11 INLAND WATERS

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11 INLAND WATERS

11.1 INTRODUCTION

"Inland Waters" refers to the beds of lakes, rivers and streams, the water column, the water surface and the air space above lakes, rivers and streams in the District, as well as the sequence of vegetation from floating to submerged, including partially submerged vegetation at the water's edge.

Inland waters include both fresh and tidal waters. In the case of rivers and streams, they stretch downstream from the point where they can still be described as "perennial bodies of fresh water". They do not apply to any stretches of rivers or streams that are in the Coastal Marine Area, which is the responsibility of the Auckland Regional Council (ARC).

Responsibility for the control of activities in lakes, rivers or streams is a responsibility shared between the ARC and the Rodney District Council. However, the focus of their control is different, reflecting their different responsibilities under the Act.

The ARC has powers under section 30 of the Act to control activities if they affect the bed of a lake, or river or stream,or the water body, or contaminate the airspace above any lake, river or stream. The main focus of the ARC in relation to inland waters is on the effects of activities in terms of water quality, water quantity, soil conservation and the avoidance or mitigation of natural hazards.

The Rodney District Council also has obligations in relation to inland waters pursuant to section 31 of the Act. Section 31(1)(a) requires the Council to achieve "integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district". Section 2(1) of the Act defines "land" to include "land covered by water and the air space above land."

In summary:

(a) if an activity inside inland waters affects or has the potential to affect any land (including the land comprising the beds of rivers, lakes and streams covered by water) then the Rodney District Council is obliged to give it due attention. The emphasis is on the use of land.

(b) if an activity inside inland waters affects or has the potential to affect water quality, water quantity, soil conservation or to create or worsen natural hazards, then the ARC is obliged to give it due attention. The emphasis is on the water itself (quality and quality), soil and on hazards.

As a result of this dual responsibility, separate consent applications may be necessary for activities occurring in the Inland Waters Zones, so that each Council may attend to its particular concerns.

The ARC has transferred some of its responsibilities to Rodney District Council to process and decide on a limited range of resource consents under Sections 13(1)(a) and 13(1)(b) of the Act. The transfer does not apply to applications for the construction of culverts, road bridges or structures for the diversion of

water and any proposal involving the taking, damming or diversion of water. The ARC retains its consent granting function under Section 13 for these activities. Rodney District Council also has a transfer of powers from the ARC to manage certain activities in the Coastal Marine Area."

Inland waters have many values. They are natural drainage channels and systems. The waterbodies and their edges provide habitats for both aquatic and terrestrial species. They also often function as ecological corridors along which animals move to other habitats.

Inland waters form an integral component of the landscape. They are also important for recreational uses such as boating, watersports and fishing, and commercial activities such as fishing, which occur on them.

They also have important cultural values. For Maori, waters are seen as the lifeblood of the land and therefore, of the people. Traditionally Maori have used inland waters for fishing, transport routes, and as a source of plants for food and crafts. For all these reasons they are a valuable natural and community resource.

The health of the aquatic ecosystems is critically linked to water quality and the levels of nutrients in the water. These are largely determined by what is happening outside the area of water itself, particularly on lake and river banks but ultimately, to a greater or lesser degree, in the whole catchment.

Like all natural resources they are vulnerable to adverse changes as a result of human activities. However, the situation is unusual in that some of the most significant adverse changes result from natural processes that have been initiated by human actions, but now have a momentum of their own. For example, streambank erosion, blocking of streams by willows, and infilling of wetlands by sediment.

11.2 ISSUES

Issue
11.2.1

Inappropriate subdivision, land use and development can adversely affect the quality, quantity and flows of inland waters, especially those areas where the system is closed.

The inland waterways of the District frequently discharge into semi-enclosed estuarine environments. Although the primary responsibility for water quality and quantity is with the Regional Council, land use activities have an impact on both.

Contamination

Inland waters are contaminated to varying degrees by silt, nutrients and toxic materials generated by activities on the land in the catchment. Some of this contamination is from point sources (eg. septic tanks, boating activities), but much is from diffuse sources, such as silt from roadworks, building sites, subdivision and eroded paddocks and stream banks, nutrients from animal droppings and fertilisers, and toxic materials in the form of herbicides and pesticides carried off farmland in runoff. In urban areas runoff is contaminated with pollutants from cars, roads, and domestic, commercial and industrial activities.

Contamination from these and other sources can have adverse effects on activities in inland waters such as recreation and shellfish farming.

In addition, activities which occur in or adjacent to the inland waters, such as dredging, reclamation, earthworks, vegetation removal, and boat cleaning, can adversely affect the water quality of these water bodies and therefore their habitat value.

Within the District there are a number of dune lakes (eg. Lake Ototoa on South Head). These lakes are closed systems, which means they do not flush, as they have no stream or river which flows out of them. The result is that the sustainability of these lakes is threatened by contaminant inputs, such as nutrients, the build up of which causes the water quality to decline. Also increased sediment inputs cause more rapid silting up.

Water quantity

Water from inland waters is used for irrigation of farmland and domestic and stock water supplies. However, the demand for water is constantly increasing, putting available resources under pressure. Extraction can also increase the concentration of contaminants in inland waters, therefore reducing water quality. It can lead to changes in salinity in estuarine areas, affecting aquatic plants and animals. If water quantity drops below a certain sustainable level where replenishment is equal to extraction, the resource can end up being depleted. (It should be noted that the Auckland Regional Council deals with water extraction.)

Water flows

The introduction of exotic plant species can also adversely affect water quantity or the flow of water. For example, spartina, introduced from England, silts up estuaries, reducing their navigability (eg. Kaipara Harbour and Whangateau). New structures can also change flows in inland waters, potentially causing erosion and slips.

Issue
11.2.2

Inappropriate subdivision, land use, development and activities in, on or adjacent to inland waters can adversely affect their ecological and wetland vegetation values, habitat values and their natural character.

Habitat value

Historically, inland water habitats have been degraded, modified or destroyed by human activities such as dredging, reclamation, drainage, piping, vegetation clearance and earthworks. Therefore, many of the remaining inland waters, especially wetland areas, are of high value because of:

(a) the important buffer that their ecological and wetland vegetation values provide between land based activities and estuarine environments; and
(b) the habitat that they provide for both aquatic and terrestrial species, which are in many instances threatened, endangered or rare.

Many of these habitats continue to be under threat from activities on and adjacent to waterways. These disturb wildlife or degrade their habitats so that they are unable to breed or feed. Recreational activities on or adjacent to inland waters are one of the main causes of disturbance, through noise from boating or other recreational uses. It is the cumulative effects of activities which are resulting in increasing disturbance.

Recreational and commercial uses of inland waterways, such as boating, can also result in the erosion of river banks or shoreline from boat wash, or the launching or retrieval of craft. This can cause the destruction of shoreline habitat, as well as a decline in water quality as more sediment enters the water, leading to a decline in aquatic habitat.

Boating activities can also result in the introduction of contaminants such as fuels and refuse, and biological threats such as weeds, which can impair the natural functioning of waterways and result in the destruction of habitat values. These adverse effects are likely to increase as the activities in, on or adjacent to inland waters increase.

Natural character

Many of the inland water areas still retain their natural character because of their remoteness, and their relatively unmodified nature. Activities such as the erection of structures, earthworks and vegetation clearance adversely affect the natural character of these areas. Structures in particular, can have a detrimental effect owing to their permanent nature. It is often not individual structures which create significant adverse effects, but the cumulative effects of numerous structures which change the character of an area.

Issue
11.2.3

Recreational and commercial use of inland waters can create pressure for new access, facilities and structures, which can adversely affect the natural functioning and landscape values of these waters, as well as creating safety issues for users.

