8 Natural Environment 8-1

Appendices

8. Natural Environment

8.1 Introduction

North Shore City is surrounded on three sides by sea, its coastline stretching for 160km, bordering the waters of both the Waitemata Harbour and the Hauraki Gulf. The coastal location of the city offers a distinct natural environment consisting of coastal cliffs of the Waitemata Group, reefs and basaltic lava flows from the Pupuke eruption, sandy beaches and secluded bush-clad inlets. There is also a diversity in the pattern of urban development which has occurred along the coastline, ranging from intensive residential environments along most of the gulf and harbour edges, to sparsely developed areas around the inlets of the Upper Waitemata Harbour. The coastline is physically, historically and spiritually close to its citizens and has an elemental role in the future well-being of the city and its inhabitants. The city's coastline has been inhabited for close to 1,000 years. It has been a focus for Maori communities since 1100AD as it has been for later European settlers. The cultural heritage of all settlers is reflected in many features of the present-day coastline.

The Natural Environment Section of the Plan relates directly to the purpose and principles of the Resource Management Act 1991 (RMA) and is derived from the requirements in:

? Section 5: the sustainable management purpose of the RMA, in particular, safeguarding the life-supporting capacity of air, water, soil and ecosystems

? Section 6: the preservation of the natural character of the coastal environment; the protection of outstanding natural features and landscapes; the protection of significant indigenous vegetation and habitats; the maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers, and the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga

? Section 7: kaitiakitanga; intrinsic values of ecosystems; maintenance and enhancement of amenity values and the quality of the environment; finite characteristics of natural and physical resources

The quality of the coastline makes a significant contribution to the character and identity of the city. It is a natural asset and finite resource which requires protection and enhancement through the District Plan. The RMA gives particular recognition to the special significance of the coastal environment. Preservation of the natural character of the coastal environment is a matter of national importance which is also reflected in the principles, objectives, policies and methods of the *New Zealand Coastal Policy Statement*, *Auckland Regional Policy Statement* and *Auckland Regional Plan: Coastal*. The District Plan must not be inconsistent with these documents. They each contain policies emphasising that subdivision, use or development should be located wherever practicable so as to: avoid, remedy or mitigate adverse effects on the coastal environment; maintain public access to the coastal environment; and avoid the need for coastal hazard protection works.

From the submissions to the *Issues Document* and responses to the resident survey it is apparent that there is very strong support for the protection of the natural character of the coastline including the beaches, bathing water quality and marine life as well as for native trees and bush. This is reflected in the Goal (Section 6) for Natural Environment. The *Land Use Strategy* (1992) has identified the management of the coastal environment as a priority issue and how this coastline is managed affects the quality of life that residents of the North Shore enjoy.

The *New Zealand Coastal Policy Statement* recognises that the tangata whenua are the kaitiaki of the coastal environment, and that cultural, historical, spiritual, amenity and intrinsic values are the heritage of future generations and damage to these values is often irreversible. The Council recognises the role of tangata whenua in the coastal environment by consulting with them on the appropriate management of that environment, particularly with regard to features they identify as being of special value.

New Zealand ratified the Convention on Biological Diversity in December 1993. Responsibility for meeting the provisions of this convention devolves to the local authorities with respect, among other considerations, to establishing a system of protected areas, rehabilitating and restoring degraded ecosystems and conserving threatened species. Significant ecological areas have been identified in the report *Ecosystems - Areas of Significant Indigenous Vegetation and Significant Habitats of Indigenous Fauna in North Shore City* (August 1992). These include forest/scrubland, freshwater wetland, as well as coastal/estuarine wetland habitat types and include areas of significant natural heritage listed in the *Auckland Regional Policy Statement*. Protection of these ecosystems for their intrinsic values has been identified as of importance under the RMA as well as by residents. The importance of protection of these ecosystems is highlighted in the Goals (Section 6) for Natural Environment.

The vitality and state of the harbour depends largely on the ecosystem functioning properly in the upper reaches of the harbour. The mangrove inlets are key spawning sites for many of the gulf's commercially and recreationally important fish species. Degradation of these breeding grounds will impact dramatically on the gulf's fish stocks. Siltation is only the first part of a chain of impacts on water following development decisions. Once the earthwork phase has passed and roads, factories and houses are built, it is untreated stormwater that poses a threat. Unchecked, stormwater's physical, chemical and biological impacts on local ecosystems have the potential to cause considerable financial loss to the region through degradation of the long-term sustainable economic yield of harbours and their associated activities, including tourism, boating, fishing and water sports as well as environmental values. Integrated management of this important resource can only be achieved through close regard to the water quality policy direction in the *Auckland Regional Policy Statement*, and recognising the Council's role in managing the effects of stormwater runoff arising from land use activities.

Protection of the natural environment of North Shore City has repeatedly been identified by the community as its number one priority, and this is reflected in the Council's City Plan and City Blueprint Action Plan. Of particular concern is the health of streams within the city, and protection of these receiving environments from the effects of stormwater discharges.

Coastal landforms aside, the North Shore landscape comprises a series of ridgelines providing extensive sea views and vistas alternating with sometimes steep gullies. Significant natural features and landscapes comprise the bush-clad escarpments, volcanic cones and craters including the freshwater Lake Pupuke. The importance of these significant landscape elements are recognised in the Goal (Section 6) for Natural Environment.

The city contains a number of bush areas that are remnants of the past, more extensive, forest cover and which act as a seed source for regenerating bush areas. North Shore City has a 'green image' because of its good tree cover in both urban and rural areas. As well as the native bush the elements of this tree cover comprise pohutukawa stands; early European plantings of exotic species; purpose trees, e.g. shelter trees, crop trees and woodlots; street trees; trees in parks and private gardens.

Reasons for maintaining quality tree cover in any city revolve around providing visual amenity, providing shade and shelter, mitigating greenhouse effects, providing for soil and water conservation purposes, providing habitats for birds and insects, and protecting natural heritage values, meeting the Goals (Section 5) for global conservation and landscape protection. The pohutukawa fringe makes a very significant contribution to the visual amenity of the city's coastline and helps to slow down the rate of natural erosion. The contribution pohutukawa trees make to the natural character of the coast is highly valued by residents, as research has shown. The pohutukawa stands are a natural resource of regional significance which the Plan seeks to protect. Areas of native bush contribute significantly to the landscape and visual amenity of the city as well as providing valuable habitat areas for native fauna and contributing to soil stability and to the quality of water in natural watercourses.

Bearing in mind that forestry is an increasingly favoured land use even on relatively small sites, there are legislative documents in conjunction with the District Plan which also protect native bush. The *New Zealand Forest Accord* restricts the clearance of indigenous forest for new forestry plantings, and the Forests Amendment Act 1993 gives

Part IIIA of the Forest Act a primary focus of sustainable forestry management of the private indigenous forest.

8.2 Natural Environment Issues

The significant resource management issues which affect the natural environment and which must be addressed in the Objectives, Policies and Methods of the District Plan are:

- How to ensure that the natural character of the coastal environment is preserved
- How to maintain and enhance public access along the coastal marine area
- How to manage sites affected by natural coastal processes.

  The coastline is subject to a variety of demands for new and expanded uses, activities and works. As these urban pressures increase, protection of the natural character of the coastal environment will become increasingly important and there will be a need for clear management policies setting out the framework for environmental protection and enhancement.

- How to best protect the integrity of important ecosystems.

  One of the most important ecosystems is that of the coastal wetlands in the Upper Waitemata Harbour. These are the areas affected most by surrounding land use. Other important ecosystems include the complex regeneration cycle of native bush and its associated animal life, and the decomposing qualities of healthy soil and its organisms. Should these ecosystems break down the ultimate consequences would be seriously polluted marine areas and sterile soil with no plant growth, consequently affecting air conditions.

- How to effectively restore, rehabilitate and enhance areas of the natural environment, particularly riparian margins.

  Riparian margins provide a buffer alongside streams between development and the stream, and perform a number of natural functions that benefit stream health in addition to protecting development from the impacts of streams naturally migrating and conveying flood waters. Vegetation within riparian margins is particularly important as it provides shading to regulate water temperature, assists in groundwater recharge, improves low flows in streams as well as acting as a filtering medium for stormwater contaminants and slowing down the free-flow of water into streams, thereby reducing the risk of bank erosion and improving water quality and stream health. Riparian margins also provide green linkages and wildlife corridors maintaining biodiversity, including food and riparian habitat. Urban development encroaching on the stream environment can reduce the ability of riparian margins to function effectively and can adversely affect stream health.

- How to protect outstanding natural features and landscapes from inappropriate subdivision, use, and development
- How to retain areas of native bush, coastal pohutukawa and trees where they possess ecological and landscape values.

  Loss of landscape elements including trees and native bush leads to loss of visual amenity as well as degradation of natural habitats.

- How to retain healthy stream systems while providing for growth and development.

  Streams are an important component of the aquatic environment and their headwaters, where water flow is intermittent, supports the stream network through flow buffering, filtering of contaminants from water flows and transporting organic matter to the aquatic ecosystems of the lower stream reaches. The cumulative effects of stream modification, particularly the loss of intermittent streams at the time of development, can significantly affect stream health and hydrological functioning of the wider stream network.

- How to avoid potential adverse effects on amenity values, landscape values, ecological values and habitat values caused by the removal or damage to tree cover in the urban area.

There is the potential for this adverse effect to arise as the city comes under more pressure for growth, infill and intensification.

- How to manage stormwater discharges taking account of the effects of surrounding land use on the natural environment.

  Stormwater is a contaminant within the definitions given in the RMA and it is also recognised as affecting the long-term sustainability of our natural watercourses in both economic and environmental terms. What happens on the land areas has major and far-reaching effects on the quality, health and functioning of the marine areas.

- How to manage changes to the ecological, amenity and landscape values associated with streams in the city.

  There are a number of interlinked values associated with streams, including in-stream ecological values and the recreational (water contact and walking) and amenity values of the stream corridor.

  Surface stormwater runoff, particularly in the urban environment, has adverse effects on these values. Development adds hard surfaces to catchments, creating increased levels of stormwater runoff on an annual basis, increasing peak flows particularly during the smaller, more frequent rainfall events, while also reducing base flows during dry weather due to reduced ground soakage of rain water. These changes adversely affect streams by increasing flows and rates of erosion and scouring of stream banks, reducing biodiversity and opportunities for habitats, and degrading amenity values. Contaminant loads (e.g. litter, sediments, hydrocarbons and heavy metals) also increase.

  Methods to control stormwater runoff through stormwater ponds are only partially effective in addressing these issues as a large proportion of the city's urban stream network is upstream of feasible pond sites, while the ponds themselves are not effective at managing the effects associated with the smaller, more frequent rainfall events, and are only part of the approach. Greater control and mitigation of stormwater at source is needed as part of an overall treatment train approach which includes down stream devices such as detention and treatment ponds. On-site management of stormwater, as close to source as possible, is an essential and effective means of maintaining stream health. By capturing rainfall and stormwater flows firstly on-site, reducing total volumes through the harvesting of water, and settling out contaminants through gradually releasing the residual stormwater over an extended period of time, stormwater flows more closely mimic pre-urbanisation flows, which the city's streams can more ably accommodate. Without this critical first step in the overall treatment train approach, the ultimate success of measures to protect stream health further downstream is compromised. In particular these additional on-site controls should be focused on those catchments where the stream network still has ecological, recreational and amenity values.

  While new development and redevelopment in accordance with the District Plan can provide source control to mitigate off-site stormwater effects associated with this development, it cannot counter the effects of existing unmitigated development. An important issue in managing stream health at source is stormwater generated from existing development. These existing effects will continue to have a level of impact on stream health until such time as redevelopment of these areas occurs and the plan provisions have effect (subject to existing use rights). Enhancement of stream health is therefore a long term objective. It is important to note however that other District Plan provisions (such as in relation to riparian margins), and additional non-regulatory measures (such as community work, council planting and capital works programmes, etc), are continually being implemented throughout the city and not only maintain but seek to improve and enhance the ecological, amenity and recreational values of streams throughout the city.

  It also needs to be recognised that business areas (town centres and employment areas) have developed to a greater intensity than residential areas, with higher percentage coverage of sites in impervious surfaces. In recognition of this, provision needs to be made to ensure future business developments are able to establish the extent of impervious areas necessary to enable efficient use of business land, provided the effects of impervious areas in excess of stated thresholds can be

adequately mitigated on-site.

Objectives and Policies for the natural environment have been developed from these resource management issues. The District Plan seeks to achieve a high level of protection of natural features and ecological values.

- How to protect the natural environment from any adverse effects of mining activities.

  Mineral extraction does lock up land for considerable periods and with limited rehabilitation potential.

- How to manage the effects of low probability but high risk hazard events and raise awareness of such events.

  The least frequently occurring natural hazards include earthquakes, volcanism, tsunami, various meteorological effects (cyclones, tornadoes, drought) and fire. While of low return frequency, they are potentially of major regional significance and not easily dealt with through land use planning strategies. The risks of these hazards are poorly understood. Potential effects are currently mainly dealt with by contingency controls such as civil defence and insurance systems.

- How to manage development within areas subject to natural flooding hazards (overland flow paths, flood plains and low lying coastal land) so as not to exacerbate the natural hazard or risk to personal safety or property.

  Flooding hazards result from a number of causes including extreme rainfall, blockage or failure of stormwater infrastructure, and high sea levels. Some locations, including areas of existing development, are significantly affected by flooding because they are within overland flow paths, flood plains, or low lying coastal land. Development of these areas has the potential to contribute to and exacerbate flooding with consequential loss of or damage to property and/or risks to safety.

  The Council recognises its role in aiming to better understand the impacts of natural hazards, developing land use planning mechanisms to avoid or mitigate effects and for improving community awareness.

  A number of resource management functions are shared by the regional council, the city council and, in the case of the coastal marine area, the Minister of Conservation. Thereby, the Plan has regard to the relevant statutory documents.

  Objectives and Policies for the natural environment have been developed from these resource management issues. The District Plan seeks to achieve a high level of protection of natural features and ecological values.

8.3 Natural Environment: Objectives and Policies

8.3.1 Coastal Conservation

Objective

To protect the natural character, public access, cultural heritage values, ecology and landforms of the coastal environment.

Policies

1. By defining the Coastal Conservation Area.
2. By applying a building set back or foreshore yard as a buffer between the coastline and development to the extent necessary to:
   - protect the natural character of the coastal environment, including its soft green edge, the physical landform, natural features, vegetation and ecological systems
   - protect the water quality of the coastal environment and the habitats that it sustains

- provide for the operation of naturally occurring processes
- keep open the existing and foreseeable opportunities for future esplanade reserves and strips
- maintain and enhance landscape and amenity values
- protect the value the coastline has to tangata whenua
- reduce potential hazards resulting from natural processes and subsequent changes in landform
- manage the cumulative effects of the activities of property owners in the coastal environment.

3. By restricting development and structures on the beach areas and other coastal areas of high public use of the city so as to protect the natural character and high recreational values of these areas, except where these structures are needed for public safety.

4. By requiring the provision of esplanade reserves or esplanade strips upon the subdivision or development of land abutting the foreshore where:

   - the land contributes to the protection of conservation values including maintaining and enhancing water quality, aquatic habitats, ecosystems, or the natural functioning of the adjacent sea, river or lake, or natural and cultural heritage features and values
   - the land has potential for maintaining and enhancing public access to and along, and to views of, the coastal marine area, lakes, and rivers including streams
   - the land enables public recreational use of the coastal environment where consistent with the protection of ecological values
   - the land so acquired would protect conservation values by mitigating natural hazards
   - the land creates linkages with existing reserves or strips
   - the land contains trees or vegetation that maintain the soft green edge of the city.

Policies - Natural Values

5. By protecting native coastal vegetation, in particular pohutukawa trees, for amenity, ecological and land stability purposes.

6. By ensuring that the effects of any buildings or any structures, including erosion control works and stormwater outlets, within the coastal environment do not adversely affect natural values or natural character.

7. By ensuring that wherever possible stormwater disposal from coastal sites be directed away from the coastal edge.

8. By ensuring that development and activities in the Coastal Conservation Area do not adversely affect the proper functioning of ecosystems, or adversely affect the natural coastal environment.

9. By encouraging the use of native species, preferably natural to the coastal environment and sourced from local seed or other propagating material, in revegetation and landscaping proposals.

10. By using activity and development controls within the Coastal Conservation Area so as to avoid or mitigate pollution or sedimentation of coastal waters, and avoid, remedy or mitigate any adverse effects on the amenity value of the coastal environment.

11. By restricting the location and effects of commercial and industrial and other business activities and development in the Coastal Conservation Area to those which are dependent on a coastal location.

12. By opposing further reclamation of the coastal marine area unless any specific

proposal has a demonstrable and positive public benefit.

Policies - Public Access

13. By providing for shoreline walkways and reserves, to and around the foreshore where these do not significantly conflict with environmental or cultural heritage values or public safety and security or lead to the erosion of sensitive landforms.

14. By controlling the location of any development and associated activities on land adjacent to the foreshore to ensure that the opportunity for the provision of waterborne transport, and the ready public access to such transport, is not compromised.

15. By continuing to provide for public facilities for recreation and boating, where these do not significantly conflict with environmental values or lead to the erosion of sensitive landforms, to reduce the need for such private facilities as jetties and slipways.

Policies - Hazard Mitigation

16. By restricting earthworks and removal of vegetation within the Coastal Conservation Area, particularly on steep, unstable or erosion-prone land.

17. By identifying areas prone to rapid erosion and restricting activities with the potential to accelerate erosion.

18. By restricting development in locations which may be subject to any effects of a rise in sea level.

19. By ensuring that new subdivision, new use and development within the Coastal Conservation Area is located and designed so that the need for coastal protection works is avoided, both at the time of development and within the expected future life span of the proposed development.

20. By ensuring that where existing subdivision, use or development is threatened or adversely affected by a coastal hazard, coastal protection works are undertaken only where it can be demonstrated that they are the best practicable option for the future, having regard to whether:

    a) They avoid, remedy or mitigate any adverse effects on the environment; and

    b) The adjoining land or development is at risk from a coastal hazard; and

    c) It is practicable to do nothing, or abandon or relocate existing structures; and

    d) Non-structural solutions such as planting can be used to avoid, remedy or mitigate the coastal hazard rather than coastal protection works; and

    e) The potential effects on landscape and amenity values have been assessed with regard to effects at the time of development and within the expected future life of the development; and

    f) The coastal protection works will be located and designed so as to avoid adverse environmental effects to the extent that it is practicable, and will not lead to any of the following effects (either in a temporary, permanent or cumulative manner):

        i) long-term adverse visual effects on the coastal landscape and amenity values;

        ii) any increase in the coastal hazard posed to the coastline in question, including increased rates of erosion, subsidence or slippage;

        iii) undermining of the foundations at the base of the structure;

        iv) loss of existing natural features and amenity values;

        v) erosion behind or around the ends or other parts of the structure;

        vi) settlement or loss of foundation material;

        vii) movement or dislodgment of individual structural components;

        viii) the failure of the coastal protection works should overtopping by water occur;

ix) piping or hydraulic pumping of fine material or backfill;

x) offshore or longshore loss of sediment from the immediate vicinity; and

g) The expected effects of sea level rise have been taken into account.

Methods

- Policies 1-11, 14, 16-20, 14-19 will be implemented by rules
- Policy 9 will be implemented through education initiatives and resource consent conditions
- Policy 12 will be implemented through Council initiatives
- Policies 13 and 15 will be implemented by Council works, including amenity improvements. Policy 11 will be implemented through works on Council owned reserves, and through works on private land only where it is in accordance with agreements, covenants or resource consent processes under the RMA or other legislation such as the Conservation Act 1987, the New Zealand Walkways Act 1990 and Te Ture Whenua Act 1993.

Explanation and Reasons

The Coastal Conservation Area has been determined on the basis of the land possessing one or more of the following characteristics:

- *Any habitat or association of flora adjacent to the foreshore which derives its intrinsic character from a maritime location*
- *Any landform adjacent to the foreshore which has been formed or modified by processes of marine erosion or deposition*
- *Any feature, either natural or physical, which substantially contributes to the visual amenity of the coastal environment*
- *Any site or part thereof adjacent to the foreshore from which natural surface drainage may flow to the coastal marine area*
- *Any reserve or part thereof adjoining mean high water springs where activities may take place which have a connection with or impact on the coastal marine area*
- *Any commercial or industrial land use located adjacent to the foreshore which engages in any activity, which may have a direct effect on the coastal environment*
- *Any part of any road or any transport or communication facility including any wharf, jetty or quay adjoining mean high water springs.*

The Coastal Conservation Area includes beaches, sea cliffs, promontories, tors, sand bars, areas of coastal vegetation and coastal-associated animals, areas subject to coastal erosion or escarpments (where these are not within the coastal marine area) as well as urbanised coastal esplanades.

Preservation of the natural character of the coastal environment is a matter of national importance. Although the coastal environment of North Shore city is largely urbanised, the natural character, as much as it exists, is a highly valued feature of the city and must be protected through rules in the Plan. The remaining natural character of the coastal environment largely involves the 'soft green' edge to the city's coastline where buildings are set back from the coast and there are pohutukawa and other trees and landscaping between the buildings and the coast.

An important tool for managing development in the coastal area is therefore the Foreshore Yard. The Foreshore Yard (which is in addition to the rules of the Coastal Conservation Area) defines that part of the coastal edge which is most sensitive to development. The width of the Foreshore Yard varies around the coastline, depending upon the specific environmental conditions. The following factors were taken into account in determining the width of the yard:

- *conservation values, including areas of coastal habitat and vegetation*
- *landscape values*

- *landform, e.g. cliff top, beach or estuarine edge*
- *coastal hazards*
- *existing development.*

The well-established nature of coastal development along substantial parts of the foreshore and the reliance that property owners have placed upon the certainty provided by a building setback, which has been applied as a specified distance for many years, ensures that new buildings do not undermine the level of amenity coastal landowners have come to expect in the coastal area, such as views of the sea, where buildings do not impinge too closely upon the coastal environment, and where allowance is made for the natural functioning of coastal processes (see Controls in the Activity zones).

Buildings, including fencing and structures like swimming pools, are restricted within the yard so as to maintain the soft green character of the coastal edge, as well as in recognition of the coastal erosion issues such structures raise.

A significant, long term threat to the soft green edge of the coastline are coastal protection works. These works have the potential to create a 'hard, engineered' appearance to the coastline over time. Poorly designed works could also increase rates of erosion. The policies of the Plan seek a stepped approach to the management of this issue. In the first instance, if possible, the policies seek to set development back from the coastline to create a natural buffer area. However if existing development patterns mean that this is not a realistic option, then the policies require the consideration of less intrusive methods of coastal protection, and where hard structures are needed, then these be designed in a way that will reduce their adverse visual effect.

The coastal environment is a dynamic physical and ecological system, the extent of which is subject to rapid change over time. Attempts to control coastal processes such as naturally occurring beach erosion and accretion by artificial structures has only been partially successful and has involved high cost and considerable impacts on the natural character of the coastal environment.

Closely related to the above is the need to ensure that an appropriate balance is achieved between access or potential for access along the coastal marine area and the rights of coastal property owners to enjoy reasonable levels of use of their land. Esplanade reserves (see Section 9.8), which are created at subdivision or development of land and vested in the Council's ownership, also help protect the coastal environment from the effects of adjacent development and permit public use and enjoyment of the land. Reserve areas adjacent to the foreshore are heavily used and contribute to the attractions and accessibility of the coast. In appropriate circumstances, conservation covenants may be a suitable alternative mechanism to esplanade reserves and esplanade strips.

Expected Environmental Results

- Preservation of the natural character of the coastal marine area as assessed by five-yearly coastal aerial photography and five-yearly native vegetation surveys
- Enhancement of public access to and along the coastal marine area as assessed by five-yearly resident surveys and biennial analysis of reserve contributions and Council land purchases
- Preservation of the coastal vegetation which has ecological, scenic and stabilising significance along cliffs and foreshore areas, as measured during the five-yearly coastal sensitivity assessment
- Future development which is in sympathy with the natural features of the coastal landscape and with natural functioning of coastal processes as assessed by an annual review of compliance with resource consent conditions, and five-yearly coastal aerial photography.

8.3.2 Ecosystems

Objective

To protect and enhance significant habitats of native fauna and flora to maintain biodiversity, and for their intrinsic, educational and recreational values.

Policies

Policies - General

1. By scheduling significant ecosystems and habitat areas in the District Plan and indicating these areas on the District Plan Maps as Sites of Special Wildlife Interest (SSWI).
2. By identifying other recognised ecological areas as a matter of public information.

Policies - Protection

3. By seeking the provision of suitable buffers of undeveloped land around water-bodies, estuaries, wetlands and the foreshore so as to protect natural ecosystems by means of esplanade reserves.
4. By ensuring that development in the Coastal Conservation Area is located, designed and constructed so as to avoid the need for removal of coastal and estuarine vegetation and avoid any disturbance or destruction of wildlife habitats and their values, shellfish beds, rocky shore ecosystems, and important fishery habitats.
5. By ensuring that development and activities in the Coastal Conservation Area do not adversely affect the proper functioning of ecosystems, including those below mean high water springs.
6. By avoiding earthworks and vegetation removal affecting ecosystems and habitats.
7. By requiring maximum on-site absorption and vegetation filters to protect receiving waters from adverse effects of stormwater flows affecting ecosystems and habitats.
8. By having particular regard to the effect on wildlife when considering any application for resource consent for development within SSWIs.
9. By providing information on the high wildlife and natural values of estuaries adjoining North Shore City (Paremoremo, Lucas and Hellyers Creeks; Soldiers and Shoal Bays; and the Okura Estuary).
10. By identifying and protecting significant nesting, breeding, roosting, feeding and resting sites of native species, including resident and migratory birds.
11. By restricting access to particularly sensitive plant and animal habitat areas under the Council's administration.
12. By providing information on management of wildlife and vegetation in the city with the objective of ensuring the survival of wildlife species in their natural habitats.
13. By increasing public awareness of wildlife values.
14. By identifying opportunities for the rehabilitation of habitat areas or the creation or enhancement of new ones.

Methods

- Policies 1 and 3 - 8 will be implemented by rules
- Policies 2, 9, 10, 12 and 13 will be implemented through information and education
- Policies 12 and 14 will be implemented by Council works
- Policy 11, 12 and 14 will be implemented by Reserve Management Plans.

Explanation and Reasons

Biodiversity is the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part. This includes diversity within species, between species and of ecosystems.

To give effect to New Zealand's international obligations to preserve biodiversity, the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna becomes a matter of national importance, and the protection of intrinsic values of ecosystems a matter to which the Council shall have particular regard. In exercising its functions and powers in this regard, the Council has employed a mechanism for protecting significant ecosystems, as advocated by the Department of

Conservation, by scheduling of Sites of Special Wildlife Interest (SSWI) and formulating rules (see Rules: Activities in the Activity zones) necessary to ensure their continued state of good health and functioning. All SSWIs are listed in a national habitat register and ranked according to their value to wildlife. The specific criteria to achieve a certain ranking are provided in Appendix 8A. Altogether, 15 SSWIs are Scheduled in the Plan.

Adequately maintaining and protecting habitat areas and intact ecosystems calls for an integrated approach, as development of surrounding land can impact greatly on such areas or systems through stormwater, changing soil/moisture regimes, ground water, ecological corridors and edge effects. For this reason, SSWI boundaries enclose some developed as well as undeveloped land, whether privately or publicly owned. Effective protection of habitat areas and ecosystems can only be achieved with the co-operation of the fully informed community.

Expected Environmental Results

- Continuation of existing healthy population levels, and improvement in degraded habitat areas, of wildlife species in their natural habitats, as measured by five-yearly stream biological inventories, five-yearly native vegetation surveys and annual shellfish population surveys, and annual bird surveys
- Improved awareness of wildlife and habitat values as part of our national heritage as assessed by five-yearly resident surveys.

8.3.3 Landscape, Landforms, Geological Features and Views

Objective: Landscape, Landforms and Geological Features

To recognise and protect those areas which make a significant contribution to the landscape character, sense of identity, or geological history of the city.

Policies

1. By identifying outstanding features or group of features which collectively contribute to a significant character or feature, or areas of environmental sensitivity and applying special protective zones.
2. By identifying and scheduling in the District Plan sites of geological significance and protecting these features for their scientific and educational and aesthetic value. Additions to this Schedule will be assessed against the criteria in Appendix 8B.
3. By identifying other geological features as a matter of public information as resources for information pamphlets become available.
4. By controlling buildings and development adjacent to the coast, Lake Pupuke, Tank Farm and Onepoto craters to protect the natural configuration of the coast and lake margins and to protect the natural character of these areas.
5. By requiring landscaping to be undertaken as part of development in order to retain and enhance some element of natural landscape character.
6. By maintaining that part of the volcanic cones which are reserve or subject to co-management, free of structures and obstructions other than structures necessary for heritage, reserve management and cultural purposes and other minor structures that are not readily visible from public places.
7. By restricting the height of buildings on sites adjoining the reserves on Takarunga (Mount Victoria) and Maungauika (North Head) so:
    - that there is no visual intrusion from residential development onto the reserves,
    - that views of the maunga from public places are maintained,
    - that views from and between the maunga are maintained.
8. By restricting the height of buildings and structures within the 9m height sensitive area shown in district plan maps Appendix 2, so:

- that the general height profile of development follows the natural topography of the landscape around Takarunga (Mount Victoria) and Maungauika (North Head),
- that views of the maunga from public places are maintained,
- that views from and between the maunga are maintained,
- while enabling development up to 2 storeys.

9. By ensuring that buildings and structures do not intrude into the volcanic viewshafts shown in Appendix 2 except where: buildings up to 9m high are provided for within a height sensitive area shown in the district plan maps Appendix 2, or the effects on the views are minor; so that views of the maunga are preserved.
10. By recognising the need for integrated management of some significant landscape features such as the volcanic cones, taking into account cultural heritage values.
11. By increasing public awareness of the heritage values of natural landscapes, landforms and geological features.

Methods

- Policies 1-9 will be implemented by rules
- Policies 10 and 11 will be implemented through education and information.

Explanation and Reasons

The city has a wide variety of landscape features and many areas of scenic and amenity value which provide distinctive character and identity worthy of protection. These are the bush-clad escarpments of Albany, Greenhithe and Paremoremo, areas of native bush, evidence of volcanic activity and natural geological processes. The visibility of the volcanic cones: Mount Victoria, North Head and Rangitoto, because of their marine setting, impart a character that is distinctly North Shore. Visibility of the cones in the volcanic field is considered a matter of regional importance. Protection of viewing corridors is achieved through provision of maximum building heights. Protection of landscapes is achieved through zoning.

Expected Environmental Results

- Unobstructed natural outline of the volcanic cones as assessed by an annual review of compliance with resource consents
- Protection of views of the volcanic cones from important viewing locations within the city as assessed by an annual review of compliance with resource consents
- Retention of the visual amenity provided by the bush-clad escarpments as assessed by resident surveys and five-yearly native vegetation surveys
- Retention of geological sites for present and future generations as assessed by five-yearly photographic surveys
- Retention of significant landforms such as coastal features and lake margins, as measured by five-yearly coastal sensitivity assessments
- Retention of small landscape features which enhance residential amenity as assessed by five-yearly resident surveys.

Objective: Views from Public Places

To identify important public views and viewpoints and provide for their protection to maintain and enhance their amenity values.

Policies

1. By applying the Rural 2 and 3 zones for landscape protection with controls to minimise the impact of obtrusive buildings on the skyline of escarpments and hills in the city's rural areas.
2. By identifying important viewpoints for publicly available views and protecting views from them from being obscured (refer to Appendix 8F).

Methods

- Policy 1 will be implemented by rules
- Policy 2 will be implemented through the provision of information and by Council works including amenity improvements.

Explanation and Reasons

Visual landmarks in the city include the bush-clad escarpments which dominate the skyline of the city's rural areas. It is important that these escarpments are protected from development and kept in their natural state.

A number of key locations provide unimpaired views across the city to the Hauraki Gulf Islands and across the harbour to Auckland City. Many of these views are self-preserved and require no specific restrictions to protect them.

Expected Environmental Results

- Readily accessible public viewpoints as assessed by five-yearly resident surveys and five-yearly photographic surveys.

8.3.4 Tree Management

Objectives

To promote amenity values in both the urban and rural areas by maintaining and enhancing the tree cover present in the city.

To retain trees that contribute to the amenity, landscape and ecological values in the urban area.

To raise community awareness and the level of education regarding trees.

To promote appropriate tree planting and maintenance.

Policies

1. By protecting areas of native bush which contribute significantly to the landscape and are important for their ecological values.
2. By assessing and listing in a Schedule of Notable Trees those individual trees which by virtue of their scientific, landscape, landmark, visual or historic interest merit particular identification and protection.
3. By protecting coastal native vegetation and pohutukawa trees in particular.
4. By encouraging the Council to plant and maintain trees on Council owned land.
5. By ensuring that tree planting does not give rise to the disruption of network utility operations.
6. By ensuring the retention of trees that contribute to amenity, landscape and ecological values of the area, including by general tree protection, a Schedule of Notable Trees and conditions of consent on subdivision and resource consents.
7. By providing advice to owners of trees on the Schedule of Notable Trees.
8. By providing assistance with the preparation of covenants to protect trees.

Methods

- Policies 1-4 and 6-8 will be implemented by rules and through education initiatives
- Policy 5 will be implemented via Council street tree planting policy.

Explanation and Reasons

Today there is a wide consensus that trees make our towns and cities beautiful. There are two vitally important aspects to maintaining a reasonable tree cover. Firstly, tree planting must be actively encouraged and, secondly, information must be available to help the community manage their trees to best advantage. It is from this standpoint that any tree protection initiatives in the District Plan must be derived.

The presence of trees and areas of native bush are important not only aesthetically but also socially, culturally and ecologically. Collectively trees can make a significant contribution to ecological functions in addition to the amenity values they provide, and

help to endow the landscape with distinctive environmental quality and charm. Reasons for maintaining urban vegetation include:

- *enhancement of visual amenity and landscape*
- *provision on screening, shade and shelter*
- *absorption of pollutants and carbon dioxide*
- *enhancing soil and water conservation to assist sustainable land management and limit erosion and sedimentation of watercourses and marine areas*
- *to support the life supporting characteristics of natural cycles (water, oxygen, carbon, soil etc.)*
- *provision of habitat for birds and insects*
- *protection of natural heritage values*
- *enhancement of building architecture, creation of vistas, defining and framing open spaces.*

Trees play a vital role in mitigating the intensified greenhouse effect which could lead to climatic change. The most plentiful and best known of the greenhouse gases is carbon dioxide. This is thought to be responsible for about half the present human-generated intensification of the greenhouse effect. Trees convert carbon dioxide from the atmosphere into living material and, as such, they can effectively act as a sink for carbon which would otherwise be available to contribute to global warming.

Trees also help absorb rainfall and transpire it back to the atmosphere, contributing to maintaining moisture levels in the air around us. The combination of air cleaning and temperature reducing effects during transpiration from trees and green areas, supplies fresh air to cities.

However, it is acknowledged that in some instances trees may adversely affect amenity values due to past deficiencies in tree planting or management, site design, or undue restrictions on the reasonable use of a site. These effects are considered through the assessment criteria.

