



Sullivan Lake Reserve

MANAGEMENT PLAN

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1 PART ONE: INTRODUCTION

1.1 Purpose of this Management Plan

This management plan is a working document, which sets out the objectives and policies for managing Sullivan Lake Reserve and describes how these will be achieved. It is a reference point for consistent, everyday management and future planning by the Whakatane District Council and others with an interest in the reserve. The Plan will guide day-to-day, as well as long-term management, over the next 10 years.

This Management Plan applies only to the land owned by the Whakatane District Council.

1.2 Plan Evolution

Whakatane District Council prepared and adopted a Reserve Management Plan for Sullivan Lake Reserve in 1992. This plan is a review of the 1992 plan.

Public concern was raised in early 2013 about the management and condition of the lake and the reserve. This concern led to a decision by Council to review the Management Plan under the Reserves Act 1977. Section 41 of the Reserves Act 1977 provides for the preparation and review of Reserve Management Plans. An extract of that section is attached as Appendix One. In keeping with Section 41 (5) Council has gave public notice of its intention to review this plan, sought written suggestions from the public and considered those in the development of this plan.

The Sullivan Lake Care Group was established in 2013 and has also provided community input into this plan.

Upon adoption of this draft plan by Council for public consultation public notice will be given inviting suggestions/objections to the plan over a not less than two month period. The plan will be available to the public and submitters to the plan will have an opportunity to be heard by Council in support of their comments or objections. Changes to the plan will be made and the final plan adopted by Council.

Action	Date
Council decision to publically notify draft management plan	May/June 2015
Public notification of draft management plan (2 month minimum period)	Beginning of July to beginning of September
Submission processing and hearing	September 2015
Redrafting	October 2015
Approval by Council	November 2015
Notification to submitters	November 2015

1.3 Introduction to the Reserve

Sullivan Lake Reserve is located within the urban area of Whakatane commonly referred to as City South. To the west, it borders King Street, to the south Douglas Street and Martin Place and the northern and eastern areas of the reserve border residential properties on Olympic Drive and Lakeview Place. Access to the lake and reserve is gained directly off King Street and Douglas Street. In addition, there are access ways to the reserve from Martin Place, Douglas Street and Olympic Drive.



Aerial Photo Sullivan Lake Reserve Figure 1

The reserve is legally described as being part allotment 11 and 12 Parish of Waimana contained in certificate of Title 481/119 and Title 50D/796 and gazetted as a Recreation Reserve. The total area of the reserve is approximately 5.67 hectares.

1.4 Management Plan Format

This management plan sets out the objectives and policies for the management of Sullivan Lake Reserve. The management plan is divided into the following sections.

Part 1: Introduction

This section briefly introduces the purpose of the plan and the steps that have led to its development.

Part 2: Background and description of the reserves

This describes the park and its use, including physical and natural features, recreational uses and its history.

Part 3: Vision, direction and goals

The vision sets out the overarching purpose of the management plan. The goals are the principles that guide the management of the Sullivan Lake Reserve.

Part 4: General objectives and policies

The general objectives and policies address the issues that affect the reserve.

2 PART TWO: BACKGROUND AND DESCRIPTION OF THE RESERVE

2.1 History of the Reserve

In pre-European times, the present bed of Sullivan Lake was part of the Whakatane River system, carrying a substantial volume of water, especially in times of flood.

At one point, it was an ox-bow lake, formed when the river cut a new channel at a tight bend to the west of the lake.

In earlier times, it was certainly influenced by tidal movements, as evidenced by the grey, estuarine mud revealed by past excavation. The area of the present lake remained a swampy lagoon for many years and, until about 1960, was a part of the late Mr Doug Paterson's farm.

Around that time, the late Sir William Sullivan negotiated to buy the present City South area and a development plan was submitted to the Whakatane Borough Council, providing for 400 building sites as well as a small commercial area (which did not eventuate). It was anticipated that 1200 to 1500 residents would occupy the new subdivision.

As part of the legal requirements for the subdivision, the owners proposed that the reserve land should include a 10 acre (4 hectare) lake to be created by excavating part of the old river course. A scheme plan was submitted in 1960, involving the deepening of the existing lagoon area and the installation of a control weir at the outlet.

In 1963, when the plan for that phase of the subdivision was about to be implemented, the owners, Sir William Sullivan and Richard Martin, asked for and were given an assurance that the proposed lake would not be allowed to become stagnant and that a flow of fresh water would be available at all times.

Since the construction of the Whakatane River stop banks, the lake has acted as a storage area for stormwater during heavy rain events.

2.2 Meteorological Information

The climatic influences on the reserve are similar to those that apply in the wider urban area of Whakatane. The area has a moderate climate, with small temperature ranges. Rainfall is generally around 1300 mm (50 inches) per annum. Winds are predominantly from the north and north-west. The ridge to the east of the reserve provides some shelter from easterly winds.

2.3 Physical Information

While the total area of the reserve is about 5.67 ha, the area of the lake is approximately 2.7 ha. The lake is less than 1.2 metres deep at its deepest point, with an average depth of approximately 600mm. There are two small islands in the main body of the lake planted with shrubs and trees and a third island at the southern end which requires managing.

The lake is the receiving environment for 10 stormwater outlets that drain some 85 hectares of the Whakatane South stormwater catchment. Stormwater runoff into the lake is generated from both suburban and industrial areas, roadside drains and hillside gullies and the Whakatāne escarpment. Water leaves the lake over a spillway weir and through a culvert under King Street. Further downstream, the water flows through a stream in a recreation reserve south towards Arawa Road. The water then gravity-



discharges to the Whakatane River, or is pumped during high river-flow periods.

When necessary (particularly during summer), water extracted from the Whakatane River is pumped into the stormwater system (at the southern end of Te Tahi Street) and enters the lake via a 900mm gravity stormwater pipe at the southern end of the lake. This aids circulation and helps to flush cooler water through the lake.

