6 HIGHLY VALUED NATURAL RESOURCES

Contents

Appendices

6 HIGHLY VALUED NATURAL RESOURCES

6.1 INTRODUCTION

This chapter provides the policy background for rules in *Chapter 7 - Rural, Chapter 8 - Residential, Chapter 10 - Open Space and Recreation, Chapter 11 - Inland Waters* and *Chapter 18 - Urban Land Modification and Vegetation Protection*.

Part 2 of the Resource Management Act (RMA) requires that particular matters be addressed to achieve sustainable management. These include the following matters of national importance in section 6 of the RMA:

(a) preserving the natural character of the coastal environment, wetlands, lakes and rivers, and their margins;

(b) protecting outstanding natural features and landscapes;

(c) protecting areas of significant vegetation and wildlife habitats.

Under the Act the Council has a clear duty to protect and maintain natural resources and landscapes. The above provisions are national "value statements" set out to guide local communities. The Act goes on to acknowledge that amenity and heritage values are also important, but leaves these to local communities to identify.

6.1.1 Highly Valued Natural Resources

Section 2 of the Resource Management Act defines natural resources as including:

"land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced)."

This chapter focuses on Highly Valued Natural Resources but excluding the economic values of mineral resources which are managed in Chapter 7 – Rural of the Plan. Highly Valued Natural Resources have been defined in the Rodney context by statutory considerations, such as the RMA itself, Auckland Regional Council documents, Department of Conservation, Conservation Management Strategy and by the local community.

In keeping with the RMA, specific Highly Valued Natural Resources have been identified following an extensive research process undertaken by the Council. They are identified as:

(a) Significant Natural Areas;

(b) Landscapes;

(c) Geologically Significant Sites.

These Highly Valued Natural Resources represent the "best" in the District. This chapter deals only with these areas of high value. Other chapters within the District Plan deal with natural resources and landscapes which may be significant in their context but which are not the "best".

6.1.2 Significant Natural Areas

Areas of native vegetation and habitats of native animals are central to the natural environment of the District. Comprising indigenous forest, scrubland and wetlands, inland and coastal waterways, the District's native vegetation and habitats of native animals tend to be of the highest value where:

(a) Natural habitats have not been modified (eg. Conical Peak, the Mangawhai to Pakiri coastline).

(b) Natural habitats are extensive, have a natural diversity of native species, and are viable in the long term.

(c) Rare species of plants and animals are present.

(d) A succession of different ecotones and habitats exist (eg. marine to bush habitats on the Kaipara, Whangateau and Mahurangi Harbours, fresh water to forest habitats at Tomarata and Te Arai).

(e) Vegetation is representative of vegetation naturally occurring in the District (eg. the regenerating manuka forest west of Orewa).

(f) Areas have a diversity of plants and animals.

(g) Areas are relatively undisturbed by weed species, animals and pests and human activities.

These areas are extremely important for maintaining the biodiversity of the plants and animals within the District, because of their relative intactness and stability and therefore their resilience to human impacts. They act as a gene pool for species and their diversity.

The Council has undertaken a survey of vegetation and wildlife habitats to identify those that are of high ecological value. The survey was based on a number of documents including the:

(a) Auckland Regional Policy Statement.

(b) Proposed Auckland Regional Plan : Coastal.

(c) Conservation Management Strategy for Auckland Conservancy 1993-2003 (Department of Conservation).

(d) Survey Report for the Protected Natural Areas Programme for the Rodney Ecological District and the Waitakere Ecological District.

(e) Southern Rodney and Northern Rodney District Development Strategy.

(f) Sites of Special Wildlife Interest Inventory (SSWI).

(g) Wetland and Ecological Resource Inventory (WERI).

Areas listed in the above documents were physically surveyed. Additionally, other areas not previously included were surveyed to ensure that a comprehensive list of sites was identified.

Each site was then ranked ie. outstanding, high, moderate-high, moderate or potential in terms of its ecological values, according to recognised criteria. Sites ranked as outstanding, high, moderate-high or moderate are regarded as highly valued sites and have been called Significant Natural Areas or SNAs.

Areas identified as SNA on the planning maps have been identified and ranked based on the Rodney Ecological District Protected Natural Areas Programme (PNA report), completed in 1984. This study used the information compiled by the SSWI surveys in 1977 – 1981 to identify priority fauna habitat

sites. (*The Assessment of Highly Valued Vegetation and Habitats in the Rodney District, Part I: Methodology and Results Summary for Rodney, Waitakere and Tamaki Ecological Districts, Julian, Davis and Bellingham, June 2000).*

In addition to this information a new survey was undertaken in 1998 which resurveyed habitat sites identified by the SSWI and identified some new sites.

The methodology stated in the resurvey that was undertaken states that "172 different native fauna habitat sites were identified during this survey (1998) in the Rodney Ecological District". From this identification sites were selected for specific field survey. A number of sites were excluded from the survey if they were already protected as reserve, or covenanted in perpetuity. Thirteen sites that were in the coastal marine area were also excluded because these are outside the jurisdiction of the District Plan. Sites on land which were part of a habitat that extended onto private land were surveyed.

Sites have been ranked as Outstanding, High, Moderate-High and Moderate as identified on the District Planning Maps. These rankings reflect the ranking system utilised in the 1984 Protected Natural Area study, a copy of which is contained as Appendix 6B. The rankings used in the 1998 study are the same as those used in the PNA study but the criteria have been updated to fit more easily within the Resource Management Act and Reserves Act framework.

This does not mean that at a local level, areas of vegetation or habitat areas are not significant. However, the surveys have focused on the identification of areas of the highest value.

Many of the areas of highly valued vegetation and wildlife habitats are in public ownership, either with the Department of Conservation, the Auckland Regional Council or the Royal Forest and Bird Protection Society. However, many areas on private land have been covenanted with the District Council or the QEII Trust. Many private landowners have fenced off these and other areas and have undertaken pest management, with or without covenanting. This reflects the value landowners place on these areas.

6.1.3

Highly Valued Landscapes

The Resource Management Act recognises the importance of protecting outstanding landscapes, as well as amenity values of importance to the community.