A range of options is available to Council for protecting trees and the approach to use is dependent on what the Council wants to achieve and what resources it is prepared to commit to this purpose. However, an over-riding principle is that tree protection is of little value unless it is clearly understood by the majority of the people concerned and receives general co-operation. The alternatives are:

- *General protection by species or height criteria*
- *Scheduling of individual trees according to amenity, landmark, historic or scientific significance*
- *Education*
- *Incentives*
- *Council tree planting*
- *A combination of the above*
- *No protection.*

The approach adopted in the Plan is for a general protection for native and exotic trees, in combination with scheduling for the most significant trees, both native and exotic. The reasons are that it is generally accepted that native species have greater ecological significance and provide sense of place and identity being an element of the natural landscape. Native trees require greater protection as they are slow growing and require specific growing conditions, whereas, exotic species are more tolerant of urban situations and faster growing. Pohutukawa trees, in particular, are afforded special significance because of their limited natural range, seasonal beauty and their stabilising influence on crumbling coastlines. Other mechanisms including education and Council planting on streets and reserves are implemented through the Annual Plan and through Reserve Management Plans.

The amount of assistance the Council will give an owner of a protected tree will be dependent on the circumstances of the case. Possibilities include:

- *Advisory service on maintenance and management of trees*
- *Consider relaxing or waiving a Development Control specified in the Plan, where this will retain and enhance a protected tree and there will be no more than minor adverse effects.*

Expected Environmental Results

- Retention of native coastal vegetation, in particular the coastal fringe of pohutukawa trees, as measured during five-yearly coastal sensitivity assessments
- Retention of native bush and regenerating bush areas within the city, as measured by five-yearly native vegetation surveys
- Retention of the significant, historic and amenity trees, whether native or exotic species, as measured by an annual review of compliance with resource consents and five-yearly photographic surveys
- Recognition of the amenity, landscape and environmental value of trees and appreciation of the need to properly manage trees as assessed by monitoring of tree cover in the city on a regular basis and by five-yearly resident surveys
- That trees and their root systems are able to co-exist with network utility services.

8.3.5 Stormwater Catchment Management

Objective: Stream Protection

To protect and enhance the natural character and ecological amenity and recreational value of streams and other natural bodies of water.

Policies

1. By protecting and enhancing natural open waterways as habitats for fish, plant and other aquatic species, particularly in sensitive catchments with high ecological values.
2. By maintaining and enhancing the aesthetic, landscape and natural character values of waterways.
3. By maintaining and enhancing the contribution of waterways to the biodiversity, resilience and integrity (including linkages) of the city's ecosystems.
4. By protecting intermittent streams, recognising their contribution to the functioning of the wider stream system, particularly in sensitive catchments with high ecological values.
5. By ensuring that where practicable, streams and wetlands are protected in advance of development in the catchment, through appropriate surveys, and by retaining streams (including intermittent streams) and their riparian margins through the structure planning and subdivision processes.
6. By acquiring land, or protecting land through the use of esplanade reserves and esplanade strips, easements or covenants, alongside streams, for public access where appropriate and for water quality, ecological and landscape protection purposes.
7. By retaining natural open waterway systems, including intermittent streams, for stormwater run-off, unless this is impracticable due to a threat to life or property affecting existing development.
8. By avoiding the situation where stormwater run-off from new development exceeds the downstream ability to accept the water without an increase in downstream flooding or channel erosion.
9. By avoiding modification to the structure and form of natural waterways including the use of culverts, the infilling and piping of streams (including intermittent streams), and hard engineering solutions for stabilisation of stream banks (such as

concrete channelling, wooden or gabion retaining walls), unless it can be demonstrated that these are the most appropriate solution.

10. By protecting and enhancing existing native vegetated buffers on the riparian margins adjacent to waterways to avoid or mitigate the effects of flooding, surface erosion, stormwater contamination, bank erosion and increased surface water temperature.

11. By enhancing riparian margins in terms of their natural, ecological, and amenity value, through revegetation with appropriate native species, increasing the extent, range and linkages between areas of native vegetation, weed eradication, removal of structures and impervious areas.

12. By avoiding development, including impermeable surfaces, earthworks and cantilevered structures, within 5 metres of the edge of all waterways.

13. By encouraging revegetation of riparian margins with predominantly native species to achieve an overall improvement in riparian margin ecological functioning and amenity values, in association with any development which encroaches on the riparian margin.

14. By enabling public and private recreational use of land adjacent to streams and where appropriate providing for pedestrian, cycle ways and recreational areas while maintaining or enhancing the overall ecological functioning of riparian margins and associated in-stream environments.

Methods

Policies 1 - 14 will be implemented by rules and through Stormwater Catchment Management Plans and/or Integrated Catchment Management Plans.

Objective: Stormwater Control

To adopt a comprehensive approach to stream system management and avoid, remedy or mitigate stormwater contaminants and sediment discharge from land-based activities.

Policies

1. By considering stormwater management (including stormwater quality and quantity) as an integral component of overall site development or redevelopment.

2. By minimising contaminant levels entering waterways or water bodies.

3. By encouraging stormwater management including biofiltration practices as a means of removing or reducing contaminants contained in stormwater run-off.

4. By encouraging native bush regeneration as a means of slowing and reducing run-off, preventing erosion and providing habitats for birds and aquatic fauna.

5. By clustering site development to protect natural areas, reduce total catchment imperviousness and to reduce the areal extent of imperviousness.

6. By requiring water quality treatment for stormwater run-off post development as well as during land development.

7. By ensuring that overland flow paths and open main drains are unobstructed by development.

8. By avoiding land disturbance and vegetation removal, particularly in sensitive catchments with high ecological value.

9. By ensuring that land use activities that have potential to produce significant stormwater contaminants control contaminant sources on-site through appropriate stormwater management measures.

10. By utilising an integrated set of land development controls, including density, imperviousness, parking and riparian controls, in order to limit the potential generation of urban run-off.

11. By encouraging and where necessary requiring the storage and detention of stormwater to limit the potential generation of urban run-off.

12. By recognising that streams function as an integral component of the stormwater

network requiring ongoing maintenance to provide for the safe conveyance of stormwater.

Methods

- Policy 1 will be implemented by rules
- Policies 2 - 12 will be implemented through a mixture of advocacy, technical assistance, rules or through Stormwater Catchment Management Plans.

Explanation and Reasons

Stormwater has been identified as the major pollution threat to Auckland's urban waterways and by far the greatest threat to marine and freshwater ecosystems comes from silt and sediment carried in stormwater. Its effects on rivers, streams, estuaries and harbours are felt in two main ways - first, by the physical effects of smothering, reducing light penetration, scouring and abrasion; and, second, by providing particles for other pollutants to attach to, allowing them to be carried into our watercourses together with the silt. Accordingly, the control of both the quality and quantity of stormwater are significant resource management issues.

The protection and enhancement of riparian (stream side) and aquatic (stream, lake and estuarine) ecosystems is another significant resource management issue. It provides positive outcomes for:

- *Terrestrial and aquatic ecosystems*
- *Water quality*
- *Prevention of erosion*
- *Reduction of flooding*
- *Amenity*
- *The aesthetic, landscape or natural character of the city.*

These benefits include:

- *Increasing biodiversity (especially when locally sourced genetic stock is used in replanting)*
- *Maintaining the resilience and integrity (including the linkages between) of terrestrial, riparian and aquatic ecosystems*
- *Protecting banks from erosion and undercutting*
- *Improved bank stability*
- *Buffers the input of contaminant loads to streams*
- *Provides shade for streams*
- *Improves fish passage.*

Development in riparian margins prevents the further regeneration of vegetation along riparian margins reducing buffering of streams and potentially exacerbating erosion and instability resulting in the need for engineering works. The loss or modification of streams, including intermittent streams, as a result of development results in the loss of in-stream habitat and may detrimentally affect wider stream health and hydrology. Riparian margins are important for stream health and require protection and/or enhancement at the time of subdivision and structure planning, as these processes have a major influence on the subsequent effects of activities.

It is recognised that a level of existing development does occur within the riparian margins of the city. Provisions relating to existing use rights are set out in section 10 of the RMA and may apply to sites with existing development (e.g. buildings, structures and impervious surfaces), that are within the riparian margin and which existed prior to 12 April 2007. The following rules therefore apply only in the instance of new development that does not otherwise meet the requirements as above.

There are particularly sensitive catchments with high ecological value that require greater protection from the adverse effects of stormwater, notably the catchments of Lake

Pupuke, Paremoremo, Lucas and Hellyers Creeks, Shoal Bay, the Okura Estuary and the Long Bay Catchment. In such areas, stormwater must be treated for water quality as well as flow and sediment control.

Stormwater Catchment Management Plans prepared by the Council provide optimum measures for development and maintenance of the stormwater drainage system for each catchment of the city, ensuring that future land development proceeds within the framework of a catchment-wide approach.

The plans identify any problems associated with flooding, erosion and stormwater quality and identify locations for ponding areas which will be of value for both flood control and water quality control.

The basic approach is to work with natural processes. Ponding areas allow sediment and other particulate matter to drop out of the body of water and remain on the pond bottom as clearer water continues down the watercourse to the receiving waters. If in addition the water runoff slowly passes through vegetated lagoons or wetlands, nutrients and other pollutants are trapped and taken up by the plants and the quality of water is further improved and purified.

Expected Environmental Results

An integrated approach to:

- Minimising the generation of stormwater runoff as assessed by compliance with Stormwater Catchment Management Plans and/or Integrated Catchment Management Plans by plans of subdivision
- As far as practicable using natural systems and processes in absorbing and purifying runoff as assessed through the level of interference with natural waterways, flood plains and wetlands through subdivision and development of land
- Protecting the quality of receiving waters and the ecosystems they support, as measured by five-yearly stream biological inventories and annual reviews of freshwater quality surveys
- Maintenance of water quality in Lucas and Te Wharau Creeks, as assessed by annual water quality surveys
- Enhancing the ecological value and functioning of riparian margins and in-stream ecosystems.

Objective: On-site Stormwater Management

To manage stormwater runoff from impervious areas on-site to protect and enhance the ecological, recreational and amenity values of waterways throughout the city and to promote a high quality urban environment.

Policies

1. By managing stormwater discharged from sites through a treatment train approach, reducing impervious surface areas as the first priority; secondly by managing stormwater on-site through the reuse of roof water and use of bio-retention devices; and thirdly the use of catchment-wide stormwater management facilities such as wetlands and treatment ponds to provide the final form of treatment, not the primary form.
2. By managing the effects of stormwater runoff within Stormwater Management Areas (SMA), as outlined in Table 8.1 below, reflecting the sensitivity of the receiving environment, the ecological, and amenity values of streams, and potential for stream bank erosion and flooding.
3. By managing the effects of increased impervious areas by addressing annual runoff volumes and peak flow rates for a range of rainfall events.
4. By encouraging innovative solutions to stormwater management as controlled activities where the solutions result in the same environmental outcomes as permitted activities, while providing for the consideration of alternative stormwater management solutions that result in similar outcomes to permitted activities, to be considered as discretionary activities.
5. By recognising that existing, legally established impervious areas on a site have existing use rights and form part of the existing environment.

6. By providing for Business-zoned sites to have a high percentage of the site covered by impervious surfaces in order to make efficient use of business land, while still retaining opportunities for some green / porous surface areas within these environments. Full coverage of sites in impervious surfaces is possible, provided all additional stormwater from the increased impervious areas is fully mitigated and amenity affects are addressed.
7. By limiting impervious areas in residential areas to avoid or mitigate adverse effects on urban amenity, ensuring that on each site there is opportunity for green space comprising lawns, soft landscaping and vegetation, which at the same time provides pervious area of value to the natural hydrological cycle.
8. By limiting impervious area on a site and implementing appropriate on-site stormwater management, even where spare capacity in the piped stormwater network exists.
9. By enabling communally owned stormwater mitigation measures for multi-unit developments under the Unit Titles Act.

Table 8.1: Stormwater Management Areas

The following table provides an explanation of the Stormwater Management Areas in the city, their main characteristics and the adopted management approach.

Stormwater Management Areas	Issues	Management Approach
SMA 1: Protection and Enhancement Areas Upper catchments with the highest quality streams where high ecological and amenity values are present. Increased runoff will have a significant adverse effect on stream health in these areas.	Volume and peak flow reductions from all impervious areas must be achieved to protect and enhance stream health, including ecological and amenity values.	Stormwater runoff from impervious areas is mitigated on-site to a level equivalent to 10% of the site being covered in impervious areas. In general, this requires stormwater run off from 80% of constructed impervious areas on a site to be fully mitigated.
SMA 2: Protection and Enhancement Areas Upper catchments or middle catchments of the highest quality streams where ecological values are declining but amenity values are high, and / or where there is the potential to restore and upgrade streams. Further runoff has the potential to degrade the qualities present.	Volume and peak flow reductions from all new impervious areas is required to protect and over time enhance stream health, including ecological and amenity values.	Stormwater runoff from impervious areas is mitigated on-site to a level equivalent to 15% of the site being covered in impervious areas. In general, this requires stormwater runoff from 70% of constructed impervious areas on a site to be fully mitigated.
SMA 3: Protection Areas Upper or middle catchments where ecological and amenity values are moderate to good, and where there is potential to maintain the current values. Further runoff will degrade the qualities present.	Volume and peak flow reductions from all new impervious areas to maintain existing stream values and to prevent further degradation of stream health.	Stormwater runoff from impervious areas is mitigated on-site to a level equivalent to 20% of the site being covered in impervious areas. In general, this requires stormwater runoff from 60% of constructed impervious areas on a site to be fully mitigated.

SMA 4: Mitigation Areas Catchments or sub catchments where stormwater from sites discharge into streams with few amenity or ecological values present, but there are significant hazard issues (such as flooding or major bank erosion that threatens properties), or where piped infrastructure capacity is constrained.	On-site peak flow reduction is needed to avoid exacerbating downstream flooding and erosion issues.	Detention of stormwater runoff from additional impervious areas so as not to exacerbate hazards associated with 10% and 50% AEP rainfall events. A mix of on-site and off-site measures may be acceptable.
SMA 5: Coastal Areas These areas cover those parts of the city where stormwater is discharged directly to the coast or into stream reaches affected by tides. In these areas, additional stormwater flows do not adversely affect stream values.	Protection of water quality.	Treatment of stormwater required as per regional council requirements. No additional controls are required under Rule 8.4.8. Site specific mitigation or management may be required to address effects on the environment. (Note. Discharges to the Coastal Marine Area are the responsibility of the Auckland Regional Council).

Methods

Policies 1 to 9 will be implemented by the following:

- District Plan provisions
- Other methods including:
  - Stormwater Catchment Management Plans and/or Integrated Catchment Management Plans
  - North Shore City Council Stormwater Practice Notes
  - Stormwater Bylaw
  - Infrastructure Design Standards Manual
  - North Shore City Council Capital Works Programme
  - Community Liaison, Partnership & Education

Explanations and Reasons

Stream health refers to the ability of a stream network to sustain its intrinsic ecological functions which in turn underpin its amenity and recreational values. Stream health is most likely to be good where stormwater runoff into stream networks is less than or equal to that which would be generated from 10 to 15% of a catchment's area being in impervious surfaces. Urbanisation of the city's catchments has resulted in levels of impervious areas above this threshold. Anticipated climatic changes are predicted to increase the extent and scale of storm events resulting in higher volumes of stormwater and increased occurrence of peak flow events from existing impervious areas, while on-going intensification of urban areas will add further to stormwater loads, posing a considerable threat to the health of the city's streams.

The city's urban streams range from streams that retain high ecological and amenity values to channelised watercourses with minimal environmental value. Stormwater Management Areas (SMA) have been identified based on the constraints and values present in each catchment, such as; flooding, erosion, amenity, and sensitivity of the receiving environment, and stream health. The District Plan's approach, as outlined in Table 8.1 above, places greater emphasis for protection and enhancement where the quality of streams has not yet been degraded. Within SMAs 1, 2 and 3 (generally covering the upper catchments of the higher value streams in the city), the long term aim is to achieve an effective imperviousness of between 10 and 20%. Within SMAs 4 and 5, the

main objective is to avoid and/or mitigate the effects of additional run off on natural hazards (flooding and stream bank erosion).

It is recognised that a significant level of existing development occurs throughout these SMAs, constructed prior to the requirement for on-site stormwater mitigation. The on-site management measures apply to new impervious surfaces and therefore can only mitigate the effects of any new hard surfaces associated with developments. They cannot compensate for the adverse affects of existing unmitigated development. This means that in the short term, the provisions are only anticipated to 'hold the line' and maintain the existing level of stream health that occurs throughout the city. Community investment in stream stabilisation and rehabilitation works will help to address the adverse affects of existing development. Longer term, as areas of the city progressively undergo redevelopment and intensification, mitigation of the effects of stormwater runoff from larger areas of impervious surfaces will progressively be achieved (subject to existing use rights), and will contribute to enhancement of the city's stream and coastal receiving environments, in association with further investment in stream rehabilitation.

The importance of business areas in contributing to the sustainable management of the city's resources is recognised in higher impervious area limits for business zoned land, as well as the ability to exceed maximum impervious areas for business zoned sites provided that the additional stormwater runoff generated can be fully mitigated on the site.

The objective and policies also recognise the visual amenity role of green spaces and elements (trees, lawns, landscaping) within residential and non-residential environments and therefore seek a mix of green and hard surfaces within these areas.

Conventional methods of stormwater management have not protected stream health. Stream networks have been degraded by the loss of natural tributaries and scouring and erosion of water channels is evident even when control devices like stormwater treatment ponds have been installed. Management of stormwater at source helps to retain the stream network in its natural state. By limiting impervious areas and using a combination of rain tanks, bio-retention, pervious paving, green roofs and other similar devices to re use, retain and absorb stormwater, the quantity of stormwater runoff from a site can be reduced such that it is equal to the site having a much lower percentage of imperviousness. This reduction in runoff is described as the site's effective imperviousness.

The use of rain tanks provides the following benefits:

- *Reducing the average annual volume of runoff through rainwater harvesting. Rain tanks are able to reduce the average annual volume of runoff from an impervious surface by between 30 and 40%.*
- *Reducing peak flows from rainfall events up to the 10% AEP event through detention and release through an orifice.*
- *Reducing potable water usage by using harvested rainwater for non-potable uses such as toilet flushing, laundry and possibly outside uses. Between 45 and 65% of household water use can be supplied from rain tanks.*
- *Improving stormwater quality by capturing the first flush.*

The use of bio-retention devices (rain gardens, stormwater planters and tree-pits), green roofs, permeable paving, and the like provide the following benefits:

- *Reducing the average annual volume of runoff, especially during smaller rainfall events through infiltration and evapotranspiration.*
- *Reducing peak flows through detention and slow release.*
- *Improving stormwater quality by filtering out contaminants.*
- *Improving groundwater recharge through infiltration.*
- *Providing increased biodiversity.*
- *Providing amenity functions.*

Expected Environmental Outcomes

- The rate of decline in the health of the city's streams is arrested, as measurable by successive future stream surveys in comparison with past survey data.
- Reduced incidences of stream bank and bed erosion attributable to stormwater discharges from new development.
- No increase in hazards associated with the 10 & 50% AEP flood event attributable to stormwater discharges from new development in residential and business zones.
- Reduced rate of degradation of coastal receiving environments.
- Amenity values associated with the city's stream environments are maintained or enhanced.
- Stormwater discharges from areas of new and redeveloped residential and business development within the city mimic a sustainable natural catchment hydrological response.
- Public and private stream restoration works are not compromised and are increasingly successful as a consequence of increased implementation of on-site mitigation of stormwater flows achieving more sustainable natural flow regimes within the city's streams.
- Long term enhancement of stream health through on-going redevelopment coupled with capital works.

8.3.6 Minerals and Aggregates

Objective

To ensure that mineral extraction proposals and operations do not foreclose other land use options or adversely affect important landscape areas and areas of indigenous vegetation and habitat.

Policies

1. By specifying mineral extraction as a Prohibited activity in areas which are important because of their landscape, ecological or heritage value and in areas which lie within the Coastal Conservation Area and are geomorphically unstable.
2. By considering mineral extraction and processing activities in other areas as a Non-Complying activity to allow for assessment of proposals by the Council.

Methods

- Policies 1 and 2 will be implemented by rules.

Explanation and Reasons

The volcanic history of the city has left behind deposits of basaltic rock, scoria and tuff material, some of which have been quarried in the past. The only remaining operation is Smales Quarry. The present built nature of areas with winnable deposits, together with environmental and amenity concerns, to a large extent preclude new quarry operations in the city. The extraction and processing of mineral resources can have an adverse effect on the environment and must be avoided where the alternative resource values are higher and the activity would have significant adverse effects.

Expected Environmental Results

- No significant landscape areas compromised by quarrying or winning of deposits.

8.3.7 Natural Hazards

8.3.7.1 Objectives: Flood Plains

1. To enable the 1% AEP floodplain to provide for the storage and safe conveyance of floodwaters during extreme rainfall events.
2. To ensure that wherever practicable, floodplains contribute to the provision of green linkages, enhancing the amenity and ecological values of the city.

3. Cumulative adverse effects on properties and the natural environment from new buildings and structures being placed in the floodplain are avoided.

4. Redevelopment of existing buildings and structures that reduces the areal extent of the 1% AEP floodplain is encouraged.

Policies

1. By identifying the 1% AEP floodplain during subdivision and development.

2. By, in the first instance, avoiding the placement of new buildings or structures in the 1% AEP floodplain: Buildings and structures will only be considered for location within the 1% AEP floodplain if it can be demonstrated that:

    - they cannot practicably be located elsewhere due to operational or site configuration reasons; and
    - they will not obstruct the natural flow of waters, or divert flows onto neighbouring properties or exacerbate upstream or downstream flooding potential; and
    - the storage capacity of the floodplain is maintained or improved; and
    - the capacity of any riparian margin to assist in mitigating the effects of the natural flow of stormwater (arising from extreme events) through the floodplain will not be compromised; and
    - finished floor levels are protected from the 1% AEP flood event.

3. By retaining vegetation cover and introducing new vegetation cover where this enhances the functioning of the 1% AEP floodplain, while providing for the removal of existing vegetation where this is necessary to ensure the safe functioning of the 1% AEP floodplain.

4. By recognizing the potential for redevelopment of existing buildings and their curtilages within the 1% AEP floodplain to reduce the extent of the floodplain, to reduce the cumulative effects of the flood plain on the site and on other properties and to generate other beneficial effects.

5. By ensuring that new buildings and structures, or additions/extensions to existing buildings located within flood sensitive areas are managed so that finished floor levels are above the 1% AEP flood levels.

Methods

- Policies 1-5 will be implemented by rules.

8.3.7.2 Objective: Overland Flow Paths

To ensure that overland flow paths are provided for and retained to convey surface water runoff safely into the reticulated stormwater network, waterways or to the coast.

Policies

1. By identifying overland flow paths during subdivision or development and ensuring they retain the capacity to convey stormwater flows from a 1% AEP rainfall event safely without causing damage to any property.

2. By ensuring at the time of development the continuity of overland flow paths between properties is maintained without altering their location and scale upstream and downstream of the site being developed.

3. By protecting secondary overland flow paths from piping to maintain emergency flow routes and minimise the risks of blockages.

Methods

- Policies 1 - 3 will be implemented by rules.

8.3.7.3 Objective: Coastal Inundation Areas

To provide for the natural process of coastal inundation in coastal inundation areas while minimising risks to buildings and structures.

Policies

1. By ensuring that new buildings, or additions/extensions to existing buildings located in coastal inundation areas are managed so that finished floor levels are above the 1% AEP coastal storm event.

2. By requiring development within coastal inundation areas to avoid or mitigate potential adverse effects on buildings, neighbouring property and the environment caused by the flow of coastal flood waters while avoiding the need for coastal protection works.

Methods

- Policies 1 and 2 will be implemented by rules.

Explanation and Reasons

Some locations, including areas of existing development, are adversely affected by natural flooding hazards. The development and further expansion of these areas has the potential to contribute to and/or be significantly affected by such hazards, with consequential loss of or damage to property and/or risks to human safety.

The Auckland Regional Policy Statement requires a precautionary approach to natural hazard management. The approach of the Auckland Regional Council is to avoid development in the 1% AEP flood plain, and for territorial authorities to undertake day to day flood management functions.

The Council has a statutory duty to identify hazard prone areas, and seeks to reduce hazards by the appropriate location of development focusing on the extreme flooding events (1% AEP). These flooding events have a 1% chance of being exceeded every year.

A detailed survey of the city using LiDAR was carried out by the Council in 2006, which has provided a Digital Terrain Model (DTM) at 0.25 metre contours accurate to +/- 0.1 metres. This DTM enabled city wide mapping of overland flow paths, identification of areas at risk of coastal inundation, and accurate mapping of the 1% AEP flood plain based on computer modelling. The area adjoining and up to 500mm above the 1% AEP flood level has been identified as a 'flood sensitive' area, providing an additional buffer to ensure the finished floor level of new buildings are above the 1% AEP flood level.

The 1% AEP flood plain generally runs adjacent to a stream and provides for extreme flooding events. Apart from the stream itself, the flood plain is generally dry, providing an area for flood waters to flow in extreme rainfall events as it discharges to the stormwater network or coast. Flooding is a natural occurrence and it is preferable to avoid risk to life and property by avoiding development within the flood plain rather than by attempting to manage flooding through physical works.

The natural process of flood plains is important as it retains the integrity of riparian vegetation, allowing sediment and nutrients to be deposited on the flood plain, and provides food and disperses seeds. Retention of vegetation within the flood plain reduces the velocity of flood waters, which in turn reduces erosion and other damage caused by the flow of water. Flood plains also provide for the natural migration of streams through erosion and deposition of sediment.

A significant number of buildings currently exist within the 1% AEP flood plain, reducing the effectiveness of the flood plain by increasing its extent and putting other properties at risk. It is now recognised that the cumulative effects of existing development within the flood plain has reached an unacceptable threshold, and the Council seeks to prevent further development from occurring within the 1% AEP flood plain unless it can be demonstrated that there will be no impact on the natural function of the flood plain, both in terms of providing for flood waters and other non-hazard related functions.

Stormwater runoff creates overland flow paths, which follow the path of least resistance towards streams and eventually discharge to the coast. It is important that landowners are aware of the existence of overland flow paths that cross their property and understand their responsibility in ensuring that they remain unhindered, maintained and protected.

The stormwater system comprises of two main types of drainage:

- *The primary stormwater drainage system (primary flow paths) which includes stormwater pipes, open channels, streams, culverts, swales or overland flow paths that cater for the more frequent rainfall events.*
- *Secondary overland flow paths which cater for higher intensity less frequent rainfall events and occasions when there are blockages in the primary drainage system or its capacity is exceeded (these are the back up system for when the primary flow paths fail).*

See Section 21 Definitions for the definitions of overland flow path, primary overland flow path and secondary overland flow path.

Although piping of overland flow paths may be a suitable solution, the maintenance of and provision for secondary overland flow paths is necessary to ensure there is ongoing provision for surface water to be conveyed without compromising safety or creating nuisance. Identification and maintenance of overland flow paths avoids inadvertently locating buildings and structures in the way of flood water. Generally, obstructing an overland flow path is not acceptable and diverting or altering an overland flow path around a building or structure is a better solution.

The Council has assessed the low lying coastal areas of the city to determine the extent to which land is subject to coastal inundation and the potential risk to development. In determining the extent of the 1% AEP coastal storm event using the 2050 sea level rise scenario, analysis has been conducted on tide levels, wave action, storm surge, cyclical sea variations and projected sea level rise.

A significant number of buildings already exist within these areas, and it is anticipated that reasonable development will continue to occur. Therefore, the Council seeks to enable development provided the natural process of coastal inundation is not significantly affected by building design and so that coastal protection works and any potential adverse effects on neighbouring properties or the environment are avoided. For example, development of a site could result in dispersing the effects of coastal inundation onto neighbouring properties or increase erosion along the beach frontage.

8.4 Natural Environment Rules

8.4.1 Protection of Natural Coastal Character

8.4.1.1 Controlled Activities

All buildings and structures in the Coastal Conservation Area that do not require above ground stormwater infrastructure shall be Controlled activities (Note: the status of an activity may change according to controls in other sections of the Plan.) Provided that:

a) for the Chelsea sugar refining industrial site the following are exempt from this requirement:

"Buildings and structures, including 'accessory buildings', wholly within the Special (Chelsea) Exemption Area, that are or will be an integral part of the sugar processing industry at the Chelsea Sugary Refinery (Appendix 11D - Special (Chelsea) Coastal Conservation Control Exemption Area)".

b) except for stormwater infrastructure, the following network utilities are exempt from this requirement:

i) any underground network utility, and

ii) any aboveground network utility that is located entirely within road reserve that is fully formed (but not including any part of the road reserve that is not fully formed).

The status of an activity may change according to controls in other sections of the Plan.

8.4.1.2 Assessment Criteria for Controlled Activities

All Controlled activities must comply with all relevant controls of the Plan. In addition, the Council may impose conditions in respect of the matters specified in Sections 108 of the RMA, and any of the matters referred to in the assessment criteria set out below:

a) Any existing native bush, or other vegetation which contributes to the natural character, should be retained where practicable, and sufficient landscape planting shall be provided to ensure that buildings blend with the existing natural character of the surrounding coastal landscape.

b) Any earthworks necessary for the creation of building platforms or access should create minimum disturbance to the landform and character of the site.

c) Any driveway and parking and turning areas should be constructed in a manner which requires minimal disturbance to existing landform or vegetation.

d) Buildings should be designed, located and constructed in a manner that minimises any change to the existing landforms and vegetation so that buildings do not visually dominate, they blend with the natural character and are complementary to significant coastal landforms in the locality (such as coastal cliffs).

e) Wherever possible stormwater shall be disposed of in locations other than the coastal edge.

f) The location and design of buildings and structures should have regard to their relationship to coastal hazards.

Explanation and Reasons

Buildings and structures may compromise the natural character of the coastline. It is therefore desirable that aspects of their design and location be subject to scrutiny to ensure that they are in sympathy with natural landforms and vegetation and do not dominate the landscape.

Some structures within the Coastal Conservation Area may have existing use rights under the RMA. If they do have existing use rights, the structures can lawfully remain. The situations when a structure can be replaced or rebuilt under existing use rights are described in the RMA.

8.4.1.3 Limited Discretionary Activities

All above ground stormwater infrastructure, including pipes protruding from cliff faces, in the Coastal Conservation Area shall be a limited discretionary activity.

8.4.1.4 Restrictions - Limited Discretionary Activity

For a limited discretionary activity, the Council may grant or refuse consent, and (if granted) may impose conditions under Section 108 of the RMA in respect of the following matters over which it has restricted it discretion:

Design and implementation of site works;

Location and design of structures and infrastructure;

Protection of landforms, vegetation and heritage features;

Reinstatement and landscaping;

Protection of riparian margins;

Granting, reserving and extinguishment of easements;

Maintenance requirements;

The methods used for stormwater treatment and disposal within the coastal conservation/foreshore yard areas.

8.4.1.5 Assessment Criteria for Limited Discretionary Activities

a) Developement proposals should ensure that any stormwater pipes or runoff of stormwater resulting from the development activity does not lead to a reduction in water quality in the coastal marine area;

b) The proposal will have no more than minor adverse effects on the landscape and the amenity value of the foreshore or any adjacent beach, reserve area, or walkway, as a result of the cumulative effect of structures/infrastructure;

c) The proposal does not increase the natrual rate of erosion or create significant risk of accelerated erosion and/or instability of the site or adjacent land;

d) If the land is affected by coastal erosion, structures are located or designed so as to minimise or avoid the need for associated coastal protection works and/or effects on

the amenity of the area are not increased as cliffs erode;

e) The location of any structure takes into account secondary or overland flow paths;

f) Consideration is given to the use of alternative stromwater management techniques to control stormwater at source, including rain tanks and rain gardens;

g) There is provision for adequate and ongoing maintenance of the infrastructure.

8.4.2 Protection of Habitats and Streams

For the purposes of this rule, a riparian margin is the area within 20 metres of the edge of any stream in the rural or urban expansion zones, or within 10 metres of the edge of any stream in all other zones (except in the Long Bay Structure Plan Area). In the case of intermittent streams, the above distances shall be measured from the centreline of the stream.

Measurement of the riparian margin shall be undertaken in accordance with the definition of Riparian Margin and associated Diagrams A & B in Section 21 Definitions.

Where the riparian margin is located within the 1% AEP flood plain, development shall also occur in accordance with Rule 8.4.9.5 - Natural Hazards, General Standards. The General and Notable Tree Protection provisions of 8.4.6 also apply to vegetation within the riparian margin.

In the Long Bay Structure Plan Area, those provisions shall take precedence.

8.4.2.1 Permitted Activities

a) The removal of vegetation in accordance with Rule 8.4.6.1.1 (General Tree Protection Permitted Activities), and replanting for the purpose of rehabilitation or enhancement of riparian margin functions, in accordance with the following performance standards:

   i) Removal of weed tree species should only occur above ground with the root mass retained in the soil for the purposes of avoiding unnecessary soil disturbance and increasing instability within the riparian margin. This should be undertaken in such a way as to ensure that vegetation removed will not regenerate and re-establish within the riparian margin (e.g. cut stumps are painted with a chemical gel or paste); and

   ii) No more than $50m^2$ of soil is to be exposed within the riparian margin within a site at any one time; and

   iii) Areas of exposed soil are to be immediately stabilised with mulch to prevent erosion and assist with the success of subsequent replanting with suitable native species; and

   iv) Replanting is to be completed as soon as practicable and no later than the end of the first available planting season (April - September); and

   v) Replanting is to comprise predominantly suitable native species, to be undertaken at appropriate densities, and involve ongoing maintenance as appropriate, to ensure the long term success of the replanting and achievement of enhanced riparian margin functions.

b) The maintenance of continuous grassed lawn areas (lawn mowing) and any disturbance of the land directly associated with domestic gardening. (For the definition of domestic gardening see Section 21: Definitions).

c) Fencing for the exclusion of livestock from the riparian margin.

8.4.2.2 Controlled Activities

a) Any works undertaken within the riparian margin for the purpose of rehabilitation and enhancement not provided for as a permitted activity.

b) Any Network Utility maintenance works undertaken within the riparian margin for the purpose of protecting the stormwater functions of waterways.

c) In all zones except for rural or urban expansion zones:

   Development, and / or the disturbance of soil, natural ground cover or vegetation, or

the deposition of fill or any material within a riparian margin, not being a permitted activity, that does not exceed 10% of the total area of the riparian margin on a site, and occurs within the outer 5 metres of the margin and not within any part of the inner 5 metres.

8.4.2.3 Limited Discretionary Activities

a) In all zones except for rural or urban expansion zones:

Development, and / or the disturbance of soil, natural ground cover or vegetation, or the deposition of fill or any material within a riparian margin, not being a permitted or controlled activity, that exceeds 10% of the total area of the riparian margin on a site, and occurs within the outer 5 metres of the margin and not within any part of the inner margin of 5 metres.

b) At "56 Fairview" (being Lots 1 & 3 DP208793 and Lot 2 DP 199126, known as 56 Fairview and 129 & 131 Oteha Valley Rd):

Development, and / or the disturbance of soil, natural ground cover or vegetation, or the deposition of fill or any material affecting a riparian margin, or involving the diversion or modification of part of any Permanent or Intermittent stream.

8.4.2.4 Discretionary Activities

a) Development, and / or the disturbance of soil, natural ground cover or vegetation, or the deposition of fill or any material within a riparian margin, that is not a permitted, controlled or limited discretionary activity.

b) The diversion or modification of any waterway including intermittent streams in any zone that is not otherwise provided for as a Controlled or Limited Discretionary Activity.

Explanation and Reasons

Development may result in modification of the natural landscape and reduction of water quality through surface runoff, erosion and sedimentation. The application of the above rules should ensure that any development undertaken will minimise any alteration to the natural character of the coastal environment and riparian margins to avoid the unnecessary destruction of vegetation and avoid, remedy or mitigate any adverse effects on both terrestrial and aquatic habitats.

