South. Te Atatu South and Te Atatu Peninsula are dominated by the “Group” housing styles of the 1950s and 1960s, with a large amount of

brick housing with their characteristic low angle hipped roofs. In the west, houses tend to be smaller, often rectangular, with a simple gable roof. This difference reflects pressure since the 1970s to reduce housing costs.



In West Harbour, which has developed substantially since the 1980s, the style is of large, often two storey houses, with garages incorporated into the main building. The houses are often built of masonry with tiled roofs. There are relatively few large trees in these newer areas. There is however, little infill housing or cross-leasing.

Changes to the north of the City around Massey North, Hobsonville Village Centre and Hobsonville Airbase will create new neighbourhoods built on town centre principles and will provide significant employment opportunities. The differences in neighbourhood character will reflect the functions of each centre (commercial, industrial, retail, residential) and build on their natural amenity values.

In the mid 1990's - early 2000's, a new form of intensive housing was introduced to the City. This was initially on the periphery of the New Lynn Town Centre, where significant development has established, and later around the Henderson Town Centre, other employment nodes and on main routes. This development has been primarily medium density housing, but higher density apartment housing has also been developed.

This is a type of development which departs from the low density historical norm, but is nevertheless the type of housing which is likely to predominate as a component of future urban consolidation/intensification strategies.

Such development, if well designed, can



produce attractive living environments at the site, neighbourhood and community levels. Integration is most difficult where such development borders existing traditional development and where design is primarily considered on a site by site rather than area basis. In order to address these issues, and create attractive, livable environments with a high amenity character, comprehensive planning is encouraged. At the same time, it must be recognised that those areas which have been specifically identified for such development must be allowed to mould to a new form, and that development may take some years to establish. This process will be assisted by such techniques as streetscape management, apartment units, medium density housing and mixed-use rules/criteria, and design guidelines.

Within the coastal villages, the differences between them are derived from their relative size in

relation to the surrounding natural landscape. They range from Piha to Little Huia and Te Henga/Bethells. The way in which buildings merge into or dominate the landscape and the particular landscape elements and character that surrounds each village, sets the framework of, and entry points into, the villages themselves.

The differences in the rural villages relate either to their function as an airbase village, their island character or again their place in the surrounding landscape - as with Waitakere Township and Swanson. The various foothills catchments derive their character from the mix of activities and vegetation that is found within them, for example, vineyards, orchards, pasture and forests. Map 3.6(d) shows the identified local character areas.

LOCAL AREA	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
Bush-living neighbourhoods of Laingholm, Titirangi, and the upper eastern foothills (found within the Outstanding Waitakere Ranges Landscape)	<ul style="list-style-type: none"> • prominent ridgelines and scarps; • steep valleys (in places) • continuous bush cover • views to the Manukau and Waitemata harbours • unkerbed winding roads following the ridgelines • clustering of buildings along the roads (ribbon housing) • 1-2 storey buildings • merging of buildings and bush • intensive settlement (relative to Waitakere Ranges) 	<ul style="list-style-type: none"> • dominance of natural over built (due to surrounding Ranges environment) • entry point to the City's wilderness • tension between the wild and the cultivated • quiet and enclosed • complex, local and small-scale neighbourhoods

Table 3.7 (a) Local Area

LOCAL AREA	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
Coastal Villages (Parau, Cornwallis, Huia, Little Huia, Karekare, Piha, Bethells/Te Henga)	<ul style="list-style-type: none"> • 1-2 storey detached housing • high level of planting on private spaces (except at Bethells Beach settlement) • buildings facing the sea (except at Bethells) • similar bulk, form and roofline of houses • low site coverage, yards around housing especially front yards • dominance of residential activities 	<ul style="list-style-type: none"> • feeling of openness • quiet (except for sounds of the sea on the west coast) • greenness and integration with the bush - varies from Karekare to more exposed landscapes of Bethells Beach settlement and Piha. • contrasts between 'suburban residential' character and location in wild landscapes • Karekare - pockets of cultivated areas amongst the essentially wild landscape • bach heritage of the west coast
Foothills Catchments: Oratia Swanson Opanuku Upper Kumeu	<ul style="list-style-type: none"> • orchards/pasture • vineyards/pasture • vineyards/pasture • pasture/pine forest 	
Rural Villages (general)	<ul style="list-style-type: none"> • 1-2 storey detached housing • low densities • high level of planting on private spaces • similar bulk, form and roofline of houses • low site coverage, yards around housing, especially front yards 	<ul style="list-style-type: none"> • dominance of residential activities • feeling of openness and greenness • quiet
Herald Island		<ul style="list-style-type: none"> • unique island location - specialness and isolation • strong sense of place.
Hobsonville and Whenuapai Airbase	<ul style="list-style-type: none"> • planned government villages • state houses • links with airbase buildings 	<ul style="list-style-type: none"> • strong sense of place
Whenuapai		<ul style="list-style-type: none"> • edge village, strong coastal links • isolation
Waitakere Township	<ul style="list-style-type: none"> • complex roading and rail crossroads • steep topography 	<ul style="list-style-type: none"> • strong sense of place
Residential Areas (Urban) <ul style="list-style-type: none"> • older low-density suburbs of New Lynn, Green Bay and Glen Eden 	<ul style="list-style-type: none"> • larger lots (800m² - 1,000m²) • dominant cottages, villas, bungalows 	