A landscape is generally a broad area which has a combination of natural and physical elements and other characteristics which together create a coherent whole. Landforms, waterways such as rivers, lakes and wetlands and vegetation ranging from native forest and scrub, to exotic forest, to pasture, combine to form a variety of landscapes. These are further defined by the way buildings, roads and other structures are set amongst them.

Many of the landscapes in the coastal parts of the District are regarded as being of regional significance or better and they make a significant contribution to the character and identity of the District. They include coastal dunes, beach areas, estuaries, tidal rivers, coastal cliffs, coastal vegetation and coastal settlements. Accordingly they are considered Highly Valued Natural Resources. Within the rural areas these encompass:

(a) Mangawhai-Pakiri Beach

(b) Cape Rodney-Leigh

(c) Omaha Beach

(d) Tawharanui

(e) Whangateau Harbour

(f) Sandspit-Mullet Point, Mahurangi East

(g) Puhoi River

(h) Waiwera River

(i) Kawau Island

(j) Te Henga-Waitakere River-Bethells Road

(k) Muriwai hinterland

(l) Weiti Corridor

(m) Sandspit

(n) Mahurangi West

(o) Hatfields Beach

(p) Coal Mine Bay

(q) Sections of Gulf Harbour

(r) Tindalls Hill

The other areas of regional landscape significance are those where large stands of native bush still exist, including Atuanui (Mt Auckland) and Mt Tamahunga. (For further details of these landscapes see *Chapter 7 - Rural*.)

In the urban areas highly valued landscapes include:

(For further details see *Chapter 8 - Residential*.)

These urban landscapes are also considered to be Highly Valued Natural Resources.

6.1.4

Geologically Significant Sites

The District contains a number of landforms and geological sites considered to be of regional, national or international importance, because they are representative of the District's or New Zealand's geological history (see Appendix 6A). They vary from dune fields, to volcanic forms, representative sediments and rock formations, and fossilised fauna. They often form an integral part of the values of the landscapes, and are considered to be Highly Valued Natural Resources.

6.2 RESOURCE MANAGEMENT ISSUES

Issue 6.2.1

Subdivision, development and land use activities can have adverse effects (including cumulative effects) on Highly Valued Natural Resources.

The Significant Natural Areas, Landscapes and Geologically Significant Sites that have been identified can be damaged, destroyed, or their value severely reduced, through inappropriate subdivision, development or land use activities which may occur with or without the knowledge that the activity is

impacting on a Highly Valued Natural Resource. Even permitted land use activities can adversely impact on the quality or long term value of a Highly Valued Natural Resource. It is therefore important that a number of methods are utilised to inform and educate people and also to provide a framework for the long term preservation or protection and maintenance of Highly Valued Natural Resources.

Issue
6.2.2

Subdivision, land use and development can have adverse effects, (including cumulative effects) on, or result in, the loss of highly valued vegetation, wetlands, watercourses and wildlife habitats.

Values

Native vegetation provides many benefits to the District. It is valuable for scenic and recreational purposes, its intrinsic values and its importance as wildlife habitat. It is also important for soil conservation and maintaining water quality, by slowing down the rate of water and sediment runoff to inland and coastal waters.
Other areas, such as the dune lakes at Tomarata and South Head, are important habitats, as are the dune areas, estuaries and wetlands. Bird species depend on these areas for breeding and feeding. Te Henga Wetland is one of the most significant in the Region for its ecological values. Wetlands are also important as well for reducing the effects of flood waters and limiting downstream flooding impacts. Estuaries and dune lakes are also valued for recreational and other purposes.

Historic loss

The modification of native bush, wetlands and ecosystems, and the resultant loss of biodiversity is a national issue. Rodney District reflects the national trend in loss. While certain areas, especially in the northern part of the District, still retain large areas of bush or relatively unmodified landscapes, most of the ecosystems within the District are fragmented, isolated pockets of bush, wetlands, dunes and dune lakes, estuaries and scrubland. Less than 15% of the original bush remains, with the majority having been cleared between 1860 and 1984 to create pasture. Less than 1% of the wetlands remain, most having been drained between 1942 and 1977 for agriculture and urban development.

Ongoing threats to native ecosystems

The ongoing threats to native ecosystems include:

(a) Subdivision and land use activities in or in close proximity to native areas.

(b) Inadequate fencing of areas, resulting in stock being able to graze the understorey of bush, or the margins of wetlands, rivers and streams.

(c) Clearance of areas for forestry, agriculture and residential sites.

(d) Recreational activities, such as biking, horse riding and use of off road vehicles.

(e) Weeds and pests.

The result is ongoing fragmentation, damage and destruction of ecosystems and habitats. The impacts of this are:

(a) A reduction in the carrying capacity and ability to sustain animal and plant species.

(b) Increased edge effects, potentially decreasing species diversity resulting in less species diversity, because the lower temperatures of the inner areas (ie. microclimates) are never reached and therefore species which need these cooler temperatures cannot grow. Species which are not tolerant of disturbance also disappear and more tolerant species take over (eg. weeds).

(c) Reduction in seed dispersal, especially if neighbouring remnants are too far apart.

(d) Barriers to movement of animals if remnants are too far apart.

Viable ecosystems

Research undertaken by A Young and N.D. Mitchell, *Microclimate and vegetation edge effects in a fragmented podocarp-broadleaved forest in New Zealand, Biological Conservation 67 (1994)* indicates that in order for areas of bush to be viable and to have the species diversity, the bush should firstly be a minimum of 10 hectares and secondly, have another area of bush of a similar size within 1 kilometre. In many instances animal species will not move between native ecosystems unless there is a vegetation connection (usually native plant species) between two areas (ie. ecological corridor). If these corridors are destroyed, the whole ecosystem becomes less viable. However it is also recognised that areas of bush less than 10 hectares can also be ecologically significant and viable.

