

Hamilton Lake Domain

Management Plan 2017



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Purpose of the management plan

Hamilton Lake Domain is in central Hamilton. It is a significant recreational facility for residents of Hamilton and beyond, providing a focal point for a variety of water and land-based activities as well as being valued for its natural and ecological characteristics.

The Management Plan for Hamilton Lake Domain (Plan) is the result of reviewing the operative Management Plan prepared in 2010, and has been prepared as a requirement of the Reserves Act 1977. The Plan has been developed with park users and stakeholder groups, and current Council's proposed development and management of the Domain.

Reserves Act management plans are an important park management tool, and provide continuity between legislative requirements, council plans and policies, and the day-to-day operation of council-administered reserve land.

The area of reserve covered by the Plan includes Lake Rotoroa and the Rotoroa Esplanade, Hamilton Lake Domain, and Innes Common. The entire area is referred to throughout the Plan as the Domain.

A plan for the Domain was first prepared in 1985 and was subsequently reviewed in 1994, 2006 and 2010. These plans have guided the development and management of activities at the Domain during this time. This Plan replaces the 2010 version.



About the Domain

The Domain is a key destination for residents and visitors, and contributes significantly to the character of the City.

It is a site recognised and valued for its natural beauty and cultural and ecological importance. The lake and vegetation being part of the original western green-belt of the city, provides an important break from the surrounding developed urban environment while providing a central ecological link with the city's green network. In total, the Domain is about 101 hectares.

Lake Domain (about 77 hectares including the lake) is an important site for leisure and recreation, with a popular destination playground and privately-operated café and function facility.

Hamilton Lake/Lake Rotoroa is valued for its ecological and aesthetic features, and providing for recreational activities. Rotoroa, meaning “long lake” in Te Reo, is the largest of three lakes located within Hamilton. The lake itself is 2m-6m deep and has a surface area of about 54 hectares. The lake is used for a number of water-based sports and recreation activities – these include dragon boating, waka ama, yachting, sea scouts and radio controlled boat racing.

Innes Common Reserve (about 24 hectares, to the east and west of Lake Domain Drive) is primarily used for three sports – cricket, hockey and football. The reserve acts as a venue for organised community events, including the annual Balloons Over Waikato event, and is the take-off point for the hot air balloons. Innes Common includes off-lead dog exercise areas.



Future of the Domain

The strategic direction for the Domain has been developed by a working group of councillors, specialist external advisers, local residents and Council staff.

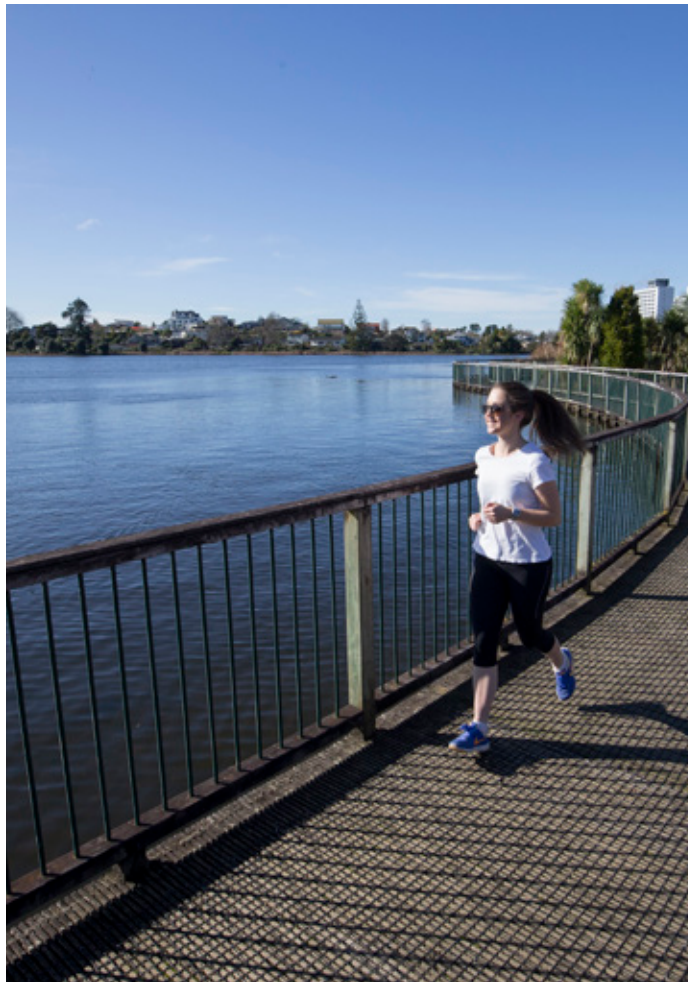
The long-term view is a balance of aspirations for the future and maintaining the aspects of the reserves that Hamiltonians and visitors know and love.

This strategic direction provides a framework for the Plan; with a Vision reflecting the role of the Domain in Hamilton's open space network. Principles have been developed to guide the management of the reserve.

Strategic goals and objectives for the development and management of the Domain have been identified, with actions to deliver on the goals and objectives for the Domain. The actions are outlined in the action list (page 22).

The decision on whether the actions will be implemented will depend on funding, other processes, partners and outside agencies. Improvements at the Domain will be progressively implemented over time, and be informed by robust research and analysis.

Although the Plan makes all of the strategic goals possible, it's wider purpose is to define how the Domain is managed by Council for the benefit of the city.



History

Approx 17,000 years ago

Lake Rotoroa was formed by natural geological evolution.

1800s

Lake Rotoroa was an important resource for iwi, who caught eels and freshwater crayfish. There was also a walking track on the eastern side of the lake which led to an established pa site, Te Rapa Pa (the current Graham Park).

1864

The British Army used the area as a recreational retreat.

1872

Alfred Cox built 'Lake House', the first dwelling building at the lakeside.

1886

Lake was declared a reserve for public recreation under the control of the Hamilton Domain Board, the local authority of the time.

1890

Hamilton Rowing Club was formed and competed on the lake.



1913

A bathing shed, miniature golf course and kiosk were built.

1930

Weed cutter introduced to clear aquatic plants.

1933

Model boat harbour built.



1920s

Families spent Sundays at the Domain, enjoying picnics, boating carnivals, swimming, a brass band, horse and carriage rides and other local events.

1907

Perch were introduced into the lake by Waikato Angler's Club.

