

PART 4 THE ENVIRONMENT AND RESOURCES OF THE DISTRICT

NATURAL AND PHYSICAL ENVIRONMENT, PEOPLE, THE VISION, ISSUES AND STRATEGY

4.1 INTRODUCTION

A number of separate elements comprise the environment of Papakura District. These include the natural landscape, built structures and features, historic places and areas and ecosystems which include people and communities. The District Plan sets out the characteristics of the environment of Papakura which have been identified, through public consultation, as important matters to be addressed in this document. Provisions for the urban expansion required pursuant to the Auckland Regional Growth Strategy have or will be incorporated, bearing those matters in mind. The principles of sustainable resource management apply in the formulation of the objectives, policies and rules of this District Plan which address these matters.

4.2 THE NATURAL ENVIRONMENT OF PAPA KURA

The natural landscape of Papakura District sets the initial tone and context for resource management. Both the rural hinterland and the developed urban environment, set on the edge of the Manukau Harbour, have a welcoming and comforting ambience which is evidence of tradition and conservatism. These two components of the District are initially defined by the qualities of the natural environment.

A distinctive and unifying feature of the District is the amount and quality of vegetation which exists in both rural and urban parts of Papakura. The Hunua Ranges are characterised by trees and this feature lends the rural environment a gracious and mature feel. Both the rural and urban landscape are punctuated by stands of native bush of outstanding quality and are visually and ecologically significant.

In addition, much of the character of the natural environment is based on the number and variety of wildlife. Birds and other fauna contribute to the proper functioning of ecosystems and establish habitats which make a significant contribution to the character and amenity of the District.

A significant element of the natural environment is the coastline. Papakura has a coastline of some 32 kilometres which opens on to the Manukau Harbour. This coastline has great significance to the community and embodies visual, recreational, ecological and cultural values. It helps to define the District and provides a contrast to the urban development which fringes the harbour.

In particular, the coastal landscape has a special quality in physical, visual and ecological terms. The inlets of the Manukau harbour create an irregular intermingling of land and water and establish a distinctive edge to the District. Salt marshes, mangrove forests and other types of inter-tidal zones provide a valuable environment for fish, birds and other fauna.

The coastline is a location of special and unique habitats. Both spawning and feeding grounds for some rare species exist on the Manukau Harbour coastline and the particular feature which makes the coast of Papakura notable is the fact that these wildlife areas are in close proximity to urban development.

The quality and attractiveness of the coastline is influenced by land-based activities in other parts of the District. The quality of stormwater run-off and the creation of sediment as a result of land development, both within and beyond the District, are two matters which affect the quality of the coastline of the District. While water quality issues are primarily the responsibility of the Regional Council, the Council will seek to ensure that the District and the coastline is managed in order to minimise pollution and other adverse impacts.

4.3 THE PEOPLE OF THE DISTRICT

4.3.1 The Cultural Heritage of Papakura

Human occupation, use and modification of the natural and physical resources of the Papakura District extend back through tradition and history to the earliest period of settlement in the region. Maori occupation has been relatively intense because of the strategic location of Papakura at the south-eastern extremity of the Manukau Harbour and at the entrance to major routes to Clevedon and Wairoa River in the east and to the Waikato in the south.

In the early 1860s the wider Papakura area became important with the military build-up associated with the Waikato campaign of the Land Wars. Great South Road was extended south to Pokeno and a series of military installations were constructed to defend the region and support the supply lines. The development and expansion of Papakura continued with the construction of the railway and southern motorway.

Today, within the Papakura District, there are remains of Maori and European occupation and settlement. These historic places and areas are important to Papakura as they form part of a unique record of the cultural heritage of the Auckland region.

4.3.2 General

The population of Papakura provides an important foundation upon which the provisions of the District Plan may be built. An understanding of the dynamics of population growth and its social characteristics is essential as changes and trends in the population are directly relevant to the objectives and policies which are set out in this document.

Following local government re-organisation in 1989, Papakura District has greatly increased in physical size, physical diversity and population. It grew from a predominantly urban area of 2,000 hectares to a diverse combination of rural and urban landscapes, covering approximately 12,000 hectares.

Within this area, Papakura District had a 2001 usually resident population of 40,655 people (Table 4.1). This represents an 22.8% increase from 1986 when residents of the same area numbered 33,108. By contrast, the old Papakura City contained only 23,565 usual residents.

**Table 4.1: PAPAURA DISTRICT TOTAL POPULATION
1976 - 2001**

Census Year	Total Population	% Increase
1976	28,887	
1981	31,014	7.36
1986	33,108	9.22
1991	37,150	12.21
1996	39,627	6.67
2001	40,655	2.60

When taken over the last two decades, the population of the District has grown steadily and the 2001 population accounted for approximately 4% of the total population of the Auckland region.