Planting and revegetation shall be undertaken along riparian margins to offset the adverse effects of development locating within riparian margins. Appropriate native tree species shall be planted alongside streams to provide shade and aid in the ecological recovery of the waterway, and for the purposes of ecological enhancement and stormwater management.

Two key aspects in particular are addressed in the rules above regarding the rehabilitation of riparian areas. The first concerns clearing and eradicating of weed species to prepare the site, and that this is undertaken in a way to minimise the exposure of soil, and to prevent erosion and discharge of harmful sediments into the adjoining watercourse. Secondly when selecting species to replant along the riparian edge, eco-sourced native plants are preferred, that are suited to the location and conditions of the margin, and to the intended function (to provide stability, shading, food and habitat for wildlife, etc).

8.4.2.5 Public Notification and Serving Notice Waived

The Council shall consider any applications that are provided for as Controlled or Limited Discretionary Activities in 8.4.2.2 and 8.4.2.3 without public notification or the need to obtain the written approval of, or serve notice on affected parties. If the Council considers special circumstances exist it may require the application to be publicly notified. Refer to Rule 3.3.2 Notification Processes for Resource Consents - Applications Requiring Multiple Resource Consents.

8.4.2.6 Reservations and Restrictions for Controlled and Limited Discretionary Activities

The Council may impose conditions in respect of the matters specified in Section 108 of the RMA, and shall restrict the exercise of its discretion to the following matters:

a) The scale, design and nature of proposed works to occur within riparian margins.

b) The extent and management of vegetation removal.

c) The extent and nature of earthworks, including the diversion or modification of any part of any waterway (including Permanent or Intermittent Streams).

d) The extent of and on-going maintenance of revegetation.

e) The extent and design of structures and impervious surfaces.

f) Ecological, aesthetic, amenity or recreational effects (positive and negative) associated with any of the above matters.

g) The effects (positive and negative) on the hydrological functioning of the wider stream network.

h) The imposition of bonds, covenants or similar instruments as conditions of consent associated with any of the above matters and which may involve land outside the site of the development or activity but within the same catchment;

i) And for 56 Fairview only, the nature and extent of proposed developments in the riparian margins, and any positive and negative effects, in the context of the development of the property as a whole.

8.4.2.7 Assessment Criteria for Controlled Activities

a) How the adverse effects of rehabilitation and enhancement works are to be avoided or mitigated through the application of appropriate design, technologies and management practices.

b) The extent to which suitable plant species can be used to enhance the natural functions of the riparian margin with reference to the Auckland Regional Council Riparian Zone Management Planting Guide: Technical Publication 148 (June 2001).

c) The design and extent of any works affecting the stream bank and riparian margins so as to improve the natural functioning and a more natural character of the riparian area and stream bank.

d) Details of proposed reinstatement of any areas of cut and fill through appropriate landscaping, revegetation and drainage, or other stabilising measures where these are necessary. Conditions may be included on any consent requiring payment of a bond to ensure that reinstatement and revegetation is carried out to a satisfactory standard.

e) The extent of weed removal and revegetation of the undeveloped portion of the riparian margin to help off-set the adverse affects of development within the margin.

f) The extent to which public or private recreational uses of the riparian margin are appropriate including the development of associated cycleways and walkways taking into account the need for and ability of the riparian area to function as an effective ecological corridor and buffer to the adjacent waterway.

8.4.2.8 Assessment Criteria for Limited Discretionary Activities

a) The assessment criteria for Controlled Activities.

b) The nature and extent of the proposed site works/earthworks or development within the riparian margin and the degree to which it may disturb vegetation, create soil instability, or lead to other adverse effects on the resilience, biodiversity and integrity of the riparian margin, including connectivity with riparian margins upstream and downstream of the site and the cumulative effects on the values (in-stream and amenity) of the associated stream network.

c) Whether development in the riparian margin is required to provide for low impact design stormwater mitigation measures in accordance with Rule 8.4.8, or is identified in a relevant catchment management plan.

d) Whether vegetation clearance is minimised and existing mature vegetation (including exotics) is retained within riparian margins. Where vegetation clearance is required in the riparian margin, demonstration of how enhancement planting of the balance of the riparian margin can offset the effects of this by providing a net

increase in the natural functioning of the riparian margin.

e) Whether the development within the riparian margin will provide opportunities for rehabilitation and enhancement of the riparian margin through removal or reduction of existing structures and impervious areas, the stabilisation of existing areas of erosion and the creation of a continuous riparian area.

f) The extent to which revegetation of the remaining riparian area can offset the adverse affects of additional structures and impervious areas.

g) The extent of impact on the hydrological functioning of the wider stream network within the catchment.

h) The extent to which ecological, aesthetic, amenity or recreational values will be affected.

i) The size and capacity of the subject site to accommodate changes to the layout or design of the proposed activity or development so as to avoid any adverse effects or to achieve a quality of outcome that is not less than exists or is achievable on adjoining sites where stream values are similar.

j) And also, with respect only to "56 Fairview"

   a) the matters for assessment of Discretionary activities listed in Rule 8.4.2.9 under the heading Riparian Margins and Diversion and Modification of Waterways, and without detracting from these -

   b) the extent to which the developments in the riparian margins promote appropriate and sustainable development of the property as a whole including how they might facilitate greater public enjoyment of the riparian margin.

8.4.2.9 Assessment Criteria for Discretionary Activities

Without restricting the exercise of its discretion to grant or refuse consent, or impose conditions, the Council will have regard to the assessment criteria set out below when considering an application under Sections 104 and 104B of the RMA.

Coastal Conservation Area and Sites of Special Wildlife Interest

For site works/earthworks within the Coastal Conservation Area or a Site of Special Wildlife Interest:

a) The nature and extent of the proposed development and the degree to which it may disturb natural landforms or vegetation, or create soil instability, or lead to adverse ecological effects to natural habitats, waterway, wetlands, estuaries or coastal waters.

b) The extent to which the proposed site works / earthworks are necessary and any alternative proposals or methods which may be available.

c) Details of proposed reinstatement of any areas of cut and fill through appropriate landscaping, revegetation and drainage, or other stabilising measures where these are necessary. Conditions may be included on any consent requiring payment of a bond to ensure that reinstatement and revegetation is carried out to a satisfactory standard.

Riparian Margins and Diversion and Modification of Waterways

For site works / earthworks and all development within a riparian margin or the modification or diversion of a stream:

a) The assessment criteria for Controlled and Limited Discretionary Activities.

b) The extent to which the proposed site works/earthworks and development can be relocated and/or redesigned so as to avoid the riparian margin.

c) The extent to which the proposed site works/earthworks and development can be relocated and/or redesigned so as to not modify or divert the stream.

d) Whether modification or diversion of the waterway will exacerbate or contribute to degradation of the natural functioning, quality and character of a stream, including its in-stream values, and the cumulative effects on the health of the wider stream

network.

e) The extent to which a diverted/modified waterway and associated riparian margin can be provided that sustains in-stream habitat, including fish passage downstream and actual or potential fish spawning habitat.

8.4.2.10 Information Requirements

Without limiting sections 88 or 92 or the Fourth Schedule of the RMA and in addition to any information or plans required under Rule 3.10.7 and Rule 3.10.9 the following information shall be required:

a) Applications for development within riparian margins as determined by Rules 8.4.2.2, 8.4.2.3 and 8.4.2.4 shall be accompanied by a Planting and Weed Eradication Plan which shall:

   i) Be in accordance with the Auckland Regional Council Riparian Zone Management Planting Guide: Technical Publication 148 (June 2001).

   ii) Show the location of planting proposed to offset the scale of development.

   iii) Show the location of any existing vegetation and include details of species, age, health and condition and whether this will be retained, removed or replanted.

   iv) Provide a planting schedule identifying the species, number and size of plants to be planted.

   v) Provide a maintenance plan to enable establishment of vegetation and including weed management and eradication.

b) Applications to divert or modify a waterway, including an intermittent stream, shall provide the following:

   i) An assessment of alternative options for the development.

   ii) An assessment of the adverse effects, including cumulative effects, of the modification on the health, functioning and values of the wider stream network.

   iii) Planting or other mitigation measures to offset the loss of stream habitat or changes in hydrology.

8.4.3 Volcanic Cones

Where a residentially-zoned site situated on the slopes of Takarunga (Mount Victoria) or Maungauika (North Head) has a boundary which abuts the Mount Victoria or North Head reserve, any part of any building erected on that site that attains a height which exceeds the average height of the site boundary common with the reserve, is a non-complying activity.

Explanation and Reasons

This height control ensures that the volcanic cones remain unobstructed by buildings around the lower slopes.

8.4.4 View Corridors, Volcanic Viewshafts and Height Sensitive Areas

Any part of any building or structure, other than power poles, that exceeds a height of 9 metres above natural ground level within the volcanic height sensitive area identified on the District Plan maps, Appendix 2 is a non-complying activity.

Any part of any building or structure, other than power poles, that is within the volcanic viewshafts identified on the District Plan maps, Appendix 2, and is not within a height sensitive area, is a non-complying activity.

Power poles above 9 metres are Limited Discretionary activities, unless they are Discretionary or Non-Complying under any other rule of this Plan. The consent application will contain a detailed plan showing the land contours for, and the heights of all existing structures and trees in, the immediate locality of the proposal. The greater the height exceeds 9 metres, the larger the area for which these details will be required.

Council may grant or refuse consent and if granted, may impose conditions in respect of the following matters over which it has restricted its discretion:

i) the extent to which the structure is necessary for the safe and efficient provision of the utility service (including consideration of required regulatory clearances);

ii) the costs and benefits of the alternatives that have been evaluated by the network utility operator or owner, including undergrounding (or further undergrounding, as the case may be);

iii) any positive environmental effects stemming from the proposal (such as the protection of mature trees and the undergrounding of existing overhead lines);

iv) the implications of any significant new utility works for the locality in the next five years that the operator may have programmed or which are known to the Council at the time of application (arising from the activities of other network utility operators);

v) the extent to which the proposed utility would be temporary, and therefore more acceptable than would otherwise be the case (for example, an undergrounding programme might see the structure replaced or relocated within a few years);

vi) the extent to which the structure/s would, in association with other existing or permitted structures, result in visual clutter, obstruction or unsightliness which would generate an adverse cumulative effect in terms of the preservation of important viewshafts and viewing locations;

vii) the extent to which existing or permitted structures or vegetation, or any proposed planting or landscaping, would mitigate for the effects of the proposal;

viii) factors arising from a consideration of documents or other relevant information held by the Council and referred to in 'Interpretation of Map 4, Sheets 1-5' of the Maps of the operative *Auckland Regional Policy Statement*.

Explanation and Reasons

These height controls ensure that volcanic viewshafts from identified viewpoints remain unobstructed by buildings and that the general profile of development around the maunga follows the topography of the volcanic landscape.

8.4.5 Protection of Significant Landforms and Sites of Geological Significance

The following Rule applies to those features contained in the Schedule of Sites of Geological and Landform Significance in Appendix 8B.

8.4.5.1 Limited Discretionary Activities

The Council will consider any application as a Limited Discretionary activity, with no application fee in the first instance, where:

Excavation, physical investigation, damage or alteration to any site of geological significance or part thereof, including the removal of rock, soil, or structures which is likely to endanger, damage, destroy or detract from such site, for:

a) Modification of the natural landform.

b) Any building or structure of any kind, including any fence, boundary wall, or retaining wall.

8.4.5.2 Assessment Criteria for Limited Discretionary Activities

In considering such an application the Council will have regard to the provisions of Part IV of the RMA and the following matters:

a) The nature, form and extent of the geological features of the site and effect of the proposed activity on the values of the site.

b) The necessity for the modification and any alternative methods and locations available for carrying out the work or activities.

c) The effect of the proposed activity on the visual amenity of the site.

d) Any evidence or submission invited by the Council from any person or body having specialist knowledge or interest relevant to the features.

e) The provisions of any relevant Management Plan or strategy prepared under other

Acts.

Explanation and Reasons

These natural features are visible evidence of the geological history of the area and as such are scientifically, educationally or aesthetically important as well as being of more general interest. Their significance relies on the clear visibility of the particular feature. Any alteration to the Schedule must be by way of a Plan Change.

8.4.6 Tree Protection

8.4.6.1 General Tree Protection

As a guide for using the following rules it is suggested that the zone where a tree or vegetation is located (e.g. Residential 4B) and also any special provisions (e.g. those for the Coastal Conservation Area) which also relate to the site are first identified from the District Plan Maps.

8.4.6.1.1 Permitted Activities

a) The following works shall be Permitted activities to any tree or vegetation:

i) Activity immediately necessary to avoid injury to persons or damage to property. In such circumstances the person undertaking such necessary activity shall notify the Council in writing within seven days of the activity commencing as to the reasons for the activity.

ii) The trimming, alteration or removal of any tree by a network utility operator when this is required as an emergency to maintain or restore power and communication links or to safeguard life or property. In such circumstances the operator concerned shall notify the Council in writing within seven days of the work commencing as to the reasons for the works.

iii) Alteration or removal of any tree in accordance with a forest disease eradication or control programme within an infected area declared pursuant to the Forests Act 1949 and the Forest Disease Control Regulations 1967.

iv) Any trimming, alteration, or removal of any tree identified within the *Auckland Regional Plant Pest Management Strategy* or listed as a National Surveillance Plant Pest under the Biosecurity Act 1993 or any subsequent amendments.

v) The removal of dead trees, dead wood and dead vegetation provided that it does not involve the cutting, alteration, partial or complete destruction of any other live protected trees or vegetation. This work may not be carried out to trees or vegetation protected by the Notable Trees (Rule 8.4.6.2) or Protection of Trees on Roads and Reserves (Rule 8.4.6.3) Rules.

vi) Any alteration, or removal of any tree species grown primarily for their edible fruit with the exception of any species listed below, where these species are within sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21, or trees or vegetation protected by the Notable Trees (Rule 8.4.6.2) or Protection of Trees on Roads and Reserves (Rule 8.4.6.3) Rules.

Walnut	*Juglans spp*
Chestnut	*Castanea sativa*
Pecan Nut	*Carya illinoinensis*
Carob	*Ceratonia siliqua*

b) The following shall be Permitted activities **on sites meeting the definition of "urban environment allotment"** as defined in Chapter 21 except trees or vegetation protected by Rule 8.4.6.1.3(a)(i) or Rule 8.4.6.2

i) Alteration or removal of any native tree and

ii) Alteration or removal of any exotic tree

c) The minor maintenance of any tree, except those trees protected by Rule 8.4.6.2: Notable Trees, or Rule 8.4.6.3: Protection of Trees on Roads and Reserves, undertaken by hand-operated secateurs or pruning shears in accordance with

accepted arboricultural practices shall be Permitted activities to:

- any native vegetation when it is part of a continuous, naturally occurring area of native vegetation in the Residential 2A, 2A1 and 2B zones, and
- any native tree of 6 metres or more in height or 600mm in girth (measured at 1.4 metres above the ground) or any exotic tree of 8 metres or more in height or 800mm in girth (measured at 1.4 metres above the ground) in the Residential 2B zone, and
- any native or exotic trees or vegetation protected by Rule 8.4.6.1.3.

d) The clearing or damaging of any native vegetation (including the roots) on sites meeting the definition of 'Urban Environment allotment' as defined in Chapter 21, when it is part of a continuous, naturally occurring area of native vegetation in the Rural 1 and Residential Expansion zones,

e) Works to trees or vegetation not protected by Rule 8.4.6.1.2, Rule 8.4.6.1.3, Rule 8.4.6.2, Rule 8.4.6.3 shall be a Permitted activity.

f) Within an urban environment allotment as defined in Chapter 21, trimming of vegetation other than that protected by Rule 8.4.6.2 or Rule 8.4.6.3.

Explanation and Reasons

The changes to 8.4.6 have been made to acknowledge the provisions within Section 76 of the Resource Management Amendment Act 2013.

8.4.6.1.2 Limited Discretionary Activities

The following shall be Limited Discretionary activities, which require a resource consent, with no application fee in the first instance:

a) Any alteration or removal within the Residential 1, 2C and Long Bay 1 zone; within sites **NOT** meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21

b) Any alteration or removal within sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 in the following zones:

Residential 3, 4, 5, 6 and 7 zones

Residential Expansion zone

Areas B, C and D of the Albany and Greenhithe Structure Plan zones and the Long Bay 2 to 4 zones:

i) Any native tree of 8 metres or more in height or 800mm or more in girth (measured at 1.4 metres above the ground), and

ii) Any exotic tree, of 10 metres or more in height or 1000mm or more in girth (measured at 1.4 metres above the ground) with the exception of any of the species listed in Appendix 8D, and

iii) Any exotic tree, of 15 metres or more in height or 1500mm or more in girth (measured at 1.4 metres above the ground) belonging to any of the species listed in Appendix 8D.

c) Any alteration, or removal of any native tree of 6 metres or more in height or 600mm or more in girth (measured at 1.4 metres above the ground) or any exotic tree of 8 metres or more in height or 800mm in girth (measured at 1.4 metres above the ground) on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 in the Residential 2B zone.

d) All works including any excavation, deposition of materials, construction activity, emplacement of services, discharge or dispersal of any toxic substance, emplacement of any weed control membrane, or storage of vehicles, machinery, or materials above, below, or within the root zone of any tree described in Rule 8.4.6.1.2.

e) The alteration or removal of any continuous area of native trees or plants, including undergrowth, in excess of 100m² on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 in Area B - Large Lot

Residential, Area C: Standard Residential, Area D: Varied Residential and Mixed Use Overlay Area.

f) The alteration or removal of any native vegetation (including the roots) when it is part of a continuous, naturally occurring area of native vegetation on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 in the Residential 2A, 2A1 and 2B zones.

g) Any alteration, removal of any exotic trees of 10 metres or more in height or 1000mm or more in girth (measured at 1.4 metres above the ground) on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 within any Landscape Protection or Management Area within the Long Bay Structure Plan as identified in the Structure Plan maps.

8.4.6.1.3 Discretionary Activities

The following shall be Discretionary activities, which require a resource consent, with no application fee in the first instance:

a) Any trimming, alteration, or removal of:

   i) Any pohutukawa tree, *Metrosideros excelsa*, (including the roots) of 3 metres or more in height located within the Coastal Conservation Area, or in the area of Lake Pupuke Site of Geological Significance 3 on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21.

   ii) Any native vegetation within the foreshore yard, and any vegetation (excluding invasive weed species) within the 30 metres lakeside yard on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21.

   iii) Any tree (native or exotic) which is the subject of a covenant or condition to a resource consent or subdivision consent.

   iv) Any native vegetation on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 within the Long Bay 6 zone, Long Bay 7 zone (Heritage Protection), Riparian Margins, Piripiri Point Protection Area and any Management Areas, within the Long Bay Structure Plan as identified in the Structure Plan maps. Any alteration or removal of native vegetation on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 within the Landscape Protection Areas - Conservation and Restoration and the Park Interface Protection Area, on the crest, north and east of the Ridgeline Height Control Line is a Non-complying activity.

b) All works including any excavation, deposition of materials, construction activity, emplacement of services, discharge or dispersal of any toxic substance, emplacement of any weed control membrane, or storage of vehicles, machinery, or materials above, below, or within the root zone of any tree described in Rule 8.4.6.1.3.

c) The clearing or damaging of any native vegetation (including the roots) on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21 within the Rural 2, 3 and 4 zones and Area A of the Structure Plan zones.

d) The clearing or damaging of any native vegetation (including the roots) on sites NOT meeting the definition of 'Urban Environment allotment' as defined in Chapter 21, when it is part of a continuous, naturally occurring area of native vegetation in the Rural 1 and Residential Expansion zones, provided that successive permitted clearances of the same continuous area of vegetation shall not cumulatively exceed a total area of 100m².

Exception

This rule shall not apply to

- Trimming of trees or groups of trees within the urban environment as defined in Chapter 21

Explanation and Reasons

The height criterion for the protection of trees ensures the exclusion of most shrubs and hedging species from protection, and targets trees which have grown for some years and are on the way to maturity. These trees often make a significant contribution to neighbourhood amenity values.

The pohutukawa fringe makes a very significant contribution to the visual amenity of the city's coastline and helps to slow down the rate of natural erosion. The regeneration potential of pohutukawa stands are a natural resource of regional significance which the Plan seeks to protect. Whenever a continuous canopy along the coast can be retained, consideration of this should be a priority. The removal of mature pohutukawa trees within this area will generally not be approved by the Council.

Consent is not required for trimming works to trees or groups of trees in the urban environment as defined in Chapter 21, in recognition of the requirements specified in

Section 76of the Resource Management Amendment Act 2013.

8.4.6.2 Notable Trees

The following rule applies to those trees contained in the Schedule of Notable Trees in Appendix 8C.

The following are Discretionary activities and require a resource consent, with no application fee in the first instance:

a) Any trimming, alteration or removal of any Notable Tree (including its roots); or

b) All works including any excavation, deposition of materials, construction activity, emplacement of services, discharge or dispersal of any toxic substance, emplacement of any weed control membrane, or storage of vehicles, machinery, or materials above, below, or within the root zone of any tree described in Rule 8.4.6.2.

Exceptions

This rule shall not apply to:

- The trimming, alteration or removal of any tree by a network utility operator when this is required as an emergency to maintain or restore power and communication links or to safeguard life or property. In such circumstances the operator concerned shall notify the Council in writing within seven days as to the reason for the works
- Activity immediately necessary to avoid any actual or potential threat to the safety of persons or damage to property. In such circumstances the person undertaking the activity shall notify the Council in writing within seven days of the activity commencing as to the reasons
- Removal or destruction (partial or total) of any tree in accordance with a forest disease eradication or control programme within an infected area declared pursuant to the Forest Act 1949 and the Forest Disease Control Regulations 1967.

Explanation and Reasons

There is a number of trees which are of such scientific, aesthetic or historic significance that their continued survival and good health is in the interests of the community at large. As community assets, these Notable Trees require consideration above the general tree protection provisions. Any alteration to the Schedule must be by way of a Plan Change.

8.4.6.3 Protection of Trees on Roads and Reserves

The following rules apply to all trees located on any road, public reserve or recreation land, on sites NOT meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21, notwithstanding that the tree(s) may not qualify for protection under the provisions of either Rule 8.4.6.1.2, Rule 8.4.6.1.3 or Rule 8.4.6.2.

a) The following shall be Limited Discretionary Activities and require a resource consent, with no application fee in the first instance, unless protected by Rule 8.4.6.1.3: Discretionary Activities or Rule 8.4.6.2: Notable Trees:

   i) Any cut or alteration to any tree (not including the destruction or removal of any tree).

   ii) Any cut or alteration to any identified group of trees (but not including destruction or removal) by a network utility operator which may be undertaken over a specified period of time, for the maintenance of a network utility as required by network utility regulations and/or legislation.

   iii) Within the root zone of any trees on roads and reserves,

      - Alteration of ground level or water table by deposition or excavation
      - Storage of materials, vehicles or machinery, except within designated street parking areas covered by impermeable surfaces
      - Undertaking of any deposition, excavation, construction, or other activity.

b) The following shall be Discretionary Activities and require a resource consent, with no application fee in the first instance:

   i) The destruction or removal of any tree located on any road, public reserve or recreation land.

   ii) Works to trees located on any road, public reserve or recreation land which are protected by Rule 8.4.6.1.3: Discretionary Activities or Rule 8.4.6.2: Notable Trees.

Exceptions

This rule shall not apply to:

- The normal trimming, maintenance and treatment or the removal by the Council or its agent of dead trees and branches or trees and branches damaged or irrecoverably diseased on roads and reserves in accordance with the Council's Parks and Street Trees policy and accepted arboricultural practice by the Council or its agent
- The cutting, alteration or removal of any tree by a network utility operator when this is required as an emergency to restore or maintain power and communication links or to safeguard life or property. In such circumstances the operator concerned shall notify the Council in writing within seven days of the work commencing as to the reason for the works
- Removal or destruction (partial or total) of any tree in accordance with a forest disease eradication or control programme within an infected area declared pursuant to the Forest Act 1949 and the Forest Disease Control Regulations 1967
- Removal or destruction (partial or total) by the Council or its agent of any plant or tree that is listed in the Schedule contained in Appendix 8E.

Explanation and Reasons

Throughout the city there are plantings of trees on the roads and on the parks, reserves and open spaces. The Council undertakes planting of new trees in these areas on a regular basis. Because of the amenity that these trees provide, the Plan provides for their protection. The removal or destruction of these trees are accorded a higher level of protection than any cutting or alteration works, due to the significant contribution they make to the amenity, ecology and landscape of the city. However, in some circumstances, it is necessary to ensure that: trees remain healthy; undesirable trees are eradicated; and, that trees and their root systems are able to co-exist with network utility services. This can be achieved by maintenance of trees (and their root systems), replanting trees and planting appropriate species in appropriate locations.

8.4.6.4 Restrictions - Limited Discretionary Activities

Council may grant or refuse consent, and (if granted) may impose conditions on Limited Discretionary activities under Section 108 in respect of the following matters over which it has restricted its discretion and will assess these matters in accordance with the assessment criteria set out in Rule 8.4.6.6: Assessment Criteria for Limited Discretionary Activities:

a) Necessity for carrying out the activity.

b) Maintenance and enhancement of the amenity, landscape and ecological values that the tree provides or trees provide.

c) Protection to a tree or trees.

d) Ensuring that a tree is not damaged or destroyed during the carrying out of pruning and maintenance.

e) Alternatives to the proposed activity, including relocation of the tree(s) or the relocation or reconfiguration of the network utility infrastructure.

f) Covenanting.

g) Mitigation measure, such as the provision of replacement tree or trees.

h) Revegetation and rehabilitation of areas of native bush.

8.4.6.5 Notification of Limited Discretionary Activities

The Council shall consider any of the following applications for a Limited Discretionary activity under Rule 8.4.6.1.2(a) and (b) without public notification. Notice of such an application shall be served on all affected parties unless the statutory tests for non-notification are met. If the Council considers special circumstances exist it may require the application to be publicly notified.

a) Within the Residential 1, 2C, 3, 4, 5, 6 and 7 zones, Residential Expansion zone and Areas B, C and D of the Structure Plan zones, the alteration or removal of :

   i) Any native tree of 8 metres or more in height or 800mm or more in girth

(measured at 1.4 metres above the ground), and

ii) Any exotic tree, of 10 metres or more in height or 1000mm or more in girth (measured at 1.4 metres above the ground) with the exception of any of the species listed in Appendix 8D, and

iii) Any exotic tree, of 15 metres or more in height or 1500mm or more in girth (measured at 1.4 metres above the ground) belonging to any of the species listed in Appendix 8D.

b) Within the Residential 2B zone any alteration or removal of any native tree of 6 metres or more in height or 600mm or more in girth (measured at 1.4 metres above the ground) or any exotic tree of 8 metres or more in height or 800mm in girth (measured at 1.4 metres above the ground).

For the avoidance of doubt, the waiver of public notification does not apply to clearance of vegetation protected by Rule 8.4.6.1.2(a), nor the partial or complete destruction of vegetation protected by Rule 8.4.6.1.2(b).

Refer to Rule 3.3.2 Notification Processes for Resource Consents Applications-Requiring Multiple Resource Consents.

8.4.6.6 Assessment Criteria for Limited Discretionary Activities

The Council shall assess applications for Limited Discretionary activity consent affecting protected trees against the following:

8.4.6.6.1 General Assessment Criteria

a) Where the removal or destruction of a tree (or trees) is proposed, the Council must be satisfied that circumstances exist to warrant removal, which may include dangerous, diseased or damaged conditions; compliance with any statutory or legal obligation; or undue interference with the reasonable enjoyment of land and/or adjoining land of residential zoning for residential purposes.

b) The extent of the trimming and maintenance of the tree(s), and the method to be 5.

c) The extent to which the viability of the native bush would be adversely affected, including cumulative effects.

d) Any alternative methods which may be available to the applicant in the achievement of his/her objectives including consideration of an application for flexibility in respect of any development control where this would encourage retention and enhancement of existing large trees on the site.

e) Whether the tree(s) can be relocated.

f) Whether or not the proposed activities within the root zone are, in the opinion of the Council, likely to damage the tree(s) or endanger its (their) health.

g) The extent to which the tree(s) or area of bush contributes to the amenity of the neighbourhood, both visually and physically, including as a habitat for birds and other animals.

h) Any function the tree(s) or area of bush may have in conservation of water and soil.

i) Whether proposed landscaping or revegetation can compensate for any loss envisaged.

j) The extent to which the tree(s) or vegetation contributes to the historical, social and/ or cultural attributes of a site and surrounding environment.

k) Whether clearance of vegetation will increase stormwater runoff downstream and methods for managing effects on-site.

8.4.6.6.2 Works in the Residential 2A, 2A1 and 2B Zones

In addition to the general assessment criteria above the Council will also assess applications for works on trees in the Residential 2A, 2A1 and 2B zones in accordance with the following criteria:

a) The contribution made by the vegetation and trees to the ecological values of the area.

b) The contribution made by the vegetation and trees to the amenity of the area.

c) The location of the vegetation and trees in relation to watercourses, the coast and the slope of the land and the degree to which the removal of the vegetation would harm or damage the values of watercourses, the coast or cause siltation or

sedimentation.

d) The reasons given by the applicant in seeking to justify the need for the clearance of the vegetation and trees.

e) Any hazard to life and property created by the vegetation and trees.

f) Any proposed mitigation such as the planting of vegetation and trees in another location on site.

g) The extent to which the removal of vegetation adversely affects remaining vegetation.

8.4.6.6.3 Works in the Residential 6 Zone

In addition to the general assessment criteria above, the Council will also assess applications for works on trees in the Residential 6 zone, in accordance with the following criteria:

a) Protected trees have been and are able to be incorporated into the layout and design of the development and proposed reserves.

b) A proposed landscape plan will mitigate the effects of the removal of protected trees.

8.4.6.6.4 Works to Trees in Roads and Reserves

a) In addition to the general assessment criteria above, the Council will also assess applications relating to trees in roads and reserves in accordance with the following criteria and methodology:

   i) The extent to which the proposed works to trees are necessary for the safe and efficient provision of the network utility service (including consideration of network utility regulations, legislation and safety regulations).

   ii) The objectives and policies set out in Part 8.3.4 of the Plan.

   iii) Any alternative methods and locations available to the applicant for carrying out the works to the tree(s) or for providing the utility service such as the relocation of the network utility, diversion or bundling of overhead lines or the undergrounding of network utility services.

   iv) Whether appropriate steps will be taken to protect a tree(s) against damage during construction work in the vicinity.

   v) Whether or not the proposed activities are, in the opinion of the Council, likely to damage the tree(s) or endanger its (their) health.

b) In addition to the above assessment criteria, all applications by network utility operators for works to groups of trees as provided for in Rule 8.4.6.3(a)(ii), shall also require an assessment of the following:

   i) Any cumulative effects of the works to trees on the amenity, landscape and ecology values of the neighbourhood or city.

   ii) The adequacy and effectiveness of the applicant's Tree Management Plan, which shall be submitted with the application. The Plan may include, but is not limited to, the following:

      - A description of the purpose and need for the proposed works in terms of maintaining the network utility including consideration of required legislative or regulatory requirements
      - A schedule of the proposed tree works programme that lists the targeted trees, including: the amount to be pruned or altered; the relevant streets and approximate timeframes for starting and completing the work
      - Diagrams which demonstrate the extent of the proposed works
      - The costs and benefits of any alternative methods and locations available to the applicant for carrying out the works to the tree(s) or for providing the utility service such as the relocation of the network utility, diversion or bundling of overhead lines or the undergrounding of network utility services
      - The tree protection methodology that will be used in relation to work undertaken and any proposed mitigation techniques
      - Description of actual or proposed consultation for example, the gaining of landowner consents or agreements for access.

8.4.6.6.5 Works to Trees in the Long Bay 6 zone and Landscape Protection and Management Areas of the Long Bay Structure Plan

The assessment criteria of Rules 8.4.6.6.1 and 8.4.6.6.2 shall apply to all works to trees within the Long Bay 6 zone and any Landscape Protection or Management Area within the Long Bay Structure Plan area as identified in the Structure Plan maps.

8.4.6.7 Assessment Criteria for Discretionary Activities

Without restricting the exercise of its discretion to grant or refuse consent, or impose conditions, the Council will have regard to the assessment criteria for Limited Discretionary activities (Rule 8.4.6.6) as well as the assessment criterion set out below when considering an application under Sections 104 and 104B of the RMA for a Discretionary activity consent affecting protected trees:

In the case of pohutukawa in the Coastal Conservation Area, whether the continuous canopy will be interrupted.

8.4.6.8 Conditions

Conditions may be imposed as part of any consent to an application, and may include the following:

a) The requirement to provide adequate protection to a tree(s) during construction work in the vicinity.

b) The requirement to pay a bond to ensure that a tree is not damaged or destroyed during the carrying out of pruning and maintenance or other activity in the vicinity, or within the dripline.

c) The requirement to enter into a covenant over the title of land where consent has been granted from one or more development controls in order to retain a tree.

d) The requirement to provide a replacement tree or trees (where a tree is removed or destroyed) elsewhere on the site or in the near vicinity, where this is appropriate. The replacement tree(s) shall be of a size and species which is approved by the Council, having regard to the amenity of the area. Native trees are favoured for their role as a food resource and habitat for native birds.

e) The revegetation or rehabilitation of areas of native bush depleted as a result of approved development, to ensure that regeneration occurs.

f) The requirement for works to any trees or vegetation to be undertaken by a competent arborist in accordance with current arboricultural standards and practices.

Reference should also be made to the following Sections:

Section 3	Procedures and General Rules
Section 9	Subdivision and Development
Section 14	Network Utilities and Designations
Section 16	Residential
Section 18	Rural

8.4.7 Maximum Impervious Area

This rule applies to all activities in Residential, Business and Structure Plan zones, except for the Long Bay Structure Plan Area. For provisions applying to the Long Bay Structure Plan Area refer to 17B – Long Bay Structure Plan.

Five Stormwater Management Areas (SMAs) have been defined for the city. Refer to the District Plan Maps (Appendix 11) to determine which SMA applies.

8.4.7.1 Permitted Activities

Maximum impervious areas that do not exceed Table 8.2 below, provided that redevelopment of sites may exceed the limits in Table 8.2, if there is no increase in the total impervious area on the site and the existing impervious areas were lawfully established.

Table 8.2: Maximum Impervious Areas

SMA	Residential & Structure Plan Zones (excluding Mixed Use Overlay Area*)	Business Zones & Structure Plan Zone Mixed Use Overlay Area*
1	50%	80%
2	60%	90%
3	60%	90%
4	70%	100%
5 **	70% **	100%

*See Section 17A: Albany and Greenhithe Structure Plans.

** Within the Residential 8 zone (Anzac Street west), and within Areas B, C & D (but not Area A) the maximum impervious area is **80%**. For the purposes of calculating this percentage, for those properties that have a public easement over them in accordance with

- Rule 16.8.3.6 (those properties that front Anzac Street); and
- Rule 16.8.3.9 (those properties that provide a through site lane)

the areas over which the public easement is provided may be included as part of the pervious area required under Rule 8.4.7. This is to ensure that development that includes these areas is not penalised by Council using pavement or other impervious surfaces in areas which would often be landscaped with trees, grass, and other pervious surfaces.

8.4.7.2 Limited Discretionary Activities

Those activities that are in Business zones and Structure Plan Zone Mixed Use Overlay Area:

a) are in SMA 1, 2 or 3, and

b) exceed the maximum impervious area in Table 8.2,

are limited discretionary activities.

