

# Puketirini

MANAGEMENT PLAN

2009





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# 1.0 INTRODUCTION

## 1.1 History of Puketirini

“Puketirini” is the original name of the area of land which the park is situated within. The name “Puketirini” means “the hills and streams”, “Puke” meaning “hills” and “Tirini” meaning “streams”.

The area comprising Puketirini was predominantly in private ownership prior to being obtained by the Crown for coal mining operations and state housing purposes between 1940 and 1980. The original lake, Lake Rotoiti, became Crown land in 1865, and was earmarked for coal mining in 1929. Lake Rotoiti was eventually considered dry land in 1986, due to it being drained for mining.

The site was first mined by State Coal Mines and then by Coal Corporation. The area comprising Puketirini was vested and transferred from Crown ownership to Coal Corporation ownership in 1986. Coal Corporation was renamed Solid Energy New Zealand Limited (Solid Energy) in 1996.

Mining ended at Weavers Opencast Mine in December 1993, after which Solid Energy began a project to rehabilitate the disused mine into a lake. This is the first New Zealand coal pit of its size to be transformed into a lake (Balvert, 2006). In 2003 Puketirini was opened for off-water recreational activities.

In December 2006 Waikato District Council (Council) acquired from Solid Energy approximately 104 hectares (refer to Figure 1) for a public work (for amenity purposes) under the Public Works Act 1981. This parcel of land includes a lake that has an approximate depth of 64 metres, with a surface area of approximately 54 hectares (Balvert, 2006).

A more detailed historical timeline can be found in Appendix I.

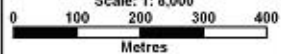




Legend

-  Puketitini
-  Property Boundaries

Scale: 1: 8,000



## 1.2 Purpose of this document

This document sets out the future development, management and use of Puketirini.

## 1.3 Legislative and Policy Planning Context

There are several legislative and policy planning documents that affect the development, management and use of Puketirini. Waikato District Council obtained Puketirini under the Public Works Act 1981; however, a reserve management plan process has been followed for the development of this plan. Puketirini must also follow relevant Council planning documents and policy, as well as other governmental body policies as necessary, such as Waikato Regional Council's Navigation Safety Bylaw.

### 1.3.1 Public Works Act 1981

Puketirini was acquired by Waikato District Council from Solid Energy New Zealand Limited under the Public Works Act 1981 for amenity purposes.

### 1.3.2 Reserves Act 1977

Although Puketirini is not administered under the Reserves Act 1977, a Reserves Act management plan process has been followed as this is considered a sound approach to developing a management plan for this area.

A reserve management plan provides guidance for the future development, management, and use of a reserve (or reserves). This management plan will be reviewed from time to time.

### 1.3.3 Resource Management Act 1991

The purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources. The Resource Management Act 1991 provides regulatory mechanisms that have an impact on type and effect of permitted behaviour at Puketirini.

Waikato District Council's District Plan has been developed in accordance with the Resource Management Act 1991. The District Plan provides rules (e.g. noise control) that will affect the use and management of Puketirini.

### 1.3.4 Long-Term Council Community Plan

The Waikato District Long Term Council Community Plan (LTCCP) is a long-term community-planning document that provides a road map for the future direction of the Waikato District. It is a ten-year plan and is reviewed every three years.

The LTCCP identifies Council's overall budget, which is decided upon through consideration of all Council's functions. Funding decisions relating to Puketirini will be made within this broader context.

### 1.3.5 Reserves and Recreation Strategy

Waikato District Council's Reserves and Recreation Strategy defines Council's function regarding the provision of recreational facilities including the purchase, development and sale of reserves. The aim of this strategy is to develop a framework for the provision of facilities that is consistent and systematic. This framework has been developed to ensure communities receive maximum benefit from Council expenditure.

This strategy sets out objectives and policies that identify the principles and process for decision-making related to reserve land.

## 1.3.6 Bylaws

There are existing bylaws that apply to the use of Council land and may impact on user behaviour at Puketirini. Bylaws applying to Puketirini include the Dog Control Bylaw 2007 and the Parking, Traffic Control and the Public Places Bylaw 2007.

Lake Puketirini is temporarily exempt from S1.22.2 (c) of the Waikato Regional Council's Navigation Safety Bylaw 2006. This has reduced the distance that any vessel exceeding five knots must be from a craft flying a divers flag to 50 metres. The Navigation Safety Bylaw identifies safe practices when using navigable waterways.

## 1.3.7 Deed of Settlement for the Waikato River

In August 2008 Waikato-Tainui and the Crown signed a Deed of Settlement for the Waikato River, which sought to address Crown confiscation of land (Raupatu) during the 1860s, which denied Waikato-Tainui of their rights and interests in the Waikato River. Waikato-Tainui's definition of the Waikato River applies to Puketirini, being that the Waikato River extends from the Huka Falls to the mouth, and includes its waters, banks and beds (and all minerals under them) and its streams, waterways, tributaries, lakes, aquatic fisheries, vegetation, floodplains, and wetlands, as well as its metaphysical being.