4.3.3 Ethnicity

Reflecting the rest of the Auckland Region, Papakura District displays considerable ethnic diversity (Table 4.2). Compared to the region as a whole, Papakura has a larger Maori population and a correspondingly smaller proportion of Pacific Peoples.

Table 4.2: ETHNICITY BY AREA

	Ethnic Group							
	European		Maori		Pacific Peoples		Other	
	#	%	#	%	#	%	#	%
Papakura District	25,029	66.8	8,808	23.5	1,989	5.3	1,641	3.9
Auckland Region	676,134	63.5	63,630	6.0	120,057	11.3	151,440	14.2

Not Specified: Papakura District = 2,160, Auckland Region = 53,693

Ethnic groups are distributed unevenly within the District. Western areas such as Hingaia and Pahurehure are almost exclusively European while the urban areas of Papakura City contain the bulk of the Maori and Pacific Island population. The other rural areas such as Drury and Ardmore are predominantly European.

4.3.4 Employment and Industry

The residents of Papakura engage in a broad range of occupations. The spread across occupational groups is relatively uniform with the exception of agriculture (in which only half as many people are engaged as in any other occupational group). This pattern contrasts slightly with that for the Auckland Region as a whole in that a greater proportion of Papakura residents are engaged in trades and labouring occupations, and a lesser proportion in managerial, professional and technical occupations. Three major industry groups dominate the employment patterns of Papakura residents, being manufacturing; wholesale, retail and restaurants; and community, social and personal services.

It has also been identified that a significant number (8,400 in 2001 – Census) of Papakura residents leave the District for employment each day, while only modest numbers enter the District for employment (the comparable figure in 2001 – Census was 4,800). In 2002 the Council adopted the *Employment Strategy and Guidelines for Papakura District, 2002*. That document outlines six strategies for achieving increased employment “self-containment” for the District, as a means of better enabling the

community to provide for its social and economic well-being. Therefore the availability of commercial and industrial land, in terms of the overall amount (hectares) is a resource of the District. Further suitable locations will need to be identified to enable industrial and commercial growth to complement population growth. In addition, the District Plan adopts a strategy for managing the adverse effects of industrial and commercial activities (See Section One, Part 4.7.7).

4.4 THE BUILT ENVIRONMENT

Within the context of the natural landscape and environment, the people of the District have evolved a built environment which adds character to Papakura. The urban landscape derives much of its essential qualities from the nature and quality of the housing stock, the nature and distribution of the commercial nodes and the location and growth of the industrial areas.

4.4.1 Residential Built Environment

The quality of residential living in Papakura is considered to be a special feature of the District and a matter which deserves protection. While the current trend has been for in-fill housing on larger lots, the Council is concerned to retain the qualities and amenities of residential neighbourhoods.

In the late 1800s the rail line brought early residential development to Papakura, being at the end of the suburban line from Auckland. World War II saw further growth in residential development with the establishment of the Papakura Military Camp and the Ardmore Aerodrome. The extension of, and improvements to, the Southern Motorway has driven much suburban residential expansion from the 1970s, notably that at Pahurehure and Conifer Grove.

Residential development throughout Papakura typically comprises single/double storey detached dwelling-houses on individual titles. However, the historical drivers of residential development, areas of government supplied housing, the age of housing stock, and its particular location within the District provide points of differentiation amongst residential neighbourhoods.

As measured by building consents issued for new buildings, building activity, has fluctuated since the mid – 1980s. New Dwellings account for only one-quarter of total new building activity, and while dwellings can also be created as a result of consents for building alteration, the demolition, removal and/or conversion of dwelling units (for example to professional activities) tends to offset the implicit increase arising from consents for new dwelling units.

Notwithstanding this, the long-term trend is toward smaller households meaning that new dwellings, in a range of forms, are expected to increase at a higher rate than population growth generally. This pattern, and the demand for new and more diverse housing opportunities, including specialised accommodation, can have adverse effects on amenity values including incompatible scale, form and arrangement of buildings. Site development can have impacts on the special character, heritage values or environmental significance of an area. At a broader scale, the form of residential development can have effects on the efficiency of infrastructure, including transportation infrastructure, and energy use.

As new areas are identified for urban expansion, or as redevelopment occurs in existing urban areas, residential amenity must be either provided for or enabled to be maintained and enhanced, while the efficient use of land and infrastructure is maximised.

4.4.2 Business Built Environment

Commercial activities in the Papakura District are focused primarily on the Central Business Area.

