DRAFT Parangarahu Lakes Area Co-Management Plan

and amendment to the GWRC Parks Network Plan

He Taonga mo tatou

Lakes & wetlands of national significance

PORT NICHOLSON BLOCK
SETTLEMENT TRUST

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

2014

Mihi & acknowledgments by Roopu Tiaki

Members of Te Roopu Tiaki

Te Roopu Kaitiaki consists of three trustees of Port Nicholson Block Settlement Trust **(PNBST)** and three senior officers from Greater Wellington Regional Council **(GWRC).**

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Cover Image: An aerial view of Pencarrow Lighthouse and the Parangarahu Lakes, looking northeast. ***http://www.nzhistory.net.nz/media/photo/pencarrow-lighthouse***

Executive Summary

The strength of a rope is in its many strands. This draft co-management plan is the result of the intertwining of multiple interest strands to develop a shared vision for preserving and protecting the taonga of Lake Kohangapiripiri and Lake Kohangatera and the broader Parangarahu Lakes area. The lakes and wetlands are an area of national significance and located along Wellington's Southeast Coast adjacent to the main harbour entrance, nestled behind the distinctive Te Rae-akiaki (Pencarrow Head) where the historic Pencarrow Lighthouse is located.

The plan has been developed jointly through kōrero with members of the iwi of Taranaki Whānui, community groups, interested individuals and staff of Hutt City Council, Department of Conservation and Greater Wellington Regional Council under the guidance and leadership of the Roopu Tiaki. The Roopu Tiaki needs strong relationships with others to successfully manage the Parangarahu Lakes Area and to progress towards achieving the 'Kohanga Ora' Moemoeā-Vision. This is reflected by Management Objective 8: *Strategic partnerships between agencies, landowners and community groups are developed to achieve the Moemoeā-Vision of the plan*. Kohanga Ora may be interpreted as 'a nest nurturing life and wellbeing'.

The use of the term 'kohanga' builds on the names of the two Lakes and it is aspirational that the combined catchments of the Lakes and the wetlands and lakes themselves will be recognised and sought after as a place for nurturing biodiversity, for regenerating life, and for sustaining human well-being. The guiding principles for management of the Parangarahu Lakes Area are: Kaitiakitanga; Co-Management; Integrated Catchment Management Approach; and Mouri Ora. These principles are further explained in the context of the Moemoeā-Vision framework in Section 2.

Section 3 (Mahi Tangata) provides an insight into aspects of Māori history and values associated with the area that is perhaps less well known. It includes an overview of the Parangarahu native reserve block history to demonstrate the Taranaki Whānui history of connection, loss and reconnection with the lakes area and a section on the importance of karaka trees and dendroglyphs (tree carvings). Management Objective 4 reflects the need to protect this heritage: *Protect and manage the historic and cultural heritage, sites of significance and other waahi taonga of the Parangarahu Lakes Area in accordance with kaitiakitanga principles. That the significance of the cultural and natural features of the landscape is understood and their histories (oral and written) preserved.*

The Natural Environment section (Section 4 Te Taiao) highlights some of the unique landscape, geological, ecological and cultural heritage features of the Parangarahu Lakes Area. For example, based on a 2011 NIWA survey, the lakes are ranked very highly on the national Lakes SPI index: Lake Kohangatera's condition is 'excellent' with nationally outstanding botanical values, placing it at 10th ranking out of a total of 206 lakes; and Lake Kohangapirpiri's condition is 'high' and ranked 47$^{th.}$ Notwithstanding these national rankings, there are still risk, threats and issues to be addressed. Key risks to the ecological integrity include aquatic weeks, terrestrial weeds, pest animals and human activities. Furthermore, a priority issue for Taranaki Whānui is to improve the opening of the lakes at the sea outlets with a long term goal to restore the once abundant eel fishery for customary purposes. Restoration of the eel fishery is connected to the restoration of the mouri of the lakes and this is reflected in Management Objective 1: *Restore the mouri and maintain the ecological integrity*

of the Parangarahu Lakes Area ecosystem to sustain vital and healthy indigenous flora and fauna populations in and around the Lakes.