Less is known about the viable size of other ecosystems. However, the highly valued vegetation and habitat areas are critical to the survival of the diversity within the District because of their size (ie. usually greater than 10 hectares), which increases their stability and resilience by minimising edge effects. These areas also tend to have greater species diversity of plants and animals. Many of these areas are within one kilometre of other areas thus increasing their viability, especially if there are vegetation connections (ie. ecological corridors).

The ecological viability of natural areas, however, is dependent on a number of factors which include not only the size, shape and distance from other remnants, but:

- the impacts of weeds and pests
- the ecological health and sustainability of the area
- the diversity and complexity of the ecosystem
- the types of species present and the resilience of the ecosystem to outside threats
- the management regime including fencing and weed and pest control.

Ecological viability may change over time and hence there should be on-going reviews of these areas to ensure that the extent and quality of areas is not further diminished over time and also to enable areas that have improved over time to be specifically identified if appropriate.

Maori values

Maori see themselves as part of the environment and the environment as part of them. Within that inter-relationship humans have certain responsibilities, and the proper discharge of these will ensure their mutual survival.

The land is recognised by Tangata Whenua as the Mother of Creation, and is considered to be amongst the most important taonga (treasures) handed down for our guardianship. Native forests, shrubs, bird-life, and forest animals are the cloak that covers Earth Mother. Therefore it is important that the land not be stripped of native trees, causing erosion and flooding.

Any land development has the potential to affect the environment and consequently the relationship of Maori to the environment. Also, many of the highly valued vegetation and habitat areas are waahi tapu. Their destruction affects the spiritual and cultural well-being of Tangata Whenua, as well as their ability to exercise Kaitiakitanga. Therefore the protection of forests and habitats is important to Tangata Whenua.

Issue
6.2.3

Subdivision, land use and development can have adverse effects (including cumulative effects) on geologically significant sites and highly valued landscapes.

Cumulative effects of development

The cumulative effects of changes in building density, increased subdivision, roading, earthworks and vegetation clearance, and changes in land use , may adversely affect landscape values. Coastal environments, ridgelines, highly valued landscapes and areas of high natural value (eg. extensive forest and bush areas, wetlands, lakes and other inland waterways) are especially sensitive to these changes. However, these areas are often those which are most sought after and are therefore under the most pressure for new development. Additional houses, roads and bush clearance to accommodate development can adversely affect the extent and quality of landscapes and natural values.

Geologically significant sites

Geologically significant sites also often contribute to landscape values. These features vary in their vulnerability and the degree to which they are affected by development or human activity. For example, the Bethells-Te Henga dune system is particularly vulnerable to off-road vehicles and stock, whereas Beehive Island, off Kawau, is virtually free of all risk. This influences how the Plan deals with each geological site.

Issue
6.2.4

Inappropriate subdivision, land use and development can have adverse effects (including cumulative effects) in terms of preserving the natural character of the coastal environment.

A significant portion of the land area of the Rodney District is within the coastal environment. The District adjoins west coast and east coast beaches as well as the Kaipara Harbour, Whangateau Harbour, Mahurangi Harbour, Weiti River and Rangitopuni River. Therefore a significant portion of the District's boundaries are adjacent to the coastal marine area and consequently careful management is required in respect of the land / coast interface.

The ARPS provides guidelines in Policy 7.4.1 on the areas and features which contribute to the coastal environment. As stated in the ARPS, the areas or features to be taken into account when determining the extent of the coastal environment include the following:

(i) any vegetation or habitat adjacent to, or connected with, the CMA which derives its intrinsic character from a coastal location or which contributes to the natural character of the coastal environment;

(ii) any landform adjacent to the CMA which is presently being formed or modified by processes of coastal erosion or deposition;

(iii) any feature or collection of features, either natural or physical, that derives its intrinsic character from a coastal location and which substantially contributes to the visual quality or amenity value of the coast;

(iv) any site, building, place or area of cultural heritage value adjacent to, or connected with, the CMA which derives its heritage value from a coastal location;
(v) areas of Significant Natural Heritage listed in Appendix B and Outstanding and Regionally Significant Landscape Areas shown on Map series 2 which are adjacent to the CMA;
(vi) any land adjacent to the coast from which surface drainage may flow directly to the CMA;
(vii) any land adjacent to the coast which is affected by, or could be affected by, coastal flooding and other identified coastal hazards;
(viii) any land adjacent to the coast where activities may take place which have a direct physical connection with or impact on the CMA;
(ix) the CMA.

In terms of natural character of the coastal environment some areas are more highly modified than others so consequently their natural character value is lower than areas that are relatively unmodified.

Subdivision, use and development is likely to be more acceptable in areas that are already modified as opposed to areas within the coastal environment that are unmodified or relatively unmodified.

Issues from other chapters

Readers should note that issues from the following chapters are also relevant:

Chapter 7 - Rural
Chapter 8 - Residential
Chapter 10 - Open Space and Recreation
Chapter 11 – Inland Waters
Chapter 18 - Urban Land Modification and Vegetation Protection

6.3 OBJECTIVES

Objective 6.3.1

To manage Highly Valued Natural Resources so that they are preserved or protected or enhanced now and in the future.

(This objective relates to Issue 6.2.1)

Objective 6.3.2

To maintain, manage, protect and enhance highly valued vegetation and wildlife habitats.

(This objective relates to Issue 6.2.2)

Objective 6.3.3

To protect highly valued landscapes and geologically significant sites from inappropriate or insensitive building, development, subdivision and other land uses, and to enhance highly valued landscapes where practicable.

(This objective relates to Issue 6.2.2)

Objective 6.3.4

To preserve the natural character of the coastal environment, and to protect land areas within the coastal environment from inappropriate subdivision, use and development.

(This objective relates to Issue 6.2.3)

Objectives from other chapters

Readers should note that Objectives from the following chapters are also relevant:

Chapter 7 - Rural
Chapter 8 - Residential
Chapter 10 - Open Space and Recreation
Chapter 11 - Inland Waters
Chapter 18 - Urban Land Modification and Vegetation Protection

6.4 POLICIES

Policy
6.4.1
Highly valued natural areas and resources

Subdivision, development and land use activities should avoid causing or creating any damage, destruction or long term disturbance to highly valued natural areas or resources. Where avoidance is not possible, remedial or mitigation measures should be undertaken, including restoration, enhancement or protection.