Industrial business development occurs in a number of locations including at the fringe of the Central Business Area, and at Takanini, Drury and Hunua Road – Redhill. In Hunua Road – Redhill, business activity is primarily industrial and construction, transport and storage. In Drury, activity is again mainly industrial and construction, with wholesale and some commercial activity along Great South Road.

Takanini has a more mixed-use character than Drury or Hunua Road – Redhill, with the industrial and wholesale activities increasingly joined by commercial activities, predominantly along and immediately off Great South Road. The Takanini Straight (being that length of Great South Road north of Wellington Park and south of Taka Street), in particular, has a number of car sales yards and a variety of low intensity commercial activities.

4.5 THE FUTURE

The resources of urban Papakura comprise an attractive environment for cultural, social and economic development. The resource base of natural, physical and cultural attributes provides an opportunity for Papakura to address the future with confidence. The District is favourably placed for continuing urban growth and the present momentum should be managed in such a way that the future of the District is maintained and enhanced in a sustainable manner, economically, environmentally and socially and consistent with Part II of the Resource Management Act 1991.

The Auckland Regional Growth Strategy: 2050, 1999 (RGS) anticipates an additional one million people being accommodated within the Auckland Region by 2050. Under the RGS, approximately 70% of the population increase needs to be accommodated within the existing metropolitan urban limits and the balance in Greenfield areas, with most of this urban growth focused around centres, or nodes of varying sizes, which are located along primary passenger transport corridors, and where appropriate along these corridors themselves.

The RGS identifies Papakura as one of two sub-regional centres in the south, (the other being Manukau City). The Southern Sector Agreement prepared under the RGS further specifies that Papakura Central Area is the Papakura sub-regional node. More intensive mixed use development should take place particularly in the Central Area where commercial and residential components will be able to change in a co-ordinated and integrated manner as proposed in the Papakura Central Area Structure Plan – February 2000. Takanini and the Hingaia Peninsula have also been identified as locations for further urban growth.

One of the outcomes sought by the Auckland Regional Land Transport Strategy is to encourage the development of Rapid Transit Services in the main corridors (the southern corridor is specifically relevant to Papakura). This in turn is seen as a key means for improving the Region's transport system and supporting the more intensive types of land use development envisaged by the RGS.

Papakura is identified as an area for potential intensification as it is ideally located on the main rail corridor that traverses the District in a north – south direction. It has the potential to become a key transfer point within the Southern Corridor rapid transit route and could become a major focus for users of rapid transit. To support this, the Papakura rail station was identified as a key Park and Ride/transfer point. Sustainable initiatives, particularly in terms of

improving transport alternatives to the private motor vehicle, such as passenger transport, cycling and walking are necessary in order to enable the development of an urban form which is less reliant on motor vehicles.

A notable feature of the District is the high level of local amenity. Air quality is high and neighbourhood noise levels are low; landscape qualities are high and accessibility is good. The quality of the coastline is good with the potential for enhancement particularly where supported by objectives to improve water quality and retain recreational use.

Papakura is characterised by good quality residential amenities. Housing occupies large parts of the urban area with about 75 percent of the built-up area subject to residential zonings. The RGS has been prepared to ensure growth is accommodated in a way that meets the best interests of the inhabitants of the Auckland Region. The RGS envisages higher density and more mixed-use development (different activities, residential, business, retail etc, sharing premises or grouped together within the same area).

It is intended that growth will be managed by promoting quality and compact urban environments through intensification in specific areas. Urban growth will be focused around town centres and major transport routes to create higher density communities with a variety of housing, jobs, services, recreational and other activities (mixed use), including provision for emergency services in urban centres and near key transport corridors with less emphasis on general intensification throughout suburban areas.

The RGS also seeks to ensure sufficient business land is available in specific planned locations. Commercial development is spread throughout the Papakura District and this provides convenient and accessible retailing, industrial, warehousing and service centres for the population. The Papakura District also contains the Ardmore Aerodrome which is a significant resource in the District.

A degree of interrelationship has evolved with commercial opportunities being focused on the Central Business Area which is, in turn, supported by various smaller nodes. There has been a trend towards greater mixed uses evolving in the commercial areas with a more general spread of activities.

Future growth outside the existing metropolitan areas should occur only where environmental, accessibility and community principles can be met. This future growth opportunity is intended to result in a wide range of living opportunities, both in rural and urban areas by enabling the accommodation of future growth in a variety of ways including integrated mixed use development focused on the Central Area. Structure planning exercise have been undertaken to support the progressive inclusion of the Takanini and Hingaia Areas within the Metropolitan Urban Limits. The Papakura Central Structure Plan supports the intensification of development in or in close proximity to the Central Business Area.

An important element in encouraging intensification through mixed-use development is ensuring that business activities are compatible and that environmental, accessibility and community values area protected. Future business development will be enables and managed with regard to these values and potential adverse effects in particular on amenity, traffic, and the Central Business Area.