Section 5 covers current management by GWRC of the reserves within the Parangarahu Lakes Area in relation to GWRC's delegated management responsibility under the Reserves Act 1977. The GWRC Parks Network Plan (the management plan for the regional parks and forests) will include a chapter on the Parangarahu Lakes Area (PNP Amendment). This will state the relevant policies of the Co-Management Plan as they apply to the reserve land. The following management objectives reflect the need to balance recreation, community and kaitiaki interests: *Objective 5: Foster kaitiakitanga and greater participation in activities at the lakes and management by Taranaki Whānui iwi and the community. Objective 7: Recreation opportunities lead to appreciation of the natural environment and to visitors being refreshed and nurtured from the experience.*

Section 6 provides details of the eight management objectives and the specific actions for each objective, which are prioritised as: Current activities or 'business as usual'; Immediate priority actions or those that require resources and focus within the next three years; Medium priority actions that require funding bids to achieve, or can wait to be achieved within a 3-10 year timeframe; and Long-term actions which may not occur within the 10-year life of this plan but which contribute to the Moemoeā – Vision and are likely to have significant funding and resource implications.

Section 7 (Rules for use and development) outlines the rules relating to the provision for, and management of, customary activities and recreational pursuits at Parangarahu Lakes Area. Legislation under the Reserves Act 1977 and Resource Management Act 1991 provides some constraints on the type of activities that can occur as of right and others that require a concession (in the form of a lease, licence or easement) or resource consent. Activities are categorised as: Allowed activities; Tangata Whenua Kaitiaki activities; Managed activities; Restricted activities; and Prohibited activities.

The final section of the plan sets out the implementation monitoring and review provisions and includes an annual work programme, planning and review cycle that aligns to current systems used by GWRC. The co-management plan is intended to have a 10 year lifespan and is both aspirational and practical in the way it directs managers to achieve the mutual goals of Taranaki Whānui and Greater Wellington Regional Council.

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Section 1: Introduction

Purpose of the Plan

This plan outlines the co-management approach by GWRC and PNBST for the Parangarahu Lakes Area. It is the guiding document for management of the Parangarahu Lakes Area, setting the vision, guiding principles and the management objectives, policy and actions. The plan is both aspirational and practical in the way it directs managers to achieve the mutual goals of the two parties.

Process for development of plan

The management plan development work was undertaken by a project team with support from GWRC staff and PNBST administrative support. A two- phase process was used to develop the plan, incorporating face to face workshops and hui to facilitate involvement by Taranaki Whānui iwi members, and a formal consultation and written submission process required by the Reserve Act 1977.

Relationship to other documents

There are a number of Acts, planning instruments and documents that have been drawn on and influence the Co-Management Plan. These documents will require consideration throughout the development and implementation of the Moemoea-vision of this plan. Key legislation plans and documents are shown in Figure 1.

GWRC Parks Network Plan

The GWRC Parks Network Plan[1] (the management plan for the regional parks and forests) includes East Harbour Regional Park of which Parangarahu Lakes Area a part. The GWRC Parks Network Plan will include a section on the Parangarahu Lakes Area, providing the relevant policies contained within this plan as they apply to the reserve land for which GWRC has delegated management responsibility under the Reserves Act 1977. In management of these areas, GWRC will be guided by the general provisions of the Parks Network Plan and the specific objectives and policies of this plan.

The vision and guiding principles of both GWRC Parks Network Plan and PNBST Strategic Plan[2] were drawn upon to create the shared Moemoea-visions of this plan.

