



Boffa Miskell

WAIMAUKU STRUCTURE PLAN
Landscape Assessment

Prepared for Rodney District Council
May 2007

Waimauku Structure Plan

OPPORTUNITIES AND CONSTRAINTS STUDY

LANDSCAPE ASSESSMENT

Prepared for

Rodney District Council

by

Boffa Miskell Limited

**RODNEY DISTRICT COUNCIL
WAIMAUKU LANDSCAPE ASSESSMENT**

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EXECUTIVE SUMMARY

The purpose of this study is to identify and describe the landscape character within an identified study area, centring on the township of Waimauku. This document has been commissioned by the Rodney District Council (RDC), and forms one of a number of specialist reports that will assist the structure planning process currently being undertaken by RDC in conjunction with the Waimauku community.

The methodology adopted has comprised both 'desk top' GIS analysis and field survey to determine boundaries and identify the particular landscape characteristics within the study area. There is considerable diversity in the landscape surrounding the Waimauku settlement, with both river/stream corridors and dissected hill country within a relatively limited physical area. The settlement is located in the vicinity of an historical portage and further defined by its location on the rail corridor

The identified study area has been delineated into two major landscape types, namely Upland and Lowland Systems. These two major landscape types are in turn made up of 14 smaller landscape character units. These are defined according to common physical factors such as elevation, contour, geology, vegetation, hydrological features and land-use patterning. Each landscape character area is examined individually and also assessed in its wider landscape context. The report also identifies a number of key locations which define Waimauku's landscape boundaries related to both its visual and physical context. These key locations suggest transitional boundaries or gateways to Waimauku.

The report introduces Landscape Structure Zones, within which a number of the landscape character areas are identified that could accommodate future urban and lower density rural/residential/clustered development, through carefully managed landscape change. Areas where such future growth is less desirable, based on landscape character and quality, are also identified. Generally speaking, the prominent hill and ridgeline landscape features are recommended for protection or limited carefully managed landscape change. In addition, the flood prone lowlands along the main waterways are recommended for protection, enhancement of their ecological and cultural values and incorporation within open space networks. The more elevated valley and hill toe slopes are identified as areas most able to accommodate landscape changes through well planned and managed future growth.

Whilst the study finds that some landscape character areas within the Waimauku study area can better accommodate the type of landscape change that accompanies urbanisation processes, the need to consider landscape values and adopt management strategies that lead to good amenity outcomes in all landscapes is also identified.

1.0 BACKGROUND

Settlements located along the arterial SH16 corridor through north-west Auckland have experienced recent pressures for development growth along with the rest of the Auckland region. Waimauku is strategically located beyond the rural agricultural settlements of Kumeu and Huapai at the gateway to the west coast via Muriwai Road and to the Kaipara Harbour and Helensville via SH16. Whilst still maintaining a rural setting, the character of Waimauku is visibly beginning to change under the pressures of residential development beyond the boundaries of the historical settlement.

Rodney District Council (RDC) have commissioned Boffa Miskell Ltd to undertake a landscape assessment of Waimauku, as part of a wider Constraints and Opportunities Study to develop a Structure Plan for the area's future growth over the next 10-20 years. Structure planning is a common approach to planning for specific areas that are facing development pressure, and can provide a programme by which the local authority and community can strategically coordinate and spatially plan for the future development of growth areas. Structure Plans are particularly relevant in areas of special character or environmental sensitivity as they provide Councils and landowners, stakeholders and the wider community with greater certainty as to the scale and nature of managed growth and landscape change.

Vision Rodney, adopted by Council in 2003, sets out a strategic vision for the future growth and development of the District, mindful of the expectations of its resident communities. Future planning for Waimauku must also be consistent with the provisions of the Proposed Rodney District Plan (2000) and wider statutory requirements.

The Resource Management Act (1991) requires local authorities, in achieving the purpose of the Act, to recognise and provide for the protection and management of outstanding landscapes as a matter of national importance, with amenity values and the quality of the environment being other matters to which regard is to be given under Section 7 of the RMA.

1.1 Scope

The Waimauku community were consulted initially by RDC (in October 2006), on the proposed Structure Plan process. RDC (in December 2006) recorded that the local community has attributed a strong sense of rural values to the Waimauku area, which is recognised as much for the community spirit of the village as for its green countryside aesthetic.