Access

Increasingly the public expects to have access to waterways and their banks, but this is not widely available. Recent changes to legislation affecting the creation of esplanade reserves, are expected to mean that the network of esplanade reserves will not in future be extended as rapidly as it has been in recent years.

Water flows and quality

The placing of structures in and the use of water bodies for water-based activities can also affect the water flow. The location of boat ramps, wharves, and other structures can affect the flow characteristics of rivers or streams. This can indirectly cause adverse effects on water quality with increased use, once access is available.

Landscape

New structures for commercial and recreational purposes can affect the natural landscape quality and character of inland water areas, because of their permanent nature. In many cases the most significant adverse effects arise, not from an individual structure, but from the cumulative effects of a number of structures in an area.

Safety issues

The increased use of inland waters for recreational and commercial purposes can create safety issues. Often there are conflicts between non-powered activities, such as swimming, canoeing and sailing, and powered activities, such as jet skiing and power boating. As the number of users increases, so do the potential hazards, unless activities are carefully controlled.

Also, the erection or installation of structures such as navigational aids, pipelines, cables and electric lines, can create safety issues if they are numerous and not clearly marked.

Issue
11.2.4

Activities, landuse and development can adversely affect the cultural values of inland waters.

Maori people view water as the life blood of the land. Any activity which adversely affects water affects the mauri of water. Traditionally, Maori have used waterways and the associated vegetation as a food source, and for crafts and medicinal purposes. Waterways have also been used for access.

The issues of most concern to Maori in relation to inland waters are siltation and the resultant destruction of habitats; the decline in water quality through sewerage inputs into waterways, both from land and septic tanks; and the loss of access to plants used for crafts and medicinal purposes.

Issues from other Chapters

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

Chapter 6 - Highly Values Natural Resources
Chapter 7 - Rural
Chapter 10 - Open Space and Recreation
Chapter 18 - Urban Land Modification and Vegetation Protection

11.3 OBJECTIVES

Objective 11.3.1

To avoid or minimise the adverse effects of the use and development of inland waters on the water quality and flow of inland waters.

(This objective relates to Issue 11.2.1)

Objective 11.3.2

To maintain, enhance, manage and protect the fauna and flora values and ecosystems of inland waters, especially in those areas that are highly sensitive to human activities.

(This objective relates to Issue 11.2.2)

Objective 11.3.3

To preserve, maintain and enhance the natural character of the District's inland waterbodies.

(This objective relates to Issue 11.2.2)

Objective 11.3.4

To ensure that recreational or commercial activities and structures do not impede the use of inland waters, where such uses are consistent with the maintenance of natural values and the safety of users.

(This objective relates to Issue 11.2.3)

Objective 11.3.5

To avoid or minimise the adverse effects of the use and development of inland waters on cultural values.

(This objective relates to Issue 11.2.4)

Objectives from other chapters

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

Chapter 6 - Highly Values Natural Resources
Chapter 7 - Rural
Chapter 10 - Open Space and Recreation
Chapter 18 - Urban Land Modification and Vegetation Protection

11.4

POLICIES

Policy
11.4.1
Quality and flow of inland waterbodies

Activities, especially in areas of high wildlife and habitat significance, should be designed, sited and operated in a manner that avoids, remedies or mitigates adverse effects on the quality and flow of inland waterbodies, especially cumulative effects, such as from:

(a) the introduction of contaminants, directly or through runoff from land or water activities (eg. silt, hazardous substances, nutrients, petrol and diesel, chemicals from boat maintenance);

(b) the erosion of river banks/shoreline through boat wash or the erection of structures; and

(c) the introduction of exotic species.

Explanation and Reasons
This policy seeks to achieve Objective 11.3.1.

There are numerous ways in which activities can be designed, sited and operated to minimise the adverse effects on water quality and flow. Some of these include minimising vegetation removal from the banks or shores of the inland water areas, so that there is a filter for contaminants, such as sediment and road runoff. Retaining this vegetation also minimises bank erosion from boating activities. Where possible, structures should be sited away from the water's edge, so that contaminants associated with their use do not go directly into waterways. They should also be appropriately sited, so that they do not impede flows.

Ensuring that exotic plant species are not introduced to inland waters is important, as they can severely affect water flows and habitats, especially if they are invasive.

Policy
11.4.2
Natural functioning, habitat values and wildlife

Activities, especially in areas of high ecological and wetland value, wildlife and habitat significance, should be designed, sited and operated in a manner that avoids, remedies or mitigates adverse effects, especially cumulative effects, on:

(a) the natural functioning, ecological and wetland vegetation values and habitat values of waterbodies and their edges, including riverbank and shoreline vegetation; and

(b) wildlife, especially during critical times such as the nesting and breeding seasons.

Explanation and Reasons
This policy seeks to achieve Objective 11.3.2.

Wildlife use the inland waters as habitats and for breeding and feeding. They are also used as corridors for migration. Activities on, in, or adjacent to waterbodies have the potential to adversely affect wildlife, especially activities which generate noise or which result in damage or destruction to habitats. Therefore, activities need to be sited and operated in a manner which minimises the adverse effects on

wildlife and habitat values, including cumulative effects, especially in areas where the wildlife values are sensitive to disturbance. This can include siting and undertaking activities away from breeding areas, or erecting structures outside of the breeding period. It can also include minimising activities adjacent to waterbodies, unless absolutely necessary, so that the effects on the natural functioning of waterbodies is minimised.

Policy
11.4.3
Enhancement of inland waters

Where possible and necessary, inland waters should be enhanced, to return them to the condition that would be characteristic of the waterways if they were functioning in their natural state, in order to remedy and mitigate the adverse effects of activities, to create additional habitat for aquatic and terrestrial wildlife or to mitigate the adverse effects of natural hazards.

Explanation and Reasons
This policy seeks to achieve Objectives 11.3.1 , 11.3.2, and 11.3.3.

Most of the inland waters, especially wetlands, have been severely modified or, in many instances, destroyed completely. These areas are important for aquatic as well as terrestrial wildlife. Enhancing these areas by fencing off esplanade strips from stock and by replanting vegetation restores wildlife habitat, as well as reducing contaminant inputs, such as silt and urban street runoff to the waterbodies. Recreating wetland areas is also important, in order to restore wildlife habitat, and the natural drainage functions of these areas. Exotic vegetation can cause potential problems in inland waterbodies, including impeding the natural flow of water and exacerbating natural hazards, and therefore where necessary may need to be removed or eradicated to mitigate adverse effects.

Policy
11.4.4
Natural character and landscape values

Structures should be designed, sited and operated in a manner that avoids, remedies or mitigates the adverse effects, especially cumulative effects, on the natural character of inland waters and landscape features.

Explanation and Reasons
This policy seeks to achieve Objective 11.3.3.

Many of the inland water areas still retain their natural character because of their remoteness. Structures, earthworks and vegetation clearance adversely affect the natural character of these areas. Structures, in particular, affect the natural landscape quality and character of inland waters. Often it is not the erection of individual structures which creates the most significant adverse effects, but the cumulative effects of the presence of a number of structures within a given area. Therefore, activities need to be designed, sited and operated in a manner which minimises the adverse effects on the landscape values of inland waters. This can include siting structures away from shores and banks where possible, using appropriate colours, and ensuring that scale of the structure is appropriate for the landscape.

Policy
11.4.5
Safety of users

Activities should be designed, sited and operated in a manner that avoids, remedies or mitigates adverse effects, especially cumulative effects, on the safety and health of users of inland waters and the public generally.

Explanation and Reasons

This policy seeks to achieve Objective 11.3.4.

Structures and overhead cables in inland waters need to be carefully designed, located, and adequately marked so that the safety of users is maintained. Often it is the cumulative effects of numerous activities and structures, which create or exacerbate the conflict of use and therefore the safety of users.