Table 3.7 (a) Local Area



LOCAL AREA	LANDSCAPE ELEMENTS	LANDSCAPE CHARACTER
<ul style="list-style-type: none"> Kelston, Glendene, Te Atatu South, Te Atatu Peninsula 	<ul style="list-style-type: none"> moderate sized lots (600m² - 800m²) houses built since 1945 	
<ul style="list-style-type: none"> the younger suburbs of Massey Ranui 	<ul style="list-style-type: none"> smaller lots with moderate (600m² - 800m²) and low cost housing 	
<ul style="list-style-type: none"> the new suburbs of West Harbour developing above the Waitemata Harbour 	<ul style="list-style-type: none"> small lots with larger houses, often two storey inclusive of garages important views and strong visual links with the harbour edge and the central City 	<ul style="list-style-type: none"> strong edge City effect
<ul style="list-style-type: none"> the mixed area around Henderson based around the Oratia and Opanuku Streams and their confluence 	<ul style="list-style-type: none"> mixed activities residential activities on the fringe of the town centre and commercial area 	

Table 3.7 (a) Local Area



3.8 THE VALUED ENVIRONMENT: CULTURAL HERITAGE

The City's heritage consists of those places, buildings, sites, objects and trees which are especially valued by the City's residents and tangata whenua, which they wish to pass on into the future. It is made up of those everyday things which people come to value as change occurs around them, and those special items, places, objects and memories that people want to mark in time and gift to the future.

Understood in these terms, the City has a rich heritage that reflects the experiences of tangata whenua before colonisation and the varied experiences of people since. A considerable amount of work was carried out between 1993 and 1994 to identify those features of the City that people regard as their heritage. Reference was also made to the nationally based register of historic places, historic areas, waahi tapu and waahi tapu areas established under the Historic Places Act 1993, and recorded archaeological sites from the New Zealand Archaeological Association files.

Approximately 800 buildings have been identified, along with 200 heritage trees. There are up to 1100 recorded archaeological sites. This information is available in the form of an inventory which is available to all residents for use. Of these

sites, some 200 buildings and 70 trees have been identified as having particular importance, sufficient to warrant formal protection under the District Plan. A small number of archaeological sites have also been identified for particular protection. These are listed in the Appendices to the Rules Section of the District Plan.

Those matters of significance to tangata whenua are discussed in Part 4.



3.9 SPECIAL AREAS

Within Waitakere City, there are a number of small areas that have highly specialised activities that are very different from the surrounding area and have the potential to be developed, or have been developed, for specialised activities:

- the Quarry - this quarry is owned by Waitakere City Council and is used as a source of aggregate.
- Balefill at Kay Road;
- West Harbour Marina - this is an area of land adjacent to the actual Marina;
- Harbour View North - this is an area of land on the eastern side of Te Atatu Peninsula adjacent to Harbour View, Pringle and Beach Road;
- Te Atatu Boat Club - this area of land is used by the Boat Club and for associated boating activities;
- Henderson Bible College - the Bible College occupies a large area of land within the Lincoln Park industrial and commercial area. It includes residential and educational activities;
- Lincoln Park Special Area - this is an area of land lying adjacent to Lincoln Road, formerly the site of Penfold's Winery;
- Marae Special Area (Te Atatu) - This is an area of land comprising 2.5 hectares located within Harbourview-Orangihina Park, upon which a marae will be developed.
- Waitakere Hospital - this includes the hospital complex in Lincoln Road;
- Corban Winery Estate - this is the complex of buildings and land associated with the Corban's Winery adjacent to Henderson town centre;
- Monterey Park - this lies adjacent to Upper Harbour Drive, across from Herald Island. It is used as a tourism facility;
- Hoani Waititi and Massey Marae - these marae serve the pan-tribal Maori and wider communities. They include a range of buildings in addition to the main wharenuī (meeting house);
- Te Kawerau a Maki marae land - this is located at Bethells/Te Henga and involves a site for the location of Te Kawerau a Maki's marae.

The following four Special Areas make up the former Hobsonville Airbase:

- Hobsonville Marine Industry Special Area - This is an area of land that has been identified as being suitable for marine industrial activities requiring deep water access for the launching and retrieval of large boats (up to about 60 - 75 metres in length).
- Hobsonville Base Village Special Area - This is a former part of the Hobsonville Airbase that will be developed for a range of urban activities.
- Hobsonville Landing Special Area - This is an area which adjoins the Upper Waitemata Harbour, and which has in the past been developed and used for defence purposes. It is required for large boat access to the harbour, as well as for ferry facilities. Other activities will be provided for in future, by way of a plan change process.
- Hobsonville Future Development Special Area - This is an area which will be developed for urban purposes via a future plan change.
- The Hobsonville Village Centre Special Area is located between Hobsonville Road and the new State Highway 18 Motorway, and extends from 84 Hobsonville Road eastwards to the Hobsonville Domain. This Special Area seeks to provide primarily for employment (non-residential) activities, with only very limited provision for residential activities. Provision is made for industry, office and service activities, and a retail/mixed use node. The retail/mixed use node is intended as an extension to the existing Hobsonville Village.
- Massey North Town Centre Special Area - This is an area of land where it is proposed to establish an expanded integrated *Major Town Centre*.
- Massey North Employment Special Area - This is an area of employment land that is located to the north of the Massey North Town Centre Special Area.
- Monier (CSR) - occupies a large site in Rankin Avenue and provides for the existing activities associated with the manufacturing of ceramics on the site while protecting the future

development potential of the site should these activities cease to continue.

The elements of the City's environment described above are brought together and unified by general processes and systems - such as:

- energy systems, the water cycle, the atmosphere, all of which require the city to be managed as a whole;
- ecological processes and ecosystems which interact at all levels;
- the life force or mauri that is considered by tangata whenua to be present in all things;
- the world view of each individual who thinks of and treasures the city in a particular way, which combines to create a complex of values and landscapes.

The Resource Management Act requires Council to be responsive to all these layers of the environment to understand and engage with the pressures and effects on each part, in a way that will lead to a sustainable future.