2.4 Infrastructure Information

Sullivan Lake acts as an intermediary receiving environment for stormwater runoff before it enters the Whakatane River. It provides buffer storage and attenuates peak flow runoff to the St Joseph drain. In addition, the lake acts as a sediment deposition environment. The silt traps along Valley Road are an inherent part of the system and require regular maintenance to reduce the volume of coarse sediment flowing into the lake. Sullivan Lake provides the trap for the fine sediments as these require a large flat area in which to settle. A bund is maintained at the southern end of the lake to aid in the capture of sediment. The silt is more manageable from that location and its removal is currently scheduled on an irregular basis. In addition to stormwater piping infrastructure, the reserve also provides stormwater overland flow relief at its southern end. This is in the form of a shallow swale connected from Douglas Street (near Mary Henry Place). This system allows water to spill into the reserve during intense rainfall events when the piped network is overwhelmed. This is an integral part of the stormwater system and provides flood relief to residential properties in the area. This overland flow path is provided for in the District Plan and delineated on planning maps.



Figure 2: Sullivan Lake - overland flow path

The reserve also supports wastewater infrastructure, with a pump station located at its eastern edge (accessed from Douglas Street). A 300mm gravity main connects into a manhole at the south-western corner of the reserve and then leads under the lake on the southern side of the footbridge.

This new main, together with increased pumping capacity, significantly reduces the likelihood of the wastewater overflows which have occurred in the reserve in the past during severe rainfall events.

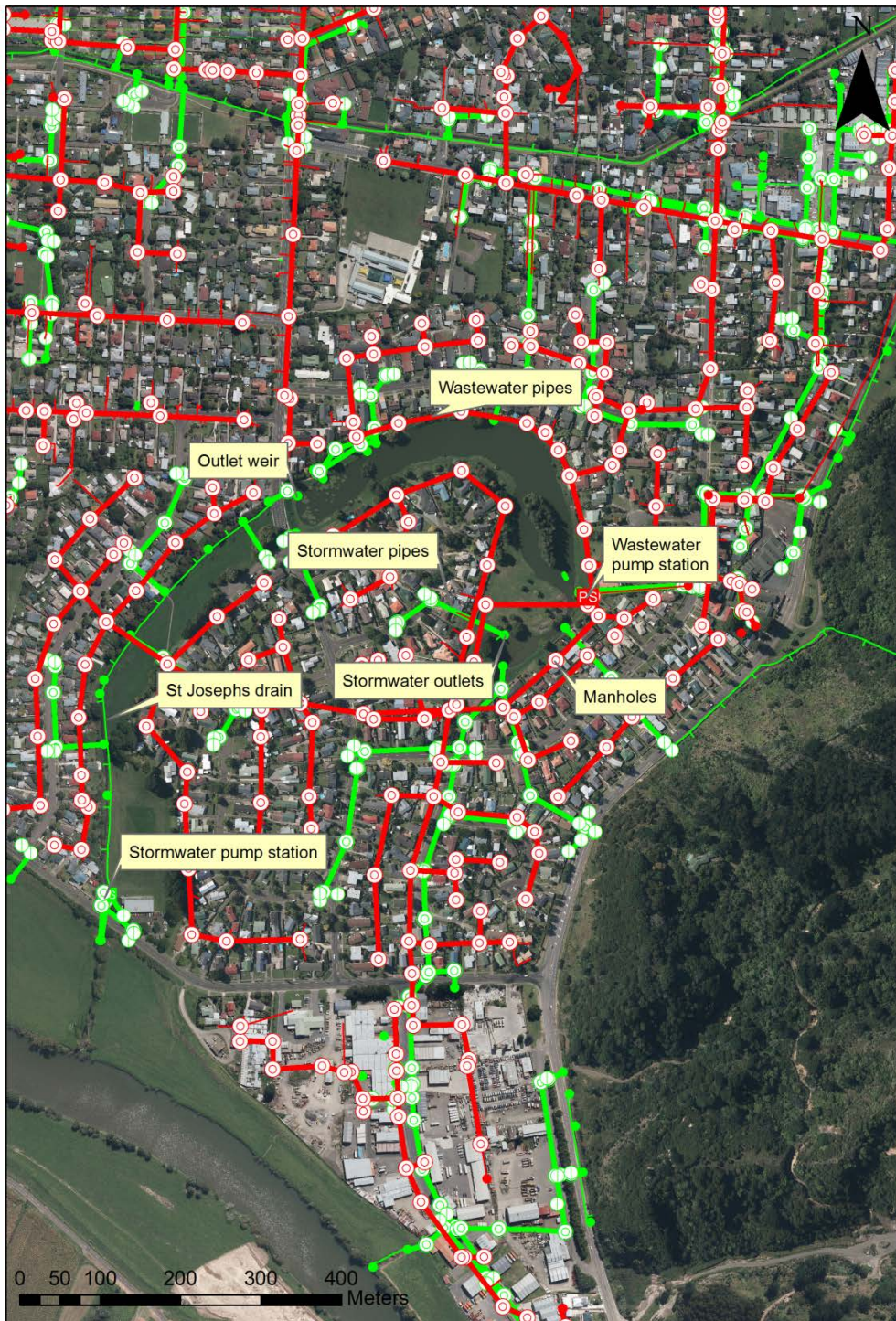


Figure 3: Three waters infrastructure in and around Sullivan Lake Reserve

Red = Sewer, Green = Storm water

There are no plans for any significant upgrades to any 3 Waters infrastructure in the next 10-20 years. There are, however, plans to upgrade the St Joseph's pump station and the open drain that is fed from the Sullivan Lake outflow. At this stage, this upgrade is planned for 2020, but the works involved are largely outside of the reserve boundaries.