1949

Hamilton City Council (formerly Hamilton Borough) took over maintenance of the Domain

1949

A 'Lake Society' was formed. The Council wanted to raise the level of the swamp with rubbish fill. Local residents objected.

1941

15 mph speed limit introduced in park for horse and vehicular traffic



1952

The popular Rose Gardens near Ruakiwi Road entrance were completed.

1955

A giant slide was placed in the domain near the entrance at Ruakiwi Road.

1956

Swamp area on the northeastern side of the lake became known as Innes Park.

1959

Railway engine donated.

1959

11,000L of Penite 6 (Sodium Arsenate) put into the lake to control aquatic weeds. This resulted in elevated concentrations of arsenic being present in the lake bed sediment today.

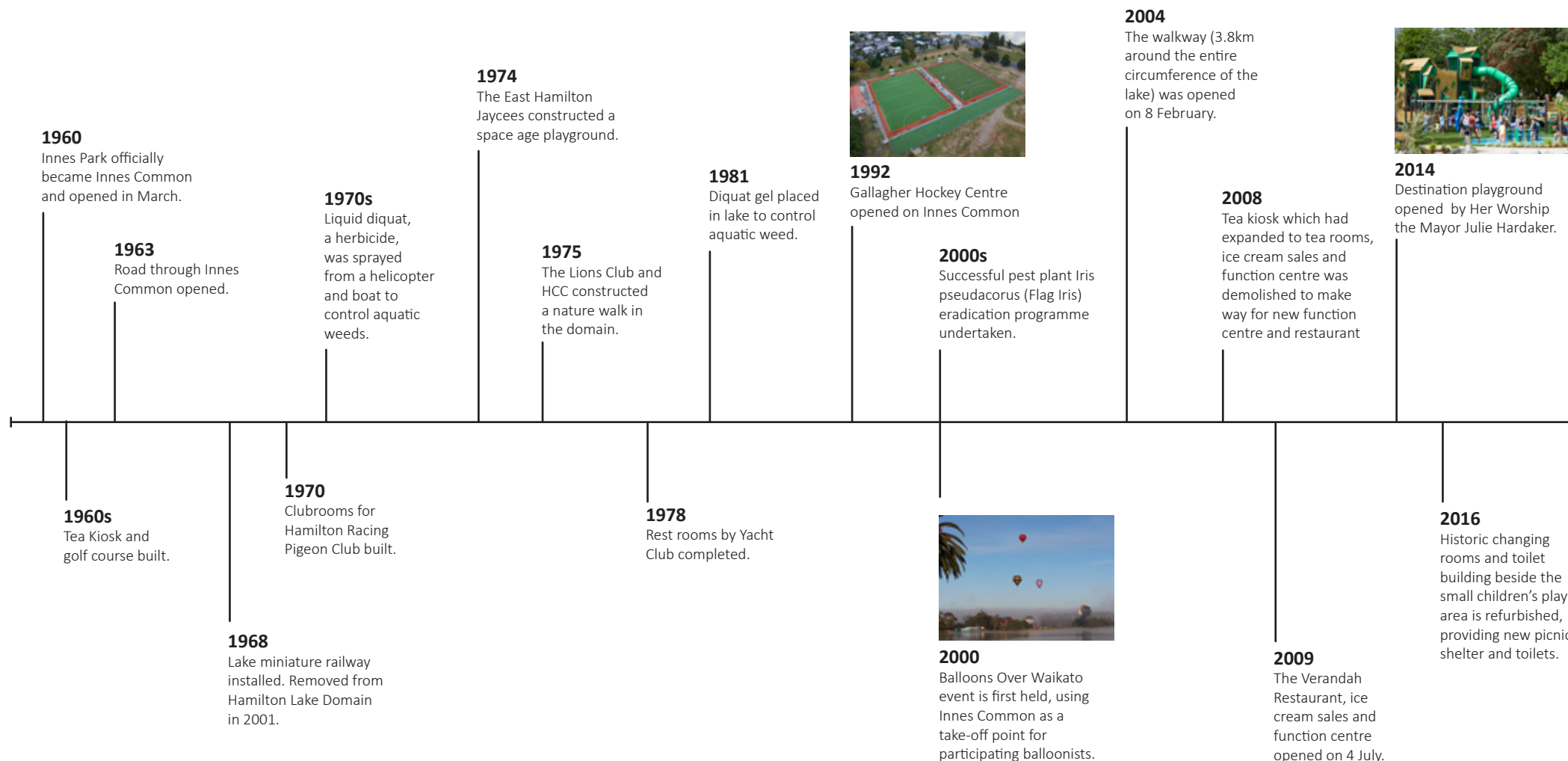
1957

Lake skating rink built. Became less popular over time and the accompanying buildings were demolished in 1977.

1954

Road from Ruakiwi Road to Lake Road via Lake Domain sealed. Tea rooms and changing rooms built.

History



Vision and principles



Vision:

An exceptional nature, leisure and recreation experience in the heart of Hamilton.

Principles to guide and inform the management of the Domain:

- conserve and enhance the open space natural character
- historic and cultural values of the Domain are recognised, conserved and protected
- provide informal no-cost leisure and recreation opportunities
- safe and accessible
- lake water quality meets the needs of the community
- provide for growth of selected sports
- limit built environment and development to key areas
- ecological and environmental values of the lake margin and natural environment are enhanced and protected.

Strategic goals and objectives



Recreation and Leisure

The Domain caters for a variety of recreation and leisure opportunities.

Objectives

- Accommodate growth of hockey and selected water-based sports including sailing, waka ama, and dragon boating.
- Innes Common provides sports fields for formal recreation.
- Playground facilities are developed in accordance with the Playgrounds of the Future Plan.
- The Domain is a well-utilised venue for community events.
- Allow for both formal and informal recreation.
- Allow use by community groups and commercial activities that are appropriate and compatible with the management of the Domain to benefit the user experience.

Key actions

- Playground upgrades at Innes Common.
- Investigate water sports hub.



Ecological value

The Domain is a healthy, sustainable environment.

Objectives

- Lake Rotorua water quality will be managed to a standard safe for recreation and swimming.
- Manage activities at the Domain to avoid, reduce and mitigate negative effects on the lake's ecological and environmental values including water quality.
- Manage Lake Rotorua and activities within the reserve considering the mauri of the lake and in accordance with the principles of Te Ture Whaimana o te Awa o Waikato – Vision and Strategy for the Waikato River (2010).
- Restoration of natural lake patterns and processes, including native vegetation and wetlands to improve lake water quality.
- Vegetation management will improve the health of the lake and margins.