As a result of this preliminary consultation, RDC have identified the following matters to be addressed as part of a landscape assessment for Waimauku:

- Views from the main roads of SH16 and Muriwai Road
- The relationship of Renall's Hill to Waimauku
- Identification of visual catchment boundaries and 'gateways' for the township
- A potential 'green belt' around Waimauku

A study area covering approximately 5,876 ha has been identified by RDC on the basis of their earlier consultation and structure planning intentions.

As set out in our offer of service, this report adopts a characterisation approach to assessing the landscapes of the Waimauku area, in which the landscape is classified into discrete character areas, based on their inherent characteristics and features. By defining the current sensitivities, values and qualities of the existing landscapes that comprise Waimauku, it is possible to evaluate the potential capacity for future change and development within specific areas. The opportunities and constraints to future development and growth are also locally defined by the unique features and characteristics of the landscape units that make up the wider study area landscape.

Future scenarios for growing Waimauku include allowing for differing scales of development and residential densities within the physical and visual boundaries identified by this study. This report considers the potential forms of residential development that are likely to be appropriate in relation to existing settlement and landscape characteristics and features.

The GIS information that accompanies this report ultimately maps out a strategic landscape framework for the future development of the Waimauku area, based on the landscape and visual characteristics and features that have been identified through the course of the assessment process. This proposed landscape structure forms the basis of recommendations for managing future change and development within and around the Waimauku settlement.

Parallel investigations are being conducted by RDC and other consultancies contracted by RDC, in the fields of cultural heritage, traffic, storm and wastewater, heritage features and natural hazards. These attributes of the Waimauku area do not form part of the landscape brief, although in some cases they are closely aligned with and contribute to landscape and visual amenity values. These specialist reports will collectively provide direction to the structure planning process in conjunction with ongoing consultation with the wider community.

2.0 WAIMAUKU IN CONTEXT – LANDSCAPE RESOURCE

2.1 Landscape Context

Along with the neighbouring rural settlements of Huapai and Kumeu, Waimauku occupies a productive alluvial corridor to the north-west of Auckland's Waitemata Harbour, which is served by both SH16 and the North Auckland Railway Line. Waterways are historically an important focus for settlement within the southern part of the Rodney District, which also includes large areas of extensive pastoral land-use and production forest in the interior rural landscapes between its eastern and western coastlines. The Kumeu River, which feeds into the Kaipara River at Waimauku, provided one of a number of portages within the wider Tamaki Makaurau region, linking the Waitemata and Kaipara harbours.

Waimauku also provides an important gateway to the west coast through the Muriwai Valley to the south-west. Muriwai beach is a popular destination for visitors to Auckland's west coast and a rapidly developing residential area. Helensville, at the head of the Kaipara harbour is the main destination of northbound traffic on SH16, approximately 13km beyond Waimauku.

The wider area of Waimauku spans three ecological districts, reflecting a range of geologies, terrain and bioclimatic conditions between Rodney, Kaipara and Waitakere. Prior to land clearing for large-scale pastoral farming and forestry activities, the elevated landforms which define the catchment boundaries of the numerous rivers and streams of this dissected topography supported forests of indigenous podocarpus, including kauri, and hardwoods.

Patchworks of significant remnant native forest are retained within the wider area, along with areas of regenerating manuka-kanuka shrubland.

Early European farmers originally settled within the Waikoukou Valley in the mid 1800's to the immediate north-east of Waimauku, where horticultural activities first commenced alongside extensive pastoral and dairying. The establishment of the North Auckland Rail Line through to Helensville in 1881 subsequently triggered the development of Waimauku as the main township. In the early 20th century, the Huapai Fruit Growers Association subdivided a large area of land to the east of Waimauku, establishing the Kumeu Valley as a commercial horticultural centre. Diverse agricultural activities that include wine and specialist fruit growing, have contributed to attracting more recent lifestyle residential development into the area.