The purpose of this agreement is to recognise the particular significance of the Waikato River to Waikato-Tainui, and to formalise the commitment of both parties in pursuing a new era of co-management in relation to the management of the Waikato River.

The overarching purpose of the settlement is to restore and protect the health and wellbeing of the Waikato River for future generations.

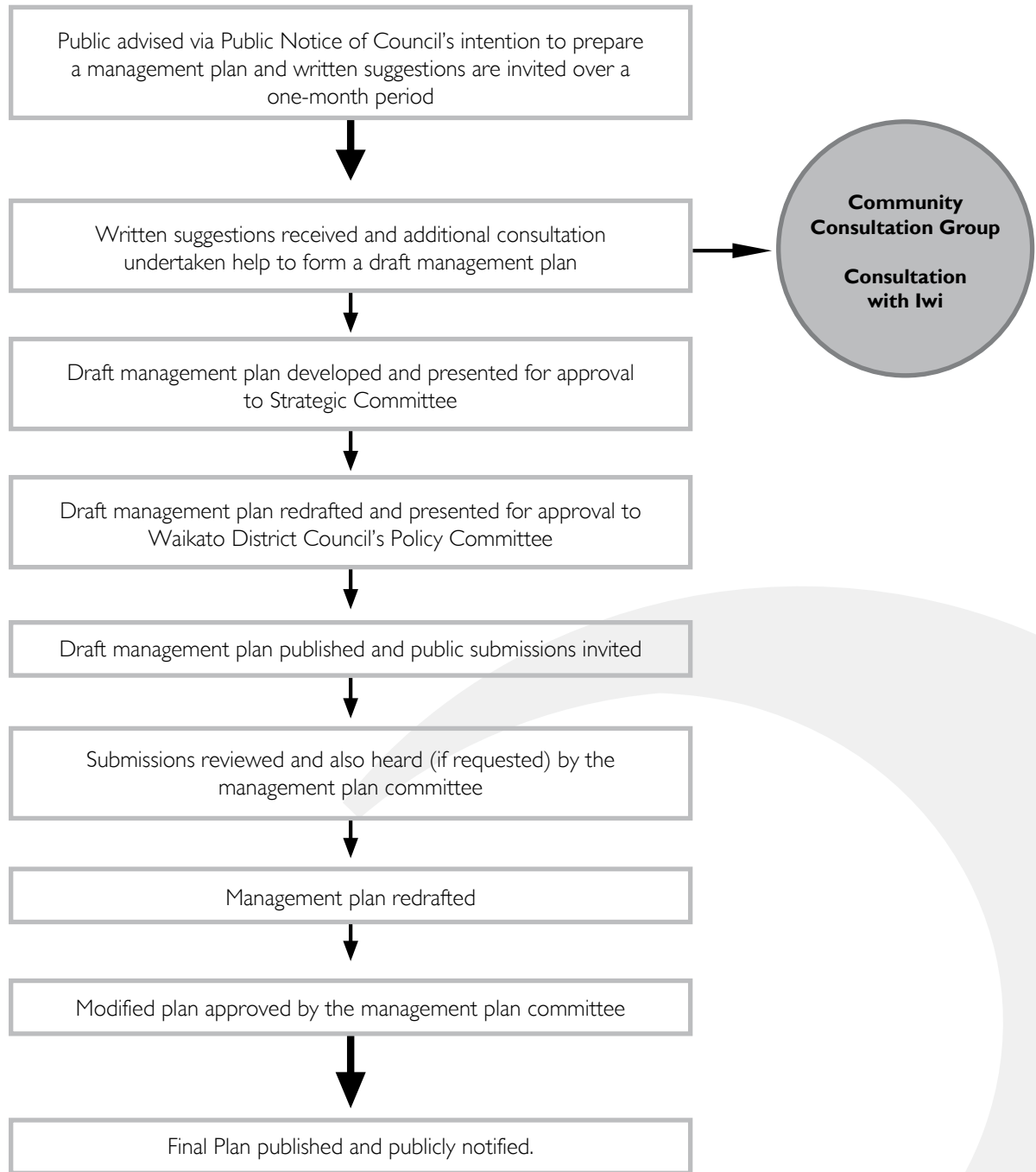
The Deed of Settlement provides for the establishment of the Guardians of the Waikato River, which is responsible to promote, and work to achieve the overarching purpose of the settlement. The Guardians will also promote, co-ordinate, facilitate and supervise the implementation of the vision and strategy. The vision and strategy was developed by the Guardians Establishment Committee who may hold office until the Guardians proper have been established. The Guardians will provide for a whole of the river approach and will be governed by Iwi of the Waikato River and an equal number of Crown representatives.