- Vegetation management will conserve and enhance natural character and amenity values.
- Vegetation management will consider the balance of aspirations and needs of the lake environment and park users.

Key actions

- On-going analysis, development of lake water quality measure, and water quality improvements.

Strategic goals and objectives



Historic and cultural Value

Visitors are connected to the history of the Domain through its history, culture and stories.

Objectives

- The historic and cultural values of the Domain and Lake Rotoroa are identified, conserved, and protected.
- Visitors to the Domain are able to learn about the historical and cultural significance of the Domain and its features.
- Public art is used to connect visitors with the history and culture of the Domain and its features.

Key actions

- Implement interpretative signage and interactive learning options.
- Install new public artwork.



Partnerships

Work collaboratively with the community to achieve the aspirations of the Plan

Objectives

- Work alongside Tangata Whenua/Mana Whenua to understand their aspirations for the Domain.
- Work collaboratively with Tangata Whenua and key stakeholders including locally-based ecology and water scientists and experts to develop a strategy to improve the ecological well-being and lake water quality of Lake Rotoroa.
- Engage with stakeholders to ensure any proposed development will meet the needs of the community.
- Enable the delivery of key projects through partnerships with key stakeholders.
- Work with stakeholders to ensure the Domain is a user-friendly venue for events.

Key actions

- Promote the Domain as a venue for the city's outdoor community events.



Accessible and safe

The Domain is safe and accessible for visitors

Objectives

- Ensure the Domain is an accessible environment for a wide range of users.
- Enhance and improve entrances, and connections with the surrounding area, central city and open space network.
- Ensure the design of the Domain reflects best practice Crime Prevention Through Environmental Design (CPTED) principles.
- Retain free public access to all areas of the Domain, except leased areas and specific organised events.

Key actions

- Walkway lighting improvements between the main entrance (Ruakiwi Road) and exit (Lake Domain Drive).
- Improve pedestrian and cycle connections.

Strategic Direction

Our Vision

An exceptional nature, leisure and recreation experience in the heart of Hamilton.

Principles

- Conserve and enhance the open space natural character
- Historic and cultural values of the Domain are recognised, conserved and protected
- Provide informal no-cost leisure and recreation opportunities
- Safe and accessible
- Lake water quality meets the needs of the community
- Provide for growth of selected sports
- Limit built environment and development to key areas
- Ecological and environmental values of the lake margin and natural environment are enhanced and protected

Strategic Goals

Recreation and Leisure	Ecological value	Historic and Cultural Value	Partnerships	Accessible and safe
The Domain caters for a variety of recreation and leisure opportunities.	The Domain is a healthy, sustainable environment.	Visitors are connected to the history of the Domain through its history, culture and stories.	Work collaboratively with the community to achieve the aspirations of the Plan.	The Domain is safe and accessible for visitors.

Objectives

Accommodate growth of hockey and selected water-based sports including sailing, waka ama, and dragon boating.	Lake Rotoroa water quality managed to a standard safe for recreation and swimmable.	The historic and cultural values of the Domain and Lake Rotoroa are identified, conserved, and protected.	Work alongside Tangata Whenua/Mana Whenua to understand their aspirations for the Domain and Lake Rotoroa.	Ensure the Domain is an accessible environment for a wide range of users.
Innes Common continues to provide sports fields for formal recreation.	Manage activities at the Domain to avoid, reduce and mitigate negative effects on the lake's ecological and environmental values including water quality.	Visitors to the Domain are able to learn about the historical and cultural significance of the Domain and its features.	Work collaboratively with Tangata Whenua and key stakeholders including locally-based ecology and water scientists and experts to develop a strategy to improve the ecological well-being and lake water quality of Lake Rotoroa.	Enhance and improve entrances, and connections with the surrounding area, central city and open space network.
Playground facilities are developed in accordance with Playgrounds of the Future Plan.	Manage Lake Rotoroa and activities within the reserve considering the mauri of the lake and in accordance with the principles of Te Ture Whaimana o te Awa o Waikato (2010).	Public art is used to connect visitors with the history and culture of the Domain and its features.	Engage with stakeholders to ensure any proposed development will meet the needs of the community.	Ensure the design of the Domain reflects best practice Crime Prevention Through Environmental Design (CPTED) principles.
The Domain is a well-utilised venue for community events.	Restoration of natural lake patterns and processes, including native vegetation and wetlands to improve lake water quality.		Enable the delivery of key projects through partnerships with key stakeholders.	Retain free public access to all area of the Domain, except leased areas and specific organised events.
Allow for both formal and informal recreation opportunities.	Vegetation management will improve the health of the lake and margins.		Work with stakeholders to ensure the Domain is a user-friendly venue for events.	
Allow use by community groups and commercial activities that are appropriate and compatible with the management of the Domain to benefit the user experience.	Vegetation management will conserve and enhance natural character and amenity values.			
	Vegetation management will consider the balance of aspirations and needs of the lake environment and park users.			

How the management plan works

This Plan is informed and supported by legislation, planning documents and associated policies.

Reserves Act 1977

The Reserves Act 1977 requires the preparation of this management plan.

The Domain is made up of Recreation Reserve and Local Purpose (Esplanade) Reserve. The main purpose of the reserve under both of these classifications is to protect the natural environment, while providing for public access, outdoor recreation activities and open space.

Council plans and policies

The Plan has then been informed by, and aligns to, Council's current plans and policies, including:

Hamilton Plan

The Hamilton Plan sets Hamilton's blueprint for development over the next 10 years, and sets Council's plan to deliver a more attractive city. Council identified 10 priorities. Particularly relevant to the Domain:

- Priority 9: An urban garden

This priority outlines a green Hamilton with parks, trees and destination playgrounds. The destination playground renewal and playground upgrades, and retention of open space and vegetation at the Domain aligns the management plan with this priority of the Hamilton Plan.



Councils Open Space Plan

The HCC's Open Space Plan identifies the importance of open space in Hamilton and identifies a number of guiding principles and goals to address future demand, challenges, and use of open space in the city.

These goals (including minimising buildings on reserve land, and developing walking and cycling corridors) are supported through a number of the strategic goals and objectives in the management plan.

Community Occupancy Policy

This policy outlines the framework for decision making regarding community use of Council-owned land and buildings.



Day-to-day management

The day-to-day use, protection and development is also guided by other regulatory documents including the District Plan, Regional Plan, and Council's Parks, Domains and Reserves Bylaw. Funding is determined through the 10-Year Plan.