Where possible, activities which conflict with each other, such as powered and non-powered activities, (eg. canoeing, sailing and swimming), should be minimised by separating them.

Policy
11.4.6
Cultural values

Activities and development should be designed, sited and operated in a manner that avoids, remedies or mitigates adverse effects on the cultural values of inland waters, including the mauri (life sustaining capability) of wetlands, lakes, rivers and their margins; and on traditional food gathering sites for domestic use and traditional plant gathering sites for domestic, craft and medicinal use.

Explanation and Reasons

This policy seeks to achieve Objective 11.3.5.

Activities can adversely affect water values of importance to Maori, such as food gathering, medicinal plant gathering and the mauri of water, if they are not designed, sited and operated in a manner which is sensitive to their traditional values.

The appropriate siting, design and operation of activities, away from areas of traditional value for food and medicinal plant gathering, can avoid or reduce these adverse effects. Also, siting activities away from banks and shores can reduce the adverse effects on cultural values.

Policy
11.4.7

Policies from the following chapters are also relevant:

Chapter 6 - Highly Values Natural Resources
Chapter 7 - Rural
Chapter 10 - Open Space and Recreation
Chapter 18 - Urban Land Modification and Vegetation Protection

11.5 STRATEGY

The Plan aims to maintain or improve water quality, and maintain or reduce levels of contaminants, by applying controls on land use in the various zones adjacent to waterways, by preventing the destruction of native vegetation on river banks and by limiting the activities which can occur on and adjacent to waterways.

In addition, the Plan also controls structures which can be erected, to ensure that habitats, water quality and flows, landscape values, and the safety of users is maintained, while still providing for the use of inland waters.

For the management of these areas the Council has to rely in part on mechanisms that cannot be included in a District Plan. Some are able to be implemented by the District Council, specifically control of powered watercraft and water safety, using bylaws. However, controls on the extraction of water, point discharges of pollutants to water, and on the use of river and lake beds, are administered by the Auckland Regional Council. The controls on fishing are administered by Crown agencies and the Auckland/Waikato Fish and Game Council.

Given these particular circumstances, the controls in the Plan that directly affect the inland waters are limited to dealing largely with the impacts of structures on the waterway, landscape values, and on disturbance of wildlife and wildlife habitats, although the Plan does include a number of controls designed to improve the riparian and water habitat.

11.6 IMPLEMENTATION

11.6.1 District Plan Regulatory Methods

11.6.1.1 Zones

Zoning is the main mechanism used to minimise the adverse effects of activities on inland waters. There are two main zones used to achieve this:

(a) Inland Waters General Zone.

(b) Inland Waters Protection Zone.

These two zones are further described in section 11.8 of this chapter.

Also identified are a number of locations (Defined Wharf/Mooring Areas) at which port or mooring facilities are considered appropriate.

11.6.1.2 Effects-Based Activity Rules

Activity-based rules have been developed to enable the effects of activities on inland waters areas to be controlled. The activities permitted depend on the type and likely impact on the values of the area.

Activities in the Inland Waters General Zone and Inland Waters Protection Zone are either Permitted, Controlled, Restricted Discretionary, Discretionary Non-complying or Prohibited, depending on the potential adverse effects. Activity rules for the Inland Waters Protection Zone are more stringent than in the Inland Waters General Zone in recognition of the high habitat and wildlife values of these areas.

On land adjoining the inland waters, in both urban and rural zones, controls are placed on certain activities which could adversely affect the inland waters area (eg. vegetation removal and earthworks adjacent to streams and rivers). (For details see *Chapter 7 - Rural* and *Chapter 18 - Urban Land Modification and Vegetation Protection*.)

11.6.2 Other Regulatory Methods

11.6.2.1 Bylaws

The Council uses bylaws to control public conduct on inland waters, eg. the control of powered watercraft and water safety.

11.6.3 Other Methods

The approach to inland waters also relies on other methods.

11.6.3.1 Education and Awareness

Increasing the awareness of communities and landowners, of factors affecting inland waters, is an important component in the sustainable management, protection and enhancement of inland waters, and in the appropriate and safe use of these areas.

11.6.3.2 **Community Action Groups**

The Council, in conjunction with other relevant organisations, favours the initiation of community action groups such as landcare groups. Programmes undertaken by such groups could include the restoration and enhancement of inland water areas, through replanting, restoration and the destruction of pest species. It could also include the protection of bush and riparian margins to reduce sediment runoff.

11.6.3.3 **Co-operation with other Organisations**

Co-operation with other organisations involved in the management of inland waters is important, especially in respect of activities where there is joint jurisdiction. There is co-operation with the Auckland Regional Council, which has control over the taking of surface and underground water, the discharge of contaminants to water, and the diversion of waterways. The Ministry of Fisheries has control over the taking of fish (except for "sport fishing", where control is exercised by the Auckland/Waikato Fish and Game Council, and "noxious fish", where control is exercised by the Department of Conservation).

11.7 ANTICIPATED ENVIRONMENTAL RESULTS

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

(a) The quality and flow of inland waterways are maintained or enhanced.

(b) The habitat and wildlife values of inland waterways are maintained or enhanced, especially in sensitive areas.

(c) The natural character of inland waterways is protected, maintained and enhanced.

(d) The cumulative effects of activities on inland waterways are avoided, remedied or mitigated.

(e) The recreational and commercial use of inland waterways is facilitated, while ensuring that the use is consistent with the maintenance of natural values, the safety of users and public health.

(f) Adverse effects on cultural values, including mauri and access to traditional sites for domestic food gathering, crafts and medicinal purposes are avoided, remedied or mitigated.

11.8 DESCRIPTION OF ZONES

This section contains the objectives and policies for the various Inland Waters Zones which are additional to those in sections 11.3 and 11.4. It also provides a zone description.

Both the Inland Waters General Zone and the Inland Waters Protection Zone encompass the water column, the water surface and the air space above the lakes, rivers and streams in the District. They include both fresh and tidal waters. In the case of rivers and streams, they stretch from the headwaters to the Coastal Marine Area where they can still be described as "perennial bodies of fresh water".

Neither Zone applies to any stretch of river or stream that is in the Coastal Marine Area, as this is the responsibility of the Auckland Regional Council.

11.8.1 Inland Waters General Zone

11.8.1.1 Inland Waters General Zone Objectives

Objective
11.8.1.1.1 See Objectives 11.3.1, 11.3.2, 11.3.3, 11.3.4 and 11.3.5.

11.8.1.2 Inland Waters General Zone Policies

Policy
11.8.1.2.1 See Policies 11.4.1, 11.4.2, 11.4.3, 11.4.4, 11.4.5 and 11.4.6.

11.8.1.3 Inland Waters General Zone Description

The Inland Waters General Zone has controls on activities to deal with the impacts of structures on waterways, landscape values and the disturbance of wildlife, as well as native vegetation removal. The main waterbodies in this Zone include:

(a) Kaukapakapa River
(b) Poutawa Stream
(c) The upper reaches of the Hoteo River
(d) Mahurangi River
(e) Waiwera River
(f) Kaipara River
(g) Rangitopuni River
(h) Orewa River
(i) Weiti River
(j) Puhoi River
(k) Kumeu River
(l) Otanerua Stream
(m) Nukumea Stream

11.8.2 Inland Waters Protection Zone

11.8.2.1 Inland Waters Protection Zone Objectives

Objective
11.8.2.1.1

To maintain and protect the high fauna and flora values and their habitat from the adverse effects of human activities, including cumulative effects.

(This objective relates to Issue 11.2.2.)

Objective
11.8.2.1.2

See Objectives 11.3.1, 11.3.2, 11.3.3 and 11.3.5.