2.2 Waimauku Township

The early layout of Waimauku developed in response to the location of the railway station on the North Auckland Rail Line, in the area now known as the 'old town'. The township grew around Station Road, Cane Road and the Waikoukou Valley Road to support a school, bank, church and later a dairy factory. This location on the alluvial floodplains at the base of Renall's Hill also coincides with the confluence of the Waimauku, Kumeu and Waikoukou waterways to form the Kaipara River. The bedded sandstones underlying Renall's Hill represent a geological barrier within the unconsolidated alluvial gravels that comprise the majority of this area, causing the confluence of waterways at this point.

The realignment of SH16 to the south of the historic township has resulted in a major refocus of its growth. Since the early 1980's there has been considerable new residential development to the south of SH16, centred on the Muriwai Road junction. The 'old town' has retained the commercial interests of the township and the 'triangle' (created by the realignment of SH16) is presently being developed to accommodate a new commercial centre, comprising retail and office accommodation.

Within the wider surrounds, residential development has continued on a piecemeal basis amongst existing rural settlement within lowland valleys and along their defining ridgelines, such as along Taylor and School Roads.

Comprehensive development has also been proposed within the existing agricultural lands to the immediate north-west of the township in a proposed residential scheme marketed as 'Waimauku Estate'.

2.3 Planning Context

The Structure Plan process is subject to a suite of statutory and legislative documents that also address the wider responsibilities of landscape management. These are listed below:

- Resource Management Act 1991
- ARC Regional Policy Statement and Growth Strategies
- Proposed Rodney District Plan 2000

- Vision Rodney 2003

2.3.1 Landscape Designations

Whilst no landscapes within the study area have been identified as *Outstanding* in terms of Section 6 (b) of the RMA, *Significant Natural Areas* have been incorporated into the Proposed Rodney District Plan (2000). The Wharaurua Stream, Kumeu Escarpment and School Road ridgeline are all associated with significant stands of remnant native forest. As a part of the Regional Landscape Assessment Review of 2003/4, the Wharaurua Stream and Kumeu Escarpment have together been identified as an *Outstanding Natural Landscape* (in terms of RMA Section 6 (b)) and included within the Auckland Proposed Regional Policy Statement Plan Change 8, 2005.

In line with the provisions of the RMA Section 6 (a, b and c), *Significant Natural Areas* and *Inland Waterways* identified by the District Plan are protected from vegetation removal and earthworks modification in conjunction with restrictions on built structures and subdivision.

2.3.2 Residential Zoning

The majority of the area surrounding the immediate township of Waimauku is zoned General Rural within the District Plan, whilst the township itself is zoned for Residential M (Medium Intensity), with an area zoned retail service between the state highway and Factory. The Medium Intensity zone currently allows for one residential unit per 1500m² site without wastewater servicing. The present southern boundary of the township, off Muriwai Road, is zoned for future urban development, as shown in the supporting mapping within the Appendix.

There are no 'blanket' provisions regarding minimum lot sizes in the **General Rural Zone**, enabling sites to be assessed on an individual basis against the standards for subdivision set out within the District Plan. The flexibility of this approach is intended to accommodate future rural land use options at a level of amenity which enables rural production to be effectively and efficiently undertaken. **Countryside Living Areas – Rural** coincides with significant areas of remnant native on School Road and Taylor Road, which allow for more intensive countryside living opportunities:

“To enable people to undertake rural lifestyle development and activities in a context where open space and amenity values reflect residential lifestyle outcomes and expectations” (7.8.5.1 Countryside Living Areas - Rural Zone).

2.3.3 Structure Planning

The scope of Structure Planning as set out in the Auckland Regional Policy Statement includes consideration of:

- *The natural character of the land (steepness, natural hazards, including flood proneness or propensity to erosion or slippage, vulnerability of ecosystems and existing vegetation patterns)*
- *The existence of features or values which warrant protection or preservation (such as sites of significance to Maori, other cultural heritage sites, natural heritage, including indigenous vegetation, sensitive areas, such as stream valleys and estuaries, and regionally significant or outstanding landscapes and the need for open space and green networks).*

- *The feasibility of creating green networks, and/ or other means to protect biodiversity, and the requirement for the establishment and retention of riparian protection yards between land use activities and water bodies and coastal waters , (Appendix A-4, 3)*
- *The maintenance and enhancement of rural amenity values and character of the area, within the wider district, sector and region (Appendix A-4, 5)*

3.0 LANDSCAPE ASSESSMENT PROCESS

The characterisation approach utilised by this study has enabled the landscapes of the wider Waimauku area to be consistently described, assessed and compared, based on their distinguishing characteristics and features. This has provided the basis for the identification of important and sensitive landscapes in order to formulate recommendations for the future management of the landscape in the context of projected growth and development and the process of managing landscape change.