Parks, Domains and Reserves Bylaw

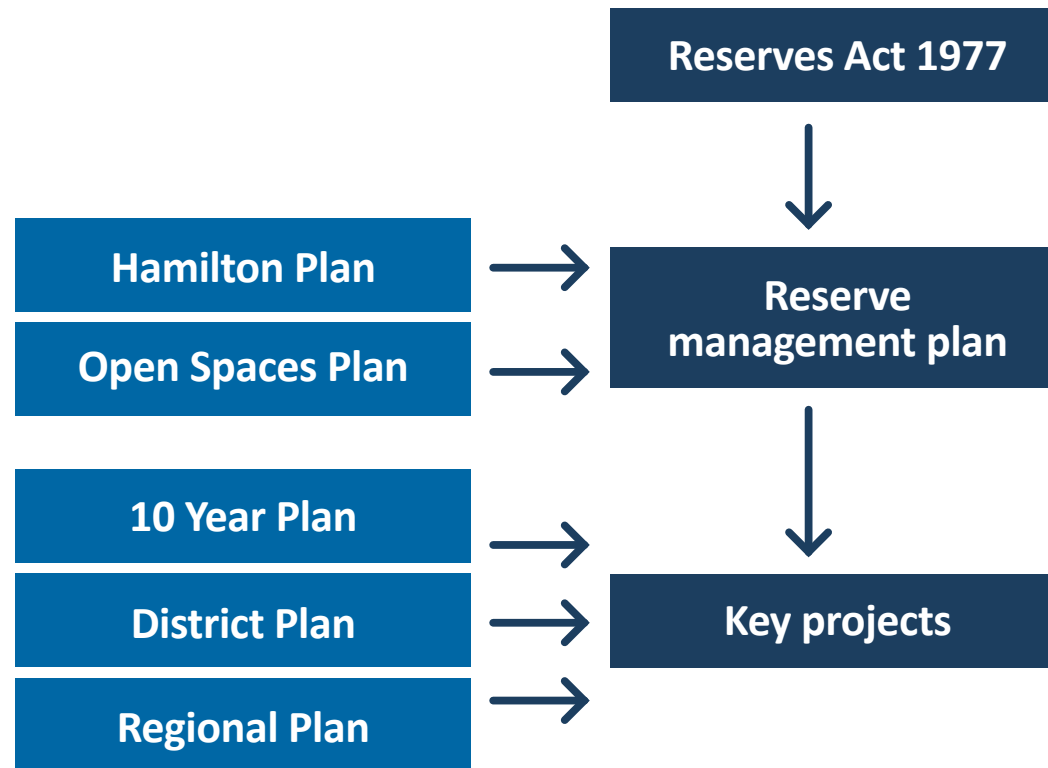
At an operational level the Parks, Domains and Reserves Bylaw is intended to prevent reserves from being misused or damaged by the public. The bylaw complements management plans by defining unacceptable behaviour and providing for enforcement.

Dog Control Bylaw

The Dog Control Bylaw gives effect to the Dog Control Policy for the city, enabling people to enjoy the benefits of dog ownership and provide for the exercise and recreational needs of dogs and their owners, whilst minimising danger, distress, and nuisance to the community.

A detailed list of these documents can be found in the Appendix.

How the management plan works



Significance to Tangata Whenua

Rotoroa has remained approximately the same size from 1860s to the present. Over the past 700 years Tainui Maaori have settled along coastal areas, river margins and lands of the Waikato region.

This settlement was fostered and supported by the rich soils and plentiful bird life of the forests and waterways. The land around Rotoroa was a significant and substantial source of food and building materials to pre-European Maaori. Raupo (Bull rushes) grew extensively and were used in construction of thatched walls and roofs of whare (houses).

The lake itself was a rich source of Tuna (eels), Koura (fresh water crayfish) and Kaeo (fresh water mussels) which formed a significant part of the diet of Maaori people of the area.

In the 1860s, the hill ridges at the southern end of the lake were dense with ferns, ti tree, native flaxes and toetoe. Raupo grew along the riparian margins of the lake. The area from the base of the Waikato Hospital Hill, southwards along the peat flats and swamps of what is now Innes Common was known in ancient times as Paretaru. In this area there were stands of Kahikatea, Tawa and Hinau trees which attracted a rich bird population.

There was a well formed walking track now covered by Ruakiwi Road. This track extended right down the ridgeline along Pembroke Street and formed a route for people living at Te Rapa Pa (located at what is now Graham Park) to get to the lake and its resources.

The hill at the Southern end of the lake, which now forms part of Pembroke Street was known as Te Ohaapu. On the northern slope of this hill overlooking the lake there was a Pohue – a site of fern cultivation.

There was an Urupa (burial ground) on the hill near the water tower. The bones from this Urupa were exhumed and relocated to Hukanui prior to the arrival of the British troops in 1864.



Considerations and opportunities

Ecology

Decisions around environmental management must be made in the knowledge all aspects of water quality, hydrology (the flow of water into and out of the lake, including evaporation) and the reserve's ecology are interrelated and that one objective can not be pursued at the expense of others. The area's ecological management must therefore be seen as an integrated whole; this particularly applies to the management and eradication of pest animals and plants. However the overall ecological health of the catchment is reflected in the well-being of the lake, so a primary focus of ecological management and monitoring is lake water quality.

Recreational activities at the Domain are to a greater or lesser extent dependent on the quality of the park's natural environment. Preserving and enhancing that environment is therefore important both intrinsically and as the setting for all park use.

Water Quality and Pest Plants

A particular challenge for the Council is the management of water quality and aquatic pest plants in the lake.

One of the biggest environment issues with Lake Rotoroa is its small confined catchment. The lake catchment has been highly modified resulting in a decline in the quality of water coming into the lake.

Challenges include the level of nutrients entering the lake through stormwater inflow, and that there is no consistent outflow of water from the lake; as there is for the vast majority of other lakes around the region. This lack of water flow through the lake intensifies the environmental and water quality issues the Council is faced with managing.

Historic management practices for the lake water involved the application of herbicides and other chemicals to eradicate pest plants. These approaches may have been well-intentioned at the time (the 1950s-1970s), but contemporary environmental science has identified shortcomings with these practises.

The control of aquatic weeds Parrot's Feather and Yellow Flag Iris are required by the Waikato Regional Pest Management Plan. The aquatic weed control programme is achieving good success and plants are gradually decreasing and only apparent in a few sites. The planting of native species is continuing throughout the lake's margins.