2.5 Aquatic Vegetation

In its early days, the former lagoon contained a mixed growth of raupo, various rushes and sedges. This has disappeared, to be replaced by infestations of common lake weeds (notably *Azolla* spp., *Egeria densa*, *Elodea* spp., *Ceratophyllum* spp., *Potamogeton crispus*) and allied species, which were probably introduced on the feet of water fowl. These vigorous weeds have, in the past, combined to take over a substantial part of the lake surface.

In addition, floating sweetgrass (*Glyceria fluitans*) is evident around some of the lake margins and Water Lilies (*Nymphae* sp.) are present at the western end of the lake adjacent to King Street. Both of these species are managed as they have the potential to overrun the lake surface and clog the outlet weir and pumping stations allowing the storm water to exit from the lake.

The Council has carried out spraying programmes for a number of years to control aquatic weed growth and holds resource consent for the use of Reglone. Improvements in weed and water management practices may lead to better options for aquatic plant management in the future.

Aligned to poor water quality is the annual appearance of algal blooms, which can pose serious risk to recreational users. Blue-green alga, or cyanobacteria can release cyano-toxins that cause serious illness in humans and sometimes death in animals. Regional Council now undertakes summer monitoring for algal blooms in our water bodies, as part of their overall recreational water monitoring work.

It has been recommended that permanent signage be erected warning against swimming and fishing in the water. All permanent signage will be clear, so that non-English speaking visitors and residents in our communities understand the warning against swimming or fishing.

Several studies were carried out between 2005 and 2008 to investigate the possibility of improving water quality by reducing the amount of algae, using water treatment products Pond-Treat PT-450 and PAP-5 Melter slag. Improvements in water quality were most readily seen in water clarity and changes in turbidity.

During the summer of 2014/15, a water quality initiative has seen river water pumped continuously to the lake (via the stormwater system). This provides a continuous flow, except in adverse conditions, which helps to keep the lake level higher and the water cooler and fresher, reducing problems with algae blooms and birdlife health issues. This was made possible by pump upgrade work completed in early 2014.

There are a number of alternative ideas being used or trialled that involve floating islands (e.g. floating gardens and barley straw). As part of the ongoing process of improving water quality, these options will be investigated and trialled if research indicates gains in water quality may be achieved.

2.6 Wildlife

There is a considerable population of waterfowl on the lake at all times of the year. Duck numbers vary from a few to more than 100. Shoveller, spoonbill and geese are also occasionally present. Three different species of shags are usually evident, together with pukeko. Also present in growing numbers are Muscovy Ducks, which are the subject of irregular complaints by people that have been “attacked” by them. It is possible in the future that some bird species may need to be managed.



White-faced herons are regular visitors and the rare and handsome white heron (kotuku) is seen occasionally. Bittern are also occasional visitors to the lake.

The lake is a small but valuable urban wildlife habitat. The challenge is to balance the stormwater utility purpose with the environmental habitat and amenity values. One way to achieve the desired balance is to manage the lake edge in a way that allows waterfowl easy access points and suitable nesting and resting locations. Plant and animal pest control operations should be undertaken as required.

Past summers have seen a number of ducks paralysed or die after being exposed to the toxin produced by botulinum bacterium (*Clostridium*). Botulism spores exist in lake and pond sediment and thrive when air temperatures rise and water and oxygen levels drop.

The fish population includes gambusia, a mosquitofish introduced to the Pacific by the Americans during World War II. These small fish probably make up a large portion of the diet of the small shag species. Goldfish (*Carassius*) are also present in large numbers, and are often mistaken for Koi Carp due to their large size. Eels, which obtain access from the river through the outlet weir as elvers, are also present.



Goldfish in Sullivan Lake

2.7 Landscape and Reserve Features

The dominant visual elements in the reserve are the water shoreline, shrubs and trees, islands, and open grassed areas. Each residential dwelling that adjoins the reserve has a unique outlook over the reserve.

Around most of its shoreline, the lake is surrounded by large open grassed areas. The border of the lake alternates between hard edges and gently sloping areas with a few large trees and flax, interspersed with new plantings of native edge species. A variety of large tree species have been planted around the reserve to enhance the amenity values.

The two islands are dominated by well-developed trees and shrubs and provide a valuable habitat for ground nesting water birds.

The reserve provides an open vista for walkers, joggers and other recreational users. The combination of water and wildlife provides a unique environment for users.

2.8 Cultural and Historical Values

Sullivan Lake is an ox bow lake and is the former course of the Whakatāne River. The site was developed in 1967 from a swampy lagoon into a reserve and lake. The Whakatane River is a major

river in the Bay of Plenty. It flows 95 kms north from near the small town of Ruatahuna through Te Urewera National Park, reaching Whakatane.

Te Runanga o Ngāti Awa holds statutory acknowledgements through the Ngāti Awa Claims Settlement act 2005 for the Whakatane River.

While there are a number of archaeological sites recorded on the escarpment to the east of Sullivan Lake Reserve there are no recorded sites on the reserve itself.

The relevant hapū of Ngāti Awa in this area is Ngāti Pūkeko. This area is significant to Ngāti Pūkeko both pre and post-colonial and was a well-known fishing spot. The present Sullivan's Lake area was traditionally referred to as Motueka.

The Sullivan Lake Reserve area has been assessed by Ngāti Awa using the Ngāti Awa GIS Database and Wahi Tapu sites of Ngāti Awa October 1999 report. The relevant Ngāti Awa hapū for this area is Ngāti Pūkeko. The following Wahi Tapu sites of Ngāti Awa are present and provide details of Ngāti Awa's history and the cultural significance of the general area.

WDC/Ngāti Awa Historical Site Entry No 39 Otahuhu

This was a small settlement on the corner of King Street and Alexander Avenue at Kopeopeo where the old Baptist Church is situated. It was a flourishing village of Ngāti Pūkeko and next to the Wainui Te Whara stream. It was close to many pā within the Kopeopeo area often being frequented by people throughout the district.