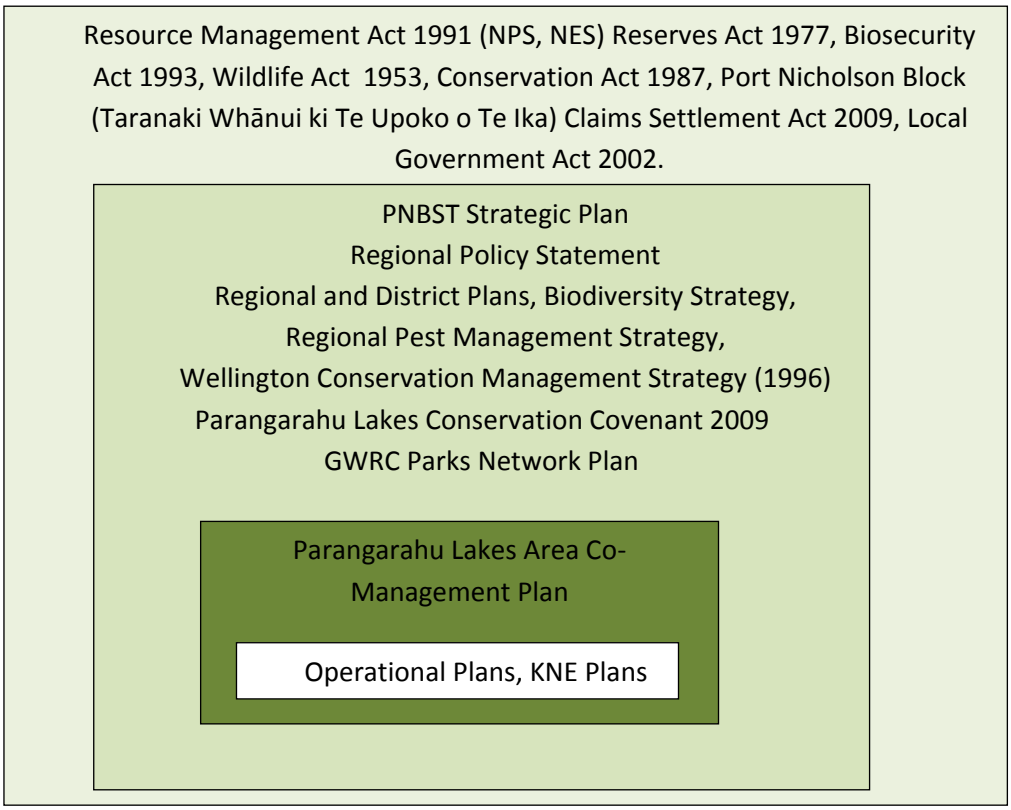
Resource Management Act 1991

GWRC also has responsibilities under the Resource Management Act 1991 to maintain and protect indigenous biodiversity and to control the effects of resource use on indigenous ecosystems and habitats of threatened species.[3] Guided by the goals of the GWRC Biodiversity Strategy 2011-2021, GWRC maintains operational level Key Native Ecosystem Plans (KNEs) and this plan provides policy and actions to enable the implementation of Parangarahu Lakes Area KNE (2013).