Along with the changes in the physical environment, the population of the District is changing and is expected to continue increasing for the next 50 years. In 1996 Papakura District had a population of 40,000 with planned provision for an additional 14,000 persons divided between metropolitan (12,000) and rural (2,000) areas respectively. Without the direction of

the RGS, the accommodation of 12,000 people in Papakura within the existing urban area would mean the continuance of infill development and the development of the minor remaining Greenfield land within the existing metropolitan limit boundary.

The RGS aims to increase population density. The Southern Sector Agreement in accordance with the RGS provides for an additional 35,000 persons, with 5,000 expected to locate within existing urban areas and 30,000 in the new settlements of Takanini (20,000) and Hingaia (10,000) by the year 2050. The total projected capacity for Papakura District between 1996-2050 is projected to be 94,000, a 135% increase. 65% of this increase in Papakura will take place on Greenfield land. Despite an increase in population it is projected that the population of Papakura, in common with New Zealand as a whole, will be steadily aging.

The actively engaged labour force in the Papakura District in 1991 was 17,150 and in 1996 was 17,700. This number is expected to increase, as a consequence of Papakura's role in the Regional Growth Strategy. The dynamics of the regional economy are constantly changing and difficult to predict, largely because of the dynamic nature of business, external influences on the economy, changes in industrial structures, and the numerous factors that influence individual locational decisions.

Further changes such as growth of suburban business centres, the move towards more mobile and 'footloose' employment, and a greater reliance on technology can be expected. Mixed use provisions in the Central Area, Takanini and Hingaia will provide the opportunity for employment growth in a location readily accessible by public transport, walking and cycling as well as private vehicles.

4.6 THE VISION

An appreciation of the natural and cultural environment of the District and a perception as to how this may be protected and preserved and allowed to evolve into the future provides a basis for the formulation of a vision for its future.

The vision of Papakura District is based on its present and future role as a major geographic, social and economic element of South Auckland. In particular, the urban areas, together with historic places, are a significant residential, commercial, educational, amenity and recreational resource and Papakura remains a key service centre for an extensive and growing rural community.

Accordingly,

Papakura is seen as continuing to evolve as a coherent rural-urban district with high standards of amenity characterised by pastoral farming, horticulture and vigorous rural settlement centred on a strong and vibrant urban heart with its own cohesive base of residential, business and recreational development.

4.7 RESOURCE MANAGEMENT ISSUES

The achievement of this vision raises a number of issues of resource management which must be identified and addressed in the District Plan. The interrelationship of these district-wide resource management issues is clear and the need for integration is apparent.

4.7.1 Community Enablement

A significant challenge for the District Plan is that of ensuring a resource management framework which maintains or enhances elements of community enablement.

4.7.2 Future Development

The urban areas of Papakura District provide a living environment, employment opportunities, shopping opportunities and recreation facilities for the population of the District. Of particular importance is the growth of Papakura as a sub-regional centre.

Over the planning period, it is projected that further population growth will take place in the District and the way in which this growth should be provided for raises a number of issues. The Auckland Regional Policy Statement and Auckland Regional Growth Strategy (RGS) provide guidance and a framework to ensure a consistent approach to managing social, economic and environmental effects of future growth across the region. Supportive District Plan provisions are therefore necessary.

A primary issue is the management of growth. Papakura District has the qualities of an urban place within a rural setting but increasingly the accommodation of growth within the Regional context will shape Papakura's development. The number and level of rural activities and rural settlement remain substantial while urban residential growth is placing pressures on amenity, infrastructure and land.

Integrated resource management requires that the provisions for rural areas and the provisions for urban development comprise a unified and comprehensive response to the demands for further settlement opportunity and the desires for on-going rural and urban amenity, both of which are identified in the RGS as desired regional outcomes.

The District Plan will encourage the re-development of a mixture of land uses that decrease the need for vehicle travel. Consistent with that approach the Papakura Central Area Structure Plan, has been developed to give effect to the policies identified in the Regional Strategies as they apply to the Central Area of Papakura, for example, to maintain and enhance the amenity values of the Central Area as an integrated business centre and community focal point, and through the introduction of land use measures that support passenger transport along identified routes to and from the Central Area. Other considerations may include the availability of commercial and industrial zoned land in suitable locations in response to demographic and economic changes.

Provisions introduced into the District Plan will also seek to ensure that urbanisation of Takanini and Hingaia takes place in a manner which enables community wellbeing, while appropriately managing environmental effects.