8.4.7.3 Discretionary Activities

Those activities that are in Residential and Structure Plan zones (excluding Mixed Use Overlay Area), and exceed maximum impervious areas in Table 8.2, are discretionary activities.

8.4.7.4 Rule: Public Notification and Serving Notice Waived

The Council shall consider any applications to exceed maximum impervious area limits that are provided for as Limited Discretionary Activities in 8.4.7.2 without public notification or the need to obtain the written approval of, or serve notice on affected parties. If the Council considers special circumstances exist it may require the application to be publicly notified.

Refer to Rule 3.3.2 Notification Processes for Resource Consents – Applications Requiring Multiple Resource Consents.

8.4.7.5 Restrictions for Limited Discretionary Activities

All Limited Discretionary activities must comply with all other relevant rules of the Plan. The Council may impose conditions in respect of the matters specified in Section 108 of the RMA, and shall restrict the exercise of its discretion to the following matters:

a) The design, arrangement and extent of pervious and impervious surfaces.

8.4.7.6 Assessment Criteria

8.4.7.6.1 Limited Discretionary Activities

The Council shall assess applications for Limited Discretionary Activities against the following:

a) Whether the additional hard surfaces are appropriate, taking into account the character and amenity of adjoining sites.

b) The design of the impervious surfaces and extent to which that can add to the amenity of the site.

c) Whether any required on-site stormwater mitigation measures can be designed to enhance the visual appearance of the development such as softening the appearance of car parking and yard areas or creating features in publicly accessible areas of the site.

8.4.7.6.2 Discretionary Activities

The Council shall assess applications for Discretionary Activities against the following:

a) Whether the visual impact of additional hard surfaces on the amenity and character of the site and its surrounds is significant.

b) Whether there are opportunities to introduce specimen trees / natural landscaping in other parts of the site to help off-set the impact of additional hard surfaces.

c) Whether the required on-site stormwater mitigation measures can be designed to enhance the visual appearance of the development.

d) The level of impervious surface and the options available to reduce it.

8.4.7.7 Information Requirements

Without limiting sections 88, 92 or the Fourth Schedule of the RMA, and in addition to any information or plans required under Rule 3.10.7 and Rule 3.10.9, applications for resource consent for additional impervious surfaces shall provide an assessment of the location and size of lawfully established existing and proposed new impervious areas on the site.

Explanation and Reasons

The maximum impervious area rule ensures that amenity is preserved, particularly in residential zones where an open vegetated appearance is generally desired. In business zones a more built up environment is accepted and these zones often require more impervious area to maximise building coverage and provide parking. However the design of impervious surfaces is important in creating high quality business areas. Of equal importance, in addition to providing amenity, pervious areas also have a role to play in on-site stormwater management, as green areas will soak up more rainfall and runoff as opposed to impervious surfaces.

Although pervious paving, green roofs and decking are considered to be permeable surfaces for the purposes of stormwater runoff mitigation as addressed in Rule 8.4.8, these surfaces are considered to be impervious surfaces for the purposes of the maximum impervious surface rules in 8.4.7. This is because pervious areas such as pervious paving, green roofs, uncovered slatted wooden decks over natural ground and swimming pools constitute 'hard surfaces' in an amenity sense, and do not necessarily contribute to the green, vegetated appearance and character of the city.

Hence, if the impervious area of a site in a residential zone in SMA 1 exceeds 50% of the site area, but the percentage of the impervious area that exceeds the 50% is, for example, pervious paving, a discretionary activity consent under 8.4.7.3 will still be required. Under the rules in 8.4.8 however, the pervious nature of pervious paving will be taken into account when calculating the impervious area that needs to be mitigated on-site.

Sites in business zones may exceed the maximum limits for impervious surfaces in Table 8.2, provided the design of the on-site mitigation facilities for the additional impervious areas enhances the visual appearance of the development. In residential zones, a discretionary resource consent is required to exceed the maximum limits for impervious surfaces. The affect of additional hard surfaces on the amenity and character of

residential neighbourhoods is a particular issue to address.

Where a site has impervious surfaces that exceed the maximum levels stated and which existed prior to 12 April 2007, then those surfaces may have existing use rights and Section 10 of the RMA may apply. In these cases maximum impervious surface limits may be exceeded and stormwater run off from these existing surfaces may not need to be mitigated on-site.

8.4.8 On-Site Stormwater Management

This rule applies to all activities in Residential, Business and Structure Plan zones, except for the Long Bay Structure Plan Area. For provisions applying to the Long Bay Structure Plan Area refer to 17B – Long Bay Structure Plan.

Refer to the District Plan Maps (Appendix 11) to determine which SMA applies.

8.4.8.1 Permitted Activities

8.4.8.1.1 Permitted Activities Where No On-Site Stormwater Mitigation is Required

Subject to compliance with 8.4.8.5 General Standards the following activities are permitted and no on-site stormwater mitigation is required for:

a) Any development in SMA 5, or

b) Development where the total impervious area as defined in 8.4.7.4 does not exceed 15% of the site area, or

c) Small additions and/or accessory buildings (including paved areas) up to an aggregate of 25m^2, and that do not exceed the maximum impervious area in Table 8.2, or

d) Installation of self mitigating surfaces provided that the maximum site impervious area listed in Table 8.2 is not exceeded.

8.4.8.1.2 Permitted Activities in SMA 1, 2, or 3 Where On-Site Stormwater Mitigation is Required

Subject to compliance with 8.4.8.5 General Standards, activities that:

a) do not comply with 8.4.8.1.1, and

b) do not exceed the maximum impervious area in Table 8.2,

are permitted activities, provided that:

i) all stormwater from the impervious areas listed in Table 8.3 is fully mitigated on site by one (or a combination) of the following methods:

   a) Stormwater rain tanks

   b) Bio-retention

   c) Self mitigating surfaces, and

ii) the selected method/s comply with the performance standards set out in Appendix 8H.

Table 8.3: Percentage of Impervious Areas To Be Fully Mitigated

Stormwater Management Area (SMA)	Percentage of Impervious Areas to be Fully Mitigated
SMA 1	80%
SMA 2	70%
SMA 3	60%

8.4.8.1.3 Permitted Activities in SMA 4 Where On-Site Stormwater

Mitigation is Required

Subject to compliance with 8.4.8.5 General Standards, those activities that:

a) do not comply with 8.4.8.1.1, and

b) do not exceed the maximum impervious area in Table 8.2,

are permitted activities provided that:

i) $3m^3$ of on-site detention volume is provided per $100m^2$ of impervious area on the site, or

ii) the Council has identified that any flooding and erosion issues affecting the catchment downstream of the site have been resolved and that as a result, no on-site mitigation is required.

8.4.8.2 Controlled Activities

Subject to compliance with Rule 8.4.8.5 General Standards, those activities that:

a) do not comply with 8.4.8.1, and

b) do not exceed the maximum impervious area in Table 8.2,

are controlled activities provided that:

i) for all activities in SMA 1, 2 or 3, all stormwater from the impervious areas listed in Table 8.3 is fully mitigated on-site.

ii) for all activities in SMA 4, the peak flows from the 10% and 50% AEP rainfall events are attenuated to pre-application peak flows by a mix of on-site and/or off-site measures.

8.4.8.3 Limited Discretionary Activities

Subject to compliance with Rule 8.4.8.5 General Standards, those activities that:

a) do not comply with 8.4.8.1 or 8.4.8.2, and

b) either:

i) do not exceed the maximum impervious areas in Table 8.2, but cannot fully mitigate on-site all stormwater from the impervious areas listed in Table 8.3, or

ii) exceed the maximum impervious areas in Table 8.2 in Business zones or the Structure Plan zone Mixed Use Overlay Area,

are limited discretionary activities.

8.4.8.4 Discretionary Activities

Those activities that:

a) do not comply with General Standards 8.4.8.5, or

b) exceed the maximum impervious area listed in Table 8.2, and are not Limited Discretionary activities.

are discretionary activities.

8.4.8.5 General Standards

All Permitted, Controlled and Limited Discretionary activities are required to comply with the following standards. Failure to comply requires consent as a Discretionary activity.

a) Bio-retention devices within areas subject to geotechnical constraints, particularly on slopes steeper than 1 in 4, shall provide an impervious membrane to reduce infiltration into the subsoil and a suitably qualified geotechnical engineer shall certify that geotechnical constraints or problems will not be created or exacerbated by the device.

b) Reserves shall not be used for soakage areas to mitigate stormwater runoff.

c) On-site stormwater management devices are to be maintained by the landowner and kept in an operational condition. These devices may not be removed or disconnected.

d) Stormwater shall be disposed of in an acceptable manner to an approved outfall so as not to cause nuisance or erosion at the point of discharge.

e) On-site stormwater management may be achieved by a combination of individual and communally owned onsite measures. Where the stormwater devices proposed serve more than one freehold property, or are located on public land or land vested in Council, then these may be vested in Council, at Council's sole discretion, provided they meet all Council's requirements. If communally-owned measures are to be partly relied upon, then localised detention and treatment devices designed to serve a multi-unit development may be used, provided these sites shall be retained in private ownership and shall be managed by a body corporate under the Unit Titles Act.

8.4.8.6 Rule: Public Notification and Serving Notice Waived

The Council shall consider any applications for on-site stormwater management that are provided for as Controlled or Limited Discretionary Activities in 8.4.8.2 and 8.4.8.3 without public notification or the need to obtain the written approval of, or serve notice on affected parties. If the Council considers special circumstances exist it may require the application to be publicly notified.

8.4.8.7 Reservations and Restrictions for Controlled and Limited Discretionary Activities

All Controlled and Limited Discretionary activities must comply with all other relevant rules of the Plan. The Council may impose conditions in respect of the matters specified in Section 108 of the RMA, and shall restrict the exercise of its discretion to the following matters:

a) The effects of stormwater runoff on streams and neighbouring properties.

b) Design, location, operation and maintenance of stormwater management techniques.

c) Design, location and mitigation of impervious areas.

d) The utilisation of stormwater networks to service the development.

8.4.8.8 Assessment Criteria

8.4.8.8.1 Controlled Activities

The Council may impose conditions in respect of the matters specified in Section 108 of the RMA, and any other matters referred to in the assessment criteria set out below:

a) For residential activities, on-site stormwater management and mitigation should

involve a combination of the following:

i) Reducing the imperviousness of hard surfaced areas such as:

- Reducing the building footprint;
- Reduced driveway length (locating the dwelling closer to the road);
- Shared driveways to serve several dwellings;
- Dual strip driveways with a grassed central strip;
- Soil decompaction and rehabilitation;
- Revegetation or planting trees;

ii) Use of stormwater mitigation devices including but not limited to:

- Detention facilities to reduce peak flows;
- Volume reduction through harvesting of stormwater runoff from roofs for non-potable use.

b) For non-residential activities, the methods that are adopted (e.g. mix of single or dual rain tanks, bio-retention areas and other on-site measures) should where practicable aim to reuse stormwater for non-potable purposes within the development (which is mainly associated with people-intensive activities like smaller shops and offices), and the areas available on-site (in landscaping, yard and car parking areas) to provide mitigation.

c) The following shall be taken into account in the selection and design of on-site bio-retention techniques:

i) The natural drainage patterns of the site should be retained wherever possible.

ii) Bio-retention should be incorporated into landscaping requirements wherever practicable and be connected to accessways and parking areas.

iii) Plant species should be appropriate to the site and the proposed method of mitigation.

iv) Subsurface conditions and appropriate design of retention areas should maximise infiltration and minimise hazards.

d) The means by which the on-site mitigation devices are to be maintained. This may include retaining a maintenance schedule that ensures that stormwater mitigation devices are maintained in operational condition, a bond or a covenant.

e) Whether the stormwater management devices will adversely affect the values associated with Scheduled Sites and the heritage values of buildings in the Residential 3 zone.

8.4.8.8.2 Limited Discretionary Activities

The Council shall assess applications for Limited Discretionary Activities against the following:

a) The Assessment Criteria for Controlled Activities in 8.4.8.8.1.

b) The best practicable mitigation achievable for the site should be selected, taking into account:

i) The steepness or instability of a site, and potential effects on natural hazards both on the site and on adjoining sites;

ii) The type and mix of on-site management techniques that could be reasonably applied to the site, given the configuration of existing buildings and development;

iii) The ability of alternative mitigation techniques to achieve the same outcome sought for the relevant Stormwater Management Area;

iv) Whether there are options to address mitigation on other sites or areas within the catchment; and

v) The ability to maintain on-site devices over the long term.

c) Whether the proposed stormwater management methods will avoid and/or mitigate adverse affects on stream health and erosion of streams.

d) The extent to which innovative solutions to on-site stormwater management achieve volume and peak flow reduction from the site, in accordance with the management approach of the Stormwater Management Area, as set out in Table 8.1.

8.4.8.8.3 Discretionary Activities

Without restricting the exercise of its discretion to grant or refuse consent or impose conditions, the Council shall assess applications for Discretionary Activities against the following:

a) The Assessment Criteria for Controlled Activities in 8.4.8.8.1 and Limited Discretionary Activities in 8.4.8.8.2.

b) The effects of additional stormwater runoff downstream of the site on other properties and on the stream network.

c) The extent to which the proposal will assist with managing stormwater in an integrated manner, across the relevant catchment.

d) Whether there are options to manage the additional stormwater runoff, off-site.

8.4.8.9 Information Requirements

Without limiting sections 88, 92 or the Fourth Schedule of the RMA, and in addition to any information or plans required under Rule 3.10.7 and Rule 3.10.9, applications for resource consent for on-site stormwater management shall include a Stormwater Management Report, which provides the following information:

a) Location and size of lawfully established existing and proposed impervious areas on the site.

b) Location, design, performance and maintenance of existing and proposed stormwater management techniques.

c) Detailed design and calculations of the pre-application stormwater runoff annual volumes and peak flows for 10% and 50% AEP events and the proposed post development stormwater runoff volumes and peak flows.

d) Capacity of the stormwater system to accommodate stormwater runoff.

e) Likely constraints in stormwater system and any means to treat or remove them.

f) A maintenance schedule for any on-site stormwater devices proposed.

Explanation and Reasons

Rule 8.4.8 gives effect to the objectives and policies set out and explained in Section 8.3.5. That section details the issues associated with on-site stormwater management and sets out the framework for on-site stormwater management, including the outcomes sought within the different Stormwater Management Areas.

The rules require development that increases impervious surfaces to mitigate the effect of these additional hard surfaces on-site. Rule 8.4.8.1 sets out the performance standards that must be met if an activity is to be a Permitted Activity. Appendix 8H sets out the detailed requirements in relation to mitigation for such activities. The extent of mitigation required depends upon the SMA within which the site is located, the type of activity and whether the site drains to an approved stormwater detention facility prior to discharge to a waterbody.

Alternative on-site stormwater management techniques to those contained within Appendix 8H are considered as Controlled Activities. Where site constraints or the particular characteristics of an activity mean that the Permitted, Controlled or Limited Discretionary Activity standards cannot be met, then the rules provide for resource consent to be sought as a Discretionary Activity.

For on-site stormwater management in Recreation, Special Purpose, Rural and Urban Expansion Zones, refer to the relevant sections of the District Plan.

Additional development controls such as building coverage, living courts, landscaping

and yards apply for specific zones and will also need to be complied with in addition to these provisions.

Auckland Regional Council may have additional consent requirements for stormwater mitigation, refer to the Auckland Regional Plan: Air, Land and Water.

8.4.9 Natural Hazards

For the purposes of this Section 8.4.9, unless specifically provided otherwise any reference to 'structures' includes those structures that are excluded from the definition of building in Section 21 (for example, fences, boundary walls and retaining walls as described in the definition).

8.4.9.1 Flood Plains

8.4.9.1.1 Permitted Activities

a) Network utilities in the flood sensitive area or the 1% AEP flood plain (subject to Rule 8.4.9.5 General Standards).

8.4.9.1.2 Controlled Activities

a) Buildings within the flood sensitive areas (subject to Rule 8.4.9.5 General Standards).

b) Flood protection works within the 1% AEP flood plain required to protect existing buildings from flooding hazards.

8.4.9.1.2A Limited Discretionary Activities

Buildings and structures or alterations and additions to existing buildings increasing building coverage within the 1% AEP flood plain at '56 Fairview' (being Lots 1 & 3 DP 208793 and Lot 2 DP 199126, 56 Fairview and 129 & 131 Oteha Valley Road).

8.4.9.1.3 Discretionary Activities

a) Buildings and structures or alterations and additions to existing buildings increasing building coverage, within the 1% AEP flood plain.

b) Permitted and controlled activities that do not comply with Rule 8.4.9.5 General Standards.

8.4.9.2 Overland Flow Paths

8.4.9.2.1 Permitted Activities

Subject to Rule 8.4.9.5 General Standards the following shall be Permitted activities:

a) Flood protection works within an overland flow path required to protect existing buildings from flooding hazards.

b) Fences and network utilities located within or over an overland flow path that do not obstruct the overland flow path.

8.4.9.2.2 Limited Discretionary Activities

a) Diverting or altering any part of the overland flow paths.

Note: Diverting an overland flow path means that no building or structure is located within its path. Generally this is undertaken to redirect the flow path around a building or area and includes moving its location within a site or changing the entry or exit locations. Altering an overland flow path means changing its capacity.

b) Buildings and structures (including retaining walls but excluding fences and network utilities) located within or over an overland flow path that do not form an obstruction to any part of an overland flow path.

c) Piping of overland flow paths.

8.4.9.2.3 Discretionary Activities

a) Permitted activities that do not comply with Rule 8.4.9.5 General Standards.

8.4.9.2.4 Non-Complying Activities

a) Buildings and structures (including retaining walls but excluding fences and network utilities) located within or over an overland flow path forming an obstruction to any part of an overland flow path.

b) Piping of secondary overland flow paths.

8.4.9.3 Coastal Inundation Areas

8.4.9.3.1 Permitted Activities

a) Network utilities in coastal inundation areas (subject to Rule 8.4.9.5 General Standards).

8.4.9.3.2 Controlled Activities

a) Buildings in coastal inundation areas (subject to Rule 8.4.9.5 General Standards).

Note for Permitted and Controlled Activities in Coastal Inundation Areas: Buildings or structures in the Coastal Conservation Area or Foreshore Yard must be in accordance with Rules 8.4.1 and 16.6.1.5A.

8.4.9.3.3 Discretionary Activities

a) Permitted and controlled activities that do not comply with Rule 8.4.9.5 General Standards.

Explanation and Reasons

These rules provide the activity status for development within the 1% AEP flood plain, overland flow paths and coastal inundation areas. Due to their potential impact on other properties within the flood plain and the flood plain itself, buildings within flood plains are provided for as discretionary activities. Network utilities are an exception to this rule. The flood sensitive area is an area bordering the flood plain which is within 0.5m in elevation of the predicted flood plain level. Floor levels of buildings in these areas must be above the 1% AEP flood plain - see Rule 8.4.9.5 Performance Standards. Flood protection works in the flood plain that are required to protect existing buildings from flooding hazards are controlled activities. To protect buildings it is important that these works are able to be completed, but it is equally important that the works to do not adversely affect the flood plain or other properties.

Buildings or structures that obstruct overland flow paths are non complying activities as it is anticipated that there are very few situations where this would be an acceptable outcome. Fewer environmental effects are likely if it is diverted or piped (in the case of a primary overland flow path) to avoid the obstruction. In some situations it may be appropriate for buildings or structures to bridge an overland flow path, for example a wooden deck that bridges an overland flow path but will not interrupt its flow. This may be acceptable in some situations - see Rule 8.4.9.10 for the criteria that are relevant. Piping of secondary overland flow paths is a non complying activity as these provide the route for water to travel overland when the primary system is overloaded or blocked. Due to the risk of pipes becoming blocked over time, it is not appropriate for a secondary overland flow path to be piped.

Fences that obstruct overland flow paths are a major cause of localised flooding in North Shore City. As fences are generally permitted activities, a resource consent to erect a fence that spans an overland flow path is not required. Instead this is provided for as a permitted activity provided that a space is left clear through which the flow can travel in a flooding event. See Rule 8.4.9.5 General Standards for this requirement.

Buildings in the coastal inundation area require a controlled activity consent as they have potential to interrupt the natural flow of coastal flood waters and affect neighbouring properties through wave action and deflection. Finished floor levels of buildings must also be above the 1% AEP flood level.

Site works associated with flood protection works, and other site works, in flood plains are addressed in Rule 9.4.1. Site works within overland flow paths are also addressed in Rule 9.4.1.

8.4.9.4 Rule: Public Notification Waived

The Council shall consider any application for the Limited Discretionary resource consents under Rule 8.4.9.2.2 a), b) and c) without public notification. Notice of such an application shall be served on all affected parties unless the statutory tests for non-notification are met. If the Council considers special circumstances exist it may require the application to be publicly notified.

Refer to Rule 3.3.2 Notification Processes for Resource Consents - Applications Requiring Multiple Resource Consents.

Explanation and Reasons

Infringement of any of the Rules 8.4.9.2.2 a), b) and c) have the potential to affect neighbouring properties or other properties that are affected by the same overland flow path, but it is unlikely that infringements will have effects on the wider general public. Therefore the need to publicly notify such applications has been excluded.

8.4.9.5 General Standards

All Permitted and Controlled activities are required to comply with the following standards: Failure to comply requires that an application be made for a Discretionary activity resource consent.

a) Finished floor levels within flood sensitive areas or coastal inundation areas shall be:

   i) For habitable residential buildings - at least 500mm above the 1% AEP flood level, and

   ii) For buildings other than habitable residential buildings - above the 1% AEP flood level.

b) Minor additions and alterations to existing buildings within coastal inundation areas, being less than 25m², are not required to comply with the finished floor levels provided in (a)(i) or (a)(ii) above.

c) Flood protection works within an overland flow path required to protect existing buildings from flooding hazards shall maintain the same entry and exit point of the overland flow path at the site boundary, shall not alter the volume and velocity of water flow, and shall not cause additional adverse effects on neighbouring sites.

d) Fences and network utilities located within or over an overland flow path that do not obstruct the overland flow path shall:

   i) provide an opening equivalent to twice the area required to convey the 1% AEP flow of the overland flow path, and

   ii) the opening shall be constructed to minimise the chances of blockage of the overland flow path.

Explanation and Reasons

The General Standards provide a baseline by which the relevant permitted and controlled activities must comply, or else a discretionary activity consent is required. Buildings in flood sensitive areas and coastal inundation areas must have their finished floor levels above the 1% AEP flood level, and in habitable residential buildings they must be 500mm above this level. This is to minimise the effects of any flooding on buildings. Any minor additions to buildings in coastal inundation areas are not required to comply with these requirements however. If the finished floor levels of the existing building are below the 1% AEP flood level, requiring floor levels of small additions to be above the 1% AEP level may result in the new addition appearing incompatible with the existing building.

Flood protection works protecting existing buildings from an overland flow path have a number of criteria that must be satisfied in order for the work to be acceptable as a permitted activity. Similarly, fences and network utilities located within an overland flow path must construct the structure according to the listed criteria to ensure that it does not obstruct the flow path. These criteria are to ensure that the work does not adversely affect neighbours and other sites affected by the overland flow path.

8.4.9.6 Reservations for Controlled Activities

Council may impose conditions on Controlled activities under s108 of the RMA in respect of the following matters over which it has reserved control:

a) Finished floor levels of buildings.

b) Maintenance or improvement of the capacity of the 1% AEP flood plain to provide for the safe conveyance and storage of floodwaters.

c) Location, building coverage and design of all developments within the site.

d) On-site stormwater management controls.

e) Effects on the subject site and neighbouring sites.

8.4.9.7 Restrictions for Limited Discretionary Activities

Council may grant or refuse consent for Limited Discretionary activities, and if granted may impose conditions under Section 108 of the RMA. For the purpose of making these decisions Council has restricted the exercise of its discretion to the matters identified below.

a) Finished floor levels of buildings.

b) Location and design of buildings or structures and landscaping.

c) Location and capacity of overland flow path.

d) Provision of secondary overland flow path.

e) Potential for obstruction of overland flow path.

f) Easements for overland flow paths.

g) Capacity of riparian margins to assist with the mitigation of floodwater flows arising from extreme rainfall events.

8.4.9.7A Restricted matters for discretion in respect of Limited Discretionary Activities at '56 Fairview'

a) Finished floor levels of buildings.

b) Maintenance or improvement of the capacity of the 1% AEP flood plain to provide for the safe conveyance and storage of floodwaters.

c) Associated impacts for overland flow paths.

d) Location, design and coverage of buildings or structures, and landscaping.

e) Capacity of riparian margins to assist with the mitigation of floodwater flows arising from extreme rainfall events.

f) The nature and extent of the proposed developments in the 1% AEP flood plain, and any positive and negative effects, in the context of the development of the property as a whole.

8.4.9.8 Information Requirements

Applications for a resource consent for site works or development in the flood sensitive area, 1% AEP flood plain, coastal inundation area, or for a resource consent in respect of overland flow paths according to Rule 8.4.9.2, shall include a 'Hydrological Report' by a Chartered Professional Engineer experienced in catchment hydrology (or other suitably qualified and experienced person). The required Hydrological Report shall:

a) Provide a detailed level survey of the lot/s in terms of DOSLI Datum, and

b) Where the Council has no accurate flood level or overland flow path data the hydrological report shall determine the 1% AEP flood levels on the lot/s and the location and extent of overland flow paths.

c) Assess the likely upstream or downstream effects of any new building or structures, or additions and alterations to existing buildings located within the 1% AEP flood plain or overland flow path, including appropriate methods to avoid, remedy or mitigate those effects.

d) For sites in coastal inundation areas, a site specific assessment is required and appropriate design requirements determined to ensure that buildings are protected from the impacts of coastal inundation and any actual or potential adverse effects on the environment and / or neighbouring properties are minimised.

e) Include an assessment of the storage capacity of the 1% AEP flood plain and methods for maintaining this capacity on the site.

f) Identify finished floor levels in relation to surrounding ground and projected flood levels.

g) Provide long sections and cross sections of any overland flow path or altered overland flow path showing that they provide sufficient capacity to convey the required flows.

h) Identify any landscaping constraints for the site required to protect the integrity of an overland flow path.

The scope of the hydrological report may be reduced at the discretion of the Council depending on availability and accuracy of Council flood information and actual site conditions.

Explanation and Reasons

Applicants for a resource consent in the specified areas are required to submit a hydrological report to verify that the proposal will not cause undue adverse effects. For these reports, Council may have information which is of assistance to an applicant. For instance, Council may have the projected flood levels of the 1% AEP flood plain and can estimate the flow levels of overland flow paths at different flooding event levels. The applicant should contact Council to find out what information it has in regard to a particular site.

The scope of the hydrological report required may be reduced depending on the nature of the application - generally, the more serious the potential effects of the application, the more comprehensive the hydrological report will need to be. In most areas of the coastal inundation area for example, the effects of wave action and deflection are only going to be meaningful in the first 20-30m beyond the high tide mark. As a general rule, beyond this level the effects of wave action on neighbouring properties from a proposed building will be minor, and will not need to be comprehensively identified in the report.

8.4.9.9 Assessment Criteria for Controlled Activities

All Controlled activities must comply with all relevant controls of the Plan. In addition, the Council may impose conditions in respect of the matters specified in Section 108 of the RMA, and any other matters referred to in the assessment criteria set out below:

a) The ability of buildings in areas subject to flooding to provide the minimum finished floor levels to avoid being flooded.

b) Whether the hydrological report determines that an alternative minimum finished floor height is acceptable to avoid the effects of flooding on buildings.

c) Whether the location, scale, building coverage and design of development exacerbates or contributes to flooding, extending the flood plain onto downstream or upstream sites or reduces flood plain storage.

d) Whether flood protection works in the 1% AEP flood plain will affect the extent of the flood plain, affect neighbouring sites, increase the flow velocity and/or any adverse effects of erosion or scour, are necessary to ensure the safety of existing development, and whether any other design options are available.

e) Whether development is associated with required on-site stormwater management devices in accordance with Rule 8.4.8.

f) Whether building design allows for the natural flow of coastal flood waters in coastal inundation areas while minimising any actual or potential adverse effects on the environment and or neighbouring properties, including the effects of wave action and deflection.

8.4.9.10 Assessment Criteria for Limited Discretionary Activities

The Council shall assess applications for limited discretionary activities against the following;

a) The extent to which an overland flow path is redirected to enable the construction of buildings, structures or fencing (including retaining walls) while providing for the continuity of overland flow paths both within the site and to and from adjacent sites with no adverse effects on adjacent sites or property.

b) Whether the hydrological report determines that the overland flow path will avoid the effects of flooding on buildings.

c) The creation of an easement for an overland flow path with a catchment area greater than 4,000m2, if the proposed route after any diversion or alteration is likely to result in the overland flow path being obstructed in the future.

d) For buildings and structures (including retaining walls but excluding fences and network utilities) located within or over an overland flow path that do not form an obstruction to any part of an overland flow path, the extent to which;

   i) the overland flow path is likely to be obstructed in the future

   ii) other alternatives exist for the location of the building or structure

   iii) it is preferable for the overland flow path to be diverted or altered around the building or structure

e) Whether a secondary overland flow path is provided.

8.4.9.10A Assessment Criteria for Limited Discretionary Activities at '56 Fairview'

The assessment of applications will be governed by any clause from Rules 8.4.9.9, 8.4.9.10 and 8.4.9.11 that pertains to the matters for discretion stated in Rule 8.4.9.7A (56 Fairview) and also the extent to which the developments in the flood plain promote appropriate and sustainable development of the property as a whole.

8.4.9.11 Assessment Criteria for Discretionary Activities

Without restricting the exercise of Council's discretion, the Council's assessment of applications for discretionary activities may include the following as applicable:

The Assessment Criteria for Controlled activities listed in Rule 8.4.9.9, Limited Discretionary activities in Rule 8.4.9.10, and:

a) Whether redevelopment of existing buildings and structures can be undertaken in a way that reduces flood hazards for the site, as well as downstream or upstream sites, using techniques such as reducing building coverage and increasing on-site flood storage space.

b) Whether development proposed to be located in the 1% AEP flood plain is required to be located in the flood plain for operational reasons (such as infrastructure) and involves activities that do not place people at risk of adverse affects.

c) Whether green areas, parking areas or buildings and structures that are less susceptible to effects of flooding or prone to exacerbating effects of flooding can be located in the flood plain.

d) Whether the retention of vegetation or addition of new vegetation or any other proposed works or features of the development will;

   i) benefit the hydrology of the flood plain

   ii) benefit the ecology of the flood plain, or any streams and their margins and their capacity to mitigate adverse flooding effects in extreme rainfall events

   iii) contribute to green linkages.

e) The extent to which the amenity of the development will be affected by flooding, including the likely frequency of flooding.

Appendix 8A: Sites of Special Wildlife Interest

Criteria for Ranking Sites of Special Wildlife Interest

1. 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 internationally uncommon species (breeding and/ or migratory).

e) Areas of vital importance to nationally migratory species with very limited distribution or abundance.

f) Large unmodified ecosystem or example of original habitat type not represented elsewhere in the country, of large size and containing viable populations of all or nearly all species which are typical of the ecosystem or habitat type.

2. High

a) Habitat containing an indigenous species which has declined significantly as a result of human 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 represented in a 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.

3. 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 as a result of human influence.

b) Areas containing high numbers of breeding or moulting birds or where breeding or moulting areas are 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 nearly all species typical of that habitat type for a particular region.

d) An area where a particular species is exceptional in terms of, say, abundance or behaviour but which is otherwise widespread.

4. Moderate

All habitats supporting good numbers of species which are typical of that particular habitat within an ecological region and which have not been heavily modified by human influence.

5. Potential

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).