Algae

Since 2011, Council has identified the presence of potentially toxic algae within Lake Rotoroa. It is a natural phenomenon which can occur in any lake with sufficient nutrients to support the growth of algae. In certain conditions the bacterial counts increase resulting in the lake water becoming unsafe.

The algae are buoyant and move through the water column to take advantage of nutrients and sunlight. The algae can cluster on the surface forming foamy scums which can be seen near the shoreline in locations around the lake.

Council regularly monitors the level of algae against Ministry for the Environment guidelines and advises public of the potential health risks if levels become elevated.

When levels are high the Council installs warning signage and publicises the need for visitors to keep themselves and their dogs away from the water and the lake shoreline. Unfortunately, this means swimming in the water, drinking it, cooking with it, and eating fish caught in the lake are discouraged for health reasons.

There is no "silver bullet" solution to deal with this algae and its related effects, nevertheless the Council has made changes to the stormwater system which feeds into the lake reducing the level of sediments and nutrients entering the lake.

Council continues to work with a range of experts and stakeholders, and in partnership with local iwi, to determine more practical long-term solutions to the algae problem.

Considerations and opportunities

Recreation

The open spaces, sports fields, lake, playground and walkways provide a range of opportunities for everyone to enjoy the Domain. The walkway between the café and Innes Common allows visitors to make a full 3.8km circuit of the lake. Hockey and the various water sports groups (Hamilton Yacht Club, and waka ama and dragon boating clubs) are established at the Domain and want to expand their facilities to accommodate expected growth and improve the experience for their participants and supporters.

Consideration of how the growth of these sports can be enabled through possible expansion and more efficient use of space will require an assessment of any impact on the reserve character, and on other activities.

There is a maximum capacity of space the Domain can provide for formal sports fields while still providing appropriate opportunities for informal recreation and natural parkland. This capacity would be reached with an improved water sports hub and expansion of the hockey turf area as provided for by this plan.

Leases, licences and permits

There are existing leases, licences and permits for the Domain allowing for recreational and commercial activities including:

- Verandah Café
- Hamilton Yacht Club
- Waka ama and dragon boating clubs
- Waikato Hockey
- St Peters Scout Group
- Waikato Racing Pigeon Club
- NZ Model Power Boat Association.

New leases, licences and permits will be considered for recreational activities and commercial activities that are appropriate for the Domain and enhance the park experience without having an adverse impact on the reserve and existing activities.

A number of proposed future outcomes for the Domain will require new and varied agreements subject to an application under the Community Occupancy Policy. These include any expansion of the hockey turf, and development of a water sports hub. Any commercial activity would require application under Council's relevant policy.

Esplanade Reserve

Where relevant, as properties adjacent to the lake are further subdivided, Council will acquire esplanade reserve to meet the 20m requirement under the Resource Management Act 1991. The requirement of esplanade reserve will be assessed as part of the resource consent process.



Management of the reserves

The Domain has been divided into four reserve management zones. Each management zone reflects the nature of use and the important features of distinct areas of the Domain. Each of the management zones has policies to ensure the different areas of the reserve are managed and used appropriately. There are also general policies that apply to the entire Domain. A full-sized map showing each zone is shown in the appendix.

Future development and improvement projects for the Domain have been identified and are illustrated on a map contained in the appendix.

Ecological Zone

The Ecological Zone comprises sections of Lake Rotoroa and its shore where the wildlife and natural vegetation must be managed with minimal disturbance.

Objective

Provide a sustainable level of desirable biodiversity in the indicated sections of Lake Rotoroa and its margins.

Policies

- The Ecological Zone will be managed with minimal disturbance.
- Water sports and casual boating will not be permitted in the Ecological Zone.
- Aquatic vegetation will be retained in these areas as a wildlife habitat.
- Any development will enhance the character, wildlife potential and public appreciation of the natural environment.
- Planting along the lake edge will be in character with the natural setting and should enhance wildlife habitats.
- Small scale artificial wetland areas for stormwater treatment will be investigated for the lake shore as a means of improving water quality.
- The lake's edge will be stabilised as required to prevent bank erosion and improve the water quality and vegetation of lake margins.
 - *Vegetation will be the preferred management option and engineering solutions will be adopted only where planting cannot be carried out.*

Natural Parkland Zone

Objective

Provide informal recreational opportunities in a natural environment and enhance public enjoyment of the lake.

Policies

- Developments within the Natural Parkland Zone will be limited to those providing access and enhance public enjoyment of the natural character of this area.
- Re-vegetation and under planting will be encouraged in the Natural Parkland Zone.
- On larger open lawn areas approval may be granted for events and temporary activities.
- No public vehicle access, leases, or long-term licences will be permitted in this zone.

Management of the reserves

Sport and Events Zone

Objective

Allow Innes Common, the main body of the lake and other parts of the domain to be used for organised sports, casual activities and organised events.

Policies

- Un-leased open space areas within Sport and Events zone may be used as additional car parking for events with Council's approval.
- The former golf area will be retained as an open space. This area will be available for informal leisure and recreation activities, and organised events.
- Area on the lake side of Lake Domain Drive will be permitted as a hot air balloon training and launch site.
 - Hot air balloon use is mainly between October and July. Activities begin at sunrise with inflation and launching taking four hours. Depending on weather, flights may be conducted between two and four hours before sunset.
- The Balloons over Waikato festival has precedence over the area during the second or third week of April depending on the timing of the festival. Innes Common is considered to be the best venue because it is open and is located away from residents.
- Innes Common is available for use by large scale events with Council's approval.
- Craft powered by engines will be prohibited from using the lake. Rescue boats or craft used for research, weed control and lake maintenance will be allowed.
 - Motorised craft are excluded from Lake Rotoroa as they disrupt the peaceful character of the park, discourage wildlife, disturb lake sediments, conflict with other water based activities, and contribute to the propagation of weed.