Continued expansion of the urban area outside of those areas identified as appropriate for growth (Takanini and Hingaia) could degrade some of the qualities of both the urban and rural environment which characterise the District. Further, while there are demographic pressures for additional residential land, significant stocks of commercial and industrial land remain available. Accordingly, any future urban development outside of the growth areas of Takanini and Hingaia will be governed by considerations of amenity, local character and a demonstrated need for land for urban purposes.

4.7.3 Residential Development

The projected population growth of the District requires that a considered District strategy for residential development be formulated and implemented. Residential development during the planning period will be governed by two principal factors. Firstly, there is the need to maintain and enhance the present quality of the new residential environment. Secondly, there is the need to provide opportunities for new development to take place.

The Council considers that population growth in the District should assist in ensuring the proper future use, development and management of the resources of the District. At the same time, this future growth should be managed in a way that secures the present levels of amenity while enabling further urban growth to take place.

The nature of the existing residential development greatly influences the opportunities for new development in the established urban area. There are instances where the desire for in-fill housing is frustrated by the siting of an existing dwelling. In addition, some parts of urban Papakura cannot adequately dispose of stormwater because of the limitation of existing infrastructure and the consequent problems of inundation and limited effluent disposal.

The District's role in catering for future population growth has been translated into an expectation of at least 8,000 additional households from 2001 to 2021. More than 8,000 new dwelling units would need to be constructed to achieve that target, partly due to the potential loss of established dwellings by way of demolition, removal or conversion to non-residential use and partly because 3-5% of all new dwelling units constructed will be vacant (ie will not contain a household) at any one time.

About two-thirds of the total District growth is expected to be accommodated through the introduction of new urban zonings (replacing rural zoning) in the Takanini and Hingaia areas. Sufficient opportunity will be made through the provisions of this District Plan so that households may be accommodated in a way that the present qualities of the residential environments of Papakura are reinforced and enhanced. The remaining balance of the residential growth will be accommodated by infill and by residential intensification, including the enablement of residential activities within the Central Business Area. Within the identified new urban areas of Takanini and Hingaia, similar intensive residential foci are intended.

Some household growth can be accommodated in the rural areas, beyond Hingaia and those parts of Takanini for which progressive urbanisation is planned. Such provisions for those parts of the District are set out in Section Two, Rural of the District Plan.

The principal housing issues are:

- To avoid the erosion of the overall housing stock and residential amenity levels in the established residential areas, particularly those intended and enabled to accommodate more intensive housing development.
- To ensure that new residential areas represent an efficient use of land, and maintain or enhance the residential amenity levels of the District.

4.7.4 Tangata Whenua

The needs of the tangata whenua and the manner in which these needs are provided for in the District Plan is a matter of significance. Based on a deep, spiritual association with the land and the environment and, in particular, with the Manukau Harbour and the Hunua Ranges, the tangata whenua of Wharekawa (Papakura) have sovereign links with the

District. The provisions of the District Plan, therefore, have significant implications for a substantial group of people. The people of Wharekawa derive mana from the harbour and the ranges. These elements of the environment supplied the physical and spiritual needs of those who occupied the District and are a great taonga for them. The modification of this environment has diminished this mana and this situation needs to be reversed.

In accordance with the Resource Management Act 1991 the Council will work with the tangata whenua of the District to address the resource management issues facing Papakura. This process will be facilitated by methods and techniques of consultation which are appropriate to the scale and importance of any issue as it arises.

In addressing the sustainable management of natural and physical resources, the District Plan will restore and preserve the mana of the tangata whenua. Matters such as water quality and the management of the margins of streams and the coast are fundamental issues to tangata whenua. The preservation and conservation of natural features and waahi tapu which are valued by the tangata whenua accords with the imperatives of the community of Papakura as a whole. So too does the active pursuit of high levels of environmental quality and local amenity.

4.7.5 Amenity

Within the context of further development in the District, the retention of local amenity is paramount. The amenity of Papakura District is made up of a range of attributes which create for the community the special features of Papakura. Air quality, water quality, noise, the landscape, cultural attributes, traffic, views and local visual standards are all factors which contribute to the creation of amenity. Resource management strategies need to examine these features.

4.7.5.1 Air Quality

Air is a natural resource which requires specific consideration. Clean air is a fundamental community resource and on-going air quality must be protected. While it is a resource which is not unique to the District, activities within Papakura can impact on air quality in general and have consequences both within the District and in adjoining jurisdictions.

Activities which produce emissions of particulate matter into the air have the potential to degrade air quality. Many industrial and commercial activities involve processes which release such emissions and are therefore subject to environmental controls. Domestic activities such as open burning involve some environmental impact and are also subject to management control. The use of motor vehicles creates further emission of contaminants.