In this document, discrete areas of landscape character have been individually described, illustrated and mapped on the pages that follow this summary report. The relative location and extent of landscape character areas are illustrated in **Figure 2**.

3.1 Landscape and Visual Analysis

Through a process involving desktop studies, field investigations and GIS mapping, fourteen landscape character areas have been identified within the Waimauku study area defined by RDC. At the assessment scale applied to this study area, important landscape features, such as Renall’s Hill and the School Road Ridge have been identified as landscape character areas in their own right. The sub-units of these broad landscape character areas distinguish localised characteristics and features, such as watercourses from their defining valley sides, as in the example below:

TYPE	CHARACTER AREA	UNITS
LOWLAND SYSTEM	Kaipara River Corridor	River corridor
		Toe slopes

The characterisation of the study area landscape relates strongly to the patterns of permanent watercourses within the area surrounding Waimauku, which are intrinsically related to underlying geomorphological patterns and processes. **Upland** and **Lowland Systems** have consequently been identified as the broad typologies of the physical landscape, based on the relative relief and associated drainage order of the landscape areas which comprise Waimauku.

Areas of landscape character are also defined by overlays of settlement history and infrastructure, land-use and land-cover, including patterns of remnant native vegetation. Data sourced from aerial photos, NZMS topographical maps, the New Zealand Land Cover/ LENZ

databases as well as historical library resources have informed the delineation of discrete landscape character areas.

Viewshed characteristics, which are intrinsically related to the physical aspects of landscape character, as well as vegetation cover, have been identified by intervisibility analyses and verified on site using an extensive photographic record of representative viewpoints. This has enabled both inner and outer visual catchments to be established for the wider Waimauku area, based on physical 'gateways' into the township.

3.2 Evaluation Assessment

Each landscape area has been assessed in relation to its existing landscape values and visibility as a basis for establishing the capacity of the landscape to accommodate future change and development. The criteria for values assessment include consideration of regional and local designations in conjunction with field and desktop interpretations.

A measure of landscape sensitivity is derived from identified landscape values, in key terms of:

- *Naturalness and legibility*
- *Cultural and historic associations*
- *Aesthetics and amenity*

Visual sensitivity, which is ultimately dictated by the nature and extent of viewing populations, also contributes to judgements in relation to the capacity of each landscape unit to accommodate change. In the context of Waimauku, both SH16 and Muriwai Road represent significant viewing corridors within which the adjacent landscapes are variably exposed.

In general terms, the landscape becomes more sensitive where natural patterns and processes are dominant and relatively intact and/or there are recognised scenic or aesthetic values. Future consultation with the Waimauku community as part of the ongoing structure planning process will refine interpretations of how the landscape units that comprise Waimauku are perceived and valued locally.

3.3 Capacity Recommendations

Decisions about the capacity of different parts of the Waimauku study area landscape reflect the interaction between the sensitivity of the landscape, the type and the extent of potential change, and the way that landscape is viewed and valued. Development capacity is also dependant upon the intrinsic ability of the landscape to adapt to change. These matters have been raised in terms of opportunities and constraints for individual character areas.

In assessing the capacity of the landscape units surrounding the Waimauku township, it is evident that there are areas with a lowered ability to accommodate limited change and areas where there is greater capacity for more intensive change to be absorbed, based on landscape factors. Determining the appropriate level of future development is therefore an important aspect of making judgements about the future growth and development of Waimauku.

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For the purpose of this study, different thresholds for residential development have been identified, based on existing settlement patterns observed within the wider District, although clearly these are points along a continuum of density of scale.