Type

All SSWI are divided into three habitat types, namely:

1. Forest/shrubland
2. Freshwater wetland
3. Coastal/estuarine wetland

Ranking

Each SSWI is ranked according to wildlife, namely:

1. Outstanding
2. High
3. Moderate-high
4. Moderate
5. Potential

Schedule of Sites of Special Wildlife Interest	
1.	**Pukeatua Bush**
Location	O'Brien Road, Paremoremo. District Plan Maps 11, 12
Area	30 hectares
Type	1
Ranking	5
Description	Secondary regenerating forest and shrubland. Forest canopy on ridges typically has kauri, tawa, tanekaha and rewarewa emerging from the kanuka-manuka. Tawa, puriri and taraire feature on the mid-slopes, down to kahikatea and kowhai close to creeks and streams. Below these canopy species there are varying degrees of forest regeneration with species such as mapou, hangehange, nikau, mahoe, various coprosma species and tree ferns. Eight species of native birds and up to 14 species of introduced birds may be found. A network of forest areas within a region is important for the more mobile bird species natives such as the kereru, silvereye and tui which rely on sources of fruit and nectar throughout the year. They seasonally move between different areas to feed on a variety of plants. In addition to birds, a number of lizard species may be found, including the protected green gecko, forest gecko, Pacific gecko and ornate skink.
Key Elements	Diversity of flora and fauna. Landscape feature.
Status	Landscape Protection zone - Rural 2 and 3

Schedule of Sites of Special Wildlife Interest	
2.	**Lucas Creek Bush**
Location	Paremoremo Road, Paremoremo. District Plan Maps 11, 12, 17, 18
Area	150 hectares
Type	1
Ranking	4
Description	Similar to the Pukeatua Bush but has added value being on the border between two different habitat types which increases the flora and fauna species diversity.
Key Elements	Diversity of flora and fauna. Landscape feature.
Status	Landscape Protection zone - Rural 2 and 3
3.	**Paremoremo Scenic Reserve**
Location	Ridge Road, Paremoremo. District Plan Maps 11, 16, 17
Area	100 hectares
Type	1
Ranking	4
Description	Similar to the Pukeatua Bush but at an earlier stage of regeneration.
Key Elements	Gumland association. Landscape feature.
Status	Scenic Reserve
4.	**Oteha Bush**
Location	Bush Road, Albany. District Plan Maps 12, 13
Area	35 hectares
Type	1
Ranking	5
Description	Similar to the Pukeatua Bush
Key Elements	Landscape feature. Wildlife corridor.
Status	Proposed Scenic Reserve

Schedule of Sites of Special Wildlife Interest	
5.	**Rosedale Oxidation Ponds**
Location	Rosedale Road, Albany. District Plan Maps 13, 19, 20
Area	40 hectares
Type	2
Ranking	4
Description	Offers good habitat for various waterfowl. Black swan, pukeko and pied stilt are known to breed near the ponds. Mallard, white-faced heron and paradise shelduck frequently use the area.
Key Elements	Open grassland surrounds water bodies.
Status	Wastewater Treatment Ponds
6.	**Hellyers Bush**
Location	Upper Harbour Drive, Greenhithe. District Plan Maps 18, 19, 22, 23
Area	140 hectares
Type	1
Ranking	4
Description	Similar to the Lucas Creek Bush but at a more mature stage of regeneration and including substantial kauri stands.
Key Elements	Regeneration stage to kauri forest. Important food source for kereru and tui. Diversity of flora and fauna. Landscape feature.
Status	Landscape Protection zone - Rural 2

Schedule of Sites of Special Wildlife Interest	
7.	**Eskdale Bush Scenic Reserve, Kaipatiki Escarpment and Birkenhead Domain**
Location	Eskdale Road/Glenfield Road, Glenfield Kaipatiki Escarpment off Arcadia Crescent, Glenfield. District Plan Maps 23, 24
Area	100 hectares
Type	1
Ranking	4
Description	Similar to the Pukeatua Bush and Lucas Creek Bush and, together with Hellyers Bush contain substantial kowhai stands which are an important food source for tui.
Key Elements	Range of plant associations, wildlife corridor, biological diversity.
Status	Scenic Reserves, Recreation Reserve
8.	**Smith's Bush**
Location	Northcote Road, Takapuna. District Plan Map 25
Area	12 hectares
Type	1
Ranking	4
Description	Excellent mature kahikatea-puriri association
Key Elements	Unique forest association in the region. Important food source for tui and kereru.
Status	Scenic Reserve

Schedule of Sites of Special Wildlife Interest	
9.	**Lake Pupuke**
Location	Killarney Street, Takapuna. District Plan Maps 20, 21, 25, 26, 26A
Area	100 hectares
Type	2
Ranking	3
Description	Deep crater lake with shallow margins providing for areas of waterweed and small areas of rushes and raupo. A good variety of water fowl species including black swan, mallard, grey duck, Australian coot and NZ scaup. A feature is that four species of shag may be present, with a colony of each of pied shag and little black shag.
Key Elements	Water body, geological significance
Status	Lake
10.	**Paremoremo Creek and its Foreshores**
Location	Upper Waitemata Harbour. District Plan Maps 16
Area	
Type	3
Ranking	3
Description	Similar to Lucas Creek.
Key Elements	Mangrove areas, intertidal mudflats, saltmarsh, coastal bush, important food source for shore birds.
Status	Part of Waitemata Harbour

Schedule of Sites of Special Wildlife Interest	
11.	**Lucas Creek and Foreshore**
Location	Upper Waitemata Harbour. District Plan Map 12, 17, 18
Area:	
Type	3
Ranking	3
Description	Large number of wading and seabird species which utilise the intertidal area. Mangroves feature in the border between land and sea and this is the habitat of an 'at risk' bird, the banded rail. Five other coastal bird species using the area are recognised as 'at risk' including NZ dotterel, reef heron, banded dotterel, Caspian tern and wrybill. The more common species may be present in very high numbers (500+) in certain seasons, e.g. South Island pied oystercatcher and pied stilt.
Key Elements	Mangrove areas, intertidal mudflats, saltmarsh, coastal bush. Important food source for shore birds.
Status	Part of Waitemata Harbour
12.	**Hellyers Creek and Foreshore**
Location	Upper Waitemata Harbour. District Plan Maps 18, 22, 23, 24
Area	
Type	3
Ranking	3
Description	Similar to Lucas Creek
Key Elements	Mangrove areas, intertidal mudflats, saltmarsh, coastal bush. Important food source for shore birds.
Status	Part of Waitemata Harbour

Schedule of Sites of Special Wildlife Interest	
13.	**Oruamo Headland**
Location	From Island Bay along the coast to Chelsea Bay, and including the hinterland with Island Bay reserves, Kauri Park, Navy Armament Depot, Kauri Point domain, Kauri Point Centennial Park, Chatswood Reserve and the Chelsea Estate R11 854627. Maps 23, 24, 24A, 28, 29
Area	125 hectares including residential land
Type	1 (Forest/shrubland)
Ranking	4 (Moderate)
Description	There is an extensive area of stream and bush corridors enabling stable population of species, such as tui and kereru, to breed in this urban area. Encompasses a wide range of habitats including a complete succession from sea to land in a natural state. This area contains the richest diversity of habitats, and consequently biota, in North Shore City.
Key Elements	Diversity of flora and fauna. Landscape feature. Complete succession from sea to climax forest at Soldiers Bay.
Status	Land designated for Defence Purpose (Armament Depot), Scenic Reserve (Kauri Park), Recreation Reserves (Island Bay Reserves, Chatswood Reserve, Kauri Point Centennial Park, Kauri Point Domain), Industrial Land (Chelsea Estate) and residential zones.
14.	**Shoal Bay and Foreshore**
Location	Mid Waitemata Harbour including Tuff Crater Lagoon, the Onepoto estuary and Ngataringa Bay. District Plan Maps 25, 26, 26A, 30, 31, 32, 32A
Area	
Type	3
Ranking	3
Description	Similar to Lucas Creek but has a lower diversity of bird species. However, the same five species 'at risk' coastal birds are found at Shoal Bay and depend on its resources for survival at certain times of the year. Moderate numbers of the common species utilising the bay.
Key Elements	Sand bars, intertidal mudflats, mangrove areas, saltmarsh. Important food source for shore birds
Status	Part of Waitemata Harbour
Key Elements	Diversity of flora and fauna. Landscape feature.

Schedule of Sites of Special Wildlife Interest	
15.	**Okura Estuary**
Location	North of Piripiri Point. District Plan Maps 3, 4, 7
Area	
Type	3
Ranking	3
Description	Good quality intertidal habitat and hundreds of birds which depend on it for a seasonal food supply. Two 'at risk' bird species; banded rail and Caspian tern are found in the estuary. There are small areas of mangroves and saltmarsh along the margins and good forest habitat on the northern side which enhances the habitat quality.
Key Elements	Sand bars, intertidal mudflats, saltmarsh, coastal bush. Landscape feature. Important food source for shore birds.
Status	Part of Hauraki Gulf, esplanade margins
16.	**Chelsea Estate Ponds**
Location	Within the Chelsea Estate R11 854640 Map 29
Area	Approximately 6 hectares
Type	2 (Freshwater Wetland)
Ranking	4 (Moderate)
Description	There are four ponds numbered 1 to 4 making up this SSWI along with nesting/breeding 'buffer' areas on their margins. Pond 1 is the small pond at the western end, and pond 4 is the large pond adjacent to the car park. Ponds 1 and 2 are more enclosed and characteristic of open freshwater habitat that may be found well away from the coast. Such sites that have good areas of reeds and rushes growing on the margins offer good habitat for nesting freshwater wetland birds as well as some species that would not normally use open grassed areas. Ponds 3 and 4 provide an excellent combination of habitat types to encourage a variety of wetland bird species. The area of this SSWI includes a 15 metre buffer margin (see Appendix 8G) on the north and western boundaries of pond number 4, the northern boundary of pond number 3, the north, south and west boundaries of pond number 2, and the full perimeter of pond 1. This 'buffer' is for the purpose of protecting a suitable area for roosting and breeding of birds and natural wildlife.
Key Elements	A combination of forest margin and wetland habitat types, including open water, vegetated margins, open roost areas and excellent nesting sites for many species. Diversity of fauna.
Status	Industrial land (Chelsea Estate).

Appendix 8B: Sites of Geological and Landform Significance

Criteria for Ranking Sites of Geological and Landform Significance

1. Importance

Sites are listed in the Schedule under three levels of significance (A-C). The importance assessment given to each site has been assessed as follows:

A. International - site of international scientific importance.

B. National - site of national scientific, educational or aesthetic importance.

C. Regional - site of regional scientific, educational or aesthetic importance.

2. Vulnerability

Each site has been given a vulnerability classification (1-3) depending on its perceived vulnerability to human activities:

1.= Highly vulnerable to complete destruction by human activities, for which strict legal protection is thought necessary.

2.= Vulnerable to partial destruction or modification by human activities, for which some sort of legal protection is thought necessary.

3.= Unlikely to be damaged by human activities, no action is warranted at present.

3. Urgency with which conservation of the site or feature is required:

High (H) = Action required in the short term (present - 2 years)

Medium (M) = Action required within the medium term (2 - 5 years)

Low (L) = Action required in the longer term (5 -15 years)

4. Unique opportunities for study, interpretation, education and scientific study:

High (H) =Site provides easily accessible, clear and readily interpretable example of feature. Has high educational and scientific value.

Medium (M)=Access to site is moderately easy, the feature may require some degree of expert interpretation. Education value is moderate, though scientific value may still be high.

Low (L) = Access is difficult. Feature requires expert interpretation and has limited potential for educational purposes, though still has scientific value or interest.

5. Abbreviations

ASL- Above sea level

BP- Before the present.

Schedule of Sites of Geological and Landform Significance

1. Takapuna Reef fossil forest

Significance	Outstanding example (one of the best in the world), of a forest that has been fossilised in lava flows. Section also includes excellent examples of gas blisters, lava stalactites, stalagmites and segregation vesicle pipes. The outflow of freshwater from Lake Pupuke is also contained within this section.
Description	Several vesicular lava flows from Pupuke volcano form the foreshore and are overlain by bedded tuff of the tuff ring. Takapuna Reef is formed of the lava moulds of the standing stumps and lower trunks of over 500 trees that were overwhelmed and incinerated by two lava flows. Sections of crust from the cooled upper surface of the flows often form miniature arches and bridges between the tops of separate tree stump moulds. 100-200 meters to the north, moulds of numerous fallen logs and branches that have been carried along by the molten lava are preserved in the flows. Here and further north are numerous lava blisters and small lava caves formed within the top of the flows and, in places, contain lava stalactites and stalagmites. The outflow from Lake Pupuke passes through natural fissures in the lava flow and exist to the sea on the south side of Thorne Bay.
Age	c 40,000 BP
Locality	Forming the low cliffs and intertidal foreshore from the north end of Takapuna Beach to the sand of Thorne Bay. District Plan Maps 26A
Classification	Importance = B Vulnerability = 1 3 = H 4 = H
Hazards	Construction of any further erosion protection works, extension of the carpark or boat ramp, upgrading of the coastal walkway.
Modifications	Part of the superb fossil forest was destroyed by construction of the carpark and boat ramp on Takapuna Reef. Erosion protection walls and pathway development and pipeline installation have all damaged the features to some extent.

Schedule of Sites of Geological and Landform Significance	
2. Tank Farm Explosion Crater and Tuff Ring (Te Kopua O Matakamokamo)	
Significance	A well preserved tuff ring and explosion crater. Only explosion crater in the Auckland field still retaining its natural intertidal mangrove forest and salt marsh.
Description	A simple explosion crater and tuff ring (about 800m diameter) breached to the south east by the sea and partially filled with intertidal mud (22ha). No lava and no scoria.
Age	Inferred c30,000-40,000 years BP
Locality	Northcote. District Plan Map 25
Classification	Importance = C 3 = M Vulnerability = 2 4 = M
Hazards	Further earthworks to tuff ring, and infilling of the crater with urban refuse or engineered reclamation.
Modifications	Old quarry on the eastern section of the tuff ring provided material for the Northern Motorway (c1959). Residential development has spread into the crater where World War II fuel tanks were buried.

Schedule of Sites of Geological and Landform Significance

3. Lake Pupuke Explosion Crater and Tuff Ring

Significance	A large compound crater with a freshwater lake. Unique in the Auckland field in that lava welled up in the crater and flowed out in all directions and these flows were later mantled with ash from explosive eruptions that formed the depression now filled by the lake.
Description	A large explosion crater (about 1500m diameter) partly filled with fresh water (104ha, 55m deep). Lava has been quarried inside the crater, and is exposed by erosion on the coast, and by streams to the north and south-west. A lapilli knoll (about 3ha) forms the highest point (34m ASL) to the south-west. Lake level is controlled by discharge to the sea through open joints in the basaltic lava flows.
Age	c36,000-42,000 years BP (Fergusson and Rafter 1959), ?140,000 (Wood 1990)
Locality	Takapuna. District Plan Maps 20, 21,25, 26, 26A
Classification	Importance = C Vulnerability = 3
Hazards	Further quarrying around the lake and excessive building development on the inside of the tuff ring which may mask the original landform.
Modification	In 1891 there was a scoria pit on the north wall of the crater. On the south west side of the lake some of the current quarry operations commenced pre-1915. There was also a quarry on the northern side of the lake pre-1963.
Status	The Lake is Crown land and the surrounds are in part reserve, part is stewardship under the Conservation Act 1987 and part is in private ownership.

Schedule of Sites of Geological and Landform Significance

4. North Head Volcano (Maungauika)	
Significance	Scoria cone with good exposures of basaltic tuff in tunnels and along the coast.
Description	A small, steep-sided scoria cone (65m ASL) fills and overtops the crater rim of a basaltic tuff cone exposed around the coastal base of the hill. A small lava flow to the west does not extend beyond the foot of the tuff cone.
Age	Inferred 20,000-30,000 years BP
Locality	Devonport, District Plan Map 32
Hazards	Further development of buildings, paths or roads or construction of erosion protection barriers.
Modifications	First used as a pilot station in 1836, and for a long time was a military fort. Fort Cautley was constructed 1885-1886. Quarrying and extensive tunnelling for additional fortifications took place during the Russian scares (1873-1894), World War I, and World War II. However, the original shape is little changed.
Status	Most is historic reserve.
5. Mt Victoria Volcano (Takarunga)	
Significance	Breached scoria cone (on a ridge top) with lava flows, but no evidence of tuff deposits.
Description	Simple scoria cone (66m ASL, and built on a ridge of Miocene sedimentary rock) with its summit crater breached to the south east. Several small lava flows to the south. Duders Hill (21m ASL) on the harbour shore is a small welded scoria cone thought to have been rafted by a lava flow from the flank of Mount Victoria.
Age	Inferred 20,000-30,000 year BP
Locality	Devonport. District Plan Map 32A
Classification	Importance = C Vulnerability = 3
Hazards	Further housing development
Modifications	The cone has been modified by a signal station, a road to the summit parking area, defence works (1880s to 1940s), a school, and housing. In 1859 Duders Hill cone was reported to have the southern half washed away by the sea and quarrying was in progress. By 1951 the hill was almost completely removed and the area built over with houses.
Status	Most is recreation reserve, part is cemetery reserve.

Schedule of Sites of Geological and Landform Significance	
6. Onepoto Explosion Crater and Tuff Ring (Te Kopua O Matakerepo)	
Significance	One of only three explosion craters and tuff rings in North Shore City
Description	A simple explosion crater breached to the south by the sea via Onepoto Stream and filled by reclamation.
Locality	Northcote. District Plan Map 25
Hazards	Excessive building or earthworks on the inside of the tuff ring that will mask the distinct crater and tuff ring landforms.
Modifications	Reclamation to create playing fields and park in the crater floor. Residential development down the sides of the crater from the ring of roads around the rim.
Status	In part recreation reserve
7. North Shore Rowing Club Volcaniclastic Exposure (Smale's Quarry)	
Significance	Best exposure on the North Shore showing the composition and structure of the tuff rings that surround the explosion craters. Excellent examples of slumping of deposits back into crater following volcanic activity.
Description	A freshly cut face adjacent to the North Shore Rowing Club along with faces cut in Smale's Quarry, show in three dimensions the volcaniclastic ejecta from the Pupuke explosion crater. Sedimentary structures and relationships are shown in these faces and large olivine crystals can be observed.
Age	c40,000-50,000 years BP
Locality	South-west shore of Lake Pupuke. District Plan Maps 25, 26
Classification	Importance = C 3 = L Vulnerability = 2 4 = M
Hazards	Continued quarrying of Smale's Quarry and overgrowth of the road side outcrop
Modification	The Rowing Club face of the exposure was recently cut when the road was widened and is prone to replanting and overgrowth.

Schedule of Sites of Geological and Landform Significance

8. St Leonards - Narrow Neck Waitemata Sandstone cliffs	
Significance	The freshest, readily accessible and best exposed section through the Waitemata Sandstone rocks in the Auckland region. Of outstanding educational value and most studied section anywhere in the region, containing examples of almost all the typical and more rare features to be seen in these rocks, including an excellent intraformational slump unit, the Belmont reverse fault and the only known exposure of the most silica-poor sedimentary chabazite (mineral) so far found in the world.
Description	A typical sequence of 20 million year old interbedded sandstone and siltstone beds displaying numerous sedimentary structures (grading, fluidisation, sole marks), structural disturbances (normal and reverse faults, folds, discordances, intraformational slump), trace fossils and some tuff beds composed dominantly of a unique type of sedimentary chabazite.
Location	In the cliffs and foreshore reefs from 200 metres north of the steps at the end of St Leonards Road south to the end of the cliffs at the north end of Narrow Neck Beach, and in the cliffs of the esplanade reserve seaward of 7 Clifton Rd, 300m to the north of the rest of the site.
Exposure Type	Coastal Cliffs and reefs.
Classification	Importance = B Vulnerability = 2 3 = M 4 = H
Hazards	Construction of erosion protection walls
9. Narrow Neck Structural Discordance	
Significance	A classic example of structural discordance
Description	Disharmonic structure in a fold giving rise to a 90º difference in dip of strata within the Waitemata Group
Age	Miocene
Locality	On shore platform at Takapuna Head. District Plan Map 32
Access	By foot along beach
Exposure Type	Shore platform
Classification	Importance = C Vulnerability = 3
Hazards	Construction of erosion protection barriers

Schedule of Sites of Geological and Landform Significance	
10. Torbay Stack	
Significance	An excellent example of a small coastal stack formed by erosion of relatively soft Waitemata Sandstone.
Locality	Torbay. District Plan Map 8
Classification	Importance = C Vulnerability = 3

References

Inventory of Important Geological Sites and Landforms in the Auckland Region

Geological Society of NZ, Miscellaneous Publication No.68,1993

Appendix 8C: Schedule of Notable Trees

Criteria for Assessing Notable Trees

Four categories of Notable Trees have been identified as particularly worthy of recognition and protection.

A Most Significant Trees

- Any tree particularly outstanding for its species in relation to its age, size and form
- Any tree that has significant landmark value due to its location
- Any tree or trees which have outstanding value because of the amenity they provide or for their ecological, scientific or other significance.

b) Historic Trees

- Any tree associated with or commemorating an historic event
- Any tree associated with or planted by an historic or notable figure
- Any tree of spiritual or cultural value.

C Rare or Unusual Trees

- Any significant tree of species rare in the region
- Any significant tree of unusual genetic or morphological form.

D Trees of Local Significance

In determining whether trees are worthy of protection, the following factors are considered:

Size - the height and canopy spread of the tree.

Visibility - amenity value and accessibility to the public.

Presence of Other Trees - whether solitary or in a group or bush setting.

Occurrence of the Species - how common or rare.

Role in Location - visual and spatial quality surrounding the tree.

Useful Life Expectancy - based on expected life-span and any actual or potential threats or compromises to the tree's environment.

Form and Condition - whether the tree is well-shaped with a balanced branch system, and how well the trunk contributes to its visual appearance. Tree health is also taken into consideration in this category.

Special Factors - historic association, ecological or scientific significance, social or cultural significance, or other special factor is considered.

Indigenous Status - geographic significance. Whether the tree is exotic or, if native, how restricted its natural range.

Those trees included in the schedule are considered to be community assets which would be valued ahead of most land development proposals which might endanger them or compromise their form or condition.

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Aberdeen Road			
(17)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 2 DP 45319	D	88	Map 20
(46)	1 Taraire *(Belischmiedia taraire)* Lot 1 DP 37419 Tree at rear of the property on border with Centennial Park	D	558	Map 20
	Akoranga Drive			
(58)	7 Monterey Cypress (*Cupressus macrocarpa)* 2 English Oak (*Quercus robur)* North Shore Marae Site Lot 698 Takapuna Parish	D	89	Map 25
	Albany Highway			
(-)	Golden Totara (*Podocarpus totara aurea)* South east of tennis courts Oteha Escarpment, Albany Lot 2 DP 132667 Original Golden Totara variant	C	53	Map 12
(-)	English Oak (*Quercus robur)* Albany Domain Part Allotment 690 Paremoremo Parish on SO 57127	D	92	Map 12
(-)	6 English Oak (*Quercus robur)* Road reserve of Albany Highway adjacent to 15 and 17 Oak Manor Drive Lots 24 and 25 DP 189308	A	76	Map 12

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Albany Highway			
(-)	Norfolk Island Pine (*Araucaria heterophylla)* Road reserve adjacent to 437B Albany Highway Lot 1 DP 187889	A	77	Map 12
(360)	Magnolia (*Magnolia grandiflora)* English Oak (*Quercus robur)* American Tulip *(Liriodendron tulipifera)* White Sapote *(Casimiroa edulis)* Pecan Nut (*Carya illinoinensis)* Silky Oak (*Grevillea robusta)* Idesia *(Idesia polycarpa)* Kristin School Lot 2 DP 102425	D	93	Map 12
(536)	Kauri (*Agathis australis)* Rimu (*Dacrydium cupressinum)* Totara (*Podocarpus totara)* Albany Outdoor Education Centre Part Allotment 94 Parish of Paremoremo	D	94	Map 12
	Albert Road			
(49)	Magnolia (*Magnolia grandiflora*) Flat 1 Lot 23 DP 189 C.T 75/282	D	96	Map 32A

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Alma Street			
(-)	17 London Plane *(Platanus x acerifolia)* Legal Road Reserve Avenue of trees	D	98	Map 30
	Aotearoa Terrace			
(-)	Pohutukawa *(Metrosideros excelsa)* Legal Road Reserve adjacent to 10-14 Aotearoa Terrace	D	793	Map 14
	Alton Avenue			
(19)	English Oak *(Quercus robur)* Lot 23 DP 47979	D	83	Map 25
	Anzac Street			
(-)	English Oak *(Quercus robur)* Takapuna Primary School Main Gates Part Allotment 79 Takapuna Parish Planted on 9th August 1902 to commemorate the coronation of King Edward VII	B	43	Map 26A
(-)	English Oak (*Quercus robur)* Takapuna Primary School Main Gates Part Allotment 79 Takapuna Parish Planted on 6th May 1910 to commemorate the coronation of King George V	B	44	Map 26A
(-)	1 Monterey Cypress (*Cupressus macrocarpa)* Potters Park Takapuna Rose Gardens Lot 7 Block 10 Deeds Plan T17	D	100	Map 26A
(31)	English Oak (*Quercus robur)* Lot 1 DP 156720	D	102	Map 26A

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Aramoana Avenue			
(27)	Camphor Laurel (*Cinnamomum camphora)* Pohutukawa (*Metrosideros excelsa)* Lot 28 DP 21368 C.T 633/233	D	103	Map 32
(62)	6 Pohutukawa *(Metrosideros excelsa)* Lot 6 DP 21369	D	615	Map 31
	Arawa Avenue			
(12)	Pohutukawa (*Metrosideros excelsa)* Part Lots 6 & 7 DP 3244 C.T 278/175	D	104	Map 32
(14)	2 Pohutukawa (*Metrosideros excelsa)* Part Lot 7 DP 3244 C.T 988/283	D	105	Map 32
	Arcadia Crescent			
(12)	Hard Beech *(Nothofagus truncata*) Lot 15 DP 53708	D	106	Map 24
	Ascot Avenue			
(8)	Liquidambar (*Liquidambar styraciflua)* Lot 17 DP 6830 C.T 51B/1369	D	108	Map 32
	Auburn Street			
(26)	Pohutukawa (*Metrosideros excelsa)* Lots 49 & 50 DP 12248	D	109	Map 26
	Audrey Road			
(9)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 20 Part Lot 21 DP 13179 - Part subject to R/W on Lot 27	D	110	Map 21

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Audrey Road			
(18)	Pohutukawa (*Metrosideros excelsa)* Lot 12 & 1/5 interest in Lot 32 DP 16529	D	111	Map 21
(24)	Pohutukawa (*Metrosideros excelsa)* Lot 15 & 1/5 interest in Lot 32 DP 16529	D	112	Map 21
	Awanui Street			
(4)	Australian Red Cedar *(Toona ciliata)* Pohutukawa *(Metrosideros excelsa)* Pt Lot 2 DP 3444	D	797	Map 30
(7)	Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 15768	D	629	Map 30
(8-12)	Palms (Waiata Tropical Gardens) Pt Lot 4 DP 3444 and Lot 1 DP 192659 Those remaining of 40 Palm species planted as a palm garden by Clement Wragge from 1910	B	40	Map 30
(10-12)	2 Magnolia *(Magnolia grandflora)* Lot 1 DP 192659		814	Map 30
	Awaruku Road			
(-)	Kahikatea *(Dacrycarpus dacrydioides)* R17 Awaruku Bush, Torbay Part Lot 2 DP 65561 Pre-european forest remnant	A	4	Map 8
(-)	Eucalyptus *(Eucalyptus cinerea)* Legal Road Reserve outside #77	D	568	Map 8

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Bayswater Avenue			
(35)	Pohutukawa *(Metrosideros excelsa)* Lot 52 DP 4787	D	610	Map 31
	Beach Road (Browns Bay)			
(-)	Pohutukawa *(Metrosideros excelsa)* Located on Sharon Road adjacent to #899 Beach Road	D	632	Map 8
	Beach Road (Campbells Bay)			
(-)	English Oak *(Quercus robur)* Road reserve outside #254 Beach Road	D	557	Map 20
(264)	6 Kahikatea *(Dacrycarpus dacrydioides)* Lot 4 DP 62151	D	616	Map 21
(246A)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured at 0.5 metres above ground level within the defined area. The defined area is the grove of ancient trees containing Kahikatea, Rimu, Totara, Ponga, Puriri to the north of the dwelling house excluding the puriri and kahikatea within the concreted driveway area. Lot 2 DP 81287	D	567	Map 21
	Beach Road (Castor Bay)			
(6)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 61602	D	113	Map 21

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(71B)	2 Pohutukawa *(Metrosideros excelsa)* Totara *(Podocarpus totara)* Flat 2 DP 164224 on Pt Lot 73 DP 11099 1/2sh 857m2 on Pt Lot 78 DP 11099 1/2sh 678m^2	D	640	Map 21
	Beach Road (Castor Bay)			
(77-79)	4 Pohutukawa *(Metrosideros excelsa)* Flat 1 DP 114353 & Flat 2 DP 126 534 both on Lot 1 DP 114708	D	115	Map 21
	Beach Road (Murrays Bay)			
(-)	10 Pohutukawa *(Metrosideros excelsa)* In front of boat club and one closer to Gulf View Road	D	609	Map 14
	Beach Road (Torbay)			
(1/994)	Kowhai *(Sophora tetraptera)* Flat 1 DP 15310 on Lot 37 DP 15757 Having ½ interest in 1143m²	D	116	Map 8
	Beach Road (Waiake)			
(-)	9 Norfolk Island Pine *(Araucaria heterophylla)* Beach Reserve	D	786	Map 8
	Beach Haven Road			
(22)	Norfolk Island Pine (*Araucaria heterophylla)* Lots 58 & 59 DP 20048	D	117	Map 23
(85)	Rimu *(Dacrydium cupressinum)* Lot 1 DP 460558	D	635	Map 23

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(93)	Rimu *(Dacrydium cupressinum)* Pohutukawa *(Metrosideros excelsa)* Lot 46 DP 20048	D	637	Map 23
	Beach Haven Road			
(101)	Pohutukawa *(Metrosideros excelsa)* Puriri *(Vitex lucens)* Oriental Red Leaf *(Photinia sp)* Lot 1 DP 17517	D	85	Map 23
	Beechwood Road			
(-)	Pine *(Pinus sp)* Lot 30 DP 20351 Crown LAND	D	787	Map 14
	Belle Vue Avenue			
(7)	Pohutukawa (*Metrosideros excelsa)* Coral tree *(Erythrina x sykesii)* Lot 2 DP 4470	D	119	Map 30
(2/15)	3 Pohutukawa (*Metrosideros excelsa)* Unit B AU2 AU3 UP 82140 Lot 6 DP 4470	D	120	Map 30
(19)	8 English Oak *(Quercus robur)* Lot 2 DP 18019	D	121	Map 30

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(27)	Eucalyptus *(Eucalyptus sp.)* Lot 5 DP 18019	D	122	Map 30
	Belmont Terrace			
(22)	Mexican cypress *(Cupressus lusitanica)* Lot 5 DP 37662	D	577	Map 20
	Belmont Terrace			
(30)	Himalayan Cedar *(Cedrus deodora)* Lot 3 DP 39029	D	123	Map 20
	Bentley Avenue			
(42A)	Tasmanian Blue Gum *(Eucalyptus globulus)* Lot 505 DP 57284	D	591	Map 24
	Birchwood Grove			
(12)	Pecan Nut *(Carya illinoinensis)* Lot 4 DP 139446 Site of an old orchard established by Thompson and Hills in 1880's (pruned in September 1990) Others in vicinity	B	35	Map 17
	Birkdale Road			
(254)	2 English Oak (*Quercus robur)* Lot 4 DP 44493	D	125	Map 23
	Blenheim Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
20 (A-C)	Rimu *(Dacrydium cupressinum)* 2 Japanese Ceddar *(Cryptomeria)* Dawn Redwood *(Metasequoia)* Lot 48 DP 53246 Trees on common driveway	D	545	Map 24
(20C)	Kahikatea *(Dacrycarpus dacrydioides)* Puriri *(Vitex lucens)* Flat 3 DP 132121 on Lot 48 DP 53246 Having 1/3 share in 1743m²	D	126	Map 24
	Blomfield Spa			
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve at the eastern end adjacent to Nos 28 & 30	D	127	Map 26A
(7)	Holm Oak (*Quercus ilex)* Lot 1 DP 87074	D	128	Map 26A
(11)	Pohutukawa (*Metrosideros excelsa)* Flat 2 DP 104561 Having ½ interest in 812m² being Lot 1 DP 100843	D	129	Map 26A
(26)	Pohutukawa (*Metrosideros excelsa)* Lot 18 DP 21013	D	130	Map 26A
(27)	2 Pohutukawa (*Metrosideros excelsa)* Lot 21 DP 21013	D	131	Map 26A
(28)	Pohutukawa (*Metrosideros excelsa)* Part Lot 19 DP 21013	D	132	Map 26
(29)	Pohutukawa (*Metrosideros excelsa)* Part Lot 20 DP 21013	D	133	Map 26A
	Brett Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(10)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 124426	D	135	Map 26A
	Bridge View Road			
(12)	Norfolk Island Pine (*Araucaria heterophylla)* 2 Pohutukawa (*Metrosideros excelsa)* Part Lots 7 & 8 DP 211	D	136	Map 30
(17)	Puriri (*Vitex lucens)* Flat 1 DP 145402 on Lot 2 DP 126984	D	137	Map 30
	Bruce Street			
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to 1 Bruce Street and 6 Belle View Avenue	D	138	Map 30
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to 7 Bruce Street	D	139	Map 30
	Buchanan Street			
(5 & 7)	Pohutukawa (*Metrosideros excelsa)* Lots 1 & 2 DP 314815	D	140	Map 32A
(6)	Puriri (*Vitex lucens)* Allotment 62 of Section 2 Takapuna Parish C.T 567/240	D	141	Map 32A
(8)	Jacaranda (*Jacaranda mimosaefolia)* 2 Pepper Trees (*Schinus molle)* Walnut Tree (*Juglans sp.)* Lot 1 DP 151246 interest in subject to R/W C.T 50C/1431	D	142	Map 32A

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(22)	Kauri (*Agathis australis)* Lot 4 Deeds Plan 159 Black C.T 567/ 59	D	143	Map 32A
	Burgess Road			
(19)	Spanish Oak (*Quercus hispanica)* Allotment 53 of Section 2 Takapuna Parish C.T 1011/217	D	144	Map 32
	Bush Road			
(92)	Balsam Poplar *(Populus trichocarpa)* Lot 1 DP 195842	D	436	Map 13
	Byron Avenue			
(9)	Pohutukawa (*Metrosideros excelsa)* Lot 132 DP 6879	D	145	Map 26A
(1/26)	English Oak *(Quercus robur)* Flat 1 DP 180026 on Lot 106 DP 6879 1/2sh 828m^2	D	627	Map 26A
	Calliope Road			
(142)	Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 313362	D	146	Map 31
	Camelot Place			
(10)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 42 DP 54407	D	147	Map 24
	Cassino Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(12B)	2 English Oak *(Quercus robur)* Flat 2 DP 152905 on Lot 15 DP 8488 See listings at 2/97 and 101 Lake Road	D	148	Map 32
	Castor Bay Road			
(31)	2 Pohutukawa (*Metrosideros excelsa)* Lot 16 DP 11904	D	149	Map 21
	Catalina Crescent			
(3)	Puriri *(Vitex lucens)* Lot 47 DP 50968	D	563	Map 20
	Chedworth Drive			
(-)	English Oak (*Quercus robur)* Recreation Reserve, end of Chedworth Drive and Kaipatiki Road Lot 42 DP 134502 Marks the site of the home built by James and Ellen Freem in 1880	B	37	Map 24
	Chelsea View Drive			
(-)	4 Kauri *(Agathis australis)* Chatswood reserve	D	842	Map 29
	Cheltenham Road			
(33)	2 Pohutukawa (*Metrosideros excelsa)* Part Lot 4 DP 4168 C.T 1117/74	D	151	Map 32

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(36)	Algerian Oak (*Quercus canariensis)* Largest Oak at the end of entrance strip Lot 1 DP 79242	A	66	Map 32
(RA 46)	Holm Oak *(Quercus ilex)* Lot 1 DP 210524 Tree is opposite #50 Cheltenham Road	B	656	Map 32
	Church Street (Devonport)			
(20)	Norfolk Island Hibiscus *(Lagunaria pattersconii)* Holy Trinity Church Lot 2 DP 57880	D	152	Map 32
	Church Street (Devonport)			
(41)	Jacaranda (*Jacaranda mimosaefolia)* Lot 1 DP 39709	D	153	Map 32
(55)	Bay Tree *(Laurus nobilis)* Part Allotment 17 Section 2 Parish of Takapuna	D	154	Map 32A
(63A)	Walnut Tree (*Juglans sp.)* Lot 2 DP 35548 C.T 917/246	D	155	Map 32A
	Church Street (Northcote Point)			
(1/5)	Pohutukawa (*Metrosideros excelsa)* Canary Island Date Palm (*Phoenix canariensis)* Flat 1 DP 117377 on Lot 1 DP 126718 Having 1/3 interest in 1700m²	D	156	Map 30

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(3/5)	Puriri (*Vitex lucens)* Flat 3 DP 126718 on Lot 1 DP 126718 Having 1/3 interest in 1700m²	D	158	Map 30
(22A)	Puriri (*Vitex lucens)* Lot 1 DP 64562	D	159	Map 30
(28)	Pohutukawa (*Metrosideros excelsa)* Part Allotment 51 Takapuna Parish	D	160	Map 30
(1/39)	Pohutukawa (*Metrosideros excelsa)* Flat 1 DP 164662 on Lot 1 DP 158822 One of a pair of pohutukawa	D	161	Map 30
(2/39)	Pohutukawa (*Metrosideros excelsa)* Flat 2 DP 164662 on Lot 1 DP 158822 One of a pair of pohutukawa	D	162	Map 30
	Church Street (Northcote Point)			
(3/39)	Pohutukawa (*Metrosideros excelsa)* Flat 3 DP 164662 on Lot 1 DP 158822	D	163	Map 30
(49)	English Oak *(Quercus robur)* St John the Baptist Church Lot 51 allot 31 Sec 2 Parish of Takapuna Association with the church	A	12	Map 25
	Churchill Road			
(39)	Norfolk Island Pine *(Araucaria heterophylla)* Lot 28 DP 36101	D	164	Map 14
	Clarence Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	All pohutukawa trees on the defined land which have a height of more than 3.5 metres, or a trunk which is more than 0.5 metres in circumference measured 0.5 metres above ground level. The defined land is generally the land between dwellings and the shoreline of the properties adjoining the shoreline of foreshore reserves, on the west side of Clarence Road and Queen Street between Little Shoal Bay and Fishermans Wharf.	D	166	Map 30
(9)	Pohutukawa (*Metrosideros excelsa)* Lot 8 DP 4187 Located at rear of property.	D	167	Map 30
(11)	4 English Oak (*Quercus robur)* Lot 9 DP 4187	D	168	Map 30
(13)	1 English Oak (*Quercus robur)* Lot 2 DP 334840	D	169	Map 30
	Clarence Road			
(13A)	2 English Oak *(Quercus robur)* Lot 1 DP 334840 Street boundary	D	537	Map 30
(17)	Pin Oak (*Quercus palustris)* Lot 1 DP 24635	D	170	Map 30
(19)	English Oak (*Quercus robur)* Pohutukawa (*Metrosideros excelsa)* Part Lots 32/3 Deeds Plan T19	D	171	Map 30
(24)	Norfolk Island Pine *(Araucaria heterophylla)* Pohutukawa (*Metrosideros excelsa)* Part Lot 4 DP 1159	D	172	Map 30