11.8.2.2 Inland Waters Protection Zone Policies

Policy
11.8.2.2.1

See Policies 11.4.1, 11.4.2, 11.4.3, 11.4.4, 11.4.5 and 11.4.6.

11.8.2.3 Inland Waters Protection Zone Description

The Inland Waters Protection Zone recognises that some of the water bodies have particular environmental values which require special treatment. These values include the presence of rare and threatened species, and of significant vegetation and its habitat importance. Many of these areas are also used for breeding by wildlife, especially birds.

Human activities have the potential to disturb the habitat or wildlife values, and therefore restrictions are placed on the type and timing of activities which can occur within this Zone.

The areas in the Inland Waters Protection Zone are:

(a) The lower reaches of the Hoteo River

(b) Makarau River

(c) Kaukapakapa River

(d) Pakiri River

(e) Lake Tomarata and Swamp

(f) Spectacle Lake

(g) Slipper Lake

(h) Te Arai Point Little Lake and Swamp

(i) Little Shag Lake

(j) Lake Kawakatai

(k) Lake Ototoa

(l) Lake Kereta

(m) Lake Okaihau

Within the Inland Waters Protection Zone there are a number of Prohibited Activities (eg. introduction of aquatic pest plants, and powered craft activities on certain lakes during certain times of the year). The reason for this is that these activities have the potential to cause adverse effects which are not acceptable, because of the high value of these areas. In some instances the activities would cause irreparable harm to the water quality and the vegetation values or wildlife species, especially during the nesting and breeding season, for example, powered craft activities on Lake Tomarata between 1 September and 20 December, when noise and human activity would disturb the sensitive birds which breed during this period.

Rule 11.9

ACTIVITY RULES

Important Notice Relating to the Activity Table

The Inland Waters part of the District Plan is concerned with the control of bodies of water ***that are not within the Coastal Marine Area****, and all lakes. (The Coastal Marine Area comprises the open sea, estuaries and the parts of rivers and streams downstream of the parts shown as Inland Waters General Zone or Inland Waters Protection Zone on the Planning Maps.)*

Responsibility for the control of activities and structures affecting these bodies of water is split between district or city, and regional councils. The split reflects the responsibilities of the two types of council under the Resource Management Act, for the control of land, water and air generally, plus some specific responsibilities in relation to these waterbodies.

Rodney District Council Responsibilities

Activities and structures are subject to the control of the Rodney District Council if they affect the bed of a lake, river or stream, the space within the water column, the water surface (including navigation) and the space above it. Activities and structures on the banks of lakes, rivers and streams above their fullest flow levels are also subject to District Council control, but through the parts of the District Plan that deal with the land.

Auckland Regional Council Responsibilities

Activities and structures are subject to the control of the Auckland Regional Council if they affect the bed of a lake, river or stream (including their banks up to the fullest flow level), the quantity and quality of the water in the water column and the quality of the air above the water, or involve the taking, use, damming or diversion of water.

Bodies to which applications for resource consent are to be made

As many activities and structures affect areas of concern to both Councils, separate applications for consent often need to be made to both. However, the Auckland Regional Council has transferred its power for dealing with some applications to the Rodney District Council.

This transfer of powers covers many structures in, on, under, or over the bed of lakes, rivers and streams. The transfer does not apply to applications for the construction of culverts, road bridges or structures for the diversion of water and any proposal involving the taking, damming or diversion of water. The Auckland Regional Council retains its consent granting function under Section 13 of the Act, for these activities. District Council staff can advise whether applications are necessary and to which Council they should be made. Consent applicants may also contact the Auckland Regional Council to determine which consents they may require for activities and structures in inland waters.

Note: *Several activities listed as* ***Permitted Activities*** *by this Plan may nevertheless require consent from the Auckland Regional Council as they affect the bed of a lake, river or stream. Also, some of the Controlled, Restricted Discretionary and Discretionary Activities may also require consent from the Auckland Regional Council. These include:*

(a) *Boardwalks;*

(b) *Boat cleaning, maintenance, fitting out and repairs;*

(c) *Boat ramps, slipways and grids;*

(d) *Bridges;*

(e) *Culverts;*

(f) *Dams;*

(g) *Deposition of substances on lake, river and stream beds;*

(h) *Dredging;*

(i) *Control or eradication of exotic plants;*

(j) *Reclamation and drainage of beds;*

(k) *Removal of native vegetation;*

(l) *Jetties, wharves and breastworks;*

(m) *Maintenance and repair of legally established structures, and the maintenance and repair of legally established reclamations;*

(n) *Moored structures for recreational use and ski lane markers; and*

(o) *Navigational aids and structures for controlling vessels and the use of waterways;*

(p) *Removal and demolition of structures;*

(q) *Stopbanks;*

(r) *Swing or pile moorings.*

Rule 11.9.1
Activities relating to this Chapter

Activities relating to this Chapter

Activities in the Inland Waters Zones shall comply with the following:

(a) All Controlled Activities in Activity Table 1 shall comply with any relevant Rule in the Plan. All Controlled Activities in Activity Table 1 shall be assessed against the criteria for Controlled Activities as set out in Rule 11.11.

(b) All Restricted Discretionary Activities in Activity Table 1 shall be assessed against those matters over which discretion is retained, as set out in Rule 11.12.

(c) All Discretionary Activities in Activity Table 1 will be assessed against the criteria set out in 11.13 Discretionary Activities: Assessment Criteria, and the relevant matters set out in section 104 of the Act.

Rule 11.9.2
Activity Table 1

Activity Table 1
Inland Waters Zones

In the following table:

P = Permitted Activity
C = Controlled Activity
RD = Restricted Discretionary Activity
D = Discretionary Activity
PRO = Prohibited Activity
NC = Non-complying Activity
NA = Not Applicable
*** = See Important Notice (section 11.9) regarding the interpretation of this table.**

Note: Words in capitals are defined in *Chapter 3 - Definitions*

See Important Notice (Section 11.9) regarding the interpretation of this table.

ACTIVITY	ZONES	
	Inland Waters General Zone	**Inland Waters Protection Zone**
Any activity not listed in Activity Table 1	**NC**	**NC**
Introduction of AQUATIC PLANT PESTS as listed in Appendix 11B	**PRO**	**PRO**
Beach and WATER recreation activities (including recreational fishing, shellfish gathering and game bird hunting) that do not require the long term reservation of any WATER, LAKE or RIVER bed for the exclusive use of that activity, but **excluding** competitive WATER skiing, power BOAT racing and similar group activities using powered craft	**P**	**P**
BOAT anchoring	**P**	**P**
BOAT cleaning and repairs* at an existing grid, mooring or public wharf, and OWNER MAINTENANCE of boats	**P**	**P**
BOAT maintenance, cleaning, fitting out and repair* other than as provided for as a Permitted Activity	**D**	**NC**
BOAT grids* for public or commercial use	**RD**	**NC**
BOAT ramps* for public use (subject on Lakes Tomarata, Spectacle and Slipper, to their being adjacent to public reserves)	**RD**	**RD**
BOAT ramps* not for public use or not adjacent to public reserves on Lakes Tomarata, Slipper and Spectacle	**D**	**D**