Rural (extensive/ intensive)	<i>Productive rural landscape in which residential activities are related to land holdings, usually as single dwellings</i>
Low intensity Lifestyle Surrounds	<i>Individual and grouped dwellings associated with cultivation/ agricultural production – equivalent to RDC Countryside Living Rural Zone of 1 unit per 2ha</i>
Low intensity Village Fringe	<i>Residential groupings within rural areas on the fringes of the developed township – equivalent to RDC Countryside Living Town at 1 unit per 1.5 ha</i>
Urban Village Centre	<i>Centralised sub-urban housing densities of approximately 1 unit per 500-800m²</i>

Some landscape character areas contain elements that contribute variable levels of sensitivity within the unit due to particular features. In the case of Waimauku, these include proximity to arterial routes and/ or important natural features as well as those areas bordering the existing township. In this situation, the potential for residential growth is therefore likely to be different across the character area.

Opportunities to protect or enhance landscape values and ecological features have been identified, alongside recommendations for different types of residential development, as a basis to guiding the formulation of a future structure plan for Waimauku.

Ultimately the spatial limits to the future development of the Waimauku township have been determined in relation to the intrinsic physical and visual boundaries identified by this landscape assessment study.

4.0 INTERPRETATION OF FINDINGS

4.1 Defensible Boundaries

Auckland Regional Council (ARC) in their Regional Policy Statement for Plan Change 6 (March 2005) identifies strategies for urban containment in proposing future growth areas. Strategic Policy 2.6.2 vi for Urban Containment requires *'a clear differentiation between urban and rural areas, including through the use of water catchment boundaries and or visual catchment boundaries, in order to reduce pressure for urban expansion.'*

The boundaries of the proposed study area have been refined through this landscape character assessment, which has included a review of the physical and visual catchments of the Waimauku township. An outer boundary - representing physical containment, and inner boundary - representing the visual gateways to the immediate township, are illustrated in **Figure 3**.

The siting of the current township on the low-lying floodplains of the Kumeu-Kaipara-Waimauku River confluence is relatively discrete, being largely contained within the landforms of the surrounding valley sides that include Renall's Hill, the Productive Plateau, Taylor Road ridge and the Kumeu Escarpment. These landforms also control the approaches into Waimauku along SH16, Muriwai Road and Waikoukou Valley Road. In most cases, the sense of arrival into Waimauku is not experienced until within approximately 500m of the current urban boundaries, shown as inner gateways in Figure 3. Visual containment to the township is also contributed by the mature vegetation cover of the productive valley landscapes that surround Waimauku.

The outer boundaries that physically define the northern and southern extent of Waimauku relate to the prominent elevated ridgelines of the main catchment boundaries along School Road-Hamilton Road and Kiwitahi-Old North Roads, shown in Figure 3. By comparison, the east and west boundaries occur at much closer range to the existing township on SH16. The south-west slopes of Renall's Hill in combination with the elevated Productive Plateau together define a physical gateway from the west. The approach into Waimauku from the east is abruptly defined by the vegetation cover of the Huapai horticultural fringes, which forms a defined edge to the associated drop in level down to the floodplains of the alluvial flats. This has produced a north-south orientation to Waimauku's Catchment boundaries. The interior elevated landscape features which also contribute to locally defining views have also been identified in Figure 3.

The physical boundaries to the potential development of Waimauku relate to the location of the physical gateways shown in Figure 3. These gateways represent locations on the approach roads into Waimauku which identify an entry into Waimauku, based on physical factors. In this way, the outer gateways confirm a transition from the bordering landscapes of Muriwai, Kaipara, Riverhead, Huapai-Kumeu and Waitakere (as indicated in Figure 3).

The location of gateways invariably coincides with character area boundaries, as well as representing key viewpoints for travelling motorists. A GIS photographic record visually documents the approach into Waimauku from these external landscapes, along the main transport routes.

4.2 Landscape Capacity

Defining the fundamental suitability of a landscape area for future development is a function of two key criteria:

- The ability of the landscape to physically accommodate change
- The ability of the landscape to visually absorb change

These have been defined for each of the landscape character areas identified by this study, in terms of landscape and visual sensitivity.

4.2.1 Landscape Sensitivity

The prominent ridgelines supporting remnant native vegetation cover such as Taylor Road, Kumeu Escarpment and School Road have all been identified as sensitive landscapes within the Waimauku catchment, along with the Wharauoa Valley. The Kaipara River Corridor represents an important natural feature within the Waimauku landscape, with significant cultural

associations. The Waipatukahu Valley to the west of the plateau is also part of a large archaeologically important landscape at the foot of the Woodhill forest.