- Motorised model boats and small, quiet electric powered model water craft will be permitted in defined areas (Paddle Boat Bay, and Radio Controlled Yacht Club area).
- Trailer mounted boats will only be launched from the public ramp at the Hamilton Yacht Club, and will not be moored or beached overnight, except with Council's approval.
- The Sport and Events Zone of the lake will be maintained free of obstacles that could affect the safety or practicability of water sports.
- The operating water level of the lake will be maintained as close as possible to the agreed level of 37.15m, Moturiki datum¹.
 - Lake water level management is important for users of Lake Rotoroa and users of the land surrounding the lake, such as the Gallagher Hockey Centre which maintains artificial turf.
 - In summer the lake loses more water from evaporation than it gains from precipitation and a slow drop in level is normal. The effects of this can be minimised by ensuring the lake is at or even slightly above the agreed optimum operating level in late spring.
- Swimming in the lake is discouraged until such time that water quality of the lake is of a swimmable quality.
- Fishing is discouraged near paths, beaches, and launching ramps.
 - Advice note: The eating of fish caught from the lake is to be cautioned and discouraged due to known arsenic contamination of the lakebed, and uncertainty on whether fish in the lake are safe for human consumption.
- Back-casting from the shore will only be permitted from the central peninsulas.
- Hamilton Yacht Club does not have exclusive rights over use of the lake or launching ramp but, during the regular season, has preferential use.

Lakeside Recreation Zone

Objective

Accommodate a variety of activities and facilities to provide for informal recreation and leisure.

Policies

- Development within the Lakeside Recreation area will be limited to improvements to existing park facilities, and development of park facilities fitting with the character of this zone. Development opportunities for this area will be fitting to the character of this zone.
- The lake edge will be stabilised and will be maintained in a safe manner.
- The former skating rink will be retained as a hard surface for recreation and leisure activities.
- The rose garden will be maintained as a collection of roses.

¹ A mean sea level reference point for water level measurement

Management of the reserves

All zones

This section outlines policies relevant to the entire Domain.

Objective

General development, maintenance and operation of the Domain are in alignment with the Plan's vision, goals and objectives.

Environment and Ecology

Vegetation

The intent of vegetation policies is to develop and manage vegetation at the Domain to strengthen the parkland character or promote revegetation of areas with primarily native plant species. Planting will be established and maintained to create an environment that encourages use and contributes to the biodiversity of the city.

Policies

- New planting and re-vegetation should take into account the different characteristics of the landscapes of the Domain and the aspirations of the Plan to uphold the existing character of the park.
 - *In general, planting within the existing native vegetated areas of the Natural Parkland Zone and the entire Ecological Zone will have a native restoration focus, and planting within the Lakeside Recreation Zone and Sports and Events Zone will be a mix of parkland planting including native and non-native planting.*
- Views of the lake from within the domain will be taken into account when landscape design is carried out.
- Where it is necessary for aquatic vegetation to be removed it will be disposed of appropriately.
 - *There are high arsenic levels in the sediment of the lake bed and potential for aquatic plants to uptake this.*
- In considering any request for the removal or pruning of trees, Council will primarily consider any relevant statutory provisions, secondly, any Council policies and plans regarding the care and maintenance of trees. The protection and enhancement of views from private property will be a minor consideration.
- The Council will consult Hamilton Yacht Club prior to planting any additional trees or planting on Innes Common that could impact on wind quality.

- Maintenance of vegetation will be minimised by species selection and planting design and practice.
- Specialised gardens and features of interest will be maintained to a high standard. Specialised gardens include the rose garden and bedding plants around the Verandah Café. These provide contrast in a setting dominated by ecologically and historically important vegetation.
- Re-vegetation of the lake and its margins will incorporate a wide variety of native species.
- Water lilies will be monitored and their growth will be restricted. If *Nymphaea mexicana* is discovered at Lake Rotorua it will be eradicated.
- Lake macrophytes (large aquatic plants) will be closely monitored and infestations will be removed manually where possible to prevent the lake bed becoming dominated by non-native (exotic) water plants, and avoid disruption of water-based recreation.

Management of the reserves

Water Quality

Policies

- Manage activities at the Domain to achieve the lake water quality targets.
- A comprehensive programme of investigation into lake water quality, identification of measurable targets that achieve the water quality aspirations of this management plan, and the development of a strategy to improve and maintain lake water quality will be undertaken.
- Maintain a water quality monitoring programme to provide data to support evaluations of water quality trends in the lake.
- Manage activities in accordance with any future Lake Management plan and or Integrated Catchment Management plan (ICMP) to meet water quality objectives and requirements.
- No activity will be permitted on or in the vicinity of the lake which could cause a significant loss of water clarity by stirring up sediment or transporting solids into the lake.
 - *Water clarity determines the depth to which plants can grow in the lake because it controls light penetration. Poor water clarity is caused by organic or inorganic solids suspended in the water column, by plankton in the water and by staining of the water (e.g. by tannin from peat or other organic matter).*
- The lake's edge will be stabilised as required to prevent bank erosion to minimise the water quality impact of silt from this source and to enable the establishment and maintenance of desirable marginal plants.
- Areas of aquatic plants too large or too well established for hand weeding will be managed by herbicide application to prevent interference with recreational uses. Herbicides used will be of a type, or will be used in a way, that will not contribute to lake bed contaminants.

Lake Bed Contamination

Policies

- The lake bed will be managed as a contaminated site due to the arsenic levels present.

- As levels of arsenic in the sediment of the bed of Lake Rotoroa exceed the guidelines for protection of sediment-dwelling organisms, it is classed as contaminated land under the Waikato Regional Plan.

Cyanobacteria (Blue-Green algae)

Policies

- Blue-green algae levels will be monitored to detect public risk and identify trends over time, with monitoring frequency increased when blue-green numbers are high.

Fauna

Objective

The Domain provides a habitat for a range of species including birds and fish, the management of these species is critical to ensure a sustainable and desirable level of biodiversity.

Policies

- Pest species will be monitored and controlled as required.
 - *Pest and invasive species can damage the biodiversity of the Lake. Pigeons have been an especially prevalent pest species in recent years and efforts have been made to reduce numbers.*
- Remains of dead fauna will be removed and disposed of appropriately and safely.
 - *Quick removal of deceased fauna is important to prevent the spread of diseases amongst local fauna and reduce the risk of affecting the lake water quality.*
- Encourage native fauna where appropriate, through the provision and protection of desirable habitat.
- Feeding of birdlife with inappropriate food will be discouraged.
 - *Bread is not considered to be suitable food for birdlife, with seeds and grains more appropriate. Options for public education and to make birdseed available at the Domain will be explored.*

2 Secchi Disk Depth is the depth below water at which a standard white disk is visible. It is the usual measure of water clarity

Management of the reserves

Walkways/Cycleways

Policies

- Walkways will be upgraded and maintained in a way that minimises any impact on adjacent residents and existing wildlife habitats, and prevents aggravation of bank instability.
- Walkways and access points will be made accessible where possible for people with disabilities or people who have restricted ability.
- Vehicle and motorcycle access on the lake walkway will be prohibited, except for park and utility maintenance
- Rotoroa Esplanade Walkway (between the children's playground/toilet and the Hamilton Yacht Club) will not be lit at night.
 - *Council will only provide lighting where it wishes to enable night-time use. In the hours of darkness the road network is usually safer for pedestrians than walkways through parks.*
- Cycling is not permitted on Rotoroa Esplanade Walkway (between the children's playground/toilet and the Hamilton Yacht Club).