WDC/Ngāti Awa Historical Site Entry No 62 Otangihaka

A kāinga site near the Arawa Road and King Street intersection on the eastern side of the Whakatane River. This was an important fishing and white baiting spot, a place that was used extensively by the large villages nearby.

WDC/Ngāti Awa Historical Site Entry No 60 Te Toka-a-Houmea

Te Toka-a-Houmea is an isolated rock situated at Valley Road on a Council Reserve to the south of Whakatāne, close to the top entrance of Arawa Road. This rock is significant in that it is where the famous Ngāti Awa tohunga Te Tahī rested, on his journeys up Te Awa o Hinemataroa. In former times he was known as an expert in the ancient knowledge of the arcane and history recalls how Te Tahī planted flax on this massive rock as a symbol of power.

WDC/Ngāti Awa Historical Site Entry No 61 Umupurapura

Directly opposite Te Toka a Houmea on the hill where the ridgeline drops down to the side of Valley Road was the pā Umupurapura. It was a pā of Ngāti Pūkeko, a tribe with ancestral connections to Ngāti Awa. This pā was captured under Apanui Waipapa of the East Coast who had distinguished family connections to Ngāti Pūkeko and Ngāti Awa.

2.9 Reserve Facilities

The southern portion of the reserve contains a children's playground. This includes a play module consisting of flying fox, chain and swing bridge and tunnel and slide, plus a set of stand-alone swings.

There are park seats on the western side of the lake and at the King Street frontage. Litter bins are provided at the entrance to the reserve off King Street, at the pump station off Douglas Street and at the children's playground. A donated picnic table is located near the footbridge at the southern end of the lake.

A concrete walking/cycling path extends approximately 230 metres from King Street along the northern side of the reserve. A footbridge links the southwest side of the lake with the north east side at the narrowest point.

2.10 Reserve Use

Formal and informal paths provide pedestrian access to the lake and around the perimeter, providing a key green space linking King Street with Douglas Street, Olympic Drive and the Eleanor Place Reserve.

People use the lake area for a range of recreational activities, such as picnicking, walking, jogging, dog-walking and cycling. It is common to see families and children's playgroups feeding the ducks at the water's edge, enjoying the open grassed areas or playing in the playground.

2.11 Reserve Development

The development of the reserve has been based around public access and providing improved amenity through vegetation planting and maintenance.

Future development of the reserve will be in the following areas.

1. Extension of formal and informal pathways

Improving opportunities for walking and cycling within our communities is an area that the council fully supports and has integrated into its planning under the Long Term Plan 2015-2025. The Sullivan Lake Reserve is an increasingly popular spot for walkers, joggers and cyclists. These activities support an active and healthy community. An extension of formal and informal pathways is envisaged around the lake and connecting to adjacent streets.

2. Playground upgrades/renewals

The playground area is popular with local children and reserve users. New playground items will be considered as part of renewal and development works.

3. Artwork and sculpture

An opportunity exists for local art and sculpture to be included within the reserve to add interest and vibrancy to the open space experience.

4. Education and interpretation

A number of visitors to Whakatane, along with school/childcare groups, visit the reserve. There is an opportunity to develop educational, historical and interpretation material and signage on the reserve to enhance the reserve experience for users.

5. Park furniture

Park furniture that supports the use of the reserve, such as park seats, litter bins and picnic tables, will be renewed and installed in response to user need.

6. Retaining walls

The natural character of the reserve will be encouraged where possible. This may involve recontouring of the lake edge (where practicable) when retaining walls have reached the end of their useful life. The result will be a more natural edge that also supports bird life and lake habitat.



2.12 Community Engagement

The Sullivan Lake Care Group was established in February 2013, with the purpose of working with the Council and the reserve's 'community of interest'. The group has been involved in and taken ownership of a range of activities in their local reserve, utilising their local knowledge and voluntary labour to get things done quickly and effectively.

The group has provided input into this plan and has also liaised with the Council on work priorities. The Care Group has held working bees to clear rubbish from the lake and remove weeds; and organised two community planting days to plant 1,600 native grasses, flaxes and reeds to enhance the reserve and create a better habitat for birdlife. All of the plants involved were purchased with the support of the Bay of Plenty Regional Council's Environment Enhancement Fund, following a successful application by the Care Group.

Other initiatives include members completing a Spraysafe training course so that they can work with the Council to help contain weed growth. The group is also actively involved with Trident High School students, who are studying the lake as part of their curriculum work.

The group has held autumn and spring barbecues to encourage nearby residents to enjoy the reserve and get involved in its ongoing care.

Other stakeholder groups and individuals also have an interest in the reserve.

2.13 Recreation Reserve - Statutory Framework and Other Obligations

2.13.1 Management and Control of the Reserve

Under S28 of the Reserves Act 1977, the Whakatane District Council has been appointed the administering authority to control and manage the reserve. Under S40, it is charged with the duty of administering, controlling and managing the reserve within the provisions of the Act. This means that it must undertake a range of functions within the terms of its appointment with the means at its disposal to ensure the use, enjoyment, development, maintenance, protection and preservation in accordance with its classification as a recreation reserve.

The Whakatane District Council as the administering authority is required to prepare a management plan for the recreation reserve. This management plan shall:

"...provide for and ensure the use, enjoyment, maintenance, protection and preservation as the case may require, and, to the extent that the administering body's resources permit, the development as appropriate, of the reserve for the purposes for which it is classified and shall incorporate and ensure compliance with the principles set out in Section 17..."

Section 17 of the Act specifies that:

Recreation Reserves are for the purpose of providing areas for recreation and sporting activities and the physical welfare and enjoyment of the public; and for the protection of the natural environment and beauty of the countryside, with emphasis on the retention of open spaces; and on outdoor recreational activities, including recreational tracks in the countryside.