The Huapai productive horticultural fringe has been identified as relatively sensitive due to its establishment as an attractive intensively cultivated landscape that also provides an important buffer between the settlements of Huapai and Waimauku. The Awa and Waikoukou Valleys also have established horticultural land-use and rural settlement patterns that also maintain a level of rural amenity.

The elevated agricultural landscapes that form a backdrop to the west of Waimauku exhibit important rural references for the township. Renall's Hill additionally represents a locally important landmark feature.

4.2.2 Visual Sensitivity

Visual sensitivity relates strongly to the elevation of the landscapes surrounding Waimauku, with Renall's Hill, Kumeu Escarpment, School Road and the Open Pastoral Flanks above the Kaipara River all exhibiting high to moderate visual sensitivity due to their relative exposure within the wider landscape. Areas with reduced visual sensitivity include the contained and remote valley system of the Waipatukahu Stream and the intensively cultivated Huapai horticultural fringe. The broad lowland valleys of Waikoukou and Awa are also reasonably contained by virtue of their defining catchment ridgelines and vegetation cover.

SH16 and Muriwai Road represent the key public viewing corridors from which Waimauku and its surrounds are largely experienced. The relative elevation of the existing township to the prominent landforms which surround Waimauku is key to defining local visibility, along with existing vegetation patterns. Consequently, the exposed elevated agricultural landscapes to the north-west of Waimauku are particularly prominent in views from SH16, and were attributed regional significance by LA4 landscape architects in their 1995 study of Rodney District. Renall's Hill is also seen as a focal landmark feature in views from SH16, travelling in both directions into Waimauku.

4.2.3 Opportunities and Constraints

Most of the landscapes that surround Waimauku already accommodate a level of residential activity in the context of existing road networks and proximity to the existing township. This landscape assessment has identified important landscape features and characteristics to be preserved as a basis to refining future development patterns.

In terms of informing recommendations for future growth scenarios, the following key conclusions have been derived from the character assessment of the Waimauku study area:

- Physically constrained landscapes, with little existing settlement or built structures and limited access such as Renall's Hill, the Open Pastoral Flanks, Wharauoa Stream, Kaipara River Corridor and the Kumeu River Escarpment exhibit important defining landscape characteristics that would be fundamentally altered by comprehensive residential development;
- Where existing settlement occurs within visually exposed and ecologically sensitive landforms such as the Taylor Road and School Ridge Roads, these environments are considered less appropriate locations for future infill or urban forms of development, where a level of protection is required;

- Contained valley landscapes that are accessible and already occupied by existing rural settlement and cultivation activities beyond the fringes of Waimauku, such as the Waikoukou and Awa Valleys offer scope to accommodate structured development alongside the provision of public amenity and environmental enhancements.

These findings have provided the basis to formulating landscape focussed recommendations to managing future growth of the Waimauku area.

5.0 LANDSCAPE MANAGEMENT RECOMMENDATIONS

Since capacity for future development within the Waimauku context is also influenced by the productive potential of the land (in terms of soil quality), slope stability and potential flooding, it is necessary to consider the possibility of a range of development scenarios for the landscapes which comprise Waimauku and appropriate landscape responses.

The **Landscape Structure Zones** identified in **Figure 4** have been formulated on the basis of representative character areas in order to refine collective landscape responses to accommodating potential development in the context of Waimauku.

A Cultivated Lowland Valley Floors

(Awa Lowland Valley/ Waikoukou Valley/ Muriwai Valley)

***Future development scenario:** Locations for potential future residential development amongst existing settlement and productive land-use activities are likely to be determined by the relative proximity of sites to Waimauku, through a consolidation of existing settlement patterns.*

Landscape management response:

- Protect and manage established amenity vegetation networks alongside native vegetation, particularly in relation to watercourses
- Manage development as part of wider integrated catchment planning
- Provide access and recreational amenity links to major watercourses through strategic recreational and open space planning

B Defining Ridges and Spurs

(School Road Ridge/ Taylor Road Ridge/ Kumeu River Escarpment)

***Future development Scenario:** Development to avoid clearance of native vegetation, with incentives for native restoration planting/ enhancement and appropriate set backs from ridgeline roads*