Policy
6.4.2
Habitats and ecosystems

Highly valued natural areas, such as Significant Natural Areas (SNA), should be protected, enhanced, maintained and managed in a manner that ensures that:

(a) habitats and ecosystems remain stable and resilient to stress;

(b) species which occur naturally within the habitat or ecosystem, including sensitive species, are able to survive and thrive;

(c) a wide representation of highly valued habitats and vegetation is maintained;

(d) species diversity is maintained or enhanced

by avoiding the adverse effects of noise, vibration, lighting, vegetation removal, earthworks, potential weed invasion, domestic animals and other animal pests.

Explanation and Reasons

This explanation and reasons relate to Policies 6.4.1 and 6.4.2. These policies seek to achieve Objective 6.3.1 and 6.3.2.

The District has lost a large proportion of its original native vegetation, wildlife habitats, wetlands and other Highly Valued Natural Resources through agricultural activities, urban development, and other human activities. Therefore, it is important to preserve or protect areas of high value which still exist. However, owing to the increased population pressures within the Rodney District and the demand for residential development and other land use activities, there is greater pressure on these highly valued areas and resources. It is therefore important to ensure that a wide representation of highly valued habitats and vegetation and other Highly Valued Natural Resources are maintained.

Policy
6.4.3
Enhancement and restoration

Enhancement and restoration of Significant Natural Areas (SNA) should be undertaken when it would provide the following:

(a) linkages between highly valued natural areas, such as Significant Natural Areas (SNA) (ie. ecological corridors);

(b) enhancement of highly valued natural areas, such as SNA;

(c) mitigation or remediation to offset the adverse effects of subdivision or development.

Enhancement should include increasing plant diversity through plantings, where natural

species diversity has been reduced, increasing the size of significant natural areas and reintroducing species likely to have occurred naturally in the area.

Explanation and Reasons

This policy seeks to achieve Objective 6.3.2.

Research indicates that for areas of bush to be viable and to have the species diversity, the bush should firstly, be a minimum of 10 hectares and secondly, have another area of bush of a similar size within 1 kilometre. In many instances animal species will not move between bush areas unless there is a vegetation connection (usually native plant species) between two areas (ie. ecological corridor).

Therefore, if biodiversity is to be sustained or enhanced it is important that larger areas are retained with adequate proximity to each other. It is also important to enhance and recreate linkages between ecosystems and to restore ecosystems which have largely been destroyed or modified. Enhancement should also be encouraged to mitigate or remediate for the adverse effects on the environment.

Policy
6.4.4
Highly valued landscapes

Highly valued landscapes should be protected, and enhanced where practicable, for their natural amenity, scenic and intrinsic values, and in particular, protected from the adverse effects of:

(a) subdivision, including building site formation;

(b) formation of access;

(c) land development, including earthworks and vegetation removal;

(d) built structures; and

(e) land use activities requiring all or some of the above.

Explanation and Reasons

This policy seeks to achieve Objectives 6.3.1 and 6.3.3.

Highly valued landscapes can be adversely affected by the poor siting and design of buildings and associated infrastructure (eg. accessways) and the number of structures introduced. Certain areas are more susceptible to change, especially ridgelines, coastal areas, the edges of lakes and rivers, rural areas with specific characteristics and areas of highly valued native vegetation. It is often difficult to predict the cumulative effects over an extended period of time. Therefore particular attention needs to be given to the way in which highly valued landscapes are developed because of this sensitivity to change, through the careful siting of buildings, structures and accessways, minimising of earthworks and the removal of vegetation, and the design of subdivisions, buildings and other structures. Where the development of highly valued landscapes does occur, the values of these areas should be enhanced where practicable.

Policy
6.4.5

Subdivision, use and development shall avoid locating or occurring in areas within the coastal environment that are an outstanding natural landscape or feature, Significant Natural Area or Geologically Significant Site , where the values of those areas will not be protected.

Policy 6.4.6

Subdivision, use and development occurring in the locality of an outstanding natural landscape or feature, Significant Natural Area or Geologically Significant Site, shall ensure the values of those areas are protected.

Policy 6.4.7

The natural character of the coastal environment shall be preserved, with any subdivision, use and development locating or occurring in the coastal environment being undertaken in a manner that ensures that adverse effects on the natural character of that part of the coastal environment are avoided. Where adverse effects cannot practicably be avoided, the subdivision, use or development shall only be approved where the effects on natural character can be appropriately mitigated.

Explanation and Reasons

This explanation and reasons relates to Policies 6.4.5, 6.4.6 and 6.4.7. These Policies seek to achieve Objective 6.3.4.

The Rodney District contains a significant area of coastline and consequently a larger part of the land area of the District can be considered to be within the coastal environment. Preserving the natural character of the coastal environment is a matter of national importance as determined by Section 6(a) of the Resource Management Act 1991. Therefore in terms of giving effect to the Purpose and the Principles of the Act the District Plan needs to make provision for the careful management of subdivision, land use and development activities that are occurring in the coastal environment.

Where land areas are unmodified or predominantly unmodified they will exhibit a higher degree of natural character and will often be more sensitive to the adverse effects of subdivision, land use and development activities.

Within the Rodney District there are several areas within the coastal environment that are highly modified such as the urban areas of the Whangaparaoa Peninsula, however there are also areas that are predominantly unmodified such as areas in the vicinity of Pakiri Beach and north to Te Arai and Mangawhai; large parts of the Kaipara Harbour and the west coast beaches of Bethells, Muriwai and Te Oneone Rangatira.

The challenge is to preserve the natural character of the coastal environment and to protect these areas from inappropriate subdivision, use and development.