Interpretation and Signage

Policies

- Permanent signs will be of a standard design and colour consistent with Council's signage guidelines.
- The number of signs in the park will be kept to a minimum but allow for adequate information for park users to enhance their experience, provide direction and regulatory signage.
- Advertising, sponsorship or hoardings that comply with any relevant statutory regulations, will be allowed to be displayed on a park for a maximum time equalling the duration of the approved event or other approved temporary activity.
- Advertising or sponsorship inside buildings is permitted.

Play Equipment and Furniture

Policies

- Play equipment will be provided for different ages and abilities (including those with disabilities).
- Park furniture will be provided in high use areas including playgrounds, along walkways and cycle ways and in areas where people congregate such as Innes Common Dog Exercise Area and the launching ramp at the Hamilton Yacht Club.
 - *Many of the seats located around the Domain have been donated or sponsored by the community. Council will maintain sponsored park furniture for the minimum life of the asset.*
- Furniture such as seating and rubbish bins will be developed in a consistent manner.

Management of the reserves

Car Parking and Traffic Management

Objective

These policies are intended to provide for a safe road network through the Domain and to allow for an acceptable level of parking for the reserve while avoiding loss of open space values.

Policies

- Where car parking facilities additional to those required under Hamilton's District Plan are required to accommodate the park's normal level of use, Council will take into account the need to safeguard both the park's open space values and the safety and efficiency of the roading network as a whole and will provide for such car parking either within park or road boundaries or within both as appropriate to the particular situation.
- Low-impact systems of stormwater management will be considered where appropriate in the design of proposed car park extensions and the development of any new hard surfaces.
- Event organisers will be required to prepare a traffic management plan and/or parking plan for large-scale events.
- Access roads within the Domain will be closed nightly, unless special arrangements are made for specific events or activities.
- Alterations to vehicle access and parking will be carried out with consideration of the aesthetic qualities of the lake and the surrounding reserve.

Leases, licences and permits

Objective

Leases, licences and permits that enhance public use and enjoyment of the Domain without compromising its natural character may be granted to appropriate clubs/groups, organisations and commercial operators.

Policies:

- Council will only grant further leases for recreational or commercial activities that:
 - *are necessary to enable the public to obtain the benefit and enjoyment of the Domain or for the convenience of people using the reserve*
 - *will meet objectives for the reserve where it is not practical for Council to provide the facility*
 - *will be compatible with other park uses and do not impede public access or cause undue maintenance problems*
 - *will not cause inappropriate visual or audible intrusion to the natural park environment, or detract from the conservation values*
 - *will meet a demonstrated demand and do not duplicate other park facilities in the vicinity*
 - *can be accommodated in terms of access, parking, services, support facilities and future expansion.*

- **Sport and Event Zone:** Commercial operators and events may be granted exclusive rights to commercial activity in a defined area.
- **Lakeside Recreation Zone:** Permits may be granted in this zone, provided they do not duplicate existing agreements or conflict with the vision for the Domain. No further permits or use agreements will be granted in the area around the main playground and Verandah Café due to congestion.
- **Natural Park Land Zone:** On some larger lawn areas permits may be granted for events and temporary activities. No leases, long term licenses or concessions will be permitted in this zone.

Action list and timeframes

Action	Short term (1 to 3 years)	Medium term (within the next 10 years)	Long term (beyond 10 years)
Recreation and Leisure			
Work with existing water-based sports groups and key stakeholders on the efficient use of the area around the Hamilton Yacht Club			
Work with water-based groups for the development of a purpose-built water-sports hub on Innes Common			
Playground on Innes Common will be upgraded			
Implement the Pooches in Parks' off-leash dog exercise areas, including fenced area (Innes Common behind the Yacht Club)			
Work with Waikato Hockey to investigate the limited expansion of their artificial turf area and assess impacts on adjacent sports fields including relocation of the football field			
Provide outdoor exercise stations			
Develop new picnic areas and park furniture in high use areas			
New public toilet on Innes Common (near the Western Rail Trail)			
Renewal of the toilet on Innes Common (near the Hamilton Yacht Club/playground)			
Ecology and Environment			
Establish the current state of the lake water quality utilising data from on- going monitoring and existing research			
Identify appropriate lake water quality measures for safe recreational use, and improved ecological health of the lake			
Develop and implement a strategy to improve and maintain the lake's ecological health and lake water quality to achieve the identified measures			
Develop and implement a water quality monitoring programme			
Enhance and stabilise the lake edge and margins by planting species representative of the regions peat lakes and wetlands			
Pest species will be monitored and controlled as required			
History and Culture			
Undertake a heritage and cultural assessment of the Domain and Lake Rotoroa			
Implement interpretative signage and interactive learning options such as outdoor classrooms that tells the story of the Domain in consultation with Tangata Whenua/Mana Whenua and key stakeholders			
Install new public artwork that reflects the history of the Domain			
Partnerships			
Explore external funding and resourcing opportunities for major projects and develop a programme for implementation			
Promote the Domain as a venue for the city's outdoor community events			
Accessible and safe			
Improve lighting on the path between the main entrance (Ruakiwi Road) and exit (Lake Domain Drive)			
Undertake an accessibility audit of the Lake Domain and implement recommended improvements			
Improve pedestrian and cycle connections with: <ul style="list-style-type: none"> • The hospital precinct • Ruakiwi Road • Western Rail Trail 			
Undertake an assessment of car and bus parking provision			

*Please note, some actions run across more than one term

*'Term' references the start finish date of the actions

Appendix

Policy and Planning Framework

A hierarchy of legislation, planning documents and policies set the framework for the Hamilton Lake Domain Management Plan.

Non-legislative documents (such as internal Hamilton City Council policies and plans) that guide the plan are directed by the Local Government Act 2002 and the Resource Management Act 1991. Associated legislation such as the Heritage New Zealand Pouhere Taonga Act 2014 also contributes to the policy framework of the Plan.