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(30)	4 Pohutukawa (*Metrosideros excelsa)* Puriri (*Vitex lucens)* Lot 1 DP 154999	D	173	Map 30
	Clifton Road (Hauraki)			
(41)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 2 DP 44136	D	174	Map 26
(43)	6 Pohutukawa (*Metrosideros excelsa)* Lot 3 DP 84187	D	175	Map 26
(-)	Norfolk Island Pine (*Araucaria heterophylla)* Legal road reserve adjacent to #48 Clifton Road	D	176	Map 26
	Cobblestone Lane			
(-)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured 0.5 metres above ground level within the defined area. The defined area is generally the groupings of properties in the vicinity of Hillcrest Avenue, Cobblestone Lane, Evelyn Place and Northgrove Avenue.	D	177	Map 25
	College Road			
(-)	Row of road frontage Eucalyptus (*Eucalyptus sp.)* Row of road frontage Poplars. (*Populus sp.)* North-western site of Hato Petera College on frontage to College Road Lot 60 DP 21894	D	178	Map 25

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	3 Eucalyptus (*Eucalyptus sp.)* South-eastern site of Hato Petera College on frontage to College Road Lot 2 DP 134763	D	179	Map 25
(4/2/2B)	Monterey Cypress (*Cupressus macrocarpa)* ¼ share Part Lot 8 DP 39737 Flat 4 DP 72646 On site's boundary with College Road	A	11	Map 25
(4/2/2B)	English Oak (*Quercus robur)* 2 Lombardy Poplar (*Populus nigra italica)* ¼ share Part Lot 8 DP 39737 Flat 4 DP 72646 Trees are located at rear of property	D	181	Map 25
	Collins Street			
(-)	Pin Oak (*Quercus palustris)* Takapuna Primary School Part Allotment 79 Takapuna Parish Planted on 2nd June 1953 to commemorate the coronation of Queen Elizabeth II	B	45	Map 26A
	Coroglen Avenue			
(-)	Tulip Tree *(Liriodendron tulipifera)* Legal road reserve outside #10 Coroglen	D	182	Map 24A
	Coronation Road (Hillcrest)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(15)	Pohutukawa *(Metrosideros excelsa)* Lot 2 DP 402131	D	183	Map 24
	Corunna Road			
(38)	English Oak (*Quercus robur)* Lot 89 DP 8886	D	184	Map 20
(40)	English Oak (*Quercus robur)* Lot 90 DP 8886	D	185	Map 20
(42A)	2 English Oak (*Quercus robur)* Lot 2 DP 208123	D	186	Map 20
	Dakota Avenue			
(39)	Rimu *(Dacrydium cupressinum)* 2 Totara *(Podocarpus totara)* Lot 32 DP 19223	D	595	Map 23
	East Coast Road			
(-)	2 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve at intersection with Marsh Avenue. Adjacent to 110 East Coast Road	D	188	Map 20
(-)	2 Pohutukawa *(Metrosideros excelsa)* Road reserve outside #116 East Coast Road	D	190	Map 20
(37)	3 Pohutukawa (*Metrosideros excelsa)* Lot 3 DP 55571	D	189	Map 21
(131)	3 Pohutukawa *(Metrosideros excelsa)* Lot 7 DP 42254	D	191	Map 20

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(203)	Pohutukawa (*Metrosideros excelsa)* Flat 1 DP 135703 on Lot 165 DP 9328	D	192	Map 20
(231)	Pohutukawa (*Metrosideros excelsa)* Memorial Avenue, Centennial Park Lot 1 DP 194867 Avenue planted by service men and women returning from World War II in thanksgiving for their safe return	B	36	Map 21
(289A)	Cabbage Tree *(Cordyline australis)* Lot 2 DP 374605	D	548	Map 20
	Empire Road			
(2)	Puriri (*Vitex lucens)* Pohutukawa (*Metroideros excelsa)* Totara (*Podocarpus totara)* Karaka (*Corynocarpus laevigatus)* Lot 17 DP 26091 C.T 709/31 Small stand of native trees at front of property	D	194	Map 32
	Eskdale Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	English Oak *(Quercus robur)* Corner Eskdale & Salisbury Roads	D	552	Map 24
(19)	Willow *(Salix sp.)* Tree at rear or property Lot 7 DP 45615	D	556	Map 23
	Eton Avenue			
(18)	Magnolia *(Magnolia grandiflora)* Mixed natives Lot 1 DP 27309	D	789	Map 32
	Evelyn Place			
(-)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured 0.5 metres above ground level within the defined area. The defined area is generally the groupings of properties in the vicinity of Hillcrest Avenue, Cobblestone Lane, Evelyn Place and Northgrove Avenue.	D	177	Map 25
	Ewen Street			
(-)	5 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to Nos 24, 26, 28, 33 & 39	D	196	Map 26
	Exmouth Road			
(-)	4 Pin Oak *(Quercus palustris)* Legal Road Reserve adjacent to #82 Exmouth Road	D	197	Map 25

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(77)	Pohutukawa (*Metrosideros excelsa)* Lot 46 DP 38481 interest in R/W over Part Lot 51	D	200	Map 25
	Fairfax Avenue			
(-)	All trees on the defined land with a height of more than 3.5 metres or a trunk circumference of more than 0.5 metres measured at 0.5 metres above the ground level. The defined land is generally the land on the slopes rising from Little Shoal Bay.	D	201	Map 25/ 30
(4)	Magnolia (*Magnolia grandiflora*) Lot 1 DP 350615	D	202	Map 25
	Forrest Hill Road			
(48)	Elm (*Ulmus sp.)* Forrest Hill Primary School Lot 12 DP 40525	D	205	Map 20
(58)	1 Elm (*Ulmus sp.)* Lot 2 DP 32648	D	206	Map 20
(60)	Elm (*Ulmus sp.)* Lot 1 DP 32648	D	207	Map 20
	Frieston Road			
(11A)	Pohutukawa (*Metrosideros excelsa)* Puriri (*Vitex lucens)* Flat 1 DP 105410 Having ½ interest in 670m² being Lot 22 DP 9178	D	208	Map 21
	Gazelle Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(6)	Norfolk Island Pine *(Araucaria heterophylla)* Lot 83 DP 20048	D	578	Map 23
	Gibbons Road			
(-)	English Oak (*Quercus robur)* Car Park Lot 3 DP 134486	D	209	Map 26A
(2A)	2 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 38417	D	210	Map 26A
(10)	6 Pohutukawa (*Metrosideros excelsa)* Lot 5 DP 20485	D	211	Map 26A
(12)	11 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 91668	D	212	Map 26A
	Gills Road			
(-)	6 Walnut *(Juglans regia)* Gills Road Reserve	D	831	Map 13
	Glade Place			
(-)	Liquidambar *(Liquidambar styraciflua)* Street Tree outside #10	D	841	Map 29
	Glade Place			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(6)	London Plane	B	81	Map 29, 30
	(*Platanus x acerifolia)*			
	Horizontal Elm	D		
	(*Ulmus pendula)*			
	Cedar of Lebanon	D		
	(Cedrus libani)			
	Camphor Laurel	D		
	(*Cinnamomum camphora)*			
	Lot 1 Part Lot 2 & interest in Lot 15 R/W DP 20732			
(8)	London Plane Tree	D	788	Map 29
	(Platanus x acerifolia)			
	Algerian Oak			
	(Quercus canariensis)			
	Lot 1 DP 147626, Lot 15 DP 20732 1/13sh 900m^2			
(10)	2 London Plane	B	81	Map 29, 30
	(*Platanus x acerifolia)*			
	Swamp Cypress	D		
	(*Taxodium distichum)*			
	English Oak	D		
	(*Quercus robur)*			
	Lot 3 & interest in Lot 15 R/W DP 20732			
(12)	London Plane	B	81	Map 29, 30
	(*Platanus x acerifolia)*			
	Lot 4 & interest in Lot 15 R/W DP 20732			
(14A)	London Plane	B	81	Map 29, 30
	(*Platanus x acerifolia)*			
	Flat 1 Lot 5 DP 20732 & interest in Lot 15 R/W DP 20732			

Gladstone Road

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Row of English Oaks *(Quercus robur)* Entrance to Kauri Glen Scenic Reserve Part Allotment 8 Parish of Takapuna and Allotment 345 Parish of Takapuna	D	87	Map 25
(23)	Monterey Cypress (*Cupressus macrocarpa)* Flat 1 DP 329085 on Lot 1 DP 53414	D	213	Map 25
(46)	English Oak (*Quercus robur)* Flat 1 Lot 1 DP 48219	D	214	Map 25
(62)	English Oak (*Quercus robur)* Near front boundary of site Lot 1 DP 122993	D	215	Map 25
	Glen Road (Stanley Point)			
(14)	2 Puriri (*Vitex lucens)* 3 Pohutukawa (*Metrosideros excelsa)* Lots 117 and Part 118 of Allotments 30-31 Section 2 Parish of Takapuna C.T 566/77	D	216	Map 31
(17)	Pohutukawa (*Metrosideros excelsa)* Lot 6 DP 11628 C.T 269/145	D	217	Map 31
	Glenfield Road			
(140)	Grove of native trees Lot 2 DP 152033	D	218	Map 24
	Grove Road			
(5)	2 English Oak (*Quercus robur)* Lot 2 DP 4725 C.T 165/122	D	220	Map 32
	Grove Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(7)	1 English Oak (*Quercus robur)* Lot 3 DP 4725 C.T 1065/179	D	221	Map 32
	Hall Street			
(-)	All pohutukawa trees on the defined land which have a height of more than 3.5 metres, or a trunk which is more than 0.5 metres in circumference measured at 0.5 metres above the ground level. The defined land is generally the land between existing dwellings and the shorelines of the properties adjoining the shoreline or foreshore reserves, on the west side of Clarence Road and Queen Street between Little Shoal Bay and Fishermans Wharf.	D	166	Map 30
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve, Hall's Beach DP 121166C	A	13	Map 30
(-)	4 Pohutukawa (*Metrosideros excelsa)* 4 Canary Island Date Palm (*Phoenix canariensis)* Hall Street Road Reserve	D	223	Map 30
(2)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 7006	A	15	Map 30
(3)	Pohutukawa (*Metrosideros excelsa)* Lot 7 DP 123599	D	224	Map 30
	Handley Avenue			
(4)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 23 DP 38125 C.T 8A/1356	D	225	Map 32
(14)	Pohutukawa (*Metrosideros excelsa)* Lot 49 DP 19255 C.T 621/91	D	226	Map 32
	Hanlon Crescent			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(5A)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 71891	D	227	Map 32
	Hauraki Road			
(-)	Pohutukawa (*Metrosideros excelsa)* Northern end within legal road reserve adjacent to No. 50	D	228	Map 26
(50)	4 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 208175	D	229	Map 26
	Heath Avenue			
(-)	All pohutukawa trees on the defined land which have a height of more than 3.5 metres or a trunk which is more than 0.5 metres in circumference measured 0.5 metres above ground level. The defined land is generally the land between the motorway and the properties on the east side of Sylvan Avenue and Heath Avenue between the Onewa Road interchange and the inlet to Tuff Crater.	D	230	Map 25
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve at the north end of Heath Avenue. Adjacent to No 25 Lot 13 DP 40320	D	231	Map 25
	Hebron Road			
(101)	English Oak *(Quercus robur)* Lot 1 DP 162397	D	565	Map 8
	Hellyers Street			
(10)	Canary Island Date Palm *(Phoenix canariensis)* Lot 16 DP 62314	D	232	Map 23
	Hillcrest Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured at 0.5 metres above ground level within the defined area. The defined area is generally the groupings of properties in the vicinity Hillcrest Avenue, Cobblestone Lane, Evelyn Place and Northgrove Avenue.	D	177	Map 25
	Hinemoa Street			
(-)	Puriri (*Vitex lucens)* Tree forms a distinctive arch over track at bottom of steep drop-off from Hinemoa entrance to LeRoy's Bush	D	553	Map 29
(-)	Pohutukawa (grove) *(Metrosideros excelsa)* Legal Road Reserve outside 2-14 Hinemoa Street (between Terrace St and Hinemoa St) Tree Fern *(Dicksonia squarrosa)*	D	630	Map 29
(32)	1 Palm *(Phoenix rupicola)* Lot 2 DP 453440 Pohutukawa grove *(Metrosideros excelsa)* Lot 1 DP 361174	D	235	Map 30
(34A)	Pohutukawa grove *(Metrosideros excelsa)* Lot 1 DP 361174	D	569	Map 30
(88)	Puriri *(Vitex lucens)* Lot 1 DP 155677 -PUA-PUZ AU1-AU17 UP 179505	D	237	Map 29
(105)	Puriri (*Vitex lucens)* Lot 3 DP 17435	D	238	Map 29
	Hinemoa Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(181)	Puriri (*Vitex lucens)* Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 15597 All Saints Church	D	239	Map 24A
	Hiwihau Place			
(10)	Rimu (*Dacrydium cupressinum)* Lot 38 DP 80160	D	240	Map 24
	Hogans Road			
(60)	Pohutukawa *(Metrosideros excelsa)* Tea tree manuka *(Leptospermum scoparium)* Lot 14 DP 43901	D	587	Map 19
	Holdaway Avenue			
(-)	Native Bush Eadys Bush and Eadys Bush Protection Line as defined in Appendix 16C	D	241	Map 25
(-)	Native Bush Northern part of Kauri Glen Reserve Previously listed as Turner Reserve Part Lot 10 DP 36204 & Lot 23 DP 58999 & Lot 4 DP 75756	D	242	Map 25
	Holyoake Place			
(-)	8 Algerian Oak (*Quercus canariensis)* Legal Road Reserve in Holyoake Place Reserve Lot 1 DP 73331 Planted as an avenue lining a carriageway probably between 1887 and 1889.	B	38	Map 24A
	Howard Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(24)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 40777	A	10	Map 25
	Huia Street			
(14)	2 Pohutukawa (*Metrosideros excelsa)* Lot 14 DP 249 and Lot 16 DP 249	D	243	Map 32A
	Huntly Road			
(-)	Norfolk Island Pine *(Araucaria heterophylla)* Huntly Road Reserve	B	844	Map 21
	Hurstmere Road			
(-)	Spanish Chestnut (*Castanea sativa)* Hurstmere Green, Takapuna Allotment 609 Takapuna Parish	A	21	Map 26A
(-)	Floss Silk Tree *(Chorisia speciosa)* Road reserve outside 55 Hurstmere Road Largest of three	D	566	Map 26A
(67-73)	English Oak (*Quercus robur)* Lot 1 DP 68876	A	74	Map 26A
(128)	Coastal Maire (*Nestegis apelata)* Lot 2 DP 38156	D	531	Map 26A
(130-134)	Holm Oak (*Quercus ilex)* Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 94124	A	73	Map 26A
	Hurstmere Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(175A)	Bunya Bunya (*Araucaria bidwillii)* Corner of Hurstmere Road/ The Promenade Lot 1 DP 7673	A	20	Map 26A
(198)	Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 202353	D	244	Map 26A
(217)	English Oak (*Quercus robur)* Lot 3 DP 459765 Part of a grove of oaks between Minnehaha/O'Neills Avenue	A	72	Map 26
(270)	4 Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 386006	D	573	Map 26A
(310)	Totara *(Podocarpus totara)* Liquidambar *(Liquidambar styraciflua)* Lot 1 DP 13466	D	639	Map 21
	Inga Road			
(-)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured at 0.5 metres above ground level within the defined area. The defined area is the parts of Wairau Estuary Reserve on the western side of Wairau Creek between Rangitoto Terrace & Inga road	D	554	Map 21
(-)	Pohutukawa (*Metrosideros excelsa)* Inga Road parking area Within Legal Road Reserve	D	246	Map 21
(5)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 66187	D	247	Map 21
	Inga Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(7)	2 Pohutukawa (*Metrosideros excelsa)* ½ share Part Lot 15 DP 7578 Flat 2 DP 92413	D	248	Map 21
(7)	Pohutukawa (*Metrosideros excelsa)* ½ share Pt Lot 15 DP 7578 Flat 1 DP 92413	D	249	Map 21
	Inkster Street			
(-)	18 Kauri (*Agathis australis)* Eucalyptus (*Eucalyptus sp.)* Area between Inkster/Pullum Streets Lot 1 & 2 DP 67734 & DP PT 56 R358 & Lot 1 DP 101041	D	250	Map 24A
	Jacaranda Avenue			
(-)	Eucalyptus (*Eucalyptus sp.)* Centre of road in median strip Adjacent to No. 27	D	251	Map 23
	James Evans Road			
(-)	2 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve outside Nos 27 & 29	A	9	Map 25
(-)	Native Bush Eadys Bush and Eadys Bush Protection Line as defined in Appendix 16C	D	241	Map 25
	Jubilee Avenue			
(30)	Canary Island Date Palm (*Phoenix canariensis)* Part Lot 4 DP 18776 C.T 639/199	D	253	Map 32
	Jubilee Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(38)	Moreton Bay Chestnut (*Castanospermum australe)* Part 14 DP 12834	C	64	Map 32
	Jutland Road			
(45)	Rimu *(Dacrydium cupressinum)* Pohutukawa *(Metrosideros excelsa)* Lot 12 DP 32625	D	255	Map 26
	Kaipatiki Road			
(-)	English Oak (*Quercus robur)* Recreation Reserve, end of Kaipatiki Road and Chedworth Drive Lot 42 DP 134502 Marks the site of the home built by James and Ellen Freem in 1880	B	37	Map 24
	Kauri Road			
(-)	Kauri (*Agathis australis)* Legal Road Reserve on a berm at the end of the road outside #25	D	256	Map 24
(14)	Kauri (*Agathis australis)* Adjacent to Flat 11 DP 145876 on Lot 1 DP 130143 having 1/15 share 1.0417ha.	D	257	Map 24
	Kauri Glen Road			
(-)	Kauri *(Agathis australis)* Kauri Glen Reserve	D	852	Map 25
(-)	Poplar *(Populus sp)* Legal Road Reserve outside 31 Kauri Glen Road	D	614	Map 25
	Kauri Glen Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(1)	6 Pohutukawa (*Metrosideros excelsa)* 1 Puriri (*Vitex lucens)* Northcote College - Kauri Glen Road frontage Part Lot 1 DP 70475 & Part Lot 1 DP 53360 as shown on SO 52398 Also refer to Onewa Road listing for additional trees	D	258	Map 25
	Kerr Street			
(18)	Oak *(Quercus robur)* Coral Tree *(Erythrina x sykesi)* Kerr Street frontage Devonport Primary School SO Plan 47342 C.T 555/281 Part Lot 17 Section 2, Parish of Takapuna	D	261	Map 32A
	Killarney Street			
(-)	2 Date Palm *(Phoenix rupicola)* Legal Road Reserve adjacent to No. 2 Matched pair	C	59	Map 26A
(-)	3 Camphor Laurel (*Cinnamomum camphora)* Moreton Bay Fig (*Ficus macrophylla)* Killarney Park Lot 1 DP 61455 & Lot 1 DP 78790	D	262	Map 26
(22)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 153565	D	263	Map 26A
	King Edward Parade			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	3 Pohutukawa (*Metrosideros excelsa)* Section 37 Block VI Rangitoto Survey District	D	267	Map 32A
(40)	Pohutukawa *(Metrosideros excelsa)* Pt Lot 13, Lot 23, and Pt Lot 25 on DP 287	D	266	Map 32
(42)	Dragon Tree (*Dracaena draco)* Lot 1 DP 19618	C	63	Map 32
(63)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 1 DP 12834 C.T 377/99	D	268	Map 32
	Kitchener Road			
(90)	Norfolk Island Pine (*Araucaria heterophylla)* The Circle, 90 Kitchener Road Lot 31 DP 49199 One remaining of two which flanked the summer house of the Goldie family, built 1900	B	49	Map 21
(143)	4 Pohutukawa (*Metrosideros excelsa)* Norfolk Island Hibiscus (*Lagunaria patersonii)* Milford Shopping Centre Lot 1 DP 180874	D	312	Map 21
	Kowhai Street			
(-)	Kowhai *(Sophora tetraptera)* 3 Kohekohe *(Dysoxylum spectabile)* Legal Road Reserve adjacent to 5 Kowhai Street	D	830	Map 26
	Kowhai Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(4)	Pohutukawa (*Metrosideros excelsa)* Part Lot 6 DP 15463	D	269	Map 26
(10)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 95116 R/W over Part Lot 2 DP 40747	D	270	Map 26
(12)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 95116	D	271	Map 26
	Lake Road (Northcote)			
(-)	8 Pin Oak (*Quercus palustris)* Legal Road Reserve between Nos 27-41	D	272	Map 25
(-)	9 Pin Oak (*Quercus palustris)* Legal Road Reserve between Nos 61-75	D	273	Map 25
(2)	2 Canary Island Date Palm (*Phoenix canariensis)* Northcote Primary School Corner of Lake/Onewa Roads Part Allotment 2 Takapuna Parish Complements war memorial structure	A	7	Map 25

Lake Road (Northcote)

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(2)	16 Pohutukawa (*Metrosideros excelsa)* 3 Lawson Cypress (*Chamaecyparis lawsoniana)* Puriri (*Vitex lucens)* 3 Karaka (*Corynocarpus laevigatus)* 2 Oak (*Quercus sp.)* Acmena (*Acmena smithii)* Northcote Primary School Part Allotment 2 Takapuna Parish	D	274	Map 25
(188)	2 English Oak *(Quercus robur)* (Previously Listed in Lenihan Reserve) Lot 51 DP 50592	D	275	Map 25
	Lake Road (Narrow Neck)			
(-)	Norfolk Island Pine (*Araucaria heterophylla)* Pohutukawa (*Metrosideros excelsa)* Memorial Drive, Lake Road Legal Road Reserve adjacent to Lot 2 DP 77578 Avenue of trees planted in memory of those who lost their lives in World War II	B	50	Map 32
	Lake Road (Takapuna)			
(415) & (417)	5 Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 147270 Potential gateway into Takapuna	A	25	Map 26
	Lake Road (Takapuna)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(419)	Norfolk Island Pine	A	26	Map 26
	(Araucaria heterophylla)			
	Lot 1 DP 195359			
(423)	2 Pohutukawa	D	288	Map 26
	(*Metrosideros excelsa)*			
	Lot 2 DP 6879			
(429)	Canary Island Date Palm	A	27	Map 26
	(Phoenix canariensis)			
	Puriri	A	28	Map 26
	(Vitex lucens)			
	Takapuna Methodist Church Lot 44 DP 6879			
	The palm complements the architectural style of the sunday school building			
	Lake Road (Devonport)			
(53)	Pohutukawa	D	277	Map 32
	(*Metrosideros excelsa)*			
	Flat 1 DP 66286 on Lot 10 DP 1170			
	Lake Road (Hauraki)			
(212)	Pohutukawa	D	441	Map 26
	(*Metrosideros excelsa)*			
	2 Norfolk Island Pine			
	(*Araucaria heterophylla)*			
	Wilson Home			
	Lot 1 DP 164021			
(212)	Road frontage Pohutukawa	D	279	Map 26
	(Metrosideros excelsa)			
	Wilson Home			
	Lot 1 DP 164021			
(228)	Totara	D	280	Map 26
	(Podocarpus totara)			
	Lot 6 DP 21175			
(242A)	Pohutukawa	D	281	Map 26
	(*Metrosideros excelsa)*			
	Lot 1 DP 180300			
	Lake Road (Hauraki)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(270)	2 English Oak (*Quercus robur)* Puriri (*Vitex lucens)* Lot 1 DP 62764	D	282	Map 26
(302)	4 Pohutukawa (*Metrosideros excelsa)* Part Lot 1 DP 62451	D	283	Map 26
	Lake Road (Belmont)			
(2/97)	7 English Oak *(Quercus robur)* Flat 2 DP 118083 on Lot 3 DP 36418	D	539	Map 27
(101)	2 English Oak *(Quercus robur)* Flat 1 DP 160470 on Lot 2 DP 51900	D	538	Map 27
(210)	Road frontage Pohutukawa (*Metrosideros excelsa)* Takapuna Grammar School Lots 1 & 2 DP 18718	D	278	Map 26
	Lake View Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(7-9)	Bush Area: 3 Kauri *(Agathis australis)* Pohutukawa *(Metrosideros excelsa)* Puriri *(Vitex lucens)* Boundary between 7 and 9 Lakeview Road: 3 Kowhai *(Sophora tetraptera)* Kauri *(Agathis australis)* Lakeside edge: Pohutukawa *(Metrosideros excelsa)* Kauri *(Agathis australis)* Holm Oak *(Quercus ilex)* Lot 9 DP 48472, Lot 10 48472	D	589	Map 26
(22)	Fijian Hoop Pine (*Araucaria cunninghamii)* Lot 2 DP 98565	C	58	Map 26
	Lansdowne Street			
(12)	Coral Tree *(Erythrina x sykesii)* Lot 171 DP 4787	D	290	Map 31
(17)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 9564	D	291	Map 31
	Langstone Place			
(11)	4 Kauri *(Agathis australis)* Lot 319 DP 68526	D	292	Map 29
	Law Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(28)	Pohutukawa	D	633	Map 8
	(Metrosideros excelsa)			
	Lot 34 DP 9855 Rear of section			
	Lenihan Street			
(-)	7 English Oak	D	293	Map 25
	(*Quercus robur)*			
	Lenihan Reserve			
	Lot 22 DP 50592 - Recreational Residential			
	Library Lane			
(R21)	English Oak	D	294	Map 12
	(*Quercus robur)*			
	Totara	B	824	Map 12
	(Podocarpus totara)			
	Kowhai			
	(Sophora tetraptera)			
	Albany War Memorial Library			
	Part Lot 14 DP 17618			
	Linley Place			
(-)	English Oak (group)	B	836	Map 25
	(Quercus robur)			
	Totara (group)	B	836	Map 25
	(Podocarpus totara)			
	Linley Reserve			
	Lydia Avenue			
(22)	Norfolk Island Pine	D	647	Map 25
	(Araucaria heterophylla)			
	Atlantic Cedar			
	(Cedrus atlantica)			
	Banksia			
	(Banksia sp)			
	Lot 31 DP 50330			
	Lyons Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(21)	2 Canary Island Date Palm *(Phoenix canariensis)* Front boundary Lot 1 DP 374794	D	295	Map 14
	Mahuta Grove			
(-)	Monterey cypress (*Cupressus macrocarpa)* Recreation Reserve Lot 11 DP 73890	A	8	Map 25
	Manly Esplanade			
(-)	6 Norfolk Island Pine *(Araucaria heterophylla)* Manly Esplanade Reserve	D	784	Map 14
(R3)	Monterey Cypress *(Cupressus macrocarpa)* Manly Esplanade Reserve	D	544	Map 14
	Manuka Road			
(148)	Kauri (*Agathis australis)* Flat 2 DP 134244 on Lot 1 DP 86763	D	296	Map 24
	Manurere Avenue			
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to No. 31	D	297	Map 26A
(22)	3 Pohutukawa (*Metrosideros excelsa)* Lot 10 DP 60824	D	298	Map 26A
(24)	2 Pohutukawa (*Metrosideros excelsa)* Lot 11 DP 60824	D	299	Map 26A
	Manurere Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(28)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 75073	D	300	Map 26A
(31)	Pohutukawa *(Metrosideros excelsa)* Lot 4 DP 73754	D	301	Map 26A
	Marine Terrace			
(7)	English Oak *(Quercus robur)* Lot 8 DP 4787	D	302	Map 31
	Maritime Terrace			
(11)	2 Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 64936	D	303	Map 30
(21)	Tawapou (*Planchonella costata)* Lot 1 DP 68852 Coastal species at its southern limit	C	54	Map 30
	Matai Road			
(-)	Moreton Bay Fig *(Figus macrophylla)* Legal Road Reserve adjacent to 15 Matai Road	D	617	Map 32
(5)	Pohutukawa (*Metrosideros excelsa)* Lot 9 DP 1791 C.T 98/107	D	304	Map 32
(15)	2 Pohutukawa (*Metrosideros excelsa)* Lot 5 DP 1791 C.T 109/152	D	306	Map 32
	Maunganui Road			
(10)	Puriri *(Vitex lucens)* Lot 1 DP 61731	D	547	Map 29
	Mayfield Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(9)	3 Puriri (*Vitex lucens)* 6 Pohutukawa (*Metrosideros excelsa)* Rewarewa (*Knightia excelsa)* Totara (*Podocarpus totara)* Kauri (*Agathis australis)* Part Allotment 465 Parish of Takapuna	D	307	Map 19
	Mays Street			
(1A)	Pohutukawa (*Metrosideros excelsa)* Lot 3 Deeds Plan 788 Black C.T 910/ 31	D	308	Map 32A
(9)	Walnut Tree (*Juglans sp.)* Jacaranda (*Jacaranda mimosaefolia)* Lots 6 & Part 7 DP 198 Lot 4 DP 49550 C.T 454/240	D	309	Map 32A
	McBreen Avenue			
(-)	All native vegetation on the defined land. The defined land is the esplanade reserve and rear parts of Lots 36-41 DP 50230	D	310	Map 25
	Mills Lane			
(R10)	Walnut *(Juglans regia)* Gills Road Reserve	D	831	Map 12
	Minnehaha Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	2 Algerian Oak (*Quercus canariensis)* Legal Road Reserve adjacent to Nos. 1 & 2 Planted by W. Hurst before 1887	B	48	Map 26
(7A)	2 English Oak (*Quercus robur)* Lot 3 DP 110913 Part of a grove of oaks between Minnehaha/O'Neills Avenue	A	72	Map 26
(8)	5 Pohutukawa (*Metrosideros excelsa)* Part Lots 19 20 DP 7523 Part Lot 19 subject to R/W	D	313	Map 26A
(11)	English Oak (*Quercus robur)* Part Lot 36 DP 7523 Part of a grove of oaks between Minnehaha/O'Neills Avenue	A	72	Map 26A
(13)	2 English Oak (*Quercus robur)* Lot 35 DP 7523 Part of a grove of oaks between Minnehaha/O'Neills Avenue	A	72	Map 26A
(18)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 30110	D	314	Map 26A
	Montrose Terrace			
(19)	2 Canary Island Date Palm *(Phoenix canariensis)* 2 Pohutukawa *(Metrosideros excelsa)* Lot 155 DP 13311 & Lot 1 DP 107996	D	315	Map 14
	Moore Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(1A)	2 Puriri *(Vitex lucens)* 2 Karaka *(Corynocarpus laevigatus)* Lot 1 DP 332493	D	219	Map 24
(21)	2 Pear Tree *(Pyrus sp)* Lot 7 DP 51126	B	575	Map 24
(23)	Pear Tree *(Pyrus sp)* Lot 8 DP 51126	B	653	Map 24
(40)	3 Monterey Cypress *(Cypressus macrocarpa)* Lot 38 DP 52455	D	652	Map 24
	Mozeley Avenue			
(1)	English Oak (*Quercus robur)* Pohutukawa (*Metrosideros excelsa)* Part Allotment 9 of Section 2 Takapuna Parish C.T 565/256	D	316	Map 32A
(3)	Pohutukawa (*Metrosideros excelsa)* Part Allotment Lot 1 DP 203087	D	317	Map 32A
	Napier Avenue			
(20)	Copper Beech (*Fagus sylvatica* “purpurea”*)* Flat 1 Lot 1 DP 105137	C	61	Map 26
	Napoleon Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Holm Oak *(Quercus ilex)* Lady Allum Home Part Lot 5 DP 2448 + Lot 5 & Part Lot 4 DP 41955 + Part Lots 1 & 2 DP 63431	D	318	Map 25
	Nelson Avenue			
(-)	2 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve outside No.14	D	319	Map 30
	Neptune Avenue			
(13)	2 Pohutukawa *(Metrosideros excelsa)* Lot 63 DP 19223 At front of property	D	601	Map 23
(42)	Pohutukawa *(Metrosideros excelsa)* Lot 98 DP 19223, Lot 1 DP 58358 group	D	582	Map 23
	Ngataringa Road			
(39)	Pohutukawa (*Metrosideros excelsa)* Part Lot 28 Block B Deeds Plan 1010 C.T 1686/1	D	320	Map 32
(68A)	1 Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 188836	D	321	Map 31
(92B)	3 Totara *(Podocarpus totara)* Lot 2 DP 348740	D	536	Map 31
(92C)	Horse Chestnut *(Aesculus hippocastanum)* Lot 2 DP 88065	D	323	Map 31
	Niccol Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(17A)	Norfolk Island Pine *(Araucaria heterophylla)* Lot 2 DP 162955 C.T 98B/298	D	324	Map 32
	Nicholson Place			
(8)	All native species over 3 metres in height Lot 25 DP 51770	D	325	Map 25
(12)	All native species over 3 metres in height Lot 23 DP 51770	D	326	Map 25
	Northboro Road			
(8)	Bead Tree (*Melia azederach)* Part Lot 13 DP 9466	D	327	Map 26
	Northcote Road			
(R42)	Kahikatea (*Dacrycarpus dacrydioides)*	A	22	Map 25
	Puriri (*Vitex lucens)* Smith's Bush Pt 1 DP 31225 Both are Pre-European forest remnants with the puriri being of an infrequent type remaining	A	23	Map 25
	Regenerating bush includes Puriri	B	626	Map 25
	Northgrove Avenue			
(-)	Pohutukawa *(Metrosideros excelsa)* Legal Road SO 473441 Corner of Sunnybrae and Northcote Roads	A	84	Map 25
(-)	All native species more than 3.5 metres in height or more than 0.5 metres in circumference measured at 0.5 metres above ground level within the defined area. The defined area is generally the groupings of properties in the vicinity Hillcrest Avenue, Cobblestone Lane, Evelyn Place and Northgrove Avenue.	D	177	Map 25
	Norwood Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(43 & 45-47)	Grove of native trees Part Lots 28 & 28A DP 4787 & Lots 29 & 30 DP 4787	D	330	Map 31
(115)	2 Pohutukawa *(Metrosideros excelsa)* Lot 9 DP 20173, Lot 2 DP 204112	D	571	Map 31
	O'Neills Avenue			
(-)	Magnolia (*Magnolia grandiflora)* Legal Road Reserve adjacent to Numbers 13 and 11	D	331	Map 26A
(2)	Maidenhair Tree (*Gingko biloba)* Lot 2 DP 83305	D	332	Map 26A
(8)	Copper Beech *(Fagus sylvatica)* Lot 2 DP 211722	D	618	Map 26A
(14)	English Oak *(Quercus robur)* Lot 9 DP 15066 Part of a grove of oaks between Minnehaha/O'Neills Avenue	A	72	Map 26
(15)	Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 19920	D	579	Map 26A
(16A)	Pohutukawa *(Metrosideros excelsa)* Lot 2 DP 98301	D	333	Map 26A
	Ocean View Road (Milford)			
(32A)	Pohutukawa (*Metrosideros excelsa)* ½ share Lot 15 DP 6859 Flat 1 DP 94419	D	338	Map 21
	Ocean View Road (Hillcrest)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	All trees Holdaways Bush & Stanich Reserve Pt 95 DP 66258 Ocean View Road & Stanich Reserve Lot 27 DP 96735 & Lot 29 DP 18327 & Lots 42 & 46 DP 49631 & Lot 3 DP 66258 & Lot 26 DP 96735	D	334	Map 25
	Old Lake Road			
(11A)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 2 DP 330256	D	339	Map 32
(11B)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 3 DP 42384 C.T 43B/755	D	340	Map 32
(75)	Pohutukawa (*Metrosideros excelsa)* Part Allotment 2 of Section 1 of Takapuna Parish C.T 881/9	D	341	Map 32
	Onepoto Road			
(2A)	2 Puriri (*Vitex lucens)* Lot 1 DP 174922 - Subject to & interest in drainage easements	D	285	Map 26
	Onewa Road			
(48)	Canary Island Date Palm (*Phoenix canariensis)* Lot 7 DP 13751	D	345	Map 25
(69)	2 Canary Island Date Palm (*Phoenix canariensis)* Northcote Primary School Corner of Onewa/Lake Roads Part Allotment 2 Takapuna Parish Complements War Memorial structure	A	7	Map 25
	Onewa Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(69)	3 Pohutukawa (*Metrosideros excelsa)* Northcote Primary School Part Allotment 2 Takapuna Parish	D	346	Map 25
(95-97)	Acmena (*Acmena smithii)* St Aidans Presbyterian Church Lot 1 & Part Lot 2 DP 156500	D	343	Map 25
(109)	Pohutukawa (*Metrosideros excelsa)* Near eastern boundary Part Lot 4 Deeds Plan T16	D	349	Map 25
(133)	2 Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 207720	D	351	Map 25
(143)	18 Pohutukawa (*Metrosideros excelsa)* 2 Puriri (*Vitex lucens)* Atlantic Cedar *(Cedrus atlantica)* Northcote College Onewa Road frontages Part Lot 1 DP 70475 & Part Lot 1 DP 53360 as shown on SO 52398 Also refer to Kauri Glen Road for additional trees	D	352	Map 25
	Orion Place			
(19)	6 Totara *(Podocarpus totara)* Lot 137 DP 55720	B	611	Map 24
	Oruamo Place			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(20)	Kowhai *(Sophora tetraptera)* Pohutukawa *(Metrosideros excelsa)* Lot 23 DP 57885	D	599	Map 23
	Oxford Terrace			
(-)	Monterey cypress (*Cupressus macrocarpa)* Balmain Reserve, Devonport. Lot 3 DP 89409	A	31	Map 32
(6)	4 Pohutukawa (*Metrosideros excelsa)* Part Lot 3 DP 1767 C.T 727/285	D	353	Map 32
	Palmerston Road			
(69)	Puriri (*Vitex lucens)* 2 Kauri (*Agathis australis)* Lot 23 DP 804	D	354	Map 24A
	Paramu Avenue			
(22)	Pin Oak *(Quercus palustris)* Lot 4 DP53541	D	785	Map 23
	Park Avenue (Takapuna)			
(17)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 1 DP 31988	D	355	Map 26
(25)	Pohutukawa (*Metrosideros excelsa)* Pt Lot 1 DP 30254	D	356	Map 26A
(26)	2 Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 28584	D	357	Map 26A
	Park Avenue (Takapuna)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(27)	5 Pohutukawa (*Metrosideros excelsa)* Lot 8 DP 24352	D	358	Map 26A
(30)	3 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 28584	D	359	Map 26A
(32)	6 Pohutukawa (*Metrosideros excelsa)* Lot 4 DP 28584	D	360	Map 26A
	Parr Terrace			
(18)	Kahikatea (*Dacrycarpus dacrydioides)* Rimu (*Dacrydium cupressinum)* Rewarewa (*Knightia excelsa)* Lot 2 DP 66649	D	361	Map 21
	Pearn Place			
(-)	Smooth Elm *(Ulmus U minor)*	D	840	Map 25
	Pemberton Avenue			
(-)	Kauri (*Agathis Australis)* Legal Road Reserve adjacent to No. 114	D	534	Map 23
(37)	Kauri (*Agathis australis)* Lot 66 DP 82101	D	363	Map 23
(100)	Kahikatea (*Dacrycarpus dacrydioides)* Pemberton Avenue Extension Lot 13 DP 177010	D	362	Map 23
	Peter Terrace			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(54)	Rimu *(Dacrydium cupressinum)* Totara *(Podocarpus totara)* Pohutukawa *(Metrosideros excelsa)* English Oak *(Quercus robur)* Ginkgo *(Ginkgo bibola)* Lot 5 DP 50583	D	580	Map 20
	Pluto Place (Beach Haven)			
(17)	Kauri *(Agathis australis)* Tree at rear of the property Lot 32 DP 69267	D	555	Map 23
	Princes Street			
(-)	All pohutukawa trees and other native species which are more than 3.5 metres in height, or have a trunk more than 0.5 metres in circumference measured above ground level The land defined generally as the eastern portion of all properties adjoining the existing or previous shoreline on the east side of Princes Street between Stokes Point and Beach Road and extending north to 79 Princes Street.	D	366	Map 30
(-)	Totara (*Podocarpus totara)* Pepper Tree (*Schinus molle)* Legal Road Reserve adjacent No. 3 Princes St	D	367	Map 30