ACTIVITY	ZONES	
	Inland Waters General Zone	Inland Waters Protection Zone
Bridges* up to 4 metres in width and less than or equal to 10 metres in length	**P**	**P**
Bridges* more than 4 metres in width or more than 10 metres in length	**RD**	**RD**
Competitive water skiing, power boat racing and group activities using powered craft on Lake Tomarata and Spectacle Lake, between 21 December and 31 August	**NA**	**NC**
Competitive WATER skiing, power BOAT racing and group activities using powered craft, on Lake Tomarata and Spectacle Lake, **except** between 21 December and 31 August	**NA**	**PRO**
Culverts*	**P**	**P**
DAMS* less than 3 metres in height	**P**	**P**
DAMS* greater than or equal to 3 metres in height	**D**	**NC**
Deposition of substances on LAKE, RIVER and stream beds*	**D**	**NC**
Dredging*	**P**	**P**
Entry onto or passing across the surface of LAKES and RIVERS, **except** as limited by the activity described as competitive water skiing	**P**	**P**
Control or eradication of exotic plants where provided for by an approved Pest Management Strategy prepared in accordance with the Biosecurities Act 1993	**P**	**P**
Control or eradication of exotic plants less than or equal to 30m² in area	**P**	**P**
Control or eradication of exotic plants greater than 30m² in area	**RD**	**RD**
Jetties, wharves and breastworks* for public use (subject on Lakes Tomarata, Slipper and Spectacle to their being adjacent to public RESERVES)	**RD**	**RD**
Jetties, wharves and breastworks* not for public use or not adjacent to public RESERVES on Lakes Tomarata, Slipper or Spectacle	**D**	**D**

ACTIVITY	ZONES	
	Inland Waters General Zone	Inland Waters Protection Zone
Launching, hauling out and retrieval of BOATS using wheeled trolleys or trailers or at an existing slipway or BOAT ramp	**P**	**P**
Moored structures for recreational use*, and ski lane markers	**P**	**P**
Removal of NATIVE VEGETATION less than or equal to 10m² in area	**P**	**P**
Removal of NATIVE VEGETATION between 10m² and 30m² in area	**P**	**RD**
Removal of NATIVE VEGETATION greater than 30m² in area	**RD**	**NC**
Removal of NATIVE VEGETATION greater than 30m² in area for the purposes of maintaining access to an existing legally established structure, or to maintain existing navigable channels	**RD**	**D**
Maintenance and repair of legally established structures*, subject to there being no significant change to the appearance or function of the structure, and subject to the whole structure not being replaced or reconstructed	**P**	**P**
Reclamation and drainage of beds*	**D**	**NC**
Removal and DEMOLITION of structures*	**C**	**C**
Sale of fuel and lubricating oils for BOATS and ancillary structures	**D**	**NC**
Slipways* to provide access to BOAT building and repair establishments and communal yacht storage areas	**D**	**NC**
Structures ancillary* to a Permitted Activity, except where explicitly specified as a Permitted Activity	**D**	**D**
Swing or pile moorings* within the defined areas on the Kaipara and Mahurangi Rivers	**RD**	**RD**
Swing or pile moorings not within the defined areas on the Kaipara and Mahurangi Rivers	**D**	**D**

ACTIVITY	ZONES	
	Inland Waters General Zone	**Inland Waters Protection Zone**
The ERECTION, use, alteration, maintenance, DEMOLITION of MAIMAIS associated with lawful gamebird hunting, where: • the floor area of the MAIMAI does not exceed 10m^2 in area; • the height of the MAIMAI above main high water springs or ground level does not exceed 3 metres; • the MAIMAI is structurally safe; • the MAIMAI is completely removed when it is no longer in lawful use.	**P**	**P**
Flood and erosion prevention and protection works	**Refer to *Chapter 16 - General Rules***	
District-wide Activities	**Refer to *Chapter 16 - General Rules***	
Use and storage of HAZARDOUS SUBSTANCES	**Refer to *Chapter 20 - Hazardous Substances and Contaminated Sites***	
UTILITIES	**Refer to *Chapter 19 - Utilities***	

Rule 11.10

DEVELOPMENT CONTROLS AND PERFORMANCE STANDARDS

There are no Development Controls or Performance Standards which apply specifically to the Inland Waters General Zone and the Inland Waters Protection Zone.

However, for Development Controls and Performance Standards relevant to this chapter refer to:

Chapter 16 - General Rules (Noise)

Rule 11.11

CONTROLLED ACTIVITIES: MATTERS FOR CONTROL AND ASSESSMENT CRITERIA

In accordance with section 76(3A) of the Resource Management Act, the Council will limit its control to the matters listed against each specified activity, when considering resource consent applications for Controlled Activities.

Rule 11.11.1
Removal and Demolition of Structures

Removal and Demolition of Structures

Rule 11.11.1.1
Matters for Control

Matters for Control

The Council has limited its control to the following matters:

(a) Methods of operation.

(b) Timing of works.

(c) End result of removal.

11.11.1.2
Assessment Criteria

Assessment Criteria

When considering an application the Council will have regard to the following criteria:

Ecological values

(a) Whether the removal or demolition of structures is undertaken in such a manner and at such times as will avoid or minimise any adverse effects on:

(i) the particular values of the Inland Waters Protection Zone affected (see Appendix 11A for the list of values and potential adverse effects);

(ii) the general ecological health of the waters of the lake or river and the adjoining land, especially the amount of material released into water or deposited on the river, stream or lake bed.

Safety of users

(b) Whether the demolition of the structures results in their complete removal and does not compromise the health and safety of the users of inland waters.

Demolition of Structures

(c) Whether the demolition of the structure is carried out in such a way as to avoid, remedy or mitigate adverse effects on public health arising from the degradation of water quality and including adverse effects on commercial or recreational shellfish growing resources in the vicinity.

Explanation and Reasons

The removal and demolition of structures can result in sediment runoff, which may adversely affect water quality and aquatic habitats.

Also, the time of year of these operations are undertaken can disturb wildlife and their breeding and feeding. Therefore it is important that removal and demolition of structures in Inland Water Protection Zones are controlled during breeding times.

It is also important that when structures are removed, sections are not left in the waterbodies which could adversely affect the safety of users.

Rule 11.12

RESTRICTED DISCRETIONARY ACTIVITIES: MATTERS FOR DISCRETION AND ASSESSMENT CRITERIA

In accordance with sections 76(3B) and 105(3A) of the Act, the Council will restrict its discretion to the matters listed against each specified activity, when considering resource consent applications for Restricted Discretionary Activities.

Rule 11.12.1
Boat Grids for Public or Commercial Use

Boat Grids for Public or Commercial Use

Rule 11.12.1.1
Matters for Discretion

Matters for Discretion

The Council will restrict its discretion to the following matters:

(a) Scale and location of structure, work or activity.

(b) Use of the structure.

(c) Timing and method of the work, activity or construction of the structure.

(d) Design and location of vehicle access.

11.12.1.2
Assessment Criteria

Assessment Criteria

When considering an application the Council will have regard to the following criteria:

Need for location

(a) Whether the activity, work or structure has an operational need to locate in the Zone, or is necessary to provide for either access to or enjoyment of the inland water area or the coastal marine area. Considerations should include:

  (i) whether the work, structure or use of the structure could be accommodated on nearby land as an alternative to a site in the Inland Waters Zones;

  (ii) whether, where the proposal affects an Inland Waters Protection Zone, it could be accommodated or provided with less adverse effect on natural values, at a location that is not in the Zone.

Necessity of structure

(b) Whether the work or structure is necessary, is the type of structure to fulfil the function for which it is being built, and is of an appropriate size and extent and no larger than is necessary, to meet the purposes for which it is being built, or the works are necessary for existing operations on the site.

Future or planned facilities

(c) Whether the need for which the proposed facility provides cannot be satisfied by an existing or planned future public facility, or by shared use of any existing or planned private facility.

Public -v- private use

(d) Whether the works or structures are so designed, located and operated that, where appropriate, they will be capable of being used by the public in addition to private users, or their use will be in the public interest, for example, retaining navigable channels or restoring opportunities for public recreational activities.