Papakura District has a relatively clean air environment. Air monitoring carried out in 1989 showed low concentrations of acid gases (sulphur dioxide) and smoke (soot particles), slighter higher levels of nitrogen oxides (such as nitrogen dioxide) with occasionally high concentrations of suspended particles as a result of construction activity.

The District Plan contains provisions which are aimed at securing acceptable levels of air quality. Since remedial measures are generally costly to implement, the provisions of the Plan are directed at retaining the observable characteristics of the District in terms of clean air. Separation distances will be required between activities producing emissions and other sensitive land uses. These will include front yards to all developments in order to establish buffers between roads and adjoining activities. Malodorous industries producing down-wind effects are most problematical but will be monitored to ensure on-going compliance. The

“best available technology” will be a guiding criteria and installed emission control technology must be evidenced as being of good quality.

4.7.5.2 Water Quality

Papakura District contains a number of significant streams and water courses. Not only is the northern boundary of the District defined by a stream but many of the important areas of social and economic activity are located alongside waterways. The Papakura Stream, Hingaia Stream, Hays Stream, Maketu Stream and Oira Stream, traverse or flow through urban concentrations and add distinctive character to many localities throughout the District.

Further, the District adjoins the Manukau Harbour and this coastal location gives Papakura some of its distinctive qualities. Principally a source of recreational opportunity for the community, the harbour is an important element contributing to the overall ecological health of the District. It provides roosting and breeding grounds for bird life and other fauna which, in turn, interact with other parts and habitats within Papakura. Protection and enhancement of these linkages by ensuring the ongoing quality of contributing waters will assist in maintaining the level of environmental quality of the District.

A significant water resource which lies within the District and which has importance is the Hays Creek water supply catchment land in the foothills of the Hunua Ranges. This catchment comprises approximately 182 hectares and provides potable water supplies for the population of Papakura. The retention of high water quality within the lands of this catchment is an important consideration for the future well-being of the District.

Much of this resource is without specific protection. While this has not generally diminished the quality of the water, there are some reservations about nutrient run-off and pesticide residues. This situation requires a considered approach to the management of the land within the catchment and the nature of permitted activities.

Increasing urbanisation, particularly industrialisation, poses an increasing risk to water quality and water quantity in that greater run-off rate is generated. Similarly, increasing levels of rural settlement with associated human activities, animal wastes, run-off, and waste management have the potential to adversely affect the quality of stream and harbour waters and water supply catchment. The catchment lands of Papakura District require conservative management of activities to minimise the prospect of environmental degradation.

4.7.5.3 Noise

Noise in the urban environment results from a number of activities. Either separately or as a concentration, commercial, industrial and residential activities have the potential to create disturbing levels of noise. Even some types of active recreation have the potential to cause an adverse impact on the environment. All these and other activities require a degree of management to secure amenity and environmental quality.

Transportation is the most common general source of noise in the urban area. This includes vehicular noise and aircraft noise. Residential properties fronting heavily trafficked roads and intersections are particularly affected with both traffic composition and individual types of vehicles being regarded as principal sources of noise. With increasing vehicle numbers on the road, it is likely that noise problems associated with traffic will worsen.

Industrial activities are also a common source of noise. With increasing industrial development, the amenity of adjacent non-industrial areas will need to be subject to review to establish the adequacy of existing controls.

Increasingly, noise generated by residential activities or non-residential activities located within residential areas is becoming a matter of concern. This is particularly a problem in areas of medium and high density development where sound attenuation offered by separation or physical barriers is less. Management of this situation relies on a control regime which recognises that legitimate residential activities do, from time to time, generate noise which may be perceived as offensive while restricting the worst effects of disturbing noise levels.

Aircraft operations in the airspace above the District and from landing areas create noise levels which can be a disturbance to a range of adjoining or over-flown activities. Either fixed-wing or helicopter aircraft may be responsible for such disturbance with the potential for increasing helicopter operations throughout the urban area itself posing a possible future problem. At Ardmore Aerodrome, legitimate aviation activities have been carried out for decades and make a significant contribution to the present level of economic and social activity in Papakura.

4.7.5.4 Landscape and Visual Amenity

The landscape of Papakura is a resource which needs to be managed such that the appearance of the District is not degraded. Local visual standards are also important and help in setting the overall level of amenity. Changes to the landscape will naturally occur as activities become established but such change can be managed to retain environmental quality and amenity while not restricting the use and development of the land.

Both rural and urban activities contribute to landscape modification and change. By its very nature, urban development irreversibly converts rural landscapes to a new range of uses. Particular activities such as quarrying also result in dramatic changes to the landscape and the establishment of major rural enterprises may have a long term visual impact if measures aimed at mitigation or rehabilitation are not undertaken.