Long-Term Plans under the LGA

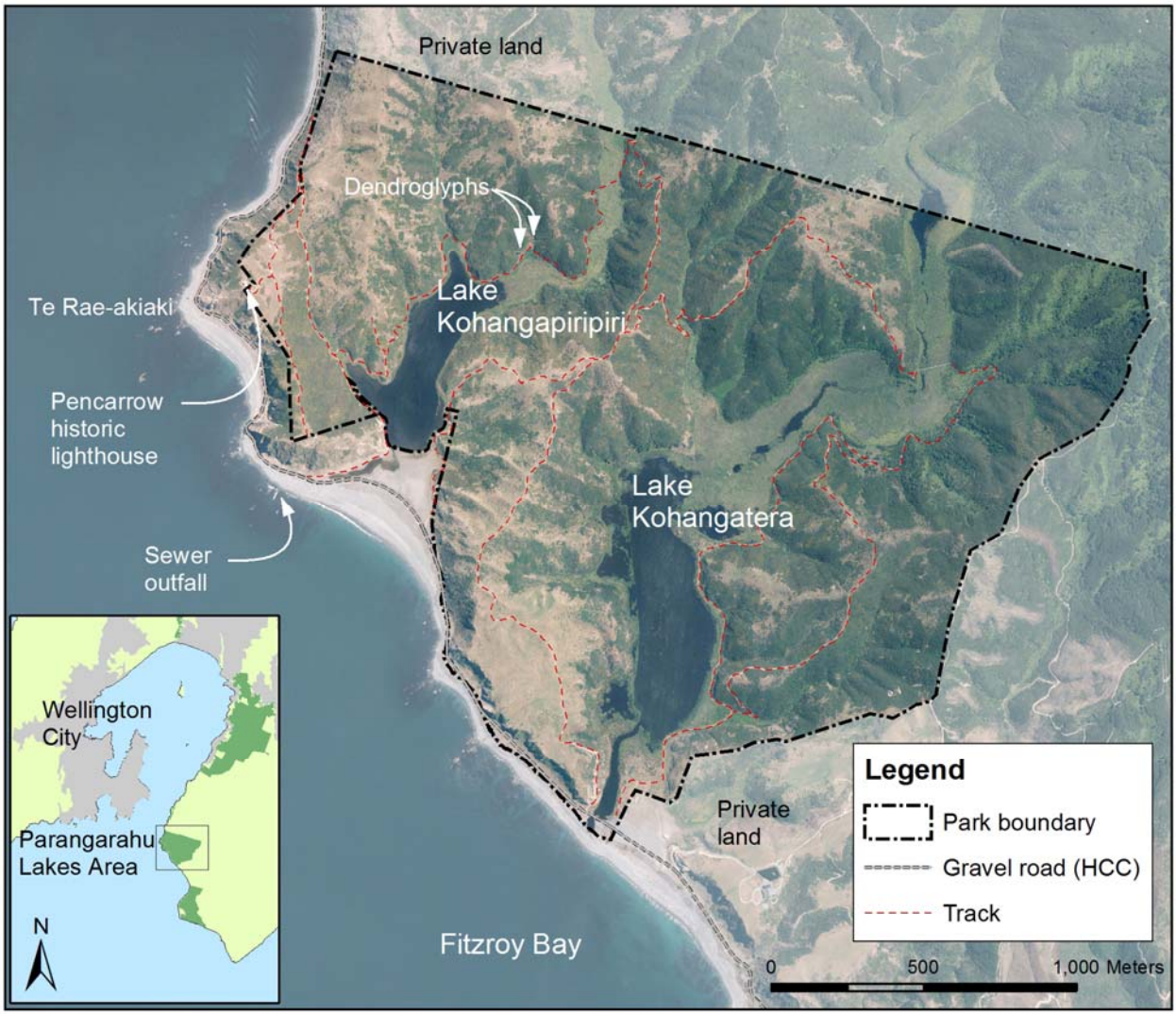
It is anticipated that a number of actions in this Plan will feed into and influence the GWRC Long-Term Plan to ensure GWRC is capable of delivering on priority issues under their jurisdiction and providing appropriate on-going support. See Section 8: Implementation, monitoring and review.

Figure 1. Key Legislation > Strategic Planning / Influential documents > Operational Planning.



Location

The Parangarahu Lakes Area is located along Wellington's Southeast Coast adjacent to the main harbour entrance, nestled behind the distinctive Te Rae-akiaki (Pencarrow Head) where the historic Pencarrow Lighthouse is located. Behind the coastal escarpment lie the nationally significant freshwater lakes Kohangapiripiri and Kohangatera.