A Waikato River Statutory Board will be developed to assist in the on-going management of the Waikato River, and ensure future river management activities align with the vision and strategy for the Waikato River. The statutory board is Waikato-Tainui's expression of its mana whakahaere (rights, authority and control) and will be responsible for its traditions between Karapiro and the Mouth of the Waikato River.

A Statutory Board Establishment Committee will be established to examine territorial authority roles and responsibilities that may be transferred to the Waikato River Statutory Board or the Waikato Raupatu River Trust.

# 2.0 MANAGEMENT PLAN PROCESS

The diagram below depicts the Puketirini management plan process:





# 3.0 DESCRIPTION OF PUKETIRINI

## 3.1 Current uses

Puketirini is utilised by the public regularly for off-water recreational activities, such as walking, running, and cycling. A significant number of community activities have also taken place at this site.

Lake Puketirini was opened for on-water recreational activities between March and May 2007. Lake access was granted by way of a key system to control user access to the lake. The purpose of this trial was to determine what issues may occur when allowing recreational activities on the lake. Lake Puketirini has been re-opened for public use in 2007/08 and 2008/09 between November and May, re-utilising a key system.

The New Zealand School of Commercial Diver Training regularly uses the lake. It is considered an ideal location for diver training due to the lake's depth and water quality. The diving school has a commercial agreement with Council.

Part of Puketirini is leased to Wel Networks Limited for substation operations located within the park boundary.

The Waikato Coalfields Museum has placed the Huntly Railway Station building at the Puketirini as part of plans to relocate Waikato Coalfields Museum to the park.

## 3.2 Lake water quality

Within the Waikato District, the lake is unique due to its high water quality. Monitoring at the lake and western drain has been undertaken on a quarterly basis since 1996. The pH level within the drain has decreased approximately one unit between 1996 and 2007.

The extreme depth of the lake compared to its small area means mixing of the water column is poor. As a result the waters below 20 metres or so may be semi-permanently devoid of dissolved oxygen. Fish and other organisms are unlikely to be present in oxygen depleted waters, and there is a risk of contaminants being released from the bottom sediments into the overlying water. The lake is probably still coming to equilibrium (i.e. "settling down"). Recent research suggest the lake's water quality may decline somewhat as it approaches equilibrium.

To provide a comparison of water quality between Lake Puketirini and other lakes within the Waikato region, Lake Puketirini water quality is better than that at Lake Waahi, but is of lower quality than Lake Taupo. Lake Puketirini contains higher concentrations of phosphorus and algae, and the waters are less clear. It is classified as "mesotrophic"<sup>1</sup> (Balvert, 2006).

The following table provides annual average water quality in Lake Taupo, Lake Puketirini, and Lake Waahi:

Table 1: Total phosphorous, chlorophyll a and secchi depth within Lake Taupo, Lake Puketirini, and Lake Waahi

	Lake <sup>2</sup> Taupo	Lake Puketirini	Lake <sup>3</sup> Waahi
Total phosphorus (mg/m <sup>3</sup> )	6	12	80
Chlorophyll a (mg/m <sup>3</sup> )	1	3.5	74
Secchi disc depth (m)	15	4	0.4

<sup>1</sup> A mesotrophic lake contains a moderate amount of nutrients.

### 3.3 Management of Park

A Strategic Committee has been established to provide general oversight, assist the development of a management plan, and deal with strategic issues related to the park.

### 3.4 Waikato Coalfields Museum

Puketirini is the proposed site for the new Waikato Coalfields Museum. The museum will be located at the Eastern end of the park, close to the main entrance. The museum complex will consist of a main building and several auxiliary buildings. Landscaping will be used to integrate the museum development into the rest of the park.

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*2 Lake Taupo is oligotrophic lake. An oligotrophic lake contains low levels of nutrients and algae. Lake Taupo data obtained from Environment Waikato database (2008).*

*3 Lake Waahi is a hypertrophic lake. A hypertrophic lake contains a very high level of nutrients, and usually has low water clarity and intense algal blooms. Lake Waihi data obtained from Environment Waikato database (2008).*

## 4.0 ISSUES

Several issues were identified as needing to be addressed through management plan objectives and policies for Puketirini:

### 4.1 Lake water quality

Ensuring lake water remains of high quality is of paramount importance and requires limiting the level of nutrients flowing into the lake. Nutrient inflows, particularly those due to non-source point run-off from land use within the lake's catchment area, need to be minimised. A high nutrient level will increase the level of algae within the lake, potentially decreasing the suitability of the lake for contact recreational activities.

Pest fish, such as koi carp (*Cyprinus carpio*), are already within the lake. Koi carp were originally introduced into New Zealand as an ornamental fish; however, have become a significant pest within many New Zealand lakes. Koi carp stir up lake sediment particles, due to their feeding habits, destroying lake vegetation and releasing nutrients into the water. Koi carp, and other pest fish, are identified as animal pests under Environment Waikato's Regional Pest Management Strategy and these species need to be controlled.