Note

Policies from the following chapters are also relevant:

Chapter 7 - Rural
Chapter 8 - Residential
Chapter 10 - Open Space and Recreation
Chapter 11 - Inland Waters
Chapter 18 - Urban Land Modification and Vegetation Protection

6.5 STRATEGY

6.5.1 Significant Natural Areas

The strategy for Significant Natural Areas, which include highly valued native vegetation and indigenous wildlife habitats is to maintain, protect and enhance these areas, which are identified on the planning maps. This is achieved by limiting the extent and range of the activities such as vegetation removal and earthworks which can occur within or adjacent to them, to those which will have only minor adverse effects on their natural values and by encouraging and providing incentives for enhancement planting and other enhancement measures to be undertaken in lieu of subdivision or as mitigation for land use activities for which resource consent is required. The strategy also provides subdivision rights for the permanent legal and physical protection of Significant Natural Areas (SNA).

The ranking (Outstanding , High, Moderate-High and Moderate) and extent of the SNA identified on the Planning Maps has been determined from a set of Council surveys of vegetation and wildlife habitats completed in 1998. It is intended to resurvey SNA in the District each time the Plan is reviewed. This data together with data obtained during the resource consent process, and monitoring for compliance with conditions of consent will assist with ongoing monitoring of the effectiveness of the strategy for SNA.

6.5.2 Highly Valued Landscapes

The strategy for highly valued landscapes is to protect and maintain them by identifying areas by way of zones/policy areas, applying limits to the activities which can occur and to control the location of structures within the landscape. Activities permitted in each zone are then based on the landscape values. Subdivision is also limited in order to reduce the extent of change that follows with the creation of additional titles.

The identification of these Highly Valued Landscapes has been undertaken based on landscape studies and assessments existing at the time that the Plan was being prepared.

6.6 IMPLEMENTATION

6.6.1 Highly Valued Vegetation and Wildlife Habitats

6.6.1.1 Regulatory Methods

6.6.1.1.1 Zoning

Zoning is one of the mechanisms used for protecting highly valued vegetation and habitats. The zones ensure that activities which could impact adversely on these areas will be minimised. They also recognise different natural values and limit the activities accordingly.

(a) **Open Space 1 (Conservation) Zone**
(See *Chapter 10 - Open Space and Recreation*)

The Open Space 1 (Conservation) Zone recognises that certain publicly owned land has highly valued vegetation and wildlife. The approach is to limit the activities which can occur in these areas to those which will facilitate the interpretation of and access to them, and to minimise or avoid their modification.

(b) **Inland Waters Protection Zone**
(See *Chapter 11 - Inland Waters*)

The Inland Waters Protection Zone is applied to the water column, the water surface, and the air space above freshwater and tidal lakes, rivers and streams that are identified as being of high environmental and wildlife value, especially for the breeding and nesting of species. All of the areas identified as being of high value are in the rural areas.

The development controls are more restrictive in the Inland Waters Protection Zone than in the Inland Waters General Zone, where the values are lower. There are controls on vegetation removal, reclamation, the erection of structures and water-based activities, especially during the breeding and nesting season of identified wildlife. There are also controls on activities which occur adjacent to these waterbodies.

(c) **Low Intensity Landscape Protection Zone**
(See Chapter 8 - Residential)

While the main intent of this zone is to protect landscape values, a number of areas within the zone have been identified as Significant Natural Areas (SNA). The rules protecting vegetation and wetlands, and minimising earthworks preserve the vegetation and wildlife values within this Zone.

6.6.1.1.2 **Significant Natural Areas**
(See Chapter 7 - Rural)

Significant Natural Areas (SNA) have been identified in the Rural Zones, based on the survey undertaken by Council. Restrictions have been placed on vegetation removal, wetland modification and earthworks in these areas. Subdivision rights are provided, as long as the subdivision does not occur within the SNA (see section 7.14 in *Chapter 7 - Rural* for details).

Buildings within SNA are considered inconsistent with the Plan's objective and policies of preservation and protection of these areas and non-complying activity status has been applied. However the Plan recognises that in some circumstances including Mineral Extraction and Processing Activities of identified Significant Mineral Extraction Resources, buildings within SNA may warrant express consideration. The ability to apply for consent to establish buildings for household units is provided for (as a restricted discretionary activity) where no practical alternative exists on the site.

6.6.1.2 **Other Methods**

The approach to highly valued vegetation and wildlife habitats also relies on other methods.

6.6.1.2.1 **Education and Awareness Programmes**

Increasing the awareness of communities and landowners is a key component in the sustainable management, protection and enhancement of highly valued vegetation and habitats. It could include workshops and the development of relevant pamphlets.

6.6.1.2.2 **Structure Plans**

Structure Plans for urban and surrounding rural areas will identify highly valued areas of vegetation and habitats, so that they can be protected when development occurs.

6.6.1.2.3 **Community Action Groups**

The Council supports the initiation of community action groups, such as landcare and beachcare/coastcare groups. Programmes undertaken by such groups could include the restoration and enhancement of highly

valued areas, fencing and pest species control.

6.6.1.2.4 **Co-operation with Other Organisations**

Co-operation with other organisations involved in the management of highly valued native vegetation and habitats is important, especially in areas where there is joint jurisdiction.

6.6.1.2.5 **Economic Incentives and Subdivision Rights**

The Council provides economic incentives such as rate relief for the voluntary protection of highly valued native vegetation and habitats (eg. through QEII covenants).

Another economic incentive is subdivision rights which allows landowners in Highly Valued Natural Resource Areas to utilise some of the development potential of their land while encouraging the protection of these areas in the long-term. Council has subdivision rights for the protection of a Significant Natural Area (SNA) through covenanting and fencing, as long as the subdivision and development of sites created does not occur within an SNA, so that the adverse effects on the wildlife and vegetation values are avoided. Subdivision rights are also provided for enhancement planting which connects SNAs.

6.6.1.2.6 **Financial Assistance**

Council will provide financial assistance to landowners for fencing of significant natural areas (SNA), in exchange for the covenanting in perpetuity of these areas. This is in instances where the fencing is not undertaken as a condition of a subdivision consent.

6.6.2 Highly Valued Landscapes

6.6.2.1 **Regulatory Methods**

Zones are the main mechanism used in protecting highly valued landscape areas and the natural character of the coastal environment, wetlands and watercourses and their margins in the rural and urban areas.