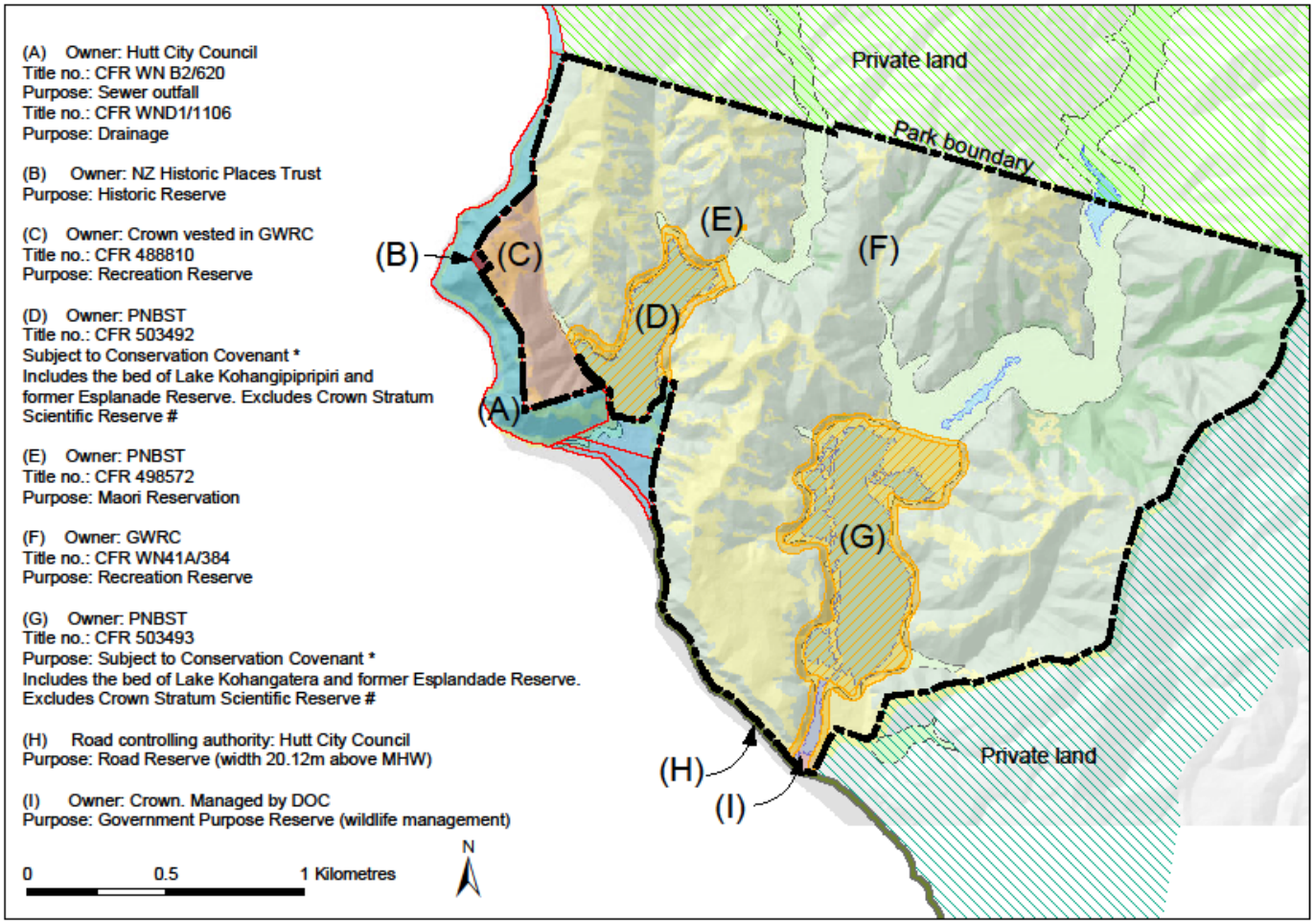


Map 1: Location and landmarks.