Recreation Reserves are to be managed so that the public shall have freedom of entry and access to the reserve and where scenic, historic, archaeological, biological, geological, or other scientific features or indigenous flora or fauna or wildlife are present on the reserve, those features or that flora or fauna or wildlife shall be managed and protected to the extent compatible with the principal or primary purpose of the reserve.

Those qualities of the reserve which contribute to the pleasantness, harmony, and cohesion of the natural environment and to the better use and enjoyment of the reserve shall be conserved. To the

extent compatible with the principal or primary purpose of the reserve, its value as a soil, water, and forest conservation area shall be maintained.

2.13.2 Local Government Act 2002

The purpose of the Local Government Act 2002 is to provide for democratic and effective local government that recognises the diversity of New Zealand communities. To that end the purpose of the Act (section 3) is to:

- state the purpose of local government;
- provide a framework and powers for local authorities to decide which activities they undertake and the manner in which they will undertake them;
- promote the accountability of local authorities to their communities;
- provide for local authorities to play a broad role in promoting the social, economic, environmental, and cultural well-being of their communities, taking a sustainable development approach.

The Local Government Act provides the framework for the way Council manages the resources that it administers. This management plan provides a mechanism for Council to help fulfil its obligations under the Local Government Act.

2.13.3 District Plan

Under the Whakatane District Plan, the Sullivan Lake Reserve is zoned Reserve. This zone applies to public land used for passive and active recreation and which generally contains open space values. Most activities provided by the Reserves Act and requiring a Resource Consent are discretionary in the zone, unless provided for in a Reserve Management Plan.

2.13.4 Bylaws

Bylaws are special laws created in response to the needs and concerns of our community. They evolve and change over time. Bylaws help the Council make sure the District runs smoothly, according to the priorities and wishes of the community. The following bylaws are relevant to the Sullivan Lake Reserve:

- Part 3 Public Places
- Part 6 Dog Control
- Part 15 Liquor Control
- Part 17 Parks and Reserves

2.13.5 Other Plans

Bay of Plenty Regional Water and Land Plan

Whakatāne District Walking and Cycling Strategy and implementation plan

Whakatane District Council Long Term Plan 2015-2025

3 PART THREE: VISION AND GOALS

3.1 Vision

A key to the preparation of the Plan has been the development of an overall vision for the Reserve into the future. The vision is a snapshot of what is important about the area and provides an overall common direction for the future. Based on community feedback over the past 18 months, the suggested vision is:

An attractive urban reserve that provides an appealing small lake and open green space environment for the Whakatane community to enjoy passive recreation.

The key elements are the lake environment, the open green space and passive recreation.

The vision states an outcome for the 3 key values.

- That the lake environment is essential to the character of the reserve and should be retained in an appealing condition, to support associated wildlife and vegetation
- The green open space is a key landscape value and this should be maintained
- The reserve supports passive recreation in Whakatane and any development of the reserve should be in keeping with this.

3.2 Goals

Five goals have been identified, the achievement of which will contribute to the delivery of the vision. These are:

1. To manage and enhance conservation values.
2. To manage and improve water quality
3. To actively manage vegetation and open space areas
4. To provide for a range of passive recreation activities
5. To plan and manage the effects of utility infrastructure on the reserve.

4 PART 4: GENERAL OBJECTIVES AND POLICIES

4.1 Objectives and Policies

The objectives set out the purposes of the Sullivan Lake Reserve and describe the uses and features considered appropriate for the reserve. The policies are more specific in nature. They show how the management objectives are to be achieved. They have been derived from current Council policy, submissions, consultation with the public and with input from Council staff in specialist fields.

1. Goal - To manage and enhance conservation values

Current situation/Issue	Objectives	Policies
<p>The reserve and the lake are used for a variety of purposes. Any improvements, development or maintenance should protect, support or enhance the conservation values of the reserve to improve the natural habitat and biodiversity values. Existing retaining walls limit wetland riparian plantings.</p>	<p>Ensure new plantings maintain or enhance conservation values of the reserve</p> <p>Ensure lake edge replacement/design maintains or enhances conservation values of the reserve</p> <p>Ensure vegetation maintenance (mowing, spraying, pruning etc.) does not detract from the conservation values of the reserve</p> <p>To ensure that aquatic weed management is undertaken when needed and in keeping with Resource Consent conditions and/or best practice</p>	<p>New or replacement plants will be in keeping with the range of flora, including natives and exotic species with particular emphasis on:</p> <ul style="list-style-type: none"> • developing a semi-natural wetland ecology around the lake margins • maintaining a selection of large amenity trees <p>Hard edging structures will not be developed/installed where they don't currently exist Any replacement of hard edge structures will consider the option of a banked natural edge to facilitate a natural lake environment to support wetland ecology</p> <p>Vegetation maintenance shall be in keeping with council contract standards (mowing, edging and spraying)</p> <p>A consent for the chemical treatment of aquatic weed will be maintained To consider alternative aquatic weed control systems resulting in a favourable environmental assessment</p>

Current situation/Issue	Objectives	Policies
	<p>To ensure sufficient control and management of animal and invasive plant species</p> <p>To enhance, encourage and support the existing habitat values of the reserve</p>	<p>To monitor the number of species and populations of individual species in the reserve and where appropriate, introduce control measures. Note that this could include species removal or control of species populations</p> <p>Undertake regular maintenance of lake edge and island plantings to ensure suitable habitat for resident birds and fish</p>
<p>There are a number of residents and community groups and individuals who have an interest in the management of the Reserve</p>	<p>To provide opportunities for community groups and individuals to be involved in the management of the reserve.</p>	<p>Council staff will liaise with the Sullivan Lake Reserve Care Group and other key stakeholders with regard to major physical works, renewals or planting.</p> <p>The input of the Sullivan Lake Reserve Care Group and other key stakeholders will be sought on any improvement plans for the reserve</p> <p>The Council will support and encourage work undertaken by community groups, schools and interested stakeholders for the benefit of the reserve</p>