Much change to the landscape is unavoidable. At the same time, the retention of environmental quality is possible through careful development and later restoration works. Earthworks which are kept to a minimum and which are followed by re-vegetation can secure amenity values and retain the valued landscape qualities of the District.

4.7.5.5 Earthworks

Uncontrolled earthworks lead to sediment loss from the site of the excavations and subsequent sedimentation of waterways and watercourses. Sediment transport results in watercourses filling up and estuaries and waterways becoming clogged. This results in reduced availability of these resources for the use and enjoyment of the community.

The re-vegetation of excavated and soil-disturbed areas can assist in the reduction of on-going impacts of development activities. “Foot-print” areas can be established for buildings and accessways leaving the balance of the site vegetated.

4.7.5.6 Views

Part of the general amenity of the District is founded on the ability to enjoy views of the District. Such views may be enjoyed from both elevated positions overlooking lower parts of Papakura and from the low-lying areas back towards such elevated features as the Hunua Ranges. Further, views over the coastline are enjoyed by those who reside alongside the coastal marine area.

In all instances, these opportunities enhance the overall experience of living, working or travelling through the District and contribute to the environmental quality of Papakura. Because the Hunua Ranges rise out of a fairly level, uniform landscape, they are visible from many parts of the District and beyond. While localised screening may obscure specific vistas, these ranges remain a focal point for many in the community.

At the same time, natural features are vulnerable to development and to the establishment of more intensive activities than might naturally occur. In this regard, the Hunua Ranges are susceptible to changes in activity patterns and would contribute less to the quality of views in the District if adversely affected by development.

Similarly, the views available over the Manukau Harbour from viewpoints adjoining the coastline are also vulnerable. The present opportunities comprise a valued environmental quality which significantly contribute to overall and local amenity and careful management is required to secure this amenity for present and future generations.

4.7.6 Preservation and Conservation

Papakura District has a wide variety of conservation and heritage elements. The heritage of the District consists of a range of old and new features which contribute to community identity and a sense of place. It consists of built heritage, archaeological sites, historic sites and landscapes, tangata whenua heritage, natural heritage and urban trees.

The Papakura District contains many historic places and areas, a number of which have not been recorded and formally recognised for protection and preservation. Council will encourage the promotion of the identification and management of places and areas of historic and cultural significance and include these in the schedules of places, areas, buildings and objects to be protected.

The District contains many trees and areas of native bush which are of visual, historic or scientific appeal. Within the urban area, these include such natural features as Kirk's Bush, alongside introduced plantings of individual specimens.

Further, an inventory produced by the Department of Conservation has identified ten sites of special wildlife interest (SSWI). There are seven forest/shrubland habitats, two freshwater habitats and the Manukau Harbour SSWI where it abuts the District. The Manukau Harbour is ranked as of international importance as a wildlife habitat. All the others are ranked as having district or local significance. Collectively, the seven forest areas are important elements of a local ecological corridor for birds which travel to and from the Hunua Ranges. For these reasons, it is important that these areas be given protection in the District Plan.

The Hunua Ranges themselves have international significance for forest wildlife species. There are important areas of regenerating hardwood and podocarp forests, together with areas of kanuka and manuka, providing significant habitats for common forest and forest margin birds. Native species which are present include the New Zealand pigeon, tui, fantail, grey warbler and kingfisher.

4.7.7 Business Activity

Business Development enables the community to provide for its wellbeing. It can either reinforce or subvert other District Strategies in relation to growth, housing and residential amenity levels. In particular:

- It enables the provision of those establishments offering goods and services directly consumed by people, communities and other businesses (commercial development)
- It enables a wide range of employment opportunities (resulting from both commercial and industrial development)

The way and rate at which business development is enabled has implications for the sustainable management of natural and physical resources and the social and economic wellbeing of the community in terms of:

- The level of accessibility to consumed goods and services, and locational and service choice, to accommodate the needs and preferences of the community.
- The relationship between the distribution of business activity and travel distances, times and modes in relation to patronage and employment trips.
- The potential for adverse impacts from business activities upon the environment including, noise, air pollution, shading and visual distraction, both from the activities themselves and through the attraction of traffic and pedestrians.
- The extent to which the grouping together of commercial activities contributes to the social environment, the efficiency of infrastructure usage (including the roading network) and the establishment and use of community and recreational activities. The grouping together of commercial activities in nodes and, where appropriate, along main arterial routes rather than allowing these activities to freely locate throughout the district also has environmental benefits in terms of convenience, transportation and travel efficiency, managing adverse impacts, and facilitating provision of an appropriate level of public amenity. Any new nodes or any commercial activities outside of the Central Business Area will need to be fully assessed in terms of effects of such development in respect of convenience, transportation and travel efficiency and the effects on the Central Business Area and existing nodes, as focal points for commercial and retail activity.
- Sporadic commercial development, particularly in industrial areas, could also be of detriment to viable industrial activities and result in a loss of convenience and efficiency for the community.
- The overall extent to which business activity (both commercial and industrial) is managed and enabled has a bearing on both convenience of access to, and the range of choice of, employment opportunities for the community.