Landscape management response:

- Protect and enhance indigenous patterns of native vegetation cover and ecological linkages
- Adopt sustainable management practices in avoiding built development on steep slopes and ridgelines

- Recognise ridgelines as defining natural landmark features

C Elevated Extensive Agricultural Lands

(Productive plateau/ Open Pastoral Flanks/ Kumeu (Dip Slope)/ Renall's Hill/ Upper Slopes of Waipatukahu and, Wharauoa Streams)

Future development scenario: *The introduction of residential development within remote rural agricultural lands requires careful planning to resolve issues including accessibility and isolation from Waimauku, alongside topographical and visual constraints*

Landscape management response:

- Adopt sustainable landscape management practices in avoiding built development on steep slopes and ridges
- Protect views from main roads and existing populations through appropriate design
- Manage built development as part of integrated management for the wider catchments

D Lower Floodplain and Toe Slopes

(Kaipara River Corridor/ Waimauku Alluvial Flats/ Waikoukou Valley/ Kumeu River)

Future development scenario: *Prioritise the protection and enhancement of major watercourses and floodplains, as important recreational and amenity resources to be managed as part of the planned growth of Waimauku, with possible built development of toe slopes*

Landscape management response:

- Exclude future built development from the floodplain environment
- Identify and manage major waterways as recreational corridors, incorporating areas of open space and pedestrian linkages between Waimauku and the wider surrounds
- Recognise and protect the important natural and cultural values of major watercourses
- Manage as part of wider integrated catchment planning

E Upper Stream Valleys

(Wharauoa Stream/ Waipatukahu Stream)

Future development scenario: *Avoid comprehensive residential development within the immediate stream corridor with the protection of natural characteristics. Associated development of adjacent agricultural landscapes to be carefully managed as part of the overall stream catchment system*

Landscape management response:

- Manage stream corridors as part of wider integrated catchment planning
- Manage Wharauoa Stream as a significant natural feature

5.1 Future Growth Scenarios

Ultimately the relative densities and patterns of future residential development extending from the centre of Waimauku need to reflect a progressive transition from the township into the surrounding rural landscape. The potential future growth of Waimauku is discussed below in terms of the location of identified landscape structure zones relative to the current township, which is illustrated in **Figure 5**.

5.1.1 Waimauku Township

It is important that a future Structure Plan for Waimauku defines a consensual capacity and form of the village, ensuring that growth in this area is consistent with the Community's vision as to the character and identity of the village. There is clearly potential for the existing form of the township to develop further, following currently visible form and intensities.

Although much of the existing extent of the Waimauku township falls within the floodplain of the Kaipara River, future development of the town should avoid flood prone areas. This provides an opportunity to create recreational open spaces within the alluvial landscapes bordering Waimauku. The networks of waterways in the vicinity of Waimauku also have the potential to provide linkages within and between the township and the wider surrounds.

The majority of the Alluvial Flats area to the south of SH16 is located above the floodplain, and these areas border the more recently developed residential areas of the township. There is clear potential for this area to accommodate further urban growth within relative proximity of the existing centre of the township.

5.1.2 Waimauku Fringes

The rural landscapes bordering the village centre offer potential opportunities for the logical extension of the township at a lower intensity village scale. The Awa Lowland Valley borders the south-east fringes of Waimauku above the floodplain, and is continuous with the Waimauku Alluvial Flats to the south of SH16.

The ability of the fringe areas surrounding Waimauku to accommodate residential development is largely dependant upon connection with the township in terms of infrastructure and servicing. From a landscape perspective, the landscape framework suggested by this study indicates potential fringe development areas based on the landscape features (Figures 4&5).

Potential fringe development along SH16 towards Huapai would need to be carefully planned to avoid linear sprawl along the corridor between Waimauku and Huapai, with the intention of retaining a rural separation between these discrete communities.

5.1.3 Waimauku Surrounds

The Waikoukou and Awa Valleys both represent contained landscapes, beyond the fringes of Waimauku, in which future development could be accommodated, through designed structure planning, amongst existing settlement and mixed agricultural production. The intensity of future residential development within either of these productive valley landscapes would need to be at an appropriate scale and form to secure and maintain the existing rural open space structure and character. This could include clustered housing within larger rural lots.