4.2 Actions - To manage and enhance conservation values

Action	Timing
Continue a programme of replacement of amenity trees and wetland plant species as lake margins are revamped	Ongoing
Continue a programme of renewal of hard edging where banked natural edging is not practical	Ongoing
Continue a programme/contract of vegetation maintenance and manage within performance criteria	Ongoing
Maintain resource consent for chemical treatment of aquatic weed	Ongoing
Monitor animal and plant species on the reserve and control as required	Ongoing

Investigate alternative aquatic weed control methods and report through the Projects and Services Committee for Council consideration	2015/16
Establish a programme of regular and ongoing meetings with the Sullivan Lake Care Group and other interested stakeholders	2015/16

2. Goal - To manage and improve water quality

Current situation/Issue	Objectives	Policies
<p>Sullivan Lake is a fundamental part of the City South stormwater catchment. Stormwater from the catchment is directed to Sullivan Lake before flowing to the Whakatāne River. At present there is little or no routine monitoring of pollutants in the stormwater discharge.</p> <p>During times of low rainfall and drought, the amount of fresh water flowing to the lake is limited and impacts on the overall lake water quality. Additional water is pumped into the lake from the Whakatane River during times of low or no natural flow.</p> <p>The water temperature and organic material also impact on water quality.</p>	<p>To continue the introduction of water into Sullivan Lake to support improved water quality.</p> <p>To maintain water quality at an appropriate level to support wildlife</p> <p>To maintain the water quality of the lake at a level that enhances the use of the reserve</p>	<p>To ensure fresh water is introduced to the lake, either through stormwater, or transfer from the river as required, to minimise summer water temperatures</p> <p>To monitor key water parameters at least quarterly, in conjunction with the BOP Regional Council</p> <p>To monitor and control the growth of aquatic weeds.</p> <p>To consider alternative methods of improving water quality e.g., floating wetlands, dedicated pumping system, aeration.</p> <p>To ensure infrastructure operations and maintenance programmes consider water quality implications for Sullivan Lake.</p> <p>To complete a comprehensive stormwater consent for the Whakatane catchment.</p> <p>To implement required works to meet the conditions of a comprehensive stormwater consent.</p>

Current situation/Issue	Objectives	Policies
		To implement a stormwater bylaw to control and manage stormwater discharge into Sullivan Lake.

2.1 Actions - To manage and improve water quality

Action	Timing
To introduce fresh water from the Whakatāne River to Sullivan Lake during the months of October through to March as necessary	Annually
To collate key water parameters	Quarterly
To investigate private stormwater outlets currently flowing into Sullivan Lake and investigate options for removal	2015/17
Investigate alternative methods for improving water quality e.g. floating wetlands, aeration etc. and report through the Projects and Services Committee for Council consideration	2016/17
Apply for a comprehensive stormwater catchment consent for Whakatane	2016/17
Undertake required works in the Sullivan Lake Reserve Catchment area to meet conditions of a comprehensive stormwater catchment consent	2016/18
Implement a stormwater bylaw	2016/18

3. Goal - To actively manage vegetation and open space areas

Current situation/Issue	Objectives	Policies
<p>Council operations staff are responsible for the delivery of services to ensure reserve, structures and vegetation are well maintained</p> <p>Council has a number of contracts that deliver supporting operational services for the reserve</p>	<p>To ensure that trees and vegetation on the reserve are well maintained</p> <p>To ensure that structures and park furniture on the reserve are well maintained and renewed</p> <p>To ensure that the reserve is maintained in a safe and tidy condition</p> <p>To ensure that the use of the reserve is in keeping with the vision for the park</p>	<p>Vegetation maintenance shall be in keeping with council contract standards (mowing, edging and spraying)</p> <p>Trees will be well maintained to ensure the safety of reserve users.</p> <p>Any damage to structures on the reserve will be repaired in keeping with Council levels of service targets</p> <p>Structures (including playgrounds) on the reserve will be checked for safety in keeping Council levels of service targets</p> <p>Litter and rubbish removal services shall be maintained for the entire reserve and lake edge</p> <p>CPTED guidelines will be applied to the development and maintenance of the park</p> <p>Council’s dog control bylaws will be enforced on the reserve</p> <p>Only authorised vehicles will be permitted on the reserve.</p>

Current situation/Issue	Objectives	Policies
<p>Sustainability is the wise use and management of resources. Sustainable practices will be incorporated into the management of existing structures and any future improvements on the reserve</p>	<p>To reduce the environmental impact of Council operations in our reserves</p>	<p>Structure design and management of green areas should take opportunities to reduce water and energy use</p> <p>Where practical and workable, hard surfaces should be permeable to enable storm water absorption to reduce run-off</p> <p>Opportunities should be taken to reduce the waste generated by the reserve through waste minimisation and recycling initiatives</p>

3.1 Actions - To manage vegetation and open space areas

Action	Timing
Continue a programme/contract of vegetation maintenance and manage within performance criteria	Ongoing
Maintain Council bylaws and a programme of review of bylaws for public spaces and reserves	Ongoing
Maintain a waste collection service/contact for the Sullivan Lake Reserve	Ongoing
Maintain a programme of structure audits for Sullivan Lake Reserve	Ongoing
Adopt and maintain a Council Waste Minimisation Plan	Ongoing
Review the Whakatāne urban tree management strategy	2015/17