6.6.2.1.1 **Rural Areas**
(See *Chapter 7 - Rural*)

In the rural areas, zones have been identified to protect highly valued landscapes. These comprise:

(a) East Coast Rural Zone: This includes land areas around Leigh, Tawharanui and Mahurangi-Waiwera.

(b) Landscape Protection Rural Zone: This includes the Muriwai-Bethells area and the coastal strip and associated inland areas of the coastline from Mangawhai to Pakiri (J Greenwood Road).

(c) Dune Lakes Zone: This includes the land areas related to and surrounding the dune lakes at Tomarata and South Head.

The approach taken in each of these areas is one of protecting and preserving those elements which have created their distinctive visual character, and which make them different from the General Rural Zone. This is done by limiting the range of activities and the extent of subdivision provided for, and by applying development and environmental control to ensure that adverse effects on the environment do not result. These include controls on building siting and restrictions on the removal of native vegetation, earthworks and modification of wetlands.

6.6.2.1.2

Urban Areas
(See *Chapter 8 - Residential*)

In urban areas highly valued landscapes are protected through the Low Intensity Landscape Protection Zone. Subdivision rules allow for large lots, to establish a low ratio of building to natural landscape. Controls are applied to protect significant trees and bush, prevent the modification of wetlands and waterbodies, and protect high quality landscapes from insensitive development. The erection of single household units, and larger scale earthworks, are Controlled or Restricted Discretionary Activities.

6.6.2.1.3

Inland Waters Zones
(See *Chapter 11 - Inland Waters*)

Many of the inland waters still retain their natural character because of their remoteness and the fact that they are often relatively unmodified. The Inland Waters General Zone and Inland Waters Protection Zone aim to protect this character through controls on the activities which can occur on and in these waterbodies. Controls are placed on the removal of vegetation and the erection of structures.

6.6.2.1.4

Geologically Significant Sites

The Council has identified significant geological sites (see Appendix 6A).

The majority were identified on either Department of Conservation, Rodney District Council or Auckland Regional Council land. Therefore they are protected either by the Open Space Zonings or the Reserve Management Plans for the reserves.

In a number of instances geologically significant sites were identified on private land. In some cases the protection of these areas was best dealt with through the existing zone, or the SNA being identified and the resultant restrictions being placed on activities (eg. Te Henga-Bethells which is a SNA, as well as within the Landscape Protection Rural Zone). In other cases applying a Scheduled Activity status was more appropriate (eg. South Head Sandhills at the northern end of South Head and the Weiti shell cheniers).

In some instances the threats to the geologically significant sites were natural processes, such as coastal erosion, and there were no threats from human activities. Therefore, placing restrictions on human activities through rules in the District Plan was not appropriate.

As all these sites could be afforded protection through one or other of these mechanisms, they have not been identified on the Planning Maps as sites of geological significance per se, although, SNAs and Zones have been identified on the maps. Within these identified areas earthworks and vegetation removal are restricted activities, which affords protection to the sites of geological significance.

6.6.2.2

Other Methods

The other methods for the protection of highly valued landscapes are the same as those for the protection of highly valued vegetation and habitats listed in section 6.6.1.2, including subdivision rights for the protection of open space in highly valued landscapes in rural areas.

6.7 ANTICIPATED ENVIRONMENTAL RESULTS

The anticipated environmental results from the implementation of the above objectives, policies and methods are:

(a) Highly valued vegetation and wildlife habitats will be retained, protected and enhanced.

(b) Linkages between highly valued vegetation and wildlife habitats will be retained, protected and enhanced.

(c) Highly valued landscapes and geologically significant sites will be protected from inappropriate or insensitive development, subdivision and land use.

(d) The natural character of the coastal environment, wetlands, lakes, rivers and their margins will be preserved from inappropriate or insensitive building, development, subdivision and land use.

Note RULES

There are no Rules in this chapter. The Rules associated with this chapter are in:

Chapter 7 - Rural
Chapter 8 - Residential
Chapter 10 - Open Space and Recreation
Chapter 11 - Inland Waters
Chapter 18 - Urban Land Modification and Vegetation Protection

APPENDIX 6A

LIST OF GEOLOGICALLY SIGNIFICANT SITES

Sites on Public Land

(a) Beehive Island
(b) Dispute Cove channelled flysch
(c) Goat Island Bay sediments
(d) Grants Island Old Hat
(e) Mathesons Bay black calcite
(f) Muriwai pillow lavas, Maori Bay
(g) Muriwai volcaniclastic sediments
(h) Muriwai Miocene fauna, Maori Bay
(i) O'Neill Bay Miocene crater
(j) Oruawharo hyaloclastite
(k) Waiwera Parnell Grit
(l) Whangaparaoa Peninsula Waitemata Group deformation - Stanmore Bay

Sites which are either partially or completely on private land

(a) Bethells dune dammed swamp
(b) Hoteo hogback bluffs and unconformity
(c) Jordan Road Miocene fauna
(d) Motuketekete Island
(e) Papakaunui dune field
(f) Pukapuka quarry
(g) Weiti shell spit
(h) Whangaparaoa Peninsula Waitemata Group deformation:
    (i) Red Beach
    (ii) Little Manly

Note: Sites below MHWS were excluded as they are within the Auckland Regional Council's jurisdiction under the RMA.