### 4.2 Competition for use of lake

A high number of user groups have expressed their interest in participating in on-water recreational activities. Lake users were identified as using the lake for the following activities: motorised casual activities, motorised events, non-motorised casual activities, and non-motorised events. There is particular competition for use of the lake between motorised and non-motorised watercraft user groups. There is also the need to balance the number of events held on the lake with general community use. The high competition for use of the lake means there is the need for careful planning to ensure there is an optimal blend of recreational uses, such as balancing waka ama, yachting, water skiing and other identified lake uses.

### 4.3 Effect of recreational activities on environmental quality

Recreational use of Puketirini area may impact on park environs. For example, boat use may result in habitat disturbance. Recreational use of Puketirini will need to be balanced against environmental quality objectives and policies.

### 4.4 Safety

Community members have expressed safety concerns for areas around Puketirini where passive recreational activities take place. Safety is particularly a concern for walking and running around Puketirini, where there are areas of vegetation that allow for seclusion around some areas of the lake. Safety issues also need to be considered when developing facilities. Unauthorised motor biking around Puketirini is also a cause for concern for walkers and runners.

Navigation safety is an issue that needs to be considered when determining lake uses and developing a schedule for lake activities and events. Additionally, there is deep water close to the lakeshore that may pose a safety issue for lake users.

There have been a number of fires lit upon dry vegetation surrounding the park. The Huntly Fire Brigade has been called to Puketirini on several occasions.

Vandalism of Puketirini facilities is an issue that needs to be weighed when considering the development of facilities.



## 4.5 Impact on surrounding neighbours

Noise from motorised boating activities can be an issue for residents living close to Puketirini. The level of noise generated from motorised boats is dependant on the type of boat used on the lake.

## 4.6 Access

Motor biking is occurring at the reserve despite efforts to prohibit access to motorised vehicles through the installation of wire fences. Motorised vehicle access within Puketirini should be limited to specific areas and for identified purposes.

Boat ramp access is controlled through the use of a key system that provides rules and regulations for on-water activities. The use of the key system assists Council in managing user behaviour and the length of season for on-water activities. The key system may need to be reviewed in response to changing lake issues and user demand.

## 4.7 Funding

Significant funding is needed to develop and maintain Puketirini, and Council funds are limited. Council will need to seek additional funding for external sources. Funding constraints will affect the timing and extent of park development.

# 5.0 MANAGEMENT PLAN VISION, OBJECTIVES AND POLICIES

## 5.1 Management Plan Vision

The vision of Puketirini is:

***To protect and enhance the health and well-being of Puketirini,  
and develop Puketirini for community use***

The health and well-being of Puketirini is of significant importance to Iwi and the wider community, and the management plan should align with the vision and strategy for the Waikato River.

It is expected that Puketirini will become a significant recreational asset for Huntly and the Waikato region. Puketirini also has the potential to provide a venue for national on-water and off-water events. Protecting and developing Puketirini as a recreational resource will require the protection and enhancement of the park's ecological values. This may mean that recreational use and development of Puketirini is dependant on its impact on park, particularly lake, environs. Recreational use of Puketirini needs to be carefully considered to ensure that ecological values are protected whilst ensuring as many recreational opportunities as possible are made available to the public.

## 5.2 Management Plan Objectives and Policies

Several objectives have been developed to guide the development, management and use of Puketirini. These objectives seek to maximise the vision of the park as a recreational resource and an ecological asset for local, regional, and national communities.

### 5.2.1 Objective 1 - Environmental Quality

#### **Objective:**

The lake remains suitable for contact recreation, and Puketirini ecological values are protected and developed.

#### **Explanation:**

Protecting the lake's water quality is a high priority. A significant factor that will affect the lake's water quality is the level of nutrients flowing into the lake, particularly from non-point run off. A number of strategies can be implemented to reduce the level of nutrients flowing into the lake. Land outside of Puketirini is not covered by this plan. Council will seek to work in partnership with landowners on matters that might affect lake health. Preventing lake erosion is an issue that may also need to be addressed.





There is also the potential for further pest fish, particularly more koi carp (*Cyprinus carpio*), to migrate into the lake. All efforts will be undertaken to eliminate Koi carp and other pest fish within the lake and to prevent re-infestation.

There are wetland areas within Puketirini that will require further development and maintenance to develop these areas into an ecological asset. Wetland areas assist in reducing the flow of nutrients into the lake.

Wildlife needs to be catered for within Puketirini. Council seeks to develop and enhance wetland habitat and vegetation around the park.

## **Policies:**

- a. Puketirini should be developed in a way that results in a minimum flow of nutrients and other contaminants into the lake.
- b. The lakebed and shoreline should be stable to avoid nutrient release into the water.
- c. Pest fish species should be controlled or eliminated.
- d. Ecological areas within Puketirini, such as wetland areas, should be developed.
- e. Suitable habitats for wildlife should be created through the development of wetland areas and a general increase in vegetation around Puketirini.