Both of these alluvial landscapes exhibit similar characteristics that are representative of the productive horticultural focus of the Waimauku area within an attractive rural valley environment. The Waikoukou Valley was also historically a focus of early European settlement.

The ridgelines of Taylor Road and School Road currently provide rural lifestyle living opportunities in the context of Waimauku. It is important that a level of rural amenity is retained alongside the protection/ enhancement of natural characteristics, in the context of future residential development. For this reason, the significant intensification of residential activities within the areas associated with these prominent landscape features is not considered an appropriate direction for growth of the township.

Opportunities for comprehensive residential development are also likely to arise within 'greenfield' sites outside of the immediate township. A strong landscape rationale would be required for the integration of potential development within extensive productive landscapes. The location of future comprehensive development within such areas would be most favourable where direct access to the existing township can be provided.

6.0 LANDSCAPE MANAGEMENT STRATEGIES

Existing vegetation, both introduced and native, along with the natural ridgeline and valley topography have been demonstrated to provide legibility and structure to the Waimauku landscape. Landscape features also dictate the character and qualities of the landscape units that currently make Waimauku an attractive rural living environment. Future growth of the township needs to maintain these qualities in the face of development.

The Landscape Structure Zones identified in Figure 4 provide the broad principles to managing existing landscapes in the context of Waimauku's potential future growth. This framework also provides for the enhancement of the existing landscape, providing for recreational, amenity, cultural and ecological benefits in parallel with the intensification of residential activities and associated increases in resident populations.

In considering a potential green belt for redefining the boundaries of Waimauku, it is preferable to look at enhancing and extending existing vegetation patterns and natural features that identify the physical boundaries to the township. The combination of watercourses and vegetated ridgelines, partially defined by mixed vegetation cover, already provide definition to the township along with established amenity plantings and tree crops. Enhancement of natural features is seen as an opportunity to structure the managed growth of the town, whilst protecting the natural environment through restored and enhanced ecological linkages.

This catchment-led approach would require the protection of existing vegetation and natural features, in conjunction with providing incentives for enhancement and amenity planting through future residential development.

The proposed landscape framework also offers associated opportunities for extending a network of recreational corridors along the main waterways through and beyond Waimauku township. This would give recognition to the historic pathways of Waimauku as well as providing linkages into the wider surrounds. The protection and enhancement of the Kaipara – Kumeu River corridor is thus seen as a priority in terms of celebrating Te Toanga Waka, as well as improving the overall quality of the degraded river environment.

The outer physical 'gateways' that have been defined by this study as a physical limit to the potential growth of Waimauku will also be reinforced by the protection and enhancement of the natural features on which they are based. These include the School Road ridge, Taylor Road ridge, Renall's Hill and the Kaipara River floodplain. The visual containment to the immediate township provided by the inner gateways could be acknowledged through appropriate gateway features for the extended village.

The elevated agricultural landscapes on the fringes of Waimauku represent important references to traditional working rural landscapes. They are also directly associated with the important ridgelines and gullies that define the Waimauku catchment whilst supporting significant stands of native bush. It is important that incentives for protecting and enhancing native bush in these locations are considered as an integral component of managed future growth.

6.1 Development Guidelines

In managing the future growth of Waimauku, it is important that development occurs at a scale and with a character that remains appropriate for the rural countryside setting and historical pattern of the township.

In addition to establishing appropriate residential intensities for those existing landscapes identified for possible future growth, the potential adverse effects of inappropriate development could be controlled through design criteria covering elements including the following:

- Lot layout and subdivision patterns;
- Road layout and connectivity;
- Recreational and open space provision (and linkages);
- Building layout, footprint, height and set-backs;
- Architectural vernacular and materiality;
- Earthworks and access formation;
- Recommended species for both amenity and indigenous restoration planting;
- Solar access and environmentally sustainable design; and
- Local access networks provided through walkways/ cycleway

7.0 FURTHER STUDIES

In line with the staged Opportunities and Constraints process outlined by RDC for developing a Structure Plan for Waimauku, the following issues have been identified by this report as requiring further investigation:

- Cultural heritage investigations;

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- Ecological habitat surveys (including waterways);
- Access and Infrastructure feasibility; and
- Natural resources and hazards

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