Titles and legal status

The Parangarahu Lakes Area comprises a number of land parcels of different ownership and legal status. This plan applies specifically to the titles owned by or vested in PNBST and GWRC as shown on Map 2.

Although some adjoining private land forms part of the Parangarahu Lakes catchment area, this plan has no statutory weight and places no obligations on adjoining landowners. The implementation and success of some of the actions proposed by this plan relies on adjacent landowner agreement and participation.



Map 2: The Parangarahu Lakes Area land titles and ownership

* These titles comprise the lake beds and the former esplanade reserves and are subject to Section 27 Conservation Act 1987 and Section 77 Reserves Act 1977 conservation covenants. The objectives of the covenant are four fold:

- for conservation purposes (the natural and historic qualities/resources of the area)
- preserving the reserve values (natural environment, landscape amenity, wildlife habitat and historic values)
- providing freedom of access to the public for their appreciation and recreational enjoyment
- to provide for the enhancement and protection of Taranaki Whānui's ancient relationship with the land, and ensure that the land is held and appreciated in accordance with Taranaki Whānui tikanga.

There is also a special condition which means the owner (PNBST) may authorise members of Taranaki Whānui to remove medicinal plant material and traditional food plants and fibres.

The crown stratum, being that part of the lakes comprising the space occupied by water and air above the lake bed is classified as Scientific Reserve[i]. DOC has not sought title to the stratum

[i] The Crown Stratum is defined in the Port Nicholson Block (Taranaki Wahnui ki Te Upoko o Te Ika) Claims Settlement Act 2009.

however it is still possible to vest the crown stratum reserves in an administering body pursuant to section 26 of the Reserves Act 1977.

For a list of the titles with relevant legal descriptions that make up the Parangarahu Lakes Area and adjacent lands refer Appendix 2.

Governance roles and management responsibilities

The following section describes the organisations involved in the governance and management of the Parangarahu Lakes Area. Some agencies are involved because they are landowners but most have legislative responsibilities.

Te Roopu Tiaki

The Roopu Tiaki was established through a Memorandum of Understanding agreed between Port Nicholson Block Settlement Trust (PNBST), representing the iwi of Taranaki Whanui, and Greater Wellington Regional Council (GWRC) in 2012. The Roopu Tiaki is an advisory body tasked with developing a long-term vision for the management of the Parangarahu Lakes Area and advising on annual work programmes for the Lakes. It is comprised of both members from PNBST and senior staff members of GWRC. A copy of the Memorandum of Understanding is available on request from GWRC or PNBST.

Port Nicholson Block Settlement Trust (PNBST)

PNBST was established in August 2008 to receive and manage the settlement package for Taranaki Whānui ki Te Upoko o Te Ika (Taranaki Whānui). Port Nicholson Block (Taranaki Whānui ki Te Upoko o Te Ika) Claims Settlement Act 2009 came into force on 2 September 2009. Part of the package included ownership of the lakebeds and former esplanade reserves of Lake Kohangatera and Lake Kohangapiripiri and two dendroglyph sites. The Vision of PNBST is:

Ki te whakahou, whakapakari me te whakanikoniko i te ahurea papori, rangatiratanga o Taranaki Whānui ki te Ūpoko o te Ika

To restore, revitalise, strengthen and enhance the cultural, social and economic well-being of Taranaki Whānui ki te Ūpoko o te Ika.

The Strategic Plan of PNBST sets out four strategic goals:

1. To maximise wealth creation and achieve economic and financial well-being.
2. To achieve social and whanau well-being.
3. To enhance cultural well-being.
4. To restore and enhance our natural resources and environmental well-being. [4]

Three members of the Roopu Tiaki are appointed by PNBST.

Greater Wellington Regional Council (GWRC)

GWRC is responsible for the management of a number of Regional Parks and Forests, including land at Parangarahu Lakes Area as part of East Harbour Regional Park. GWRC is also responsible for the Regional Plan which covers this area.