Other activities	(e) Whether the work, structure or the use of the structure will detrimentally reduce the variety of activities reasonably possible in the area, taking into account navigational needs and informal recreational activities.
Amenity values	(f) Whether the works, structure or the use of the structure will reduce the amenities of areas that have a particular value (eg. those areas that are presently providing experiences of solitude and remoteness).
Compensatory measures	(g) Whether a compensating public benefit can justify any significant detraction from the amenities of land or water which is likely to result from the work, structure or the use of the structure.
Ecological values	(h) Whether the work or structure is so designed, located, constructed and maintained, and its use is undertaken in such a manner and at such times as to have no adverse effect, or the minimum adverse effect on the ecology and wildlife of the area and in particular, where relevant: (i) the natural values identified in Appendix 11A for the Inland Waters Protection Zone; (ii) nesting, spawning, feeding, roosting sites or times, or migratory patterns, of birds and fresh or salt water biota; (iii) biological processes; (iv) connections between ecosystems; (v) continuity of areas or stretches of indigenous vegetation; (vi) the habitat of threatened or protected species; and (vii) the maintenance of fish passage. Note: If a fish passage is to be impeded, then the consent of the Director General of Conservation is required.
Natural character, historic/cultural importance, public access	(i) Whether the structure or work is so designed, located, constructed and maintained, and its use is undertaken in such a manner and at such times as to have no adverse effects, or minimum adverse effect on: (i) the natural character, landscape qualities and visual amenity of the area, including the natural riparian edge, riparian vegetation, and vegetation within the river or lake, and panoramic and other views of and from the water as appreciated from locations to which the public has access; (ii) any areas or sites of historic or cultural importance; and (iii) public access to, on and around the water area, except at locations where access is not desirable for ecological, public safety or public interest reasons.
Maori values	(j) Whether the work, structure or use of the structure is likely to have an adverse effect on Maori spiritual values or traditional Maori access to the water area concerned, or to interfere with traditional Maori fishing and shellfishing rights.
Natural hazards	(k) Whether the activity, work or structure is likely to have an adverse effect on the stability of the foreshore or adjacent land, or create or exacerbate other natural hazards, such as flooding upstream or downstream of the site.

Landscape amenity	(l) Whether the structure results in adverse effects on the natural landscape, and consists of materials and colours that will adversely affect its environment; and whether the structure will detract from the amenity values of an area in relation to the natural landscape.
Recreational use	(m) Whether the work, structure or the use of the structure, where appropriate, maintains or enhances opportunities for recreational use of the water or foreshore areas by the general public; or creates, maintains, enhances, or restores environments of ecological or wildlife interest, or provides access to these environments for education or scientific study.
Access	(n) Whether the work, structure or use of the structure, where appropriate, utilises any advantages of water access to land set aside in the District Plan for water-related or water-dependant uses, or to public points of access from the land.
Water quality	(o) Whether the work or structure will have an adverse effect on water quality.
Cumulative effects	(p) Whether the structure, or its use, will create a precedent which would result in cumulative adverse effects on the natural character, wildlife and habitat values, and on water quality.
Navigability	(q) Whether the activity, work or structure will adversely affect the navigation of waterbodies by reducing flows, changing the navigation channel or impeding water access.
Risk to human health	(r) Whether the activity, work or structure will have an adverse effect on water quality that affects recreational activity or commercial shellfish growing activity in the vicinity and thus poses a risk to public/human health.
Rule 11.12.2 **Boat Ramps for Public Use**	**Boat Ramps for Public Use (Subject, on Lakes Tomarata, Slipper and Spectacle, to their being adjacent to Public Reserves)**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.3 **Bridges**	**Bridges more than 4 Metres in Width or more than 10 Metres in Length**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.4 **Control or Eradication of Exotic Plants**	**Control or Eradication of Exotic Plants Greater than 30m² in Area**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Natural Hazards	(a) whether the activity will help avoid the exacerbation of natural hazards and will mitigate adverse effects on the natural flow of inland waterbodies.

Rule 11.12.5 **Jetties, Wharves and Breastworks**	**Jetties, Wharves and Breastworks for Public Use (Subject, on Lakes Tomarata, Slipper and Spectacle, to their being adjacent to Public Reserves)**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.6 **Removal of Native Vegetation in Inland Waters Protection Zone**	**Removal of Native Vegetation between 10m² and 30m² in Area in Inland Waters Protection Zone**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.7 **Removal of Native Vegetation in Inland Waters General Zone and Inland Waters Protection Zone**	**Removal of Native Vegetation Greater than 30m² in Area in the Inland Waters General Zone**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.8 **Removal of Native Vegetation to Maintain Access or a Navigable Channel**	**Removal of Native Vegetation Greater than 30m² in Area for the Purposes of Maintaining Access to an Existing Legally Established Structure or to Maintain Existing Navigable Channels**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.
Rule 11.12.9 **Swing or Pile Moorings Within the Defined Areas on the Kaipara and Mahurangi Rivers**	**Swing or Pile Moorings Within the Defined Areas on the Kaipara and Mahurangi Rivers**
	See the Matters for Discretion and Assessment Criteria in Rule 11.12.1.

Rule 11.13

DISCRETIONARY ACTIVITIES: ASSESSMENT CRITERIA

Without limiting the exercise of its discretion, for all Discretionary Activity resource consent applications in the Inland Waters Zones, the Council will have regard to the following Assessment Criteria, and any relevant Discretionary Activity Assessment Criteria in any other chapter of this Plan, and the relevant matters set out in section 104 of the Act:

Rule 11.13.1
All Discretionary Activities

All Discretionary Activities in the Inland Waters General Zone and in the Inland Waters Protection Zone

Need for location

(a) Whether the activity, use, work or structure has an operational need to locate in the Zone, or is necessary to provide for either access to or enjoyment of the inland water area or the coastal marine area. Considerations include:

(i) whether the activity, work or structure could be accommodated on nearby land as an alternative to a site in the Inland Waters Zones

(ii) whether, where the proposal affects an Inland Waters Protection Zone, it could be accommodated or provided with less adverse effect on natural values, at a location that is not in this Zone.

Necessity of structure

(b) Whether the work, structure or its use is necessary, is the type of structure to fulfil the function for which it is being built, and is of an appropriate size and extent and no larger than is necessary, to meet the purposes for which it is being built.

Future or planned facilities

(c) Whether the need for which the proposed facility provides cannot be satisfied by an existing or planned future public facility, or by shared use of any existing or planned private facility.

Public -v- private use

(d) Whether the work, structure or its use is so designed, located and operated that, where appropriate, they will be capable of being used by the public in addition to private users; or their use will be in the public interest, for example, retaining or restoring navigable channels or restoring opportunities for public recreational activities (eg. boardwalks).

Other activities

(e) Whether the work, structure or its use will detrimentally reduce the variety of activities reasonably possible in the area, taking into account navigational needs and informal recreational activities.

Amenity values

(f) Whether the work, structure or its use will reduce the amenities of areas that have a particular value (eg. those areas that are presently providing experiences of solitude and remoteness).

Compensatory measures

(g) Whether a compensating public benefit can justify any significant detraction from the amenities of land or water which is likely to result from the activity, work or structure.

Ecology and wildlife

(h) Whether the work or structure is so designed, located, constructed and maintained, and its use is undertaken in such a manner and at such times as to have no adverse effect, or the minimum adverse effect on, the ecology and wildlife of the area and in particular, where relevant:

(i) the natural values identified in Appendix 11A for the Inland Waters Protection Zone;

(ii) nesting, spawning, feeding, roosting sites or times, or migratory patterns, of birds and fresh or salt water biota;
(iii) biological processes;
(iv) connections between ecosystems;
(v) continuity of areas or stretches of indigenous vegetation; and
(vi) the habitat of threatened or protected species.