## **Implementation:**

- I. Analysis of lake and western drain water quality data will be undertaken regularly, and monitoring and analysis of phosphorous, chlorophyll a, and secchi depth levels will be undertaken.
- II. Pest fish populations will be controlled through installation of a barrier that prevents pest fish migrating into the lake from Lake Waahi but allows native fish and eel migration, and through eradication programmes.
- III. Planting of habitat areas on private land surrounding the reserve, and best practice land management practices, will be encouraged through liaison with surrounding landowners.
- IV. Drainage and stormwater management practices within the lake's catchment area, to enhance the quality of water flowing into the lake, will be promoted through liaison with surrounding landowners.
- V. Lake bank erosion will be monitored and lake management actions implemented as necessary, with a preference for riparian planting, but with the possible use of protection structures at the Eastern end of the lake.
- VI. Silt traps will be developed at appropriate locations to trap sediment and nutrient inflows.
- VII. Riparian plant species will be planted at the lake outlet and Eastern drain, with eco-sourced plant species utilised as much as practicable.
- VIII. Flap gates will be used to prevent water from Lake Waahi entering the lake.
- IX. Direct storm water discharges from car parks to the lake will be avoided.
- X. Ongoing advice will be sought from Waikato Regional Council regarding water quality issues.
- XI. Plant and animal pest control activities will be undertaken as appropriate.
- XII. A wetland management plan will be developed that addresses issues such as plant and animal pests, planting, and fencing issues.
- XIII. A planting programme will be developed and will utilise native plant species as much as possible, with preference given to planting locally sourced species.
- XIV. Collaboration with other governmental agencies (particularly Waikato Regional Council), Iwi, and community groups will occur as appropriate to develop, maintain, and create awareness relating to the ecological health of park land, lake, and wetland habitats.
- XV. Suitable habitats for wildlife will be created through the development of wetland areas and a general increase in vegetation around Puketirini.
- XVI. Sampling and monitoring of lake algal levels will be undertaken as appropriate.
- XVII. An on-going relationship with Waikato-Tainui will be developed to protect and enhance Puketirini's ecological values.
- XVIII. Advocate that Waikato Regional Council classify the lake as a contact recreation venue and recommend that this be reflected in discharge consent conditions and regional plans.

## 5.2.2 Objective 2 - Recreational Opportunities

### Objective:

Recreational opportunities are maximised to allow for local, regional, and national activities, and casual and organised events.

### Explanation:

Puketirini is regularly used for walking, running, and cycling, and a number of community organisations have already utilised the tracks around Puketirini for their events. Council seeks to increase the accessibility of current walking and cycling tracks and increase the number of tracks around Puketirini as appropriate.

A high level of interest in on-water recreational activities on the lake will require careful planning to ensure the number of on-water events held at the lake is balanced with general community access. The conflict between motorised and non-motorised watercraft activities will also be considered when determining lake activity scheduling.

Jet skis are prohibited on the lake as specified under Waikato Regional Council's Navigation Safety Bylaw 2006; however, exemption from this bylaw can be sought for organised events by contacting both Waikato Regional Council and Waikato District Council.

### Policy:

- a. Walking and cycling tracks should be developed and maintained.
- b. Easy access to the lake will be maintained where swimming or boat launching is desirable.
- c. Motorised and non-motorised boating should occur at the lake provided there are no significant adverse environmental effects related to these activities.

### Implementation:

- I. A suitable number of walking and cycling tracks will be developed dependant on user demand.
- II. Walking and cycling tracks will be maintained to an appropriate standard.
- III. The dual walkway-cycleway around the lake will be retained and maintained to pushchair standard.
- IV. Walking tracks will be upgraded to provide wheelchair access adjacent to car parks.
- V. The existing boat ramp will be maintained and additional boat facilities will be considered.
- VI. Grass and sandy areas will be maintained adjacent to the lake in selected areas.
- VII. Vegetation growth on the shoreline will be limited where there are no erosion problems.
- VIII. Major swimming and recreational areas will be distributed as appropriate.
- IX. Boating activities will be monitored to provide an appropriate level of access to the lake for recreational boating activities.

### Policy:

- d. Events and usage should be managed to ensure a balance between competing and conflicting uses.

### Implementation:

- I. Events will be managed through a booking schedule and appropriate event rules (refer to Appendix 2).
- II. Event rule compliance will be monitored as deemed necessary by Council.
- III. Puketirini event rules will be reviewed as necessary.
- IV. A schedule for lake access will be developed providing scheduled days and times for lake activities.
- V. Waka ama activities will be encouraged through establishment of an on-going relationship with waka ama representatives.

**Policy:**

- e. Commercial activities should be allowed at the lake dependant on the agreement of Waikato District Council and the suitability of commercial proposal.

**Implementation:**

- I. Council will consider applications for commercial ventures in accordance with the policies of this plan.