Princes Street

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	3 Puriri (*Vitex lucens)* Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve between Nos. 25 & 35	D	368	Map 30
(5A)	Puriri (*Vitex lucens)* Flat 2 DP 168749 on Lot 1 DP 165191	D	370	Map 30
(18)	Puriri (*Vitex lucens)* Allotment 40 Town of Woodside Tree at rear of property	D	372	Map 30
(25)	2 Eucalyptus (*Eucalyptus sp.)* 2 Lombardy Poplar (*Populus nigra italica)* Lot 3 DP 59586	D	373	Map 30
(27)	4 Lombardy Poplar (*Populus nigra italica)* Lots 1 & 2 DP 59586	D	374	Map 30
(47)	Lombardy Poplar *(Populus nigra var italica)* Lot 1 DP 378871	D	369	Map 30
(49)	Norfolk Island Pine *(Araucaria heterophylla)* 2 Canary Island Date Palm *(Phoenix canariensis)* Puriri *(Vitex lucens)* 2 Pohutukawa *(Metrosideros excelsa)* Camphor Laurel *(Cinnamomum camphora)* Lots 4 5 DP 46075 Also Part Allotments 30 & 31 Takapuna Parish	D	377	Map 30

Princes Street

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(73)	3 Pohutukawa (*Metrosideros excelsa)* 3 Canary Island Date Palm (*Phoenix canariensis)* Princes Park Estate Lot 1 DP 157086	D	378	Map 30
	Prospect Terrace			
(1/5)	Puriri (*Vitex lucens)* Flat 1 DP 154148 on Lot 1 DP 154148 Having 1/3 interest in 1432m²	D	379	Map 21
(6)	Puriri (*Vitex lucens)* Lot 2 DP 61494	D	380	Map 21
(11)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 43990	D	381	Map 21
(13)	6 Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 153269 & Lot 1 DP 85537	D	382	Map 21
	Pullum Street			
(-)	18 Kauri (*Agathis australis)* Eucalyptus (*Eucalyptus sp.)* Area between Pullum/Inkster Streets Lots 1 & 2 DP 67734 & DP Part 56 R358 & Lot 1 DP 101041	D	250	Map 29
	Pupuke Road (Hillcrest)			
(64A)	English Oak *(Quercus robur)* Lot 4 DP 50800	D	384	Map 24
	Pupuke Road (Takapuna)			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(37)	Queensland Nut (*Macadamia integrifolia)* Lot 3 DP 98565 Planted by Sir Frederick Whittaker in 1875	B	42	Map 26
(37)	Rimu (*Dacrydium cupressinum)* Totara (*Podocarpus totara)* Lot 3 DP 98565	D	289	Map 26
	Quebec Road			
(18)	Norfolk Island Pine *(Araucaria heterophylla)* Lot 120 DP 8886	D	386	Map 20
	Queen Street			
(-)	All pohutukawa trees on the defined land which have a height of more than 3.5 metres, or a trunk which is more than 0.5 metres in circumference measured at 0.5 metres above ground level. The defined land is generally the land between existing dwellings and the shorelines of the properties adjoining the shoreline or foreshore reserves, on the west side of Clarence Road and Queen Street between Little Shoal Bay and Fishermans Wharf.	D	166	Map 30
(-)	Grove of Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent No. 1-17 on divided carriageway	D	388	Map 30
(-)	Pohutukawa (*Metrosideros excelsa)* Road Reserve between Numbers 36 & 38	D	390	Map 30

Queen Street

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Pohutukawa	D	391	Map 30
	(*Metrosideros excelsa)*			
	Located in south-west corner			
	All Section 17, 18 & 19 Town of Woodside also Lot 2 DP 115604 R25 Jean Sampson Reserve			
(5)	Canary Island Date Palm	D	393	Map 30
	(*Phoenix canariensis)*			
	Allotment 30 Town of Woodside			
(44)	Pohutukawa	D	394	Map 30
	(*Metrosideros excelsa)*			
	Land at back of No. 44 Lot 1 DP 169925			
(59)	5 Pohutukawa	D	395	Map 30
	(*Metrosideros excelsa)*			
	English Oak			
	(*Quercus robur)*			
	Located at rear of property			
	Part Allotment 30 Takapuna Parish			
(80)	Pohutukawa	D	396	Map 30
	(*Metrosideros excelsa)*			
	Lot 2 DP 66252			
(97)	2 Canary Island Date Palm	D	397	Map 30
	(*Phoenix canariensis)*			
	Puriri			
	(*Vitex lucens)*			
	Lots 2 & 3 DP 45718			
(99)	Coral Tree	D	398	Map 30
	(*Erythrina x sykesi)*			
	Near rear of site			
	Lot 1 DP 181913			
(113)	Kentia Palm	D	399	Map 30
	(*Howea forsteriana)*			
	Lot 2 DP 1151			

Queen Street

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(118)	Norfolk Island Pine (*Araucaria heterophylla)* Pohutukawa (*Metrosideros excelsa)* Part Lot 1 DP 2133	D	400	Map 30
(119)	Pohutukawa (*Metrosideros excelsa)* Magnolia (*Magnolia grandiflora)* Lot 1 DP 51072	D	401	Map 30
(152)	Puriri (*Vitex lucens)* Lot 1 Deeds Plan T19 Tree is located on the site's boundary with Vincent Road	D	402	Map 30
(168)	3 London Plane (*Platanus x acerifolia)* Lot 2 DP 74718	D	404	Map 30
(181)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 35147	D	405	Map 30
(196)	3 Lombardy Poplar *(Populus nigra var italica)* Lot 1 DP 47663	D	204	Map 30
	Rae Road			
(-)	Kahikatea *(Dacrycarpus dacrydioides)* Tree #13 on the Kohekohe Track of the Centennial Park Nature Trail	D	551	Map 20
	Raleigh Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	English Oak (*Quercus robur)* Canary Island Date Palm (*Phoenix canariensis)* Pohutukawa (*Metrosideros excelsa)* Raleigh Road Reserve Lot 23 DP 72397 - Recreational Residential	D	406	Map 25
(18)	3 Norfolk Island Pine (*Araucaria heterophylla)* Lot 8 DP 46419	D	407	Map 25
(20)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 7 DP 46419	D	408	Map 25
(54)	Pohutukawa (*Metrosideros excelsa)* Lot 3 DP 48661	D	409	Map 25
(58)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 48661	D	410	Map 25
(60)	2 Pohutukawa (*Metrosideros excelsa)* Puriri (*Vitex lucens)* Lot 1 DP 48661	D	411	Map 25
(92)	Pohutukawa (*Metrosideros excelsa)* Part Lots 1 & 2 DP 36204	D	413	Map 25
	Rame Road			
(22)	5 English Oak (*Quercus robur)* “Grey Oaks” Lot 9 DP 157230	D	414	Map 17
	Ranch Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	2 English Oak (*Quercus robur)* Legal Road Reserve Site of former Ranch House. Adjacent to 46 and 31-33 Ranch Avenue	B	80	Map 23
	Rangatira Road			
(-)	Kauri *(Agathis australis)*	A	5	Map 23
	Kahikatea *(Dacrycarpus dacrydioides)* Kauri Park, Rangatira Road Lot 2 DP 14492 Pre-European forest remnant	A	6	Map 23
(142)	2 Pohutukawa *(Metrosideros excelsa)* Kauri *(Agathis australis)* Pt Lot 1 DP 21747, Pt Lot 2 DP 21747	D	631	Map 23
	Rangitoto Terrace			
(27)	2 Norfolk Island Pine *(Araucaria heterophylla)* Lot 4 DP 7578	D	416	Map 21
(29)	2 Norfolk Island Pine (*Araucaria heterophylla)* Lot 3 DP 7578	D	417	Map 21
	Rarere Road			
(10)	5 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 37560	D	419	Map 26
	Rata Road			
(8)	2 Pohutukawa (*Metrosideros excelsa)* Lot 2 Part 1 DP 1791 C.T 98/229	D	420	Map 32
	Rata Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(12)	2 Pohutukawa (*Metrosideros excelsa)* Lot 4 DP 3244 C.T 47A/1027	D	421	Map 32
(14)	2 Pohutukawa (*Metrosideros excelsa)* Lots 5 & Part 6 DP 3244 C.T 125/45 At north-east corner of property	D	422	Map 32
	Rawene Road			
(-)	Hinau (*Elaeocarpus dentatus)* Esplanade Reserve, Chelsea Bay Lot 1 DP 120844	C	55	Map 29
(4-6)	2 Canary Island Date Palm (*Phoenix canariensis)* Lot 1 DP 91962	A	68	Map 24A
(58)	English Oak (*Quercus robur)* Lots 43 & 44 Deeds Planted as an acorn by British troops occupying historic cottage dated 1845	B	39	Map 29
	Rewiti Avenue			
(2)	Coral Tree (*Erythrina x sykesii)* Lots 18, 19 & 20 DP 10853	A	70	Map 26
	Richmond Avenue			
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent No. 38	D	423	Map 30
(5)	Puriri (*Vitex lucens)* Titoki (*Alectryon excelsus)* Part Lot 87 DP 712	D	424	Map 30
	Richmond Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(8)	Totara (*Podocarpus totara)* Pohutukawa (*Metrosideros excelsa)* Part Lot 51 DP 343	D	426	Map 30
(10)	Totara (*Podocarpus totara)* Near back of site Part Lots 49, 50 & 51 DP 343	D	427	Map 30
(21)	1 Puriri *(Vitex lucens)* 2 Canary Island Date Palm *(Phoenix canariensis)* 3 English Oak *(Quercus robur)* The Oaks All units DP 83822 on Lot 1 DP 81174	D	430	Map 30
(31)	English Oak *(Quercus robur)* Lot 61 DP 712	D	431	Map 30
(38)	Magnolia *(Magnolia grandiflora)* Part Lots 34 & 35 DP 343	D	432	Map 30
	Ridge Road (Albany)			
(-)	Kahikatea (*Dacrycarpus dacrydioides)* Paremoremo Scenic Reserve Allot 447 Parish of Paremoremo	A	1	Map 16
	Rodney Road			
(3)	English Oak *(Quercus robur)* PT Lot 6 and Lot 8 of Allot 52 Parish of Takapuna	D	403	Map 30
	Rodney Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(19)	1 English Oak *(Quercus robur)* Lot 1 DP 123059	D	435	Map 30
	Roseberry Avenue			
(8)	Pohutukawa *(Metrosideros excelsa)* Puriri *(Vitex lucens)* Lot 1 DP 62798 Tree on street boundary of property	D	559	Map 24
	Russell Street			
(24)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 87752 C.T 45C/32	D	437	Map 31
	Rutland Road			
(27A)	3 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 327968	D	439	Map 31
	St Aubyn Street			
(3)	Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 30684 C.T 783/282	D	440	Map 32A
	St Peters Street (Northcote)			
(20/2)	Puriri *(Vitex lucens)* Dawson property Lot 19 DP 51823	D	560	Map 25
(R38)	2 Poplar *(Populus sp)* Tuff Crater Reserve	D	650	Map 25
	Salamanca Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Mexican Pine *(Pinus ayachuite)* HOU-8000207 - Lot 130 DP 74219 Road Reserve adjacent to No. 42	D	826	Map 20
	Saltburn Road			
(-)	English Oak (*Quercus robur)* Legal road reserve adjacent to No. 18 Lot 1 DP 23400	D	442	Map 21
(-)	Pohutukawa (M*etrosideros excelsa)* Legal Road Reserve adjacent to No. 20 Pt Lot 5 DP 3640	A	18	Map 21
	Salisbury Road			
(10)	6 English Oak *(Quercus robur)* Pt Lot 129 DP 1375 Totara *(Podocarpus totara)* 2 London Plan Tree *(Platanus x acerifolia)* Near corner Salisbury and Birkdale Roads	D	592	Map 23
	Sampson Lane			
(4)	5 Pohutukawa *(Metrosideros excelsa)* (Previously listed at 45 Exmouth Road) Lot 3 DP 372284	D	443	Map 25
(5)	Pohutukawa *(Metrosideros excelsa)* Lot 1 DP 372284	D	543	Map 25
(5A)	5 Pohutukawa *(Metrosideros excelsa)* Lot 2 DP 372284	D	542	Map 25
	Sanders Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	2 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to No. 35	D	444	Map 26A
(-)	Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent to No. 34	D	444	Map 26A
(12A)	Pohutukawa *(Metrosideros excelsa)* Lot 2 DP 47884 Rear of Flat 5	D	576	Map 26A
(29)	Pohutukawa (*Metrosideros excelsa)* Lot 15 DP 4406	D	445	Map 26A
(31)	Pohutukawa *(Metrosideros excelsa)* Lot 16 DP 4406	D	447	Map 26A
(33)	Pohutukawa *(Metrosideros excelsa)* Lot 17 DP 4406	D	448	Map 26A
	Sanders Road			
(R142-178)	Kowhai *(Sophora tetraptera)* Sanders Reserve Coastal remanant	D	833	Map 16
	Seaview Avenue			
(-)	All trees on the defined land with a height of more than 3.5 metres or a trunk with a circumference of more than 0.5 metres measured at 0.5 metres above ground level. The land is generally the land on the slopes rising from Little Shoal Bay.	D	201	Map 30
(-)	6 Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve at south-west side	D	450	Map 30
	Seaview Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(2)	Coral Tree (*Erythrina x sykesi)* Totara (*Podocarpus totara)* Lot 2 DP 103303	D	451	Map 25
(9)	Pohutukawa (*Metrosideros excelsa)* Near front of site Lot 1 Deeds Plan P46	D	453	Map 25
(24)	2 Rimu (*Dacrydium cupressinum)* 2 Queen Palm (*Arecastrum romanzoffianum)* Chinese Magnolia (*Magnolia soulangeana)* Lot 1 DP 191332	D	454	Map 30
	Selwyn Crescent			
(11)	Eucalyptus (*Eucalyptus sp.)* Lot 2 DP 51864	D	456	Map 20
	Shakespeare Road			
(132)	English Oak *(Quercus robur)* Lot 1 DP 201215 Oak near Taharoto Road frontage adjacent to 142 Shakespeare Road	D	561	Map 20
(145)	2 Totara *(Podocarpus totara)* Lot 2 DP 31337	D	457	Map 20
(173)	Cork Oak *(Quercus suber)* Lot 2 DP 49678	D	86	Map 25
(175)	English Oak *(Quercus robur)* Lot 1 DP 49678	D	540	Map 25
	Sharon Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Pohutukawa (multiple) *(Metrosideros excelsa)* Sharon Road Reserve at 2-6, 22-29, 32-34, 52, 56 and including 899 Beach Road			
	Sispara Place			
(37B)	3 Nikau *(Rhopalostylis sapida)* On boundary of private property and Sispara Place Reserve	D	550	Map 23
	Sovereign Place			
(1)	Kahikatea (*Dacrycarpus dacrydioides)* Lot 206 DP 57285	D	458	Map 24
	Stafford Road			
(-)	Line of 26 Pohutukawa (*Metrosideros excelsa)* Eastern end of Stafford Park Lots 5 & 6 DP 39967 & Lots 72A, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82 & 82A DP 712	D	459	Map 30
(16)	Puriri (*Vitex lucens)* Part Lots 70 & 71 DP 712	D	460	Map 30
(17)	Totara *(Podocarpus totara)* Lot 1 DP 46339	D	570	Map 30
	Stanaway Street			
(-)	Totara (*Podocarpus totara)* Legal Road Reserve adjacent No. 13	D	462	Map 25

Stanaway Street

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Puriri (*Vitex lucens)* 2 Totara (*Podocarpus totara)* Legal Road Reserve adjacent No. 15 Also see Totara Grove listing	D	461	Map 26
(20)	English Oak *(Quercus robur)* Lot 12 DP 52228	D	482	Map 25
	Stanley Point Road			
(6)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 3 DP 17483 C.T 393/229	D	463	Map 31
(7)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 2 DP 13724 C.T 350/57	D	464	Map 31
(25)	Camphor Laurel (*Cinnamomum camphora)* 3 Pohutukawa (*Metrosideros excelsa)* Lots 1 & 2 DP 47579 & DP 61560	D	465	Map 31
(37)	Puriri (*Vitex lucens)* Lot 1 DP 58460 C.T 132/35	D	466	Map 31
(37A)	Kauri (*Agathis australis)* Lot 1 DP 55250 C.T 7A/59	D	467	Map 31
(67)	Totara (*Podocarpus totara)* Magnolia (*Magnolia grandiflora)* Part Lot 3 DP 3651 C.T 137/195	D	468	Map 31
(85A)	Norfolk Island Pine (*Araucaria heterophylla)* Part Lot 5 DP 16607 Marked on navigation charts	A	34	Map 31
	Stanley Point Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(85A)	Pohutukawa (*Metrosideros excelsa)* Part Lot 5 DP 16607	D	469	Map 31
(R96)	Cork Oak *(Quercus suber)* Lot 4 DP 25872 Blair Park Reserve	D	819	Map 31
(102)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 1 DP 25872 C.T D9999/176P	D	470	Map 31
	State Highway Seventeen			
(-)	Kauri (*Agathis australis)* State Highway Seventeen, North of Albany Legal Road reserve adjacent to Lots 1 & 3 DP 193077	A	2	Map 12
(-)	Bunya Bunya *(Araucaria bidwillii)* Northern part of Reserve Part Crown Land Paremoremo Parish on SO 1488	D	472	Map 12
(-)	3 California Redwood (*Sequoia sempervirens)* Southern part of Reserve Part Crown Land Paremoremo Parish on SO 1488	D	473	Map12
(-)	12 Totara (*Podocarpus totara)* State Highway Seventeen/ The Avenue within legal road reserve Adjacent to Lot 1 DP 134288	D	474	Map 12
(350)	5 English Oak (*Quercus robur)* Lot 1 DP 149838	D	471	Map 12
	Sunnybrae Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(36A)	Totara (*Podocarpus totara)* Kahikatea (*Dacrycarpus dacrydioides)* Puriri (*Vitex lucens)* Sunnybrae Primary School, Hillcrest Pt Lot 6 DP 72555 Remnant forest - Predominantly totara with kahikatea and puriri in association	A	16	Map 25
(-)	Pohutukawa *(Metrosideros excelsa)* Legal Road SO 473441 Corner of Sunnybrae and Northcote Roads on traffic island, opposite No. 2	A	84	Map 25
	Sunnyfield Crescent			
(4)	3 London Plane Tree (*Platanus x acerifolia)* Lot 39 DP 46114	D	475	Map 24
	Sunnyhaven Avenue			
(28)	Pohutukawa *(Metrosideros excelsa)* Pt Lot 14 DP 42517	D	598	Map 23
	Sunrise Avenue			
(37-49)	29 Pohutukawa *(Metrosideros excelsa)* English Oak *(Quercus robur)* Murrays Bay Intermediate School	D	608	Map 14
	Sunrise Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(55)	Puriri *(Vitex lucens)* Kowhai *(Sophora tetraptera)* Nikau *(Rhopalostylis sapida)* Magnolia *(Magnolia grandiflora)* Lot 1 DP 39249	D	564	Map 14
	Sunnynook Road			
(R90)	Eucalyptus *(Eucalyptus maculata)* Sunnynook park	D	827	Map 20
	Sylvan Avenue			
(-)	All pohutukawa trees on the defined land which have a height of more than 3.5 metres or a trunk which is more than 0.5 metres in circumference measured at 0.5 metres above ground level. The defined land is generally the land between the motorway and the properties on the east side of Sylvan Avenue and Heath Avenue between the Onewa Road Interchange and the inlet to Tuff Crater.	D	230	Map 25
(51)	2 Pohutukawa (*Metrosideros excelsa)* Lots 16 & 17 DP 21248	D	478	Map 25
(59)	Pohutukawa (*Metrosideros excelsa)* Lot 13 DP 21248	D	480	Map 25
	Sylvan Park Avenue			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Karaka (grove) (*Corynocarpus laevigatus)* Sylvan Park & Kitchener Park Part 3 & 4 DP 1381 Remnant broadleaf forest	A	19	Map 21
	Taharoto Road			
(6-8)	Pin Oak *(Quercus palustris)* Located on front boundary in front of St Josephs	D	783	Map 26
	Tainui Road			
(27)	Fine Leaf Italian Cypress *(Cupressus sempervirens gracilis)* Puriri (*Vitex lucens)* Lot 75 Deeds Plan TI C.T D9999/136K	D	483	Map 32
(35)	Liquidambar *(Liquidambar styraciflua)* Part Lot 1 Deeds Plan T41	D	484	Map 32
(37)	Tulip Tree (*Liriodendron tulipifera)* Lot 1 DP 388394	A	65	Map 32
(47)	2 Pohutukawa (*Metrosideros excelsa)* Maidenhair Tree *(Gingko biloba)* Lot 9 DP 6646	A D	29	Map 32
(49)	Pohutukawa (*Metrosideros excelsa)* Lot 8 DP 6646	A	29	Map 32
(53)	Maidenhair Tree (*Gingko biloba)* 2 Pohutukawa *(Metrosideros excelsa)* Part Lot 6 DP 6646	A D	30	Map 32
	Telephone Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(23)	English Oaks (*Quercus robur)* Lot 13 DP 89170	D	485	Map 29
(29)	English Oak *(Quercus robur)* Lot 2 DP 73425	D	541	Map 29
	The Avenue			
(3)	California Redwood (*Sequoia sempervirens)* Lot 2 DP 183474	A	78	Map 12
(41)	Norfolk Island Pine (*Araucaria heterophylla)* Lot 1 DP 141348	D	488	Map 12
	The Esplanade (Castor Bay)			
(3)	Pohutukawa (*Metrosideros excelsa)* Castor Bay Reserve, Castor Bay Part Lot 1 DP 58024	A	17	Map 21
	The Promenade			
(5)	Monterey Cypress (*Cupressus macrocarpa)* Mon Desir Residential Development Lot 4 DP 170538 Unusual form	C	60	Map 26A
(7)	13 Pohutukawa (*Metrosideros excelsa)* Mon Desir Residential Development Lot 5 DP 310793 and adjacent esplanade reserve Land being Lot 3 DP 18295, Lot 3 DP 98618 Allot 581 Parish of Takapuna, Lot 3 DP 167963, Lot 1 DP 310793, Lot 2 DP 310793 13 trees in sacred grove of 23	B	47	Map 26A
	The Strand			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Norfolk Island Pine *(Araucaria heterophylla)* Private car parking area Part Lot 15 DP 4872	D	489	Map 26A
(-)	4 Pohutukawa *(Metrosideros excelsa)* 2 Norfolk Island Pine *(Araucaria heterophylla)* The Strand beach front reserve Part Lot 2 DP 121049	D	490	Map 26A
(-)	1 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve Part Lot 6 DP 121049	D	490	Map 26A
(-)	4 Pohutukawa *(Metrosideros excelsa)* 1 Norfolk Island Pine *(Araucaria heterophylla)* The Strand beach front reserve Part Lot 3 DP 121049	D	490	Map 26A
(-)	3 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve Part Lot 7 DP 121049	D	490	Map 26A
(-)	2 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve Part Lot 5 DP 121049	D	490	Map 26A
(-)	3 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve Part Lot 22 DP 4872	D	490	Map 26A
(-)	1 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve Part Lot 1 DP 121049	D	490	Map 26A

The Strand

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	1 Pohutukawa *(Metrosideros excelsa)* The Strand beach front reserve on boundary of Part Lot 4 DP 170281 and Lot 5 DP 170281	D	490	Map 26A
(41)	Pohutukawa *(Metrosideros excelsa)* Part Lot 6 DP 30813	D	532	Map 26A
(45)	Pohutukawa *(Metrosideros excelsa)* Part Lot 4 DP 30813	D	533	Map 26A
(47)	10 Pohutukawa *(Metrosideros excelsa)* The Sands Residential Development Lot 1 DP 183331 and adjacent esplanade reserve land being Lot 3 DP 106525, Lot 2 DP 183331 10 trees in a sacred grove of 23	B	47	Map 26A
	The Terrace			
(2)	Puriri (*Vitex lucens)* Pohutukawa (*Metrosideros excelsa)* St George's Presbyterian Church Part Lot 1 DP 2753	D	101	Map 26A
	The Warehouse Way			
(-)	Group of Eucalyptus (*Eucalyptus sp.)* North tip of outlet to Tuff Crater Allotment 601 Takapuna Parish	D	491	Map 25
	Tiri Road			
(8)	Totara (*Podocarpus totara)* Lot 4 DP 7514	D	492	Map 21
	Totara Grove			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	11 Totara (*Podocarpus totara)* Karaka (*Corynocarpus laevigatus)* Legal Road Reserve outside Nos. 1, 2, 3 & 5 Also see Stanaway Street listing	D	493	Map 25
(1)	2 Puriri (*Vitex lucens)* Kohekohe (*Dysoxylum spectabile)* Lot 5 DP 80571	D	494	Map 25
(5)	Totara (*Podocarpus totara)* Lot 3 DP 80571	D	495	Map 25
	Tramway Road			
(55)	Moreton Bay Fig *(Ficus macrophylla)* Lots 1 & 4 DP 125523	D	496	Map 23
	Tudor Street			
(10)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 103748 C.T 57A/1028	D	497	Map 32
	Tudward Glade			
(-)	Totara (*Podocarpus totara)* Legal Road Reserve on roundabout opposite No. 12 on traffic island at end of cul-de-sac	D	498	Map 25
(12)	2 Totara (*Podocarpus totara)* Lot 13 DP 54371	D	499	Map 25
	Tui Street			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(2)	Pohutukawa (*Metrosideros excelsa)* Lot 57 Deeds Plan T1 C.T 552/106	D	530	Map 32
	Upper Harbour Drive			
(278)	Rata Hybrid (*Metrosideros excelsa/Metrosideros robusta)* Lot 1 DP 199096 Naturally occurring hybrid	A	3	Map 18
	Valhalla Drive			
(24)	Pohutukawa (*Metrosideros excelsa)* Lot 38 DP 52814	D	501	Map 23
	Valley Road			
(-)	All trees on the defined land with a height more than 3.5 metres or a trunk with a circumference of more than 0.5 metres measured at 0.5 metres above ground level. The defined land is generally the land on the slopes rising from Little Shoal Bay.	D	201	Map 30
	Vauxhall Road			
(-)	Moreton Bay Fig (*Ficus macrophylla)* HMNZ Tamaki, Vauxhall Road Section 3 SO 69845	A	79	Map 32
(32)	1 Windmill Palm *(Trachaecarpus fortunei)* 2 Kentia Palm *(Howea forsteriana)* Lot 1 DP 82091 subject to R/W C.T 38D/209	D	503	Map 32
	Vauxhall Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(59)	Fine Leaf Italian Cypress *(Cupressus sempervirens gracilis)* Puriri *(Vitex lucens)* Lot 1 DP 105473 C.T 58A/957	D	504	Map 32
(75)	Magnolia *(Magnolia grandiflora)* Lot 8 Deeds Plan T 6 C.T 553/247	D	505	Map 32
	Victoria Road			
(-)	Moreton Bay fig *(Ficus macrophylla)* Triangle Reserve, Victoria Road Lot 1 DP 110322	A	32	Map 32A
(-)	Canary Island Date Palm *(Phoenix canariensis)* Legal Road reserve adjacent to Triangle Reserve Lot 1 DP 110322 The palms are in an avenue of 13	A	33	Map 32A
(-)	Holm Oak (*Quercus ilex)* Legal Road Reserve adjacent to Triangle Reserve Planted by Sir George Grey	B	52	Map 32A
	Vincent Road			
(6A)	4 English Oak (*Quercus robur)* Flat 3 DP 148775 on Lot 1 DP 143051 Having 1/3 interest in 1152m²	D	506	Map 30
	Vinewood Drive			
(-)	Totara *(Podocarpus totara)* On public land at the end of the point on Wharf Reserve	D	549	Map 12
	Waimana Avenue			

Schedule of Notable Trees

Street Number			Category	Tree No	Map Ref
(-)		All pohutukawa trees on the defined land which have a height of more than 3.5 metres or a trunk circumference of more than 0.5 metres measured at 0.5 metres above ground level. The defined land is generally the land between the existing dwellings and the shoreline of the properties adjoining the shoreline on the eastern side of Waimana Avenue.	D	508	Map 30
(-)		Pohutukawa (*Metrosideros excelsa)* Legal Road Reserve adjacent Numbers 17 & 15	D	509	Map 30
(-)		London Plane Tree (*Platanus x acerifolia)* Legal Road Reserve adjacent Numbers 35 & 33	D	510	Map 30
(-)		Pohutukawa *(Metrosideros excelsa)* On reserve land behind No. 15 Waimana Avenue being Lot 1 DP 124173 & Lot 8 Deeds Plan T36 No. 2	D	513	Map 30
(10 & 12)		Pohutukawa (*Metrosideros excelsa)* Boundary between Nos. 10 & 12 Lot 22 Deeds Plan T36 No. 2 & Part Lot 27 Deeds Plan T36 No. 2	D	512	Map 30
		Waipa Street			
(11)		2 Phoenix Palm (*Phoenix canariensis)* 2/3 interest 1587m² being Lot 1 DP 132698 Flat 2 DP 126491	D	515	Map 24
		Wairau Road			

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
(-)	Silky Oak (*Grevillea robusta)* Sweet Chestnut (*Castanea sativa)* 2 Puriri (*Vitex lucens)* Legal Road Reserve adjacent to St Thomas Moore Church being 334 Wairau Road Lot 4 DP153655	D	516	Map 19
(-)	Pohutukawa *(Metrosideros excelsa)* Solitary tree Legal Road Reserve adjacent to St Thomas Moore Church being 334 Wairau Road Lot 4 DP153655	D	823	Map 19
	Waterloo Road			
(2/17)	2 English Oak (*Quercus robur)* Flat 2 DP 134968 on Lot 1 DP 129419	D	518	Map 20
	Waterview Road			
(14)	Totara *(Podocarpus totara)* Lot 29 DP 2430 C.T 104/173	D	519	Map 31
(16 & 18)	Grove of native trees containing Pohutukawa, Totara, Karaka, Rata, Puriri Pt Lot 30 Allot 30 Sec 2 Parish of Takapuna	D	562	Map 31
	Weldene Avenue			
(29)	Rimu *(Dacrydium cupressinum)* Lot 31 DP 49824	D	646	Map 19
	Westbourne Road			
(11)	Kauri *(Agathis australis)* Lot 39 DP 13312	D	520	Map 14

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	William Street			
(15)	3 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 38971	D	521	Map 26
(17)	Pohutukawa (*Metrosideros excelsa)* Lot 4 DP 160923 - subject to & interest in easements on DP 167144	D	522	Map 26
(21)	3 Pohutukawa (*Metrosideros excelsa)* Lot 2 DP 162492	D	523	Map 26
(25)	Pohutukawa (*Metrosideros excelsa)* Lot 1 DP 22771	D	524	Map 26A
	Williamson Avenue			
(44)	Puriri (*Vitex lucens)* Norfolk Island Pine *(Araucaria heterophylla)* Lot 40 DP 37086	D	525	Map 27
	Winscombe Street			
(14)	2 Pohutukawa (*Metrosideros excelsa)* Lot 6 DP 29654	D	526	Map 27
	Woodside Avenue			
(18)	Norfolk Island Pine *(Araucaria heterophylla)* Lot 1 DP 80227	D	528	Map 25
	Wyvern Place			
(3-5)	Grove of Kahikatea (*Dacrycarpus dacrydioides)* Lot 17 and 18 DP 64517	D	529	Map 24

Schedule of Notable Trees

Street Number		Category	Tree No	Map Ref
	Zion Road			
(14A)	Kowhai *(Sophora tetraptera)* Native Bush Lot 1 DP 428657	D	654	Map 24

Appendix 8D: Exotic Tree Species Protected at 15 metres in Height or 1500mm in Girth (measured at 1.4 metres above the ground)

Note: Appendix 8D does NOT apply to exotic trees on sites meeting the District Plan Definition of 'Urban Environment Allotment' as defined in Chapter 21

Casuarina (Sheoke)	*Casuarina spp*
Gum (except Red Flowering Gum)	*Eucalyptus spp* (except *Eucalyptus ficifolia*)
Macrocarpa	*Cupressus macrocarpa*
Norfolk Island Pine	*Araucaria heterophylla*
Pine	*Pinus spp*
Poplar	*Populus spp*
Wattle	*Acacia spp*
Willow	*Salix spp*

Appendix 8E: Schedule of Species of Trees located on Roads and Reserves excluded from Rule 8.4.6.3

1. Any plant or tree listed as a pest in the *Auckland Regional Plant Pest Management Strategy* or listed as a National Surveillance Plant Pest under the Biosecurity Act 1993 or any subsequent amendments.