Natural character, historic/cultural importance, public access

(i) Whether the structure or work is so designed, located, constructed and maintained, and its use is undertaken in such a manner and at such times as to have no adverse effects, or minimum adverse effect on:

(i) the natural character, landscape qualities and visual amenity of the area, including the natural riparian edge, riparian vegetation, and vegetation within the river or lake, and panoramic and other views of and from the water as appreciated from locations to which the public has access;
(ii) any areas or sites of historic or cultural importance; and
(iii) public access to, on and around the water area, except at locations where access is not desirable for ecological, public safety or public interest reasons.

Maori values

(j) Whether the activity, work or structure will have an adverse effect on Maori spiritual values or traditional Maori access to the water area concerned, or will interfere with traditional Maori fishing and shellfishing rights.

Natural hazards

(k) Whether the activity, work or structure, including wash from powered craft, is likely to have an adverse effect on the stability of the foreshore or adjacent land; or create or exacerbate other natural hazards, such as flooding upstream or downstream of the site.

Landscape amenity

(l) Whether the structure results in adverse effects on the natural landscape and consists of materials and colours that will adversely affect its environment; and whether the structure will detract from the amenity values of an area in relation to the natural landscape.

Recreational use

(m) Whether the activity, work or structure, where appropriate, maintains or enhances opportunities for recreational use of the water or foreshore areas by the general public; or creates, maintains, enhances, or restores environments of ecological or wildlife interest, or provides access to these environments for education or scientific study.

Access

(n) Whether the activity, work or structure, where appropriate, utilises any advantages of water access to land set aside in the District Plan for water-related or water-dependant uses, or to public points of access from the land.

Water quality

(o) Whether the activity, use, work or structure will adversely affect water quality in a way that affects recreational activity or commercial shellfish growing activity in the vicinity and thus poses a risk to public/human health.

Cumulative effects	(p) Whether the structure, or its use, will create a precedent which would result in cumulative adverse effects on the natural character, wildlife and habitat values, and on water quality.
Navigability	(q) Whether the activity, use, work or structure will adversely affect the navigation of waterbodies by reducing flows, changing the navigable channel or impeding water access.
Water quality and flows	(r) Whether the activity, use. work or structure will adversely affect water quantity or flows in a manner that adversely effects ecology and wildlife habitats or raises the potential for erosion and slips.
Rule 11.13.2 **Swing or Pile Moorings not within the Defined Areas on the Kaipara and Mahurangi Rivers**	**Swing or Pile Moorings not within the Defined Areas on the Kaipara and Mahurangi Rivers**
Other users	(a) See Assessment Criteria in Rule 11.13.1.
	(b) Whether access can be obtained to the mooring without significant adverse impacts on other users of land or water in the vicinity.
Visual quality	(c) Whether the moored boat will have an adverse effect on visual amenity values.
Future navigational recreational and commercial use	(d) Whether the moored boat will tend to conflict with or compromise, present or likely future navigational, general recreational or commercial use of the water area, including its use as a temporary anchorage.
New areas	(e) Whether the mooring site will create a de facto general swing and/or pile mooring area in the immediate vicinity, either by being an addition to others already in existence, or by constituting a precedent which others are likely to wish to follow; and the concentrated and cumulative effects of this precedent.
Rule 11.14	**SUBDIVISION**
11.14.1	There is no provision for subdivision in either the Inland Waters General Zone or the Inland Waters Protection Zone.

APPENDIX 11A

WILDLIFE VALUES OF INLAND WATERS PROTECTION ZONE

1 INTRODUCTION

The information in the following list is derived from the Sites of Special Wildlife Interest (SSWI) database held by the Department of Conservation. It is included in this Plan for the purpose of providing guidance on the types of activity that are likely to cause adverse effects on the listed habitats, and thus guidance on the effects that should be avoided when proposals for activities or developments are put forward for resource consent.

Where activities or developments are proposed the desired result will be that, at the very least, the inland waters and their riparian margins will be maintained in as natural a state as possible. However, where there is the opportunity to do so, whether as a mitigation measure or for some other reason, habitats can usually be improved by protecting the wetland margin by fencing off a riparian strip. Such strips benefit water quality by filtering run-off, stabilising the river or lake bank and providing cover and protection for wildlife species using the inland waters and riparian habitat.

The specified protection areas listed in this Appendix are subject to a number of threats. These are wide ranging in nature and include:

(a) ad-hoc subdivisions;
(b) the effects of pines extracting water from smaller dune lakes and completely destroying their values;
(c) other plant pest invasions;
(d) silt and nutrient pollution;
(e) damage by stock; and damage from excessive recreational use

2 VALUES OF THE SPECIFIED PROTECTION AREAS

2.1 HOTEO RIVER

2.1.1 Description

One of the longest rivers in the Auckland Region, with significant estuarine and extensive freshwater components. Although most of the catchment is developed, one particular area, Mt Auckland Stewardship Area, remains in full forest with significant natural values. Estuarine habitat extends up to Tarakihi Rapids and is ranked as regionally significant wildlife habitat up to that point.

2.1.2 Reason for significance

Presence of "threatened" banded rail, plus a good variety of wetland birds, especially ducks and shags. One of the most important galaxid breeding sites in the Auckland Region. Relatively undisturbed river adjoining Mt Auckland forest. The presence of such good quality broadleaf - podocarp forest on a riparian river margin is now rare in the Auckland Region.

2.1.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of river margins, eg. by reclamation, degradation of water quality, stock, pest plant species invasion, erection of structures, and the cumulative effects of powered watercraft activities.

2.2 MAKARAU RIVER

2.2.1 **Description**

Estuarine habitat extends up to just before the junction of Makarau River and Ruahori Stream. Good diversity of estuarine vegetation including mangroves, saltmarsh ribbonwood and a variety of rushes and sedges.

2.2.2 **Reason for significance**

Presence of "threatened" banded rail and possibly fernbird, plus a good variety and abundance of wetland birds, especially ducks and shags. The "endangered" brown teal was reported until the early 1980's. Excellent estuarine vegetation.

2.2.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of river margins, eg. by reclamation, degradation of water quality, pest plant species invasion, stock intrusion, erection of structures, and the cumulative effects of powered watercraft activities.

2.3 KAUKAPAKAPA RIVER

2.3.1 **Description**

Estuarine habitat extends to within about one kilometre of where State Highway 16 crosses the river. Good diversity of estuarine vegetation including kahikatea, mangroves, saltmarsh ribbonwood, a variety of rushes and sedges plus areas of saltmarsh. Part of the river borders the Kaukapakapa Estuary Scientific Reserve, which has high quality forest down to the river.

2.3.2 **Reason for significance**

Presence of "threatened" banded rail and possibly fernbird, plus a good variety and abundance of wetland birds especially ducks and shags. Excellent estuarine vegetation associations, as well as significant association with a good quality broadleaf - podocarp forest on a riparian river margin, now rare in the Auckland Region.

2.3.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of river margins, eg. by reclamation, degradation of water quality, pest plant species invasion, stock intrusion, erection of structures, and the cumulative effects of powered watercraft activities. Excessive recreational use or human activities during the breeding season would disturb and possibly prevent breeding of threatened wildlife species.

2.4 PAKIRI RIVER

2.4.1 **Description**

Estuarine habitat extends up to where the river joins Pakiri Stream. The estuary is quite small, yet has high plant and wildlife species diversity with a range of wetland habitats, including sandy river mouth, saltmarsh ribbonwood, saltmarsh and open water.

2.4.2 **Reason for significance**

Several "threatened" species present, including New Zealand dotterel, variable oystercatcher which nest at the river mouth, fernbird and banded rail in the saltmarsh ribbonwood and rushes area, as well as a range of other coastal and wetland birds. Excellent estuarine vegetation associations in a relatively small area.