GWRC Parks, Biodiversity, Biosecurity, and Environmental Monitoring departments all provide services to ensure the viability of this area both as a place of recreation and as one of the region's most important biodiversity sites. GWRC Parks Network Plan[5] and Biodiversity Strategy[6] are key guiding documents for GWRCs involvement in the Parangarahu Lakes Area.

Three GWRC senior staff are members of Roopu Tiaki.

Department of Conservation (DOC)

The Department of Conservation manages Crown land and assets. The Crown owns some of the recreation reserve, the outlet of Lake Kohangatera and the Crown stratum of both lakes (the space occupied by water and air above the lakebeds). The recreation reserve is vested to GWRC under the Reserves Act 1977 while DOC retains administration of the outlet and Crown stratum, including the issuing of permits for activities in or on the lakes.

It is the intention, in the future, that the whole area, including the parcels held by DOC, will be integrated for management and control purposes. Until that time, components of this plan that relate to the reserves administered by DOC mustn't be in conflict with DOCs Conservation Management Strategy for the area. Confirmation of this will be sought from DOC.

DOC retains a particular interest in preserving the high water quality of the lakes, maintaining the wetlands and preserving indigenous flora and fauna as far as possible in their natural state. A Parangarahu Lakes Conservation Covenant for each lake signed by DOC and landowner PNBST in 2009 sets out the Conservation Values and Reserve Values that must be protected. DOC and PNBST signed a general relationship protocol as part of the Deed of Settlement, which includes among other matters sections relevant to Parangarahu Lakes, for example, cultural materials, species management, freshwater fisheries and pest control.

As this plan is written, DOC is in the process of reclassifying the existing Government Purpose Wildlife Reserve (Map 2 (I)) to Scientific Reserve under the Reserves Act 1977

Hutt City Council (HCC)

HCC hold a number of responsibilities for this area, as landowner, infrastructure provider and as the territorial authority responsible for the implementation of the District Plan for this area.

HCC manages the Pencarrow Head sewer outfall, located immediately west of the Kohangapiripiri outlet. This serves the Seaview Wastewater Treatment Plant which collects trade, commercial and (mainly) residential waste and discharges to the ocean. The Pencarrow Coast Road follows the coast and is the primary access to Parangarahu Lakes Area, and is owned by HCC for the purpose of maintaining the sewer outfall. Permission for use of the road is granted through HCC on the basis of the Pencarrow Coast Road Policy for Vehicle Use 2012 - 2017.[7] Landowners along this section of the

coast hold keys and have access for land management purposes, as well as Horokiwi Quarries Ltd who extract sand and shingle from Fitzroy Bay and maintain the road.

Part of the escarpment between the Pencarrow Coast Road and the Parangarahu Lakes is owned by HCC, as is the outlet of Lake Kohangapiripiri.

Te Atiawa ki te Upoko o Te Ika a Maui Potiki Trust (Fisheries Trust)

Te Atiawa ki te Upoko o te Ika a Maui Potiki Trust is a Mandated Iwi Organisation (MIO) for managing fisheries of Taranaki Whanui/Te Atiawa in Wellington region[ii]. The Trustees are elected through the three Taranaki Whānui marae in Wellington and Lower Hutt (Pipitea Marae, Tatau o te Po Marae and Waiwhetu Marae). The Fisheries Trust is a registered charity, not only responsible for the commercial fisheries interests and fisheries settlement assets of Te Atiawa/Taranaki Whānui, but also the customary fisheries interests in the takiwa, including freshwater fisheries. The takiwa extends from Windy Point in Palliser Bay to Pipinui Point just north of Makara Beach.[8]

New Zealand Historic Places Trust (NZHPT)

The NZHPTs work, powers and functions are prescribed under the *Historic Places Trust Act 1993*. While protection for land-based historic heritage is generally administered by local authorities through their District Plan policies and heritage listings, the NZHPT retains regulatory responsibilities regarding archaeological sites. In addition to any resource consents required, an archaeological authority must be obtained from the NZHPT where work may involve disturbance of an archaeological site. There are a number of listed archaeological sites in the Parangarahu Lakes Area (refer Map 3, p34).