SCHEDULE OF GEOLOGICALLY SIGNIFICANT SITES

* Indicates that the Geologically Significant site is in public ownership

KEY:

VULNERABILITY

Each site has been given a vulnerability classification (1 – 5) depending on its perceived vulnerability to human activities:

1. Highly vulnerable to complete destruction or major modification by humans.
2. Moderately vulnerable to modification by humans.
3. Unlikely to be damaged by humans.
4. Could be improved by human activity.
5. Site already destroyed (not necessarily by human activity)

SITE	SIGNIFICANCE	SITE DESCRIPTION	LEGAL DESCRIPTION	OWNER	ZONE	VULNERABILITY	COMMENTS
1. Beehive Island Kawau *	Outstanding regional significance	Small "old hat" island surrounded by large intertidal platform with contrasting white shell sand high tide beach. Classified as extremely well defined landform of scientific / educational and scenic value.	Allot 77 Psh of Matakana SP 46905	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat therefore no need for protection through the District Plan.
2. Bethells dune dammed swamp	Outstanding regional significance	The largest remaining swamp in the Auckland area – valley dammed by Holocene sand dune. Classified as a moderately well defined landform of scientific / educational and scenic value.	1. Sec 165 Motutara Settlement SO 25055 2. Puketotara ML 136 3. unnamed 182C1 Maori Block ML 12243 4. unnamed Pt 18202 Maori Block ML 12243	1. Kumeu Country Est 2. Jordan 3. Thompson 4. Jordan		Vulnerability = 1 Infilling, reclamation, increased upper catchment erosion resulting in more rapid infilling, increased water extraction upstream, weeds such as crack willow, changing swamp hydrology, damage to dune by vehicles.	At present this feature is zoned Conservation 1 – Nature Conservation. Infilling and reclamation are discretionary activities in this zone. Earthworks and vegetation removal are also strictly controlled. Zoning and related controls are the most appropriate means of dealing with this site. The control of eutrophication is best achieved through education and not a zone or the site being scheduled. District Plan Review Note: This area has also been identified as a significant natural area (SNA). Therefore to apply conservation type suite of controls via SNA protection mechanisms would be the most appropriate means of dealing with this
SITE	**SIGNIFICANCE**	**SITE DESCRIPTION**	**LEGAL DESCRIPTION**	**OWNER**	**ZONE**	**VULNERABILITY**	**COMMENTS**
							This geological site is part of the Landscape Policy Area and is also identified as a SNA. This provides protection for this area through the rules for both the policy area and SNA which have restrictions on the earthworks, wetland modification and vegetation clearance.

3. Dispute Cove channeled flysch *	Outstanding regional significance	Excellent exposure of a small channel within the basal Waitemata Group.	Lot 6 DP 39418 Pt 232 DP 7674	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
4. Goat Island Bay sediments, Leigh *	Outstanding regional significance	Excellently exposed basal sequence of Waitemata flysch overlaying the basement. The sequence of Pakiri Formation.	Allot 195 Parish of Omaha SO 5169	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
5. Goat Island Oldhat, Mahurangi*	Outstanding regional significance	A small island surrounded by broad intertidal rock platforms, giving it the classic "old hat" shape. One of the best examples of an "old hat" in New Zealand. Classified as a moderately well defined landform of scientific / educational and scenic value.	No legal description	Land Information New Zealand		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan
6. Hoteo hogback bluffs and unconformity	Outstanding regional significance	4kms of prominent bluffs visible from State Highway 1, 2-3 kms south of Wellsford. Largest and most prominent hogback ridge in the Auckland Region. Well exposed, regionally significant unconformity within the Waitemata Group.	Pt Allot 128 Psh of Tauhoa Allot 44 Psh of Tauhoa	Oldfield		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan
7. Jordans Road Miocene fauna	Outstanding regional significance	Best preserved and most diverse bathyal molluscan and coral fauna in early Miocene of northern New Zealand.	Kukutango Pt DP 15975	Jordan		Vulnerability = 3 Disused quarry.	No noted threat, therefore no need for protection through the District Plan
8. Mathesons Bay black calcite *	National importance	A good exposure of large black calcite crystals.	Lot 2 DP 132630	Rodney District Council		Vulnerability = 2 Marine erosion.	There is nothing that Council would do to minimize erosion without interfering with natural coastal processes which is contrary to Council's present policy. This would be more appropriately addressed through the Coastal Management Strategy.
SITE	**SIGNIFICANCE**	**SITE DESCRIPTION**	**LEGAL DESCRIPTION**	**OWNER**	**ZONE**	**VULNERABILITY**	**COMMENTS**
9. Motuketekete Island Waitemata Group Miocene basal limestone	Outstanding regional significance	One of only three known localities in New Zealand where reef corals are preserved in growth position. Only occurrence of early Miocene limestone between Auckland and Bream Tail. Good exposure of sequence passing up into flysch.	BLK V Kawau Survey District SO 33121	Private (Vivian / Sweetman)		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan
10. Muriwai pillow lavas, Maori Bay *	International importance	Among the best exposed and preserved pillow lavas in the world, interbedded with fossiliferous sediments that give an indisputable bathyal depth.	Crown Land BLK XI Kumeu Survey District SO 25055 Sec 43 VLK IX Kumeu Survey District	Dept of Conservation Auckland Regional Council		Vulnerability = 2 Quarrying and marine erosion.	This feature is on public land (i.e. Auckland Regional Council). Quarrying is highly unlikely to occur in this area. If a proposal were put forward for quarry the ARC would have to go through a public consultation process, as it would be contrary to the Reserve Management Plan. Council could then submit on this at that stage. There is nothing that Council would do to minimize erosion without interfering with natural coastal processes which is contrary to Council's present policy in such a remote area.