**Policy:**

- f. Recreational activities should be subject to an assessment of their impact on ecological values and other park users.

**Implementation:**

- I. Council will periodically consider the appropriateness of recreational activities in accordance with environmental and cultural objectives and policies within this plan.
- II. Council will assess the environmental impact of all applications to utilise Puketirini for recreational activity and/or event purposes.

## 5.2.3 Objective 3 - Safety

**Objective:**

A safe environment for passive and active recreational activities is developed and maintained.

**Explanation:**

Community members have expressed safety concerns relating to areas around Puketirini where passive recreational activities take place. Safety was particularly a concern when walking or running around Puketirini, where areas of vegetation have allowed for seclusion around some areas of the lake. Future landscape design will need to consider such safety issues.

Safety is an issue for on-water recreational activities, where there is the potential for collision between lake users. This is particularly a concern when motorised boats are used on the lake. The Navigation Safety Bylaw 2006 needs to provide for water-skiing and other motorised activities on the lake.

Safety issues need to be considered when developing facilities, as vandalism is an on-going concern.

**Policies:**

- a. Signage should be developed, displaying the location of facilities and recreational activities.
- b. Waikato Regional Council's navigation safety bylaw requirements must be followed.
- c. Undesired access to Puketirini should be curbed through the appropriate use of access barriers.
- d. Landscape design, facility development, and car park development should consider safety issues.
- e. Event car parking should take into consideration safety issues.
- f. Fencing around and within Puketirini should be developed and maintained, with particular emphasis on excluding unauthorised motorised vehicles from Puketirini except for identified public parking areas and accessways.
- g. Lake access should be granted through the use of a key system that identifies rules and regulations for on-water activities.

## **Implementation:**

- I. Undesirable access to Puketirini will be restricted through the use of access barriers as much as practicable.
- II. A key system will continue to be utilised identifying rules and regulations for appropriate lake use. This system will be reviewed as Council considers necessary.
- III. Any landscape design, facility development, and fencing activities will consider safety issues.
- IV. Waikato District Council will work with Waikato Regional Council to amend the Navigation Safety Bylaw during the next bylaw review to manage the use of vessels on the lake.
- V. Buoys or floating barriers will be installed in the lake to show the location of swimming areas that are designated under the Navigation Safety Bylaw.
- VI. Pruning and vegetation removal will be undertaken to retain visibility for park users.

## **5.2.4 Objective 4 - Noise control**

### **Objective:**

Motorised watercraft recreational activities occur in a manner that does not detract from the enjoyment of passive recreation activities or cause a nuisance to surrounding neighbours.

### **Explanation:**

Noise from motorised boating activities can be an issue for passive recreation user groups and residents living close to Puketirini. The level of noise generated from motorised boats is dependant on the type of motorboat used on the lake. Jet skiing is prohibited on the lake.

### **Policy:**

- a. Noise from activities within Puketirini should not be excessive and should not cause a nuisance to near-by residents or other park users.

### **Implementation:**

- I. Monitoring of noise levels will occur as necessary to determine the level of noise occurring from motorised boats on the lake.
- II. The establishment of a key system will assist noise control in terms of hours and frequency of motorised watercraft activities
- III. Appropriate actions will be undertaken if Council deems noise levels to be excessive.

## **5.2.5 Objective 5 - Facility development**

### **Objective:**

Facilities are developed that allow for increased park use whilst retaining as natural an atmosphere as possible.

### **Policies:**

- a. Facilities should be designed using a consistent design and colour theme where possible.
- b. Facilities should be developed in accordance with user demand as much as practicable.

- c. The number of buildings should be minimised to retain a natural atmosphere.
- d. Facilities should be designed to limit their visual impact to retain a more natural visual landscape.
- e. Any development, such as the Waikato Coalfields Museum, should integrate with park landscaping and path development.
- f. Parking facilities should be developed that will enable large-scale organised events to occur at Puketirini.
- g. Organisations should be encouraged to share any facilities that are developed.
- h. Club facilities may be developed at Puketirini dependant on user demand.
- i. Facility development should encourage a range of permitted casual and event use.

### **Implementation:**

- I. Opportunities for joint use of facilities must be fully explored before permission to construct any facility is granted.
- II. Any commercial ventures need to integrate with the overall park plan.

## **5.2.6 Objective 6 - Cultural and historical significance of Puketirini**

### **Objective:**

Alignment with the Deed of Settlement for the Waikato River and increased public understanding of Puketirini's cultural significance and historical use and development.

### **Explanation:**

The vision, objectives, and policies within the management plan need to align with the vision and strategy for the Waikato River to appropriately recognise the significance of Puketirini to Iwi.

Information relating to the site's cultural significance and historical use and development should be made available to the public.

Providing information about Puketirini will increase public understanding and interest in this area. This will help the community to "take ownership" of the site. Increasing community ownership of the site may also assist in decreasing vandalism at Puketirini.