4. Goal - To provide for a range of passive recreation activities

Current situation/Issue	Objectives	Policies
<p>The reserve is currently used for a range of recreation activities, these should continue to be supported (E.g. walking, cycling picnicking, children’s play, informal sports, education, family and group gatherings) Users of the reserve should feel the area is safe for passive recreational purposes The provision of reserves supports a healthy and active community</p>	<p>To limit the adverse effects of vehicles on the use of the reserve</p> <p>To manage public access to encourage walking and cycling To provide for improvements and facilities that support and encourage passive recreational opportunities on the reserve</p> <p>Informal use of the reserve by the community will be supported and encouraged</p> <p>To encourage the acknowledgement of cultural values, stories and history associated with the reserve</p>	<p>Only authorised vehicles will be permitted on the reserve</p> <p>Primary access to the reserve shall be pedestrian and cycling access</p> <p>Improvements, upgrades or new development on the reserve will be in keeping with the reserve use for passive recreation</p> <p>To provide for children’s play activities on the reserve</p> <p>This public reserve will be a smoke free environment</p> <p>The park will be available for educational and passive recreational use by the public and community groups. Commercial activities, including circuses, trade exhibitions, and other commercial activities will not be permitted on the reserve Appropriate signage to direct, inform and educate users will be provided</p> <p>Culture and heritage information relating to the reserve will be provided to increase public awareness</p>

4.1 Actions - To for a range of passive recreation activities

Action	Timing
Provide for the maintenance and renewal of playground and other recreation assets	Ongoing
Maintain a programme of structure audits for Sullivan Lake Reserve	Ongoing
Develop a programme of interpretation information and signage rationalisation for Sullivan Lake Reserve	2015/2018
Implement Council's walking and cycling plan	2015/2018

5. Goal - To plan and manage the effects of utility infrastructure on the reserve

Current situation/Issue	Objectives	Policies
<p>A large part of the reserve is relatively low-lying and prone to flooding during extreme weather events. There is a history of these events in Whakatāne, which can impact on the use of the reserve and the condition of the lake</p> <p>Public utility network services, such as water, electricity, drainage, sewerage and telecommunications, may be required to be located within the reserve to service internal activities or to support infrastructure in the surrounding residential area. The reserve provides a logical option for such services, but they should not compromise the use of the property as a recreation reserve</p> <p>Due to the lake being a stormwater retention area there is ongoing deposition of silt in the lake</p>	<p>To ensure that facilities are designed to be resilient when flooding occurs</p> <p>To ensure floodwaters are able to dissipate following flooding minimising the impact</p> <p>To ensure that the reserve is maintained to maximise stormwater storage throughout periods of high rainfall</p> <p>To ensure that any necessary network and infrastructure services are developed and maintained in an appropriate manner within the reserve</p> <p>To minimise the visual and physical impact of infrastructure services equipment and operations on the reserve</p> <p>To monitor the impact of silt on the lake</p> <p>To manage the level of silt accumulation in the lake</p>	<p>Facilities will be located and designed to preserve the storage volume of flood water in the reserve.</p> <p>Landscaped areas will be designed to allow movement of floodwaters over and through the reserve.</p> <p>Utility services necessary for the servicing of the Whakatane town shall be permitted, provided they are carried out in a way which minimises their visual and physical impact</p> <p>All new utility services shall be placed underground unless exceptional circumstances make it impractical to do so</p> <p>Underground utility services shall be carefully sited, having regard to existing features including trees, waterways and paved surfaces Access to or maintenance of utility services should not unduly disrupt reserve use and maintenance</p> <p>To monitor the levels of sedimentation through bathymetric survey.</p> <p>Council will continue a programme of silt removal at the southern end of the lake</p>

Current situation/Issue	Objectives	Policies
		<p>Investigate options to restrict sediment deposition within the lake e.g. silt curtain</p> <p>Reduce sediment flows into the lake from contributing catchments</p>

5.1 Actions - To plan and manage the effects of utility infrastructure on the reserve

Action	Timing
To undertake bathymetric surveys of the Sullivan Lake bed to monitor sedimentation	2015/16 and then 3 yearly
To maintain a system of silt removal at the southern end of the lake	Ongoing
To undertake investigations into a programme of silt removal and report back through the Projects and Services Committee for Council consideration	2015/16
To investigate options to restrict sediment deposition into the lake (e.g. silt curtain) and report back through the Projects and Services Committee for Council consideration	2015/16

5 APPENDIX ONE

Extract from the Reserves Act 1977

Sec 41 Management plans

(1)The administering body shall, within 5 years after the date of its appointment or within 5 years after the commencement of this Act, whichever is the later, prepare and submit to the Minister for his or her approval a management plan for the reserve under its control, management, or administration.

(2)The Minister may extend the time within which an administering body is required to submit its management plan to him or her for approval, where he or she is satisfied with the progress the administering body has made with the preparation of its management plan.

(3)The management plan shall provide for and ensure the use, enjoyment, maintenance, protection, and preservation, as the case may require, and, to the extent that the administering body's resources permit, the development, as appropriate, of the reserve for the purposes for which it is classified, and shall incorporate and ensure compliance with the principles set out in section 17, section 18, section 19, section 20, section 21, section 22, or section 23, as the case may be, for a reserve of that classification.

(4)The administering body of any reserve shall keep its management plan under continuous review, so that, subject to subsection (3), the plan is adapted to changing circumstances or in accordance with increased knowledge; and the Minister may from time to time require the administering body to review its management plan, whether or not the plan requires the approval of the Minister under this section.

(5)Before preparing a management plan for any 1 or more reserves under its control, the administering body shall—

(a) give public notice of its intention to do so; and

(b) in that notice, invite persons and organisations interested to send to the administering body at its office written suggestions on the proposed plan within a time specified in the notice; and

(c) in preparing that management plan, give full consideration to any such comments received.

(5A)Nothing in subsection (5) shall apply in any case where the administering body has, by resolution, determined that written suggestions on the proposed plan would not materially assist in its preparation.