2.4.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of river margins, eg. by reclamation, degradation of water quality, pest plant species invasion and stock intrusion. Excessive recreational use or human activities during the breeding season would disturb and possibly prevent, breeding of threatened wildlife species, eg. New Zealand dotterel.

2.5 LAKE TOMARATA AND SWAMP

2.5.1 **Description**

This wetland consists of the lake itself, and the associated swamp to the south of the lake. The entire area used to be a large dune lake that has decreased in size so that, although there is less open water, there is now an extensive area of swamp with excellent freshwater vegetation. One of several dune lakes in the area with small, mostly developed catchments.

2.5.2 **Reason for significance**

High value wildlife habitat for a range of secretive wetland birds, including several "threatened" species, such as bittern, fernbird and possibly banded rail.

2.5.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion, and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of threatened wildlife species.

2.6 SPECTACLE LAKE

2.6.1 **Description**

Large dune lake with good wetland vegetation around much of the margins. One of the several dune lakes in the area with small, mostly developed catchments.

2.6.2 **Reason for significance**

Good value wildlife habitat for "threatened" bittern, several shag species and waterfowl. The "threatened" caspian tern also recorded.

2.6.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of threatened wildlife species.

2.7 SLIPPER LAKE

2.7.1 **Description**

Moderate sized dune lake with good wetland vegetation around much of the margins. One of several dune lakes in the area with small, mostly developed catchments.

2.7.2 **Reason for significance**

Good value wildlife habitat for "threatened" bittern, several shag species and waterfowl. The "threatened" caspian tern also recorded.

2.7.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of threatened wildlife species.

2.8 TE ARAI POINT LITTLE LAKE AND SWAMP

2.8.1 **Description**

Dune lake and swamp areas, although not joined physically, are close together and have similar swamp vegetation.

2.8.2 **Reason for significance**

Good value wildlife habitat for "threatened" fernbird in the swamp and possibly the lake, which has value for little shag and waterfowl.

2.8.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat for modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent, breeding of threatened wildlife species.

2.9 LITTLE SHAG LAKE

2.9.1 **Description**

Small dune lake completely surrounded by bush, with only scattered wetland margin vegetation.

2.9.2 **Reason for significance**

Significant breeding site for little shag, grey duck and possibly little black shag. Excellent secluded habitat now not often found.

2.9.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of wildlife species.

2.10 LAKE KUWAKATAI

2.10.1 **Description**

Large dune lake with approximately 30% of its area vegetated. Surrounded mostly by pasture with some manuka/kanuka areas.

2.10.2 **Reason for significance**

High quality wildlife habitat with an excellent diversity of wetland species recorded, including "threatened" bittern and dabchick, plus four duck species, four shag species and others.

2.10.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent, breeding of wildlife species.

2.11 LAKE OTOTOA

2.11.1 **Description**

Large dune lake, mostly open water with wetland around the margins. Bordered on one side by kanuka/broadleaf forest, with farmland around the remainder.

2.11.2 **Reason for significance**

High quality wildlife habitat with good diversity of wetland bird species recorded, including "threatened" bittern and dabchick as well as ducks, shags and variety of other species.

2.11.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of wildlife species.

2.12 LAKE KERETA

2.12.1 **Description**

Large dune lake mostly open water, with wetland vegetation around the margins, particularly at the southern end. Regenerating manuka/kanuka on one side with pine plantation behind, and farmland on the other side.

2.12.2 **Reason for significance**

High quality wildlife habitat with good diversity of wetland bird species recorded. Recorded as the best breeding area for the "threatened" dabchick in the Auckland Region, and also has bittern, together with five duck species, shags and variety of other species.

2.12.3 **Activities likely to cause adverse effects**

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of wildlife species.

2.13 LAKE OKAIHAU

2.13.1 **Description**

Moderate sized dune lake with little wetland vegetation, but has varied forest and shrub areas on the edges, providing good cover for wildlife.

2.13.2 **Reason for significance**

High quality waterfowl habitat with good breeding areas on the margins. "Threatened" bittern and dabchick reported, together with an excellent diversity of ducks, shags and other wetland birds.

2.13.3

Activities likely to cause adverse effects

Damage or destruction of wildlife habitat by modification of lake and swamp edges eg. by reclamation, drainage, degradation of water quality, pest plant species invasion, stock intrusion and erection of structures. Excessive recreational use during the breeding season would disturb and possibly prevent breeding of wildlife species.

APPENDIX 11B

AQUATIC PLANT PESTS

Aquatic Plant Pests listed in the Auckland Regional Plant Pest Management Strategy, adopted on 1 July 1997.

Regional Surveillance Aquatic Plant Pests

Common Name	Botanical Name	Description of Problem
Alligator weed	*Alternanthera philoxeroides*	Alligator weed is a perennial emergent aquatic plant which can also grow in terrestrial situations. Its leaves are green, hairless waxy and have a conspicuous midrib. The flowers resemble those of white clover but are smaller and each cluster is produced on a long stalk. The plant will not root in water deeper than two to three metres, however, a marginal weed bed can support a floating mat of vegetation in deeper water.
Eel grass	*Vallisneria gigantea* - Lake Pupuke variety *Vallisneria spiralis* - Meola Creek variety	Eel grass is an attached, submerged, stoloniferous, dioecious perennial herb up to 5.5 metres tall with strap-like leaves arising from stout rhizomes. It can colonise lake-bed sediments to a depth of nine metres.
Egeria	*Egeria densa*	Egeria oxygen weed is a submerged, much branched, perennial freshwater aquatic herb with whorled leaves growing on brittle stems up to six metres long. The dark green leaves grow from nodes on branched stems and are very densely arranged. Small white flowers are often conspicuous on the water surface during summer but no seed is produced in New Zealand. The plant is usually firmly rooted in the substrata of waterbodies but is occasionally found as a free floating mat. The plant spreads solely by vegetative fragments being transported by water flow, accidental or human introduction, on boats, trailers and in fishing nets.
Hornwort	*Ceratophyllum demursum*	Hornwort is a dark green, entirely submerged herb, which forms free floating dense growths which lack roots. It has stems up to 10 metres long with leaves of narrow, forked segments borne in whorls.
Hydrilla	*Hydrilla verticillata*	Hydrilla is a submerged, branching, perennial aquatic herb with whorled leaves on this stems up to six metres long, normally bottom rooted but occasionally breaking free and forming free-floating

Common Name	Botanical Name	Description of Problem
		mats.
Lagarosiphon	*Lagoraosiphon major*	Lagarosiphon oxygen weed is rhizomatous perennial freshwater herb with spiralled leaves on slender, brittle, much branched stems up to five metres long. The stems form larger mats of interwoven stems below the water surface.
Parrot's feather	*Myriophyllum aquaticum*	Parrot's feather is a stout, hairless perennial emergent freshwater herb with whorled feathery leaves on stems up to two metres long. The stems form vigorous mats of tangled stems or carpets of short growth where water has receded.

GENERAL COMMENTS

This group of plants invades waterbodies and once released into such ecosystems this invasion is generally irrevocable. For this reason they should not be introduced into natural waterways. They all reproduce rapidly by vegetative means. Fragmentation of floating mats and regrowth of stem nodes are the main means of spread and dispersal.

All these plants obstruct waterways, causing flooding and affecting water quality. They block water intakes and make boating, fishing and swimming difficult. Alligator weed can also cause illness in stock. The plants grow rapidly over summer and are capable of forming dense impenetrable masses. They are easily spread by diggers or on outboard motors. Decay of exposed plants during periods of low water level deoxygenates waterbodies and smells unpleasant. They also displace native aquatic species thus altering the ecosystem drastically.

All users of waterbodies are potentially affected by the plants, particularly people drawing water or those involved in fishing and recreation.