The hierarchy of legislation, planning documents and policies that guide the protection, use and development of reserves in Hamilton include the following:

Legislation

- Reserves Act 1977
- Local Government Act 2002
- Resource Management Act 1991
- Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010
- Heritage New Zealand Pouhere Taonga Act 2014

Internal Council Statutory Documents

- 2015-25 Long Term Plan and succeeding documents
- Annual Plan
- District Plan
- Dog Control Bylaw
- Parks, Domains and Reserves Bylaw

Regional Statutory Documents

- Waikato Regional Plan and Waikato Regional Policy Statement

National Strategies and Guidelines

- New Zealand Biodiversity Strategy
- National Guidelines for Crime Prevention through Environmental Design (CPTED)
- Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas
- New Zealand guidelines for cyanobacteria in recreational fresh waters: Interim guidelines

Regional Strategies

- Regional Pest Management strategy

Hamilton City Council Strategies, Plans and Policies

- Hamilton Plan
- Open Spaces Plan
- Playgrounds of the Future
- Biking Plan
- Dog Control Policy
- Pooches in Parks
- Council's Disability Policy
- Community Occupancy Policy

Agreements

- Joint Management Agreement.

Appendix

Legal descriptions

Reserve Name	Lot_No	Legal Description	Area (Ha)	Classification (under reserves act 1977)
Hamilton Lake (Rotoroa)	1	DP 305940	55.2600	Recreation
Lake Domain	1	DPS 91755	.1770	Recreation
Lake Domain		Section 22B Hamilton West	6.4749	Recreation
Lake Domain		Section 15 Hamilton West Town Belt	2.3320	Recreation
Lake Domain		Section 73 Hamilton West Town Belt	.1228	Recreation
Lake Domain		Section 74 Hamilton West Town Belt	10.9100	Recreation
Lake Domain	1	DP 16167	.2797	Recreation
Lake Domain		Section 2 SO 59570	.0867	Recreation
Lake Domain- Walkway	4	DPS 90435	.4342	Recreation
Lake Domain	3	DPS 6853	.0268	Recreation
Lake Domain	4	DPS 16122	.0225	Recreation
Lake Domain	4	DPS 21841	.0070	Recreation
Lake Domain	3	DPS 8411	.0068	Recreation
Lake Domain	8	DPS 7769	.0832	Recreation
Lake Domain	7	DPS 12593	.0230	Recreation
Lake Domain	8	DPS 12593	.0106	Recreation
Lake Domain	5	DPS 3378	.0379	Recreation
Lake Domain	3	DPS 4231	.0192	Recreation
Lake Domain	3	DPS 9577	.0228	Recreation
Lake Domain	3	DPS 17965	.0223	Recreation
Lake Domain	3	DPS 8463	.0200	Recreation
Lake Domain	3	DPS 90435	.0076	Recreation
Lake Domain	2	DPS 44564	.0221	Recreation
Lake Domain	3	DP 34122	.0007	Recreation
Lake Domain	26	DP 22569	.2048	Recreation
Lake Domain	2	DPS 90435	.0273	Recreation
Lake Domain	4	DP 33067	.1112	Recreation

Appendix

Legal descriptions

Reserve Name	Lot_No	Legal Description	Area (Ha)	Classification (under reserves act 1977)
Lake Domain	1	DPS 90435	.0900	Recreation
Lake Domain	3	DP 316094	.0014	Recreation
Lake Domain	4	DP 316094	.0014	Recreation
Innes Common Garden	Sec 1	SO 375056	.0845	Recreation
Innes Common Garden	42	DPS 65653	.1889	Recreation
Innes Common Garden	10	DP 316492	.2149	Recreation
Lake Domain- Walkway	7	DPS 13789	.0559	Local purpose (esplanade)
Lake Domain	4	DPS 50210	.0156	Local purpose (esplanade)
Lake Domain	4	DPS 16122	.0452	Local purpose (esplanade)
Lake Domain	4	DPS 21841	.0223	Local purpose (esplanade)
Lake Domain	3	DPS 8411	.0050	Local purpose (esplanade)
Lake Domain	4	DPS 7769	.0086	Local purpose (esplanade)
Lake Domain	3	DPS 12593	.0209	Local purpose (esplanade)
Lake Domain	5	DPS 12593	.0422	Local purpose (esplanade)
Lake Domain	3	DPS 3378	.0326	Local purpose (esplanade)
Lake Domain	3	DPS 4231	.0152	Local purpose (esplanade)
Lake Domain	3	DPS 9577	.0052	Local purpose (esplanade)
Lake Domain	5	DPS 17965	.0488	Local purpose (esplanade)
Lake Domain	4	DPS 8463	.0211	Local purpose (esplanade)
Lake Domain	4	DPS 90435	.0311	Local purpose (esplanade)
Lake Domain	3	DPS 44564	.0466	Local purpose (esplanade)
Lake Domain	10	DP 34122	.0132	Local purpose (esplanade)
Innes Common		Part Allotment 414 Te Rapa Parish	1.2468	Recreation reserve
Innes Common		Section 1 SO 61561SO 61561	.1422	Recreation reserve
Innes Common	Part 1	DPS 90061	21.4412	Recreation reserve
Innes Common	20	DPS 22654	.5618	Recreation reserve
Innes Common	99	DPS 55058	.2180	Recreation reserve



Existing Features:

1. The Verandah Cafe
2. Lake Domain destination playground
3. Rose garden
4. Park maintenance shed / yard
5. Outdoor performance stage
6. Radio controlled yacht area
7. Cricket wicket
8. Lake outlet
9. Hamilton Racing Pigeon Club building
10. Gallagher Hockey Centre
11. Innes Common sports area
12. Public launching ramp
13. Yacht Club, Sea Scout, Waka Ama & Dragon Boat Area
14. Large event overflow parking area
15. Lake Rotoroa Esplanade Walkway
16. Dog off leash exercise area
17. Hard surface area
18. Western Rail Trail cycleway
19. Toilets
20. Picnic shelter & toilets

Future Development:

- A. Proposed future carpark expansion
- B. Proposed watersports hub
- C. Proposed playground upgrade
- D. Proposed picnic area
- E. Indicative hockey expansion
- F. Relocated football field
- G. Potential reserve access improvements
- H. Future dog off leash exercise area
- I. Proposed bus parking
- J. Proposed walkway lighting along Rotoroa Drive
- K. Proposed exercise stations
- L. Proposed public toilet & rest area
- M. Proposed fencing of existing dog off leash area