(6)Every management plan shall be prepared by the administering body in draft form in the first place, and the administering body shall—

(a) give public notice complying with section 119 stating that the draft plan is available for inspection at a place and at times specified in the notice, and calling upon persons or organisations interested to lodge with the administering body written objections to or suggestions on the draft plan before a specified date, being not less than 2 months after the date of publication of the notice; and

(aa) on giving notice in accordance with paragraph (a), send a copy of the draft plan to the Commissioner; and

(b) give notice in writing, as far as practicable, to all persons and organisations who or which made suggestions to the administering body under subsection (5) stating that the draft plan has been prepared and is available for inspection at the place and during the times specified

in the notice, and requiring any such person or organisation who or which desires to object to or comment on the draft plan to lodge with the administering body a written objection or written comments before a specified date, being not less than 2 months after the date of giving of the notice; and

(c) make the draft management plan available for inspection, free of charge, to all interested persons during ordinary office hours at the office of the administering body; and

(d) before approving the management plan, or, as the case may require, recommending the management plan to the Minister for his or her approval, give every person or organisation who or which, in lodging any objection or making any comments under paragraph (a) or paragraph (b), asked to be heard in support of his or her or its objection or comments, a reasonable opportunity of appearing before the administering body or a committee thereof or a person nominated by the administering body in support of his or her or its objection or comments; and

(e) where the management plan requires the approval of the Minister, attach to the plan submitted to him or her for approval a summary of the objections and comments received and a statement as to the extent to which they have been allowed or accepted or disallowed or not accepted.

(7) Where under subsection (4) the Minister requires an administering body to review its management plan, he or she may direct that the administering body follow the procedure specified in subsections (5) and (6), and the administering body shall follow that procedure accordingly as if the review were the preparation of a management plan.

(8) Where in terms of its responsibilities under this Act the administering body of any reserve resolves to undertake a comprehensive review of its management plan, the administering body shall follow the procedure specified in subsections (5) and (6) as if the review were the preparation of a management plan.

(9) Where under subsection (4) the administering body considers any change not involving a comprehensive review to its management plan is required, it may, if it thinks fit, follow the procedure specified in subsections (5) and (6).

(10) The administering body or committee or person before which or whom any person appears at any hearing in support of any objection or comments shall determine its or his or her own procedure at the hearing.

(11) The administering body shall in the exercise of its functions comply with the management plan for the reserve and any amendment thereof, being, in the case of a plan or an amendment that requires the approval of the Minister, a plan or an amendment so approved.

(12) No approval by the Minister for the purposes of this section shall operate as an approval or a consent for any other purpose of this Act.

(13) Where a recreation reserve is vested in a local authority or a local authority is appointed to control and manage a recreation reserve, the local authority shall not be required to submit its management plan to the Minister for approval, unless the terms of vesting or of appointment to control and manage the reserve so require:

provided that the local authority shall make its management plan available for inspection by or on behalf of the Minister whenever so required.

(14) The Minister may, by notice to them, require the administering bodies of reserves in any locality to consult with each other in the preparation of their management plans so that the management plans are integrated for the benefit of the locality.

(15) Where under this Act the approval or consent of the Minister is required to any action by an administering body, the Minister may, at his or her discretion, refuse to grant his or her approval or consent unless and until the administering body has submitted its management plan for approval (whether or not the plan otherwise requires the approval of the Minister under this section) and the plan has been approved by him or her.

(16) This section shall not apply in respect of any government purpose reserve or local purpose reserve unless the reserve is vested in an administering body or an administering body is appointed to control and manage the reserve, and the Minister in the notice of vesting or notice to control and manage directs that this section is to apply in respect of the reserve.

6 APPENDIX TWO

Extract from the Reserves Act 1977

The Reserves Act 1977 classifies all public reserves in accordance with their primary purpose. Seven classifications are provided for under Sections 17-23 of the Act.

Under Section 17 of the Reserves Act, Recreation reserves have the primary purpose of:

"...providing areas for the recreation and sporting activities and physical welfare and enjoyment of the public, and for the protection of the natural environment and beauty of the countryside, with emphasis on the retention of open spaces and on outdoor recreational activities, including recreational tracks in the countryside."

The Act also provides for a number of other important management considerations under S17 (2). These are as follows:

- (a) The public shall have freedom of entry and access to the reserve, subject to the specific powers conferred on the administering body by Sections 53 and 54 of this Act, to any bylaws under this Act applying to the reserve, and to such conditions and restrictions as the administering body considers to be necessary for the protection and general well-being of the reserve and for the protection and control of the public using it.*
- (b) Where scenic, historic, archaeological, biological, geological, or other scientific features or indigenous flora or fauna or wildlife are present on the reserve, those features or that flora or fauna or wildlife shall be managed and protected to the extent compatible with the principal or primary purpose of the reserve,*

Provided that nothing in this subsection shall authorise the doing of anything with respect to fauna that would contravene any provision of the Wildlife Act 1953 or any Regulations or Proclamation or Notification under that Act, or the doing of anything with respect to archaeological features in any reserve that would contravene any provision of the Historic Places Act 1954:

- (c) Those qualities of the reserve which contribute to the pleasantness, harmony, and cohesion of the natural environment and to the better use and enjoyment of the reserve shall be conserved:*
- (d) To the extent compatible with the principal or primary purpose of the reserve, its value as a soil, water and forest conservation area shall be maintained.*

7 APPENDIX THREE

References

Whakatāne District Council (1992), Sullivan Lake Management Plan, October 1992

Scholes P. (2005) Water Treatment Trial, Sullivan Lake 2005, Environment Bay of Plenty

Whakatāne District Council (2010) Operative Whakatāne District Plan

Whakatāne District Council (2013) Proposed Whakatāne District Plan