4.7.7.1 Central Business Area

Commercial (including retail and service) activities in the Papakura District are focused primarily on the Central Business Area, within the Central Area. This principal commercial precinct represents a substantial investment of public and private resources and must be managed to efficiently and effectively meet the needs of investors and the community. The future of the Central Area as a resource to the community of Papakura is therefore a central issue with implications for infrastructure, complementary commercial development and the provisions for adjoining areas.

At the same time, intervention is required to repair and adapt this environment to changing circumstances. The redevelopment and intensification of Papakura's Central Business Area including both residential and business growth will be consistent with the RGS, which identifies the Central Business Area as one of the two (along with Manukau City) sub-regional centres in the southern sector.

(Note: the term "sub-regional centre" in the context of the Auckland Regional Growth Strategy is determined by centre role, function and complexity, not only by the size or influence of its retail components.)

The consolidation of some commercial activities within a clearly defined Central Business Area is intended to result in social, economic, cultural and environmental benefits, including those arising from the opportunities offered by existing infrastructure.

However, some forms of commercial activity may be less suited to locating in the Central Business Area. These may include activities which are assessed to have visual characteristics, noise or air emissions, or vehicle access requirements which are incompatible with the Central Business Area environment. It may be appropriate to provide for some activities to locate outside of the Central Business Area provided that they do not detract from sustainable management objectives (including social, economic and travel efficiency objectives) of the District for the Central Business Area as a sub-regional centre and a focal point for the community.

4.7.7.2 Other Business Development

Additional business development for commercial, industrial and service activities will be needed to serve the residential growth of the District which is enabled by the Plan, and as a consequence of wider economic trends. This is a significant issue with implications for growth, community enablement, transportation, amenity and efficiency.

A particular impetus will be the ongoing residential development in the growth areas of Takanini and Hingaia (in the context of the RGS and supporting documents) which will require provision for mixed use and other business development in appropriate specified locations to service community needs. Appropriate zoning provisions will contribute to the regional need and help to achieve greater employment self-sufficiency.

Concentrating business activities rather than allowing these activities to freely locate throughout the District will minimise the spread of any adverse environmental impacts and create a situation that can be managed in a straightforward manner without undue impact on adjoining activities.

4.7.8 Hazardous Substances

Hazardous substances are an increasing part of daily life. Until recently, these substances were poorly understood or used only in specialised areas of society such as agriculture (pesticides), mining (explosives) or industry (solvents). Along with increased use has come an increased awareness of the environmental risk posed.

The uncontrolled use, transport and storage of hazardous substances has serious environmental consequences. In Papakura District, these activities are, or have the potential to be, located in both the rural and urban environment. Strict provisions are necessary in the District Plan to address this emerging situation.

4.7.9 Waste Management

Refuse or solid wastes are generated by domestic, industrial and commercial consumers. By definition, they are unwanted products and must be removed and disposed of in some manner which is acceptable to the community. This disposal has, until the recent past, been a process which has prompted little community discussion or debate since volumes were low and issues such as the toxicity of wastes were of little concern. This situation has now changed and the matter of integrated and environmentally secure waste management and waste minimisation are principal issues for the 1990s.

The proper management of waste requires a resource strategy which reflects the needs and concerns of the community. It is now recognised that much waste material can be re-used or re-cycled as raw materials for industry and that the disposal of rubbish needs a considered approach. At the same time, there will always be a need for general waste disposal facilities and a waste minimisation programme and these requirements cannot be ignored.

The safe and secure disposal of toxic and non-toxic wastes requires the formulation of acceptable and viable management strategies. Only environmentally safe and secure operations should be established.

4.8 Resource Management Techniques

Appropriate techniques of control must be formulated to secure sustainable resource management. These techniques must enable the use, development and protection of resources while providing certainty and clarity.

Clearly defined zones of activities, the setting out of those activities expected to evolve in those zones and the environmental criteria which will be used to measure the acceptability of activities, both at the stage of establishment and during the period of their operation, offer certainty and clarity.

Performance standards relating to the environmental effects of activities such as noise, glare, vibration, odour, air and water quality, views, landscaping, total visual amenity and general amenity degradation offer flexibility. The performance of all activities will be measured in terms of the applicable criteria to ensure that environmental impacts are minimised if not avoided altogether.

The District Plan relies upon a mixture of zoning and performance standards to serve integrated resource management.

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