Iwi have also expressed interest in utilising Puketirini for propagation and cultural harvesting purposes.

### **Policies:**

- a. Management plan objectives and policies should not be inconsistent with the Deed of Settlement for the Waikato River and subsequent outcomes.
- b. Reports, local publications, and other resources should be developed and disseminated explaining the cultural significance and historic development of Puketirini.
- c. Appropriate acknowledgement of sites of significance should be encouraged and involve liaison with Iwi.
- d. Signage explaining Puketirini's history and cultural significance should be developed and must involve liaison with Iwi and Solid Energy.
- e. Community ownership of Puketirini should be developed through the provision of volunteering opportunities and encouraging community activities at Puketirini as appropriate.
- f. Area(s) should be developed for propagation and cultural harvesting purposes in consultation with Iwi.



## 5.2.7 Objective 7 - Signage

### **Objective:**

Signage is limited as much as possible and follows a consistent design and colour theme.

### **Explanation:**

There is the need for several types of signage at Puketirini, including locational, informational, and directive signage. There needs to be a balance between conveying enough detail and limiting the amount of visual pollution at the site.

### **Policies:**

- a. Signage should be developed using a consistent design and colour theme that allows signage to blend into its surroundings appropriately.
- b. Signage should be developed to provide directions to Puketirini from State Highway One.
- c. Signposting along walkways and cycle tracks should be implemented as appropriate.
- d. Signage should be limited as much as possible to decrease the level of visual pollution at the site.
- e. Directive signage should be provided to indicate the direction to facilities and recreational activities.
- f. Signage should be developed explaining Puketirini's cultural significance and historical development.
- g. Signage depicting regulations and advisory messages should be displayed on site as appropriate.
- h. Any permanent sponsorship signage must have approval from the Strategic Committee.
- i. Puketirini signage should be written in English and Maori.

## 5.2.8 Objective 8 – Funding

### **Objective:**

Equitable funding arrangements are in place for the development and maintenance of Puketirini.

### **Explanation:**

Council will be required to seek funding from external sources to fund park development and maintenance. Puketirini is a regional amenity and local ratepayers should not bear the sole cost of park development.

Developments already on site have been partly funded by Solid Energy.

Waikato District Council also receives funds from New Zealand School of Commercial Diver Training in accordance with their agreement with Council to use the lake for diver training purposes.

### **Policies:**

- a. Free access to Puketirini shall be provided to the general public, unless entry fees are charged in accordance with policy c).
- b. A fee shall be charged for vehicular access to the boat ramp (through the use of a key system)
- c. Spectator entry fees may be charged when organised events occur at Puketirini. Any such fees must be first approved by Council.
- d. Event organisers may incur a fee for utilising park facilities for organised events.
- e. Commercial operators shall be charged for operating within Puketirini, with charges being decided on a case-by-case basis.
- f. Council shall seek funding from external sources to fund park development and maintenance.

# 6.0 FUTURE DEVELOPMENTS

Potential developments at Puketirini can be found in Figure 2.

Developments identified within the Puketirini concept plan are subject to funding constraints and timing decisions. Decisions regarding the funding and timeframes of proposed developments will occur through Waikato District Council's Long Term Council Community Plan (LTCCP) Process.

Council will seek funding from external sources to assist development and maintenance of Puketirini.

Potential developments are subject to an assessment of their consistency with a detailed concept plan for Puketirini. Any proposed activities will need to integrate with other park development and uses.

## 6.1 Schedule of potential developments

Nature of Development	Description of Potential Development
Wetland development	Wetland areas to process runoff from grazed areas, car parks, access roads and buildings.  Major wetland development at the Southern end of the lake to create wildlife habitat and protect water quality.
Riparian management	Plant around outlet drain with riparian species.  Plant around Eastern drain once drain is realigned.
Wildlife area	A wildlife area at the South West end of the lake.
Facilities at the Western end of the lake	Facilities at the Western end of the lake to cater for a greater level of use.
Drainage	Re-align drain at Eastern end of lake to more nature stream form.
Parking	Thirty-five parking spaces to provide parking facilities for waka and boat trailers at the Southeast end of the lake.  Twenty car parking spaces at the western end of the lake in association with the toilets and swimming area.  Dependant on whether a water cableway is developed, additional car parking spaces at the western end of the lake.  Car parking facilities to allow up to 175 motor vehicles (including buses) to park at the Eastern end of the lake.
Playground	A playground close to the museum development and Rotary garden.
Event facilities	Facilities at the Eastern end of the lake for event purposes.
Toilets	Upgrading of toilet facilities at the Western end of the lake to cater for a greater level of use. Toilets at the Eastern end of the lake to cater for events.
Temporary camp site	Specific areas designated for temporary camping for events.