11. Muriwai volcaniclastic sediments*	International importance	Well exposed in coastal and intertidal platforms. Best exposures in New Zealand of submarine canyons and channels filled with volcaniclastic.	Crown land BLK XI Kumeu Survey District SO 25055 Section 63 BLK IX Kumeu Survey District	Dept of Conservation Auckland Regional Council		Vulnerability = 3 Marine erosion	There is nothing that Council would do to minimize erosion without interfering with natural coastal processes which is contrary to Council's present policy in such a remote area.
12. Muriwai Miocene fauna, Maori Bay*	Outstanding regional significance	Unusual, bathyal molluscan fauna and also a conglomerate bed with redeposited shallow water reef corals.	Sec 52 BLK IX Kumeu Survey District	Auckland Regional Council		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
13. Muriwai Miocene fauna, Powell Bay*	Outstanding regional significance	Unusual bathyal molluscan fauna, mainly turrids.	Crown Land BLK XI Kumeu Survey District SO 25055	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
14. O'Neill Bay Miocene crater*	Outstanding regional significance	One of the best exposed craters in the unnamed region.	Lot 1 DP 116242 Lot 1 DP 103778	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
15. Oruawharo hyaloclastite*	National importance	Best example of hyaloclastite and associated vent complex in Miocene volcanics of Northland.	Okahukura PT 2 DP 10011	Dept of Conservation		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
SITE	**SIGNIFICANCE**	**SITE DESCRIPTION**	**LEGAL DESCRIPTION**	**OWNER**	**ZONE**	**VULNERABILITY**	**COMMENTS**
16. Papakanui dune field*	National importance	A large area of mobile dune fields and 3 kilometres long active spit.	Pt Sec 63 BLK X Okaka Survey District SO 39853 Lot 1 DP 13825	Dept of Conservation		Vulnerability = 2 Reforestation, off road vehicles, bombing.	This is part of the New Zealand Defence Force bombing range and bombing is authorized by the designation. Most of this area is in the Department of Conservation's ownership and therefore reforestation is unlikely to occur. This area is zoned Conservation 1 – Nature Conservation, South head Sandhills Special Character Area which restricts what activities can occur in this area and focuses on the protection of the area as it presently exists. Off-road vehicles are an issue but it is inappropriate to control this through the District Plan. The Council has a bylaw relating to vehicles on the foreshore, which is a more appropriate means of dealing with these areas. District Plan Review It is proposed that the area in private ownership be a schedule activity with restrictions on activities similar to the South Head Sandhills Special Character Area. The area in public ownership (i.e. DOC) is proposed Open Space 1 (Conservation) – the most restrictive of the open space zones, which aims to protect the values on the site. This area has also been identified as a significant natural area (SNA). Therefore, to apply conservation type suite of controls via SNA protection mechanisms would be the most appropriate means of dealing with this, in conjunction with appropriate bylaws.
17. Pukapuka quarry unconformity	Outstanding regional significance	One of very few exposures of sedimentary contact of Waitemata on	Lot 1 DP 62135	Berger		Vulnerability = 2	This quarry is an existing use right.

		allochthon.				Quarrying.	
18. Waiwera Parnell Grit*	National importance	Easily accessible, educational locality showing a complex volcanic sediment gravity flow interbedded with Waitemata flysch	Lot 2 DP 45560	Rodney District Council		Vulnerability = 3 No noted threats.	No noted threat, therefore no need for protection through the District Plan.
SITE	**SIGNIFICANCE**	**SITE DESCRIPTION**	**LEGAL DESCRIPTION**	**OWNER**	**ZONE**	**VULNERABILITY**	**COMMENTS**
19. Weiti River shell spits	International importance	Some of the best examples in New Zealand of actively forming intertidal shell spits, which are built 300-500 m out across tidal flats.	Lot 7 DP 95984 Lot 1 DP 51255	Rodney District Council Green and McCahill		Vulnerability = 2 Earthworks and marine erosion.	This area is presently zoned Conservation 1 – Nature Conservation. Earthworks are strictly controlled. District Plan Review Note: This area has also been identified as a significant natural area (SNA). Therefore, to apply conservation type suite of controls via SNA protection mechanisms would be the most appropriate means of dealing with this, in conjunction with appropriate bylaws. In the District Plan Review, the proposed zoning for this site is Greenbelt Lifestyle Zone on the land contained within Designation 154 – *Public Reserve* and Open Space 1 (Conservation) on the part owned by RDC. Therefore, the site has been scheduled with restrictions on earthworks and vegetation removal, which should provide for the protection of the area in public ownership as well as in private.
20. Whangaparaoa Peninsula Waitemata Group deformation (a) Red Beach (b) Stanmore Bay (c) Little Manly	Outstanding regional significance	Superb examples of three dimensional exposure of folds (including slumping and synsedimentary folding) and faults in Miocene Waitemata Group rocks.	Lot 3 DP 70403 Lot 71 DP 47821 Lot 50 DP 17951	Pinewoods Motor Camp Ltd. Rodney District Council Moss - Mason		Vulnerability = 2 Construction of erosion control walls.	This is very unlikely to happen along this coast because of the cost. Council also has a policy of not interfering with coastal processes unless there is a definite community benefit. Therefore, in reality, there is no threat that could be controlled through the District Plan.

APPENDIX 6B

NZ Wildlife Service methodology to define Sites of Special Wildlife Interest

Ranking	Criteria
Outstanding	(a) Presence of a breeding population of a highly endangered or rare endemic species. (b) A population of an endemic species of very restricted distribution and which could become endangered. (c) Areas essential to species from (a) and (b) for purposes other than breeding. (d) Areas of vital importance to internally migratory species with very limited distribution or abundance. (e) Large unmodified ecosystem or example of original habitat type not represented elsewhere in the country, of large size and containing viable populations of almost all species which are typical of the ecosystem or habitat type.
High	(a) Habitat containing an indigenous species which has declined significantly due to man's influence. (b) One of few or the only breeding area for a non-endemic indigenous species of limited abundance. (c) Habitat of an uncommon, discontinuously distributed species not adequately representing particular ecological region. (d) Example of a large unmodified habitat which is not represented to the same extent elsewhere in the ecological region and is used by most species which are typical of that habitat type for the region. (e) Presence of a species of an endemic family which is of limited abundance throughout the country although adequately represented in one ecological region, but whose habitat is at some risk.
Moderate – High	(a) Presence of a species which is still quite widely distributed but whose habitat has been and still is being significantly reduced or modified due to man's influence. (b) Areas containing high numbers of breeding or moulting areas of inter-regional significance to wildlife. (c) A large and fairly unmodified habitat or ecosystem which is represented elsewhere in the ecological region and contains all or almost all species typical of that habitat type for a particular region. (d) An area where any particular species is exceptional in terms of, say, abundance or behaviour but which is otherwise widespread.
Moderate	(a) All habitats supporting good numbers of species which are typical of that particular habitat within a particular ecological region and which have not been heavily modified by man's influence.
Potential	(a) All areas of some wildlife significance which are limited by size, heavy modification or other reasons, but are of potential wildlife value if left to regenerate or are managed or developed for wildlife (may include habitat which functions as a corridor or is sub-optimal habitat which is necessary for maintaining genetic diversity).