2. 'Wilding' or self-seeded specimens on the following list:

Bamboo	
Brush Wattle	*Paraserianthes Iophantha*
Casuarina (sheoke)	*Casuarina spp*
Chinese Windmill Palm	*Trachycarpus fortunei*
Eucalyptus	*Eucalyptus spp*
Hakea	*Hakea spp*
Loquat	*Eriobotrya japonica*
Macrocarpa	*Cupressus macrocarpa*
Phoenix Palm	*Phoenix canariensis*
Pine	*Pinus radiata*
Queensland Poplar	*Homalanthus populifolius*
Red Monkey Apple	*Syzygium australe*
Tamarix	*Tamarix tetrandra*
Wattle	*Acacia spp*
Willow (grey)	*Salix cinerea*
Willow (crack)	*Salix fragilis*

3. Any tree species grown primarily for its edible fruit except the following:

Walnut	*Juglans spp*
Chestnut	*Castanea sativa*
Pecan Nut	*Carya illinoinensis*
Carob	*Ceratonia siliqua*

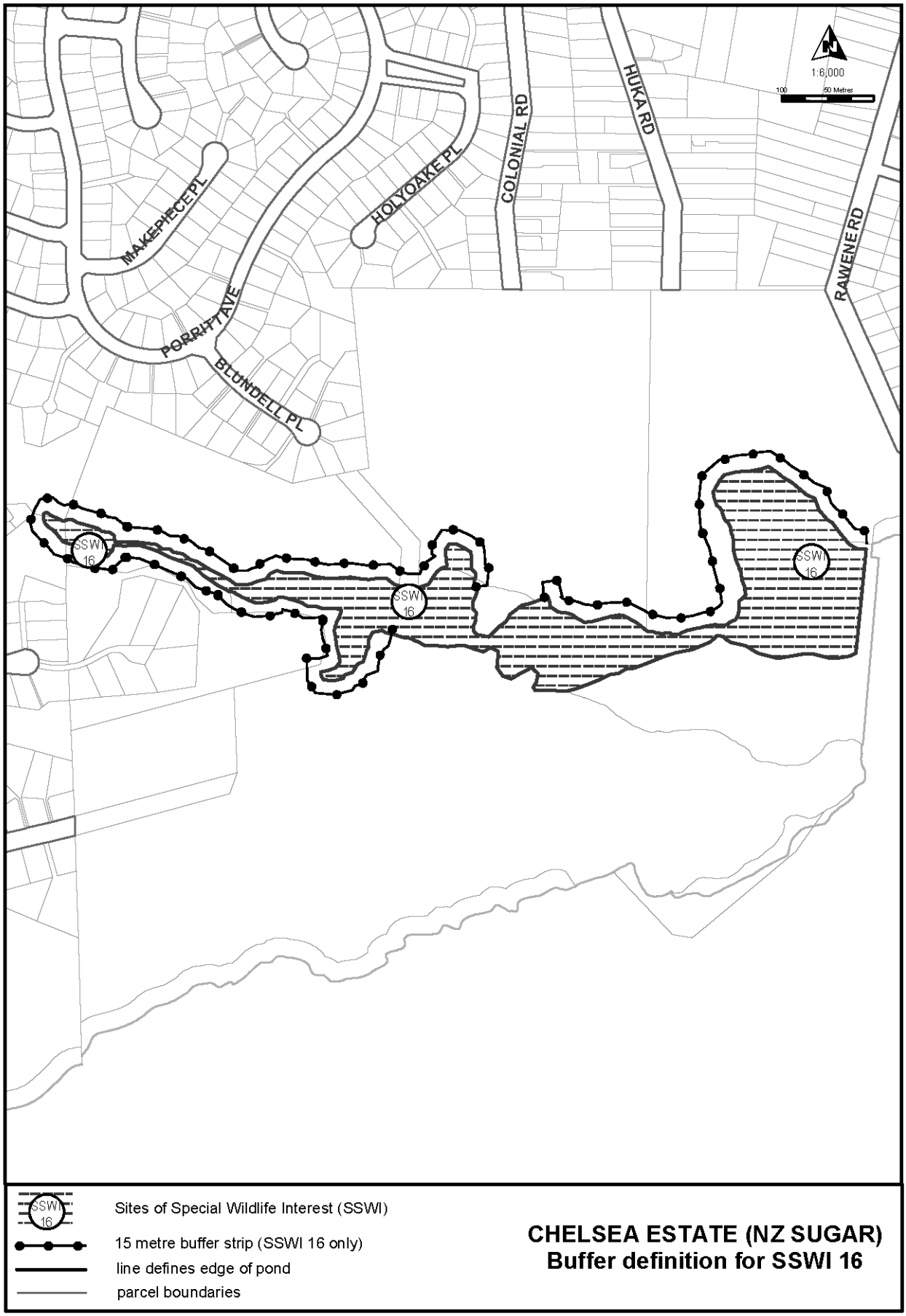
Appendix 8F: Significant Views from Public View Points

(See Plan Maps Appendix 6; see Plan Maps Appendix 2 - Visual Protection of Mt Victoria and North Head)

1. Rangitoto Island from the intersection of East Coast Road with Sunrise Avenue, Mairangi Bay.
2. Rangitoto Island looking across the Wairau Valley from Glenfield Road south of the Sunset Road intersection.
3. Lake Pupuke with Rangitoto Island in the background from Shea Terrace, Takapuna.
4. Lake Pupuke with The Circle in the background from Northcote Road intersection with Mary Poynton Road, Takapuna.
5. Lake Pupuke across Killarney Park from Killarney Street, Takapuna.
6. Rangitoto Island, around to Mount Hobson, One Tree Hill and Mount Eden from Sunset Road near the Northern Motorway junction.
7. Rangitoto Island from Pupuke Road at the junction with Bank Street, Birkenhead.
8. Hauraki Gulf with The Circle in the foreground looking down Ocean View Road, Northcote.
9. Tank Farm explosion crater to North Head and Mount Victoria from College Road, Northcote.
10. Rangitoto Island and Mount Victoria looking across Shoal Bay from Akoranga Drive entrance to Esmonde Road.
11. Serial view of Mount Hobson, Mount Eden and Auckland City across Shoal Bay and the harbour from Esmonde Road to the Onewa Road interchange.
12. North Head, Mount Victoria and the Hauraki Gulf in the background, with the Waitemata Harbour in the foreground, from Mokoia Road junction with Hinemoa Street, Birkenhead.
13. Panoramic view of the Harbour and Gulf from the top of Onewa Road, Birkenhead.
14. Mount Victoria looking down Onewa Road from the intersection at Lake Road, Northcote.
15. Mount Eden looking down Queen Street from the intersection with Onewa Road, Northcote.
16. Rangitoto Island from the Onewa Road on-ramp to Esmonde Road.
17. Harbour views from beneath the Harbour Bridge from Stokes Point, Northcote.
18. Mount Victoria looking down Lake Road from the Clifton Road intersection, Takapuna.
19. Mount Victoria looking down Lake Road from the Williamson Avenue and Bayswater Avenue intersection, Belmont.
20. Mount Victoria looking down Lake Road from the Achilles Crescent intersection, Devonport.
21. Panoramic views from Mount Victoria.
22. Mount Victoria from the seaward end of Victoria Road, Devonport.
23. Panoramic views from North Head.
24. North Head from Duders Beach, Devonport.
25. Mount Hobson and Mount Eden from Windsor Reserve, Devonport Beach and the Ferry Wharf.
26. North Head from Seacliffe Avenue at the junction with Hamana Street, Devonport.
27. Mount Victoria looking across Woodall Park from Old Lake Road, Narrowneck.

28. North Head from Vauxhall Road adjacent to Fort Cautley, Narrowneck.
29. North Head from Tainui Road at the intersection with Vauxhall Road, Cheltenham.
30. North Head looking down Tainui Road, and Mount Victoria looking down Eton Ave, Cheltenham.
31. Mount Victoria looking across Devonport Domain from Cheltenham Road, Devonport.
32. Onepoto Basin from Onewa Road, Northcote.
33. Tank Farm explosion crater from the northbound lanes of the Harbour Bridge approach.
34. Greenhithe Escarpment from Rangatira Road at the intersection with Aeroview Drive, Beach Haven.
35. Greenhithe Escarpment from Birkdale Road intersection with Eskdale Road, Birkdale.
36. Greenhithe Escarpment from Manuka Road for the last 500 metres, Glenfield.
37. Panoramic views of the Greenhithe Escarpment and Hellyers Creek across Birkenhead Domain with Waitakere City in the background.
38. Greenhithe Escarpment and Hellyers Creek from Glenfield Road at the junction with Unsworth Drive, Albany.
39. Oteha Escarpment across Massey Campus from Albany Highway at the Wharf Road intersection.
40. Escarpment above Albany Village from Library Lane.
41. Rangitoto Island from Northern Motorway alignment as it crosses Spencer Road.
42. Rangitoto Island from Northern Motorway alignment as it crosses Lonely Track Road.
43. Serial view of the Waitemata Harbour and Hauraki Gulf from the Harbour Bridge and its approaches.
44. Serial view of the harbour waterfront along King Edward Parade.
45. Beach and gulf views from many locations along Beach Road, from Milford to Long Bay.
46. Eskdale Bush from the length of Eskdale and Lauderdale Roads, Birkdale.
47. Greenhithe Escarpment from the Beach Haven shops.
48. Onepoto Basin in the foreground with Rangitoto Island in the background, from Lake Road at the intersection with Onewa Road, Northcote.
49. Greenhithe Escarpment from Lynn Reserve, Glenfield.
50. Paremoremo Escarpment from Wharf Road, Albany.
51. Views of Little Shoal Bay and the Waitemata Harbour and Auckland City from the top of Council Terrace through to Maritime Terrace.
52. Panoramic Auckland from the corner of Pupuke Road and Lydia Road, Northcote.
53. Panoramic Auckland from High Road and Oruamo Domain, and round to the Greenhithe and Kaipatiki escarpments.
54. Panoramic Auckland from the corner of Balmain Road and Waipa Street, Birkenhead.
55. Panoramic view of Rangitoto from the Glenfield Hall.

Appendix 8G: Chelsea Ponds - Buffer Strip Definition for SSWI 16



Appendix 8H: ON-SITE STORMWATER MANAGEMENT IN SMA 1, 2 AND 3

8H.1 INTRODUCTION

This appendix sets out the performance standards which apply to the on-site stormwater methods provided for by Rule 8.4.8.1.2.

Examples are also provided to help explain the rule. The council has additional information that assists in understanding the rule.

8H.2 PERFORMANCE STANDARDS

8H.2.1 Introduction

The required design of the mitigation method depends upon whether the activity is:

i) a residential or a non-residential activity, and

ii) whether the site is in a business or residential or structure plan zone; and

iii) whether the site drains directly to a stormwater detention facility which is approved by North Shore City Council for the purposes of this rule to provide adequate detention for stream protection and attenuation of the 10% and 50% AEP rainfall events.

8H.2.2 Residential Activities

8H.2.2.1 Residential Activities in Residential and Structure Plan Zones (Excluding Mixed Use Overlay Areas) Where the Site Does Not Drain Directly to an Approved Stormwater Detention Facility

a) Stormwater Rain Tanks:

Rain Tank Purpose

All rain tanks are to be dual purpose stormwater rain tanks, providing both detention and harvesting volume.

Refer to the definitions in Section 21 for a description of a dual purpose stormwater rain tank.

For multi unit developments, communal rain tanks may be provided rather than individual tanks for each unit.

Size of Rain Tank

Table 8H.1 sets out the size of dual purpose stormwater rain tank required, based on the roof area connected.

Table 8H.1 Residential Activities Dual Purpose Rain Tank Sizes

Roof Area (m^2)*	Total Rain Tank Size (m^3)**	Harvesting Volume (m^3)***
Up to 100	4.5	2
101-150	5.5	2
151-200	7.5	2.5
201-250	10	3.3
251-300	12	4
301-350	13.5	4.5
351-400	14.5	4.5

Greater than 400	$4m^3$ per $100m^2$ of roof area	4.5 where there is only one unit in the development, otherwise $3m^3$ for the first unit and $2m^3$ for subsequent units

* Roof Area means the area of the roof that is connected and drained to the rain tank. This may be less than the total roof area.

** Rain Tank Size means the minimum dual purpose rain tank size required to mitigate the 'Roof Area'. It refers to the working or active volume of the tank between the lowest outlet and the overflow.

*** Harvesting Volume means the volume used to store non-potable water to supply the toilet and laundry.

Impervious Area Mitigated By Rain Tank

The impervious surface area that is mitigated by a dual purpose stormwater rain tank is the area of roof connected to the dual purpose stormwater rain tank, plus an additional area of impervious surfaces equivalent to 25% of the roof area connected to the tank. This additional area does not need to be connected to the dual purpose stormwater rain tank, and may be a roof or non-roof area.

b) Bio-Retention:

Impervious Area Mitigated By Bio-Retention

Bio-retention devices sized at 8% of the impervious surface area draining to it are deemed to fully mitigate stormwater from this area. This may include both roof and non-roof areas.

For example, a bio-retention area $8m^2$ in area mitigates $100m^2$ of impervious surfaces.

Design of Bio-Retention

The minimum size of a bio-retention device to be provided shall be $2m^2$ with a minimum depth of planting soil mix at least 600mm. Where bio-retention requirements are calculated at $1m^2$ or less then no provision for bio-retention is required. Where bio-retention is calculated at between $1m^2$ and $2m^2$ the minimum requirement shall be $2m^2$.

c) Self Mitigating Surfaces:

Impervious Area Mitigated By Self Mitigating Surfaces

The area that is mitigated by a self mitigating surface is the actual area of the self mitigating surface itself. For example $10m^2$ of pervious paving fully mitigates rain water falling on that direct area, but not stormwater from other surfaces draining to it.

Design of Self Mitigating Surfaces

Refer to Section 21 Definitions re Self Mitigating Surfaces, Green Roofs and Pervious Paving.

8H.2.2.2 Residential Activities in Residential and Structure Plan Zones (Excluding Mixed Use Overlay Areas) Where the Site Drains Directly to An Approved Stormwater Detention Facility

Where a site drains directly to a stormwater detention facility which is approved by North Shore City Council for the purposes of this rule to provide adequate detention for stream protection and attenuation of the 10% and 50% AEP rainfall events, then the performance standards for rain tank and bio-retention standards in 8H.2.2.1 can be modified as follows:

- Rain Tank: a $3m^3$ Stormwater Rain Tank is provided for each residential unit to provide for rainwater harvesting of non-potable water plumbed to the toilet and laundry. This rain tank size is irrespective of the surface area of the roof connected

to the rain tank, and mitigates an additional area of impervious surface equivalent to 25% of the roof area connected to the tank; and

- Bio-Retention: bio-retention devices are sized at 5% of the impervious surface area draining to it, with a minimum size and depth of planting soil mix as required in 8H.2.2.1 b).

8H.2.2.3 Residential Activities in Business Zones (Including Structure Plan Zone Mixed Use Overlay Areas), Whether the Site Drains Directly to an Approved Stormwater Detention Facility or Not

Refer to 8H.2.3 (Non-Residential Activities).

8H.2.3 Non-Residential Activities

8H.2.3.1 Non-Residential Activities in Business Zones and Structure Plan Zone Mixed Use Overlay Areas (Including Residential Activities in Business Zones and Structure Plan Zone Mixed Use Overlay Areas) Where the Site Does Not Drain Directly to an Approved Stormwater Detention Facility.

a) Stormwater Rain Tanks

Rain Tank Purpose

Rain tanks are to provide for detention, and where the development involves buildings with more than one toilet, harvesting volume as well.

Separate rain tanks may be provided for these functions or a dual purpose rain tank.

Multi unit developments may use communal rain tanks, rather than rain tanks for each individual unit.

Size of Rain Tank

The size of the rain tank is based on the detention volume required.

Detention capacity equals $4m^3$ of volume per $100m^2$ of roof area connected to the tank.

Where the building contains more than 1 toilet, then a proportion of this volume shall be made available for rain water harvesting. The rain tank harvesting volume is based on roof area per occupant, as per Table 8H.2.

Table 8H.2 Rain Tank Harvesting Volume

Roof Area per Occupant (RAO)	Rain Tank Volume for Harvesting* (* for toilet use)
Less than $15m^2$ of roof area per occupant	$0.2m^3$ per occupant
15 to $26m^2$ of roof area per occupant	$0.15m^3$ per occupant
27 to $40m^2$ of roof area per occupant	$0.125m^3$ per occupant
Greater than $40m^2$ of roof area per occupant	$0.1m^3$ per occupant

This harvesting volume may be contained within a separate rain tank. In this case, the volume of the detention tank may be reduced by the volume of the harvesting rain tank.

Impervious Area Mitigated By Rain Tank

The impervious surface area that is mitigated by the rain tank(s) is the area of roof connected to the rain tank(s), plus an additional allowance for high occupancy buildings. This additional area does not need to be connected to the rain tank, and may be a roof or non-roof area.

The additional area is calculated on the roof area per occupant (RAO), as per Table

8H.3. RAO is calculated as set out below.

Table 8H.3 Impervious Area Mitigated by Rain Tank

Roof Area per Occupant	**Area (m^2) Deemed to be Mitigated by Rain Tank**
Less than or equal to $7m^2$	Connected roof area (RA) plus an additional area equivalent to 35% of the connected roof area
$>7m^2 – 10m^2$	Connected roof area plus an additional area equivalent to 25% of the connected roof area
$>10m^2 – 16m^2$	Connected roof area plus an additional area equivalent to 15% of the connected roof area
Greater than $16m^2$	The area of roof connected to the rain tank(s)

Roof Area Per Occupant

Roof area per occupant (RAO) is calculated by dividing the roof area in m^2 connected to the rain tank (RA) by the average building occupancy. Average building occupancy is determined by dividing the gross floor area (GFA) in m^2, by the floor area to occupant ratio (OR) listed in Table 8H.4.

- RAO = RA / (GFA / OR)

Table 8H.4 Building Occupancy Ratios for Different Activities

Activity	**Floor Area to Occupant Ratio (OR)**
Office	$25m^2$
Showroom	$35m^2$
Warehouse	$50m^2$
Retail	$35m^2$
Restaurant/Café	$15m^2$
Local Shopping Centres	$35m^2$
Manufacturing	$25m^2$
Residential Component of Mixed Use Development	$20m^2$

For example, a two storey office building that has a gross floor area of 200m^2 with a 100m^2 roof area that is to be fully connected to a rain tank has an RAO of 12.5m^2, calculated as follows:

i) Number of occupants: 200m^2 / 25m^2 = 8 occupants

ii) Roof area per occupant: 100m^2 roof area / 8 occupants = 12.5m^2

In the case where only 50% of the roof area is connected, then the calculation is as follows:

iii) Number of occupants: 8 occupants

iv) Roof area per occupant: 50m^2 of roof area / 8 occupants = 6.25m^2

Where the calculation to assess the number of occupants results in a fraction, if the fraction is less than one half it shall be disregarded, if the fraction is half or more then one whole additional occupant shall be counted.

b) Bio-Retention:

Refer to 8H.2.2.1 b) (Residential Activities in Residential and Structure Plan zones where the site does not drain to an approved stormwater detention facility).

c) Self Mitigating Surfaces:

Refer to 8H.2.2.1 c) (Residential Activities in Residential and Structure Plan zones, where the site does not drain to an approved stormwater detention facility).

8H.2.3.2 Non-Residential Activities in Business Zones and Structure Plan Zone Mixed Use Overlay Areas (Including Residential Activities Within Business Zones and Structure Plan Zone Mixed Use Overlay Areas) Where the Site Drains Directly To An Approved Stormwater Detention Facility

Where a site drains directly to a stormwater detention facility which is approved by North Shore City Council for the purposes of this rule to provide adequate detention for stream protection and attenuation of the 10% and 50% AEP rainfall events, then the performance standards for rain tanks and bio-retention areas in 8H.2.3.1 may be modified as follows:

- Rain Tank: The detention volume may be dispensed with, but a harvesting volume, based on the RAO is still required as per Table 8H.2. The minimum size of tank shall be 3m^3.
- Bio-Retention: bio-retention devices are sized at 5% of the impervious area draining to it, with a minimum size and depth of planting soil mix as required in 8H.2.2.1 b).

8H.2.3.3 Non-Residential Activities in Residential and Structure Plan Zones (excluding Structure Plan Zone Mixed Use Overlay Area), Whether the Site Drains Directly to an Approved Stormwater Detention Facility or Not.

Refer to 8H.2.2 (Residential Activities).

8H.3 EXAMPLES OF PERMITTED ACTIVITIES

Note: The examples presented here are for explanatory purposes only. They present very simple development examples to illustrate the basic concepts involved for Permitted Activities under Rule 8.4.8.1.2.

8H.3.1 IMPERVIOUS AREA TO BE MITIGATED (IAM)

The impervious area to be mitigated (IAM) is based on the total impervious area on a site.

Total impervious area includes roof areas, driveways, all paved areas (whether pervious or not), decks and swimming pools. See the definition of impervious area for further detail (Section 21).

The maximum impervious area allowed on a site is set by Table 8.2 (Rule 8.4.7.1).

If the total impervious area on a site is less than 15% of the site area, then no on-site mitigation is required.

If total impervious surfaces are more than 15%, then refer to Table 8.3 (Rule 8.4.8.1.2) to determine the percentage of total impervious surface which is to be fully mitigated on site (IAM).

The IAM varies, based on the Stormwater Management Area within which the site is located (SMA).

Refer to Appendix 11 to the District Plan Maps to determine which SMA applies.

For Example:

Total site area:	500m^2
Total impervious area:	300m^2 (includes 170m^2 of roof area and 130m^2 of hard surfaces)
Total impervious area as a percentage of site area:	60%

As the total impervious area is more than 15% of site area, on-site stormwater mitigation is required as per Table 8.3.

SMA:	2
Impervious Area to be Mitigated:	70% (from Table 8.3)
IAM (Impervious Area to be Mitigated):	**210m^2** (70% of 300m^2)

8H.3.2 SELECTION OF MITIGATION METHODS

For the purposes of Rule 8.4.8.1.2, mitigation methods are limited to the following three methods:

a) Stormwater rain tanks (RT) that collect rain water from roof areas. Rain tanks may be designed to harvest rain water for reuse in toilets and laundries, or to detain roof water prior to discharge, or to provide both harvesting and detention functions.

b) Bio-retention (BR) facilities that collect, absorb and slowly release run off.

c) Self mitigating surfaces (SMS) that are able to fully mitigate stormwater runoff from the surface area of the relevant device or structure. Pervious paving, green roofs, uncovered slatted wooden deck over natural ground, and swimming pools are deemed to be self mitigating surfaces.

Refer to the definitions in Section 21 for a description of these methods.

The impervious surface areas mitigated by the above methods, either singly or in combination must equal the total area of impervious surfaces to be mitigated as per Table 8.3:

- IAM = RT + BR + SMS

Where:

- RT = the roof area in m^2 connected to the stormwater rain tank, plus an additional area of impervious surfaces (roof or non roof) for specified situations.
- BR = the area of impervious surfaces (roof or non roof) in m^2 draining to the purpose built bio-retention device
- SMS = the area (m^2) of the self mitigating surface.

8H.3.3 EXAMPLES

8H.3.3.1 Residential Activities

8H.3.3.1.1 Example One

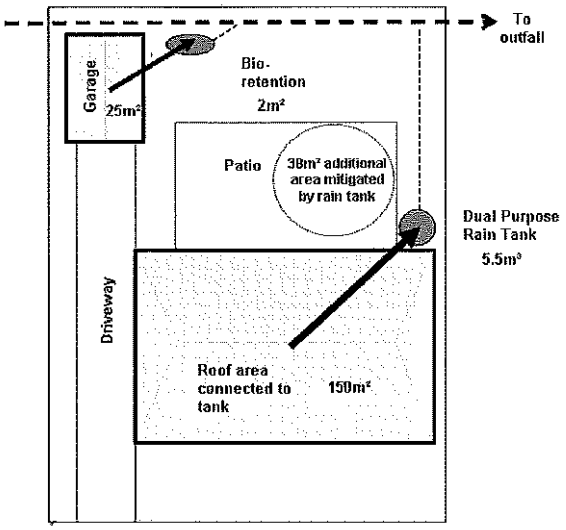
- 500m^2 site in SMA 2, in residential zone, with 300m^2 of impervious surfaces:
  - 175m^2 of roof area (house and garage)
  - 125m^2 of other impervious surfaces (patio and driveway)
- Site DOES NOT drain to an approved stormwater detention facility
- Dual purpose rain tank is main form of mitigation

Step	**Area**
Total impervious area to be mitigated (IAM)	210m^2 (70% of 300m^2, Table 8.3)
Roof area that can be connected to dual purpose rain tank (RA)	150m^2
Size of dual purpose rain tank	5.5m^3 (from Table 8H.1)
Additional area allowed for by rain tank	38m^2 (25% of 150m^2)
Remaining impervious area to be mitigated	22m^2 (210m^2 - 150m^2 - 38m^2)
Bio-retention area to be provided	2m^2 (8% of 22m^2 = 1.76m^2, however 8H.2.2 b) requires a minimum of 2m^2)

Therefore:

- RT = 188m^2 (150m^2 + 38m^2)
- BR = 22m^2
- SMS = 0m^2

RT + BR + SMS = 210m^2



8H.3.3.1.2 Example Two

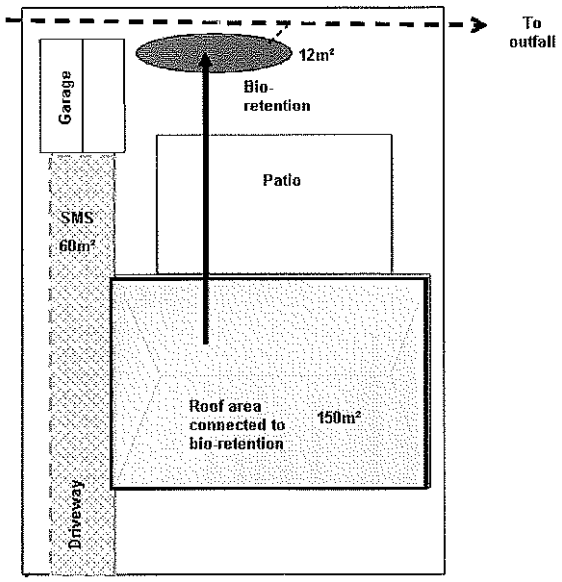
- Site details as per Example One.
- Site DOES NOT drain to an approved stormwater detention facility
- No rain tank

Step	**Area**
Total impervious area to be mitigated (IAM)	210m^2 (70% of 300m^2, Table 8.3)
Bio-retention area that can be accommodated on site	12m^2
Area mitigated by bio-retention	150m^2 (12m^2 = 8% of 150m^2, 8H.2.2.1 b))
Remaining impervious area to be mitigated	60m^2 (210m^2 - 150m^2)
Area where self mitigating surfaces to be used (e.g. driveway, patio surface)	60m^2

Therefore:

- RT = 0m^2
- BR = 150m^2
- SMS = 60m^2

RT + BR + SMS = 210m^2



8H.3.3.1.3 Example Three

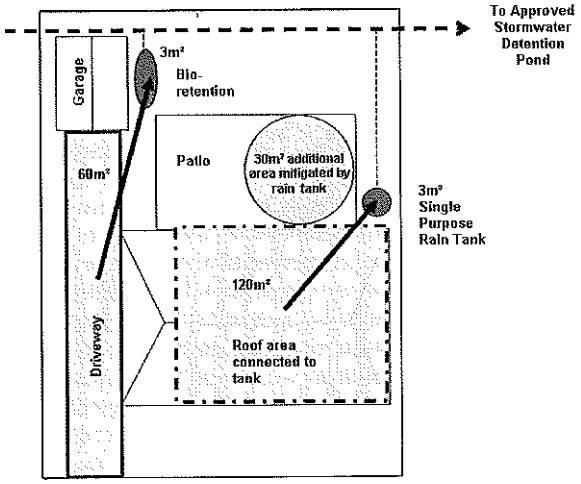
- Site details as per Example One.
- Site DOES drain to an approved stormwater detention facility
- With single purpose rain tank (for harvesting)

Step	Area
Total impervious area to be mitigated (IAM)	210m^2 (70% of 300m^2, Table 8.3)
Roof area that can be connected to rain tank (RA)	1020m^2
Detention volume	Not required (8H.2.2.2)
Size of single purpose rain tank (for harvesting)	3m^3
Additional area allowed for by rain tank	30m^2 (25% of 120m^2)
Remaining impervious area to be mitigated	60m^2 (210m^2 - 120m^2 - 30m^2)
Bio-retention area to be provided	3m^2 (5% of 60m^2, 8H.2.2.2)

Therefore:

- RT = 150m^2 (120m^2 + 30m^2)
- BR = 60m^2
- SMS = 0m^2

RT + BR + SMS = 210m^2



8H.3.3.2 Non-Residential Activities

8H.3.3.2.1 Example Four

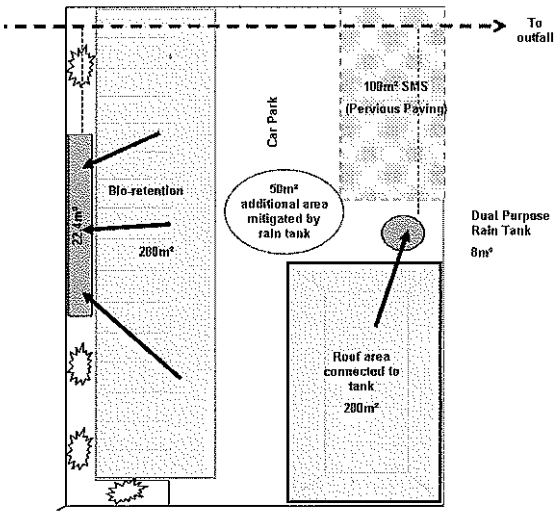
- 1000m^2 site in SMA 2, in business zone, with 900m^2 of impervious surfaces:
  - 200m^2 of roof area, 3 level mixed café / office building, 600m^2 Gross Floor Area (GFA) (café 150m^2 GFA / office 450m^2 GFA).
  - 700m^2 of other impervious surfaces (car parking / accessways)
- Site does not drain to an approved stormwater detention facility
- Building contains more than one toilet

Step	**Area**
Total impervious area to be mitigated (IAM)	630m^2 (70% of 900m^2, Table 8.3) (includes 200m^2 of roof area and 430m^2 of car parking and accessways)
Roof area that can be connected to a dual purpose rain tank (RA)	200m^2
Building Occupancy (Table 8H.4)	10 occupants (150m^2 of cafe / floor area to occupant ratio of 15m^2) + 18 occupants (450m^2 of office / floor area to occupant ratio of 25m^2) = 28 occupants
Roof Area per Occupant (RAO)	7.1m^2 (200m^2 of connected roof area / 28 occupants)
Total tank volume of dual purpose rain tank	8m^3 (4m^3 per 100m^2 connected roof area)
Portion of total tank volume to be available for harvesting based on Roof Area per Occupant of 7.1m^2 (Table 8H.2)	5.6m^3 (0.2m^3 x 28 occupants)
Additional area allowed for by rain tank (Table 8H.3)	50m^2 (25% of connected roof area)
Remaining impervious area to be mitigated	380m^2 (630m^2 - 200m^2 - 50m^2)
Self mitigating surfaces to be used (e.g. for some car parking stalls)	100m^2
Remaining Impervious area to be mitigated	280m^2 (630m^2 - 200m^2 - 50m^2 - 100m^2)
Bio-retention area to be provided	22.4m^2 (8% of 280 m^2, 8H.2.2.1 b))

Therefore:

- RT = 250m^2 (200m^2 + 50m^2)
- BR = 280m^2
- SMS = 100m^2

RT + BR + SMS = 630m^2



8H.3.3.2.2 Example Five

- 2000m^2 site in SMA 3, in business zone, with 1750m^2 impervious area:
  - 1000m^2 of roof area (single level warehouse)
  - 750m^2 of other impervious surfaces (sealed yard area)
- The site DOES drain to an approved stormwater detention facility.
- Building contains more than one toilet.

Step	Area
Total impervious area to be mitigated (IAM)	1050m^2 (60% of 1750m^2, Table 8.3) (includes 600m^2 of roof area and 450m^2 of sealed yard area)
Roof area that can be connected to a rain tank (RA)	600m^2
Building Occupancy (Table 8H.4)	20 occupants (1000m^2 of warehouse / floor area to occupant ratio of 50m^2)
Roof Area per Occupant (RAO)	30m^2 (600m^2 of connected roof area / 20 occupants)
Detention volume of rain tank	Not required (8H.2.3.2)
Single purpose rain tank volume for harvesting based on RAO of 30m^2 (Table 8H.2)	3m^3 (0.125m^3 x 20 occupants = 2.5m^3, however 8H.2.3.2 requires a minimum of 3m^3)
Additional impervious area deemed to be mitigated by rain tank	0% (greater than 16m^2 RAO, Table 8H.3)
Remaining Impervious Area to be Mitigated	450m^2 (1050m^2 - 600m^2)

Bio-retention area that can be accommodated on site (in landscaping strip)	$10m^2$
Area mitigated by bio-retention	$200m^2$ ($10m^2$ = 5% of $200m^2$, 8H.2.3.2)
Remaining impervious area to be mitigated	$250m^2$ ($1050m^2$ - $600m^2$ - $200m^2$)
Self Mitigating Surfaces to be used (e.g. for parking stalls)	$250m^2$

Therefore:

- RT = $600m^2$ ($600m^2$ + $0m^2$)
- BR = $200m^2$
- SMS = $250m^2$

RT + BR + SMS = $1050m^2$