Spectator areas	Designated spectator areas to allow spectators good views of lake events.
Picnic areas	Picnic areas at the Northeast, Southeast, and Western ends of the lake.
Walking and cycling tracks	Upgrading of the existing walking and cycling tracks.
Rotary garden	Development of a garden integrated with the museum development – developed in conjunction with the Huntly Rotary Club.
Boat ramp	Development of boat ramps dependent on user demand.
Lake shoreline	Swimming areas developed in conjunction with Waikato Regional Council under the Navigation Safety Bylaw, and erosion protection works installed.
Fencing	Fencing erected around Puketirini as necessary to exclude unauthorised vehicles.
Waterski Cableway	Development of a waterski cableway at the Western end of the lake is a possibility.

Figure 2 -Puketirini Concept Plan



NOTES

**KEY**

- Property Boundaries
- Privately Owned Property
- Lake Edge and streams
- Existing Walking / Running Tracks
- Mountain Bike Tracks
- Railway
- Existing Vegetation
- Power Lines

DESIGNED BY:	DATE:
MOLA	09/08
REVISIONS:	DATE:



DISTRICT OFFICES LOCATED AT PRIVATE AND GOVERNMENT BUILDINGS  
PO BOX 4800 TEL 07 838 4800

COUNCIL DEPARTMENT:  
**Community Assets**

PROJECT:  
**Puketirini**

SHEET TITLE:  
**Existing & Proposed Site & Facilities**

PROJECT NUMBER:	SHEET:
PLAN NUMBER:	DATE:
SCALE:	REVISION:
1:3000 (A1)	
TITLE:	



# REFERENCES

Balvert, S. F. (2006), Limnological Characteristics and Zooplankton Dynamics of a Newly Filled Mine Lake, University of Waikato.

Weaver's Park Information Sheet (September 2007), Media Release, Solid Energy New Zealand Ltd

Weaver's Park Usage – Information Sheet (April 2006, updated March 2007), Media Release, Solid Energy New Zealand Ltd

Environment Waikato database (2008), Environment Waikato Regional Council.



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# APPENDIX I: SELECTED HISTORICAL TIMELINE OF PUKETIRINI DEVELOPMENT

1865	Lake Rotoiti becomes Crown Land
1940 - 1980	Crown obtains the rest of the park area for coal mining and state housing purposes
1958 - 1993	Coal mining is undertaken at Weavers Crossing mine
1993	Water begins flowing into the pit from the surrounding catchment & ground water commences
1995	Mine is closed and the lake & park project is confirmed
1997	Solid Energy begins undertaking rehabilitation work at the site
1997 - 1998	Mined pit is stabilised, shaped and contoured
1998 - 1999	The lake shoreline is shaped
2001 - 2002	A significant amount of tree planting is undertaken
2003 - 2004	Tracks are formed and the outlet is cut into the original drain
2004	Iwi bless the site before the first waka ama training session begins
2005	The lake reaches its maximum level
2006	Car park bollards are installed Waikato District Council acquires the park from Solid Energy
2007	Eco-toilets are installed

# APPENDIX 2: PUKETIRINI EVENT RULES

1. It is expected that events will be held at Puketirini during the period beginning September until April, with on average one event held within the park per month. It is expected that there will be up to eight events held at Puketirini each year.
  - a. An event is defined as:
    - i. It lasts for one day or more, or
    - ii. It requires a substantial amount of parking on the reserve requiring traffic management, or
    - iii. It has a significant effect on the availability of Puketirini for casual use, for either lake use or off-water recreational activities.
  - b. Events should not be held on consecutive weekends
2. Additional events may be held at the discretion of the Strategic Committee.
3. Events must be held in a manner that ensures maximum use of Puketirini for non-participants.
4. There is no limit on mid-week events. If experience shows that such events are causing problems then a limit may be introduced.
5. No alcohol is to be sold at Puketirini. Any alcohol supplied by an event sponsor to guests must be consumed within an identified restricted area. No alcohol shall be supplied to under age or intoxicated persons, or those behaving in an unruly manner.
6. All applicable Waikato District Council bylaws must be adhered to.
7. All events must comply with Waikato Regional Council's Navigation Safety Bylaw.
8. Requests for use of Puketirini for event purposes should be received by the Strategic Committee no less than two months prior to the date of the potential event. Event applications received less than two months from the date of the proposed event may be considered for approval at the discretion of the Strategic Committee. In the event of dispute, matters will be forwarded to Waikato District Council for final determination.
9. Event organisers may be required to deal with issues including: traffic and parking management, noise control, toilet provision and rubbish collection.
10. All events must comply with the District Plan noise standards. This is the responsibility of the Event Organiser. Any monitoring of noise levels by Waikato District Council staff or its agents during an event shall be at the Event Organiser's expense.
11. The Strategic Committee will set conditions of use. In the case of dispute, Waikato District Council will be the adjudicator.
12. Failure to comply with any of these rules or conditions imposed may impact upon future applications for use of Puketirini.

**Note: Puketirini Event Rules will be reviewed as deemed necessary by the Strategic Committee.**