NZHPT owns and manages the Historic Pencarrow Lighthouse and the small parcel of land upon which it sits. Access to this site is through the recreation reserve.

Others groups with interests in the Parangarahu Lakes Area

There are a number of other groups with specific interests in the Lakes including Fish and Game New Zealand Inc Wellington Region, Royal Forest and Bird Protection Society Lower Hutt Branch, Mainlnad Island Restoration Operation (MIRO) Incorporated, Wellington Wildfowlers Club, adjacent landowners and Horokiwi Quarries Ltd.

[ii] The Trust is registered as a charitable entity with the Charities Commission – Registration number CC38312 http://www.register.charities.govt.nz

Section 2: Moemoeā – Vision

Structure of the Management Plan

This management plan is the key document for outlining how the Moemoeā-Vision for the Parangarahu Lakes Area will be realised. Essentially the plan is structured in the following way:

1) Moemoea - Vision
2) Guiding Principles
3) *Mahi Tangata – human history*
4) *Te Taiao – Natural Environment*
5) Management Objectives
6) Management Policies and Actions
7) Rules for use

Te Reo

Common and Māori names are used interchangeably in this plan. The plan provides definitions for some Māori concepts within the text or footnotes.

Moemoeā – Vision

The Parangarahu Lakes Area contains the two Lakes; Lake Kohangapiripiri and Lake Kohangatera and their associated wetlands and catchment areas. Lake Kohangatera is classified as a Lake of national significance. The combined area is considered by the Roopu Tiaki to be a taonga (precious resource) warranting the highest level of conservation and protection, akin to the 'mainland island' concept where the designated island area is protected by predator proof or boundary fencing. In the lakes context, the concept of a protective nest (kohanga) is used to recognise the importance of the Parangarahu Lakes Area and the need to nurture this taonga through careful management so that the land, lakes and wetlands can fulfil their role of nurturing of life and wellbeing.

The Roopu Tiaki Moemoeā – Vision for this plan is:

Kohangapiripiri – Kohangatera - Kohanga Ora – nests nurturing life and wellbeing

Kohanga Ora may be interpreted as 'a nest nurturing life and wellbeing'. The use of the term 'kohanga' builds on the names of the two Lakes and it is aspirational that the combined catchments of the Lakes and the wetlands and lakes themselves will be recognised and sought after as a place for nurturing biodiversity, for regenerating life, and for sustaining human well-being.

One interpretation of the meaning of the name Kohanga-piripiri is a strongly clinging nest. The lake is a very windswept place and the hollow containing the lagoon was figuratively referred to by the Māori as a 'nest' (kohanga), which had to cling (piripiri), hence 'a strongly clinging nest'.[9]

Kohanga-te-rā has been interpreted as meaning a nest basking in the sun in contrast to Kohanga-piripiri, the hollow occupied by Kohanga-te-ra is taken to be a sheltered place, again

likened to a 'nest' but one basking in the sun (te rā), and the literal meaning given is 'nest basking in the sun'. [10]

The 'Kohanga Ora' vision draws together some of the following ideas generated during vision workshops and Roopu Tiaki meetings:

- Kohanga is a nest for new life, young growth and development
- A nursery sheltering and protecting the young (whether plant, animal or human)
- New life, hope and a new generation (people and environment)
- Foundations laid well lead to stronger outcomes and resilience in future
- Early learning and education is important
- Incubator - for ideas and intellectual development (research & development, business)
- It takes a community to raise a child – it takes a community to care for our environment

Framework of the Roopu Tiaki Moemoeā – Vision

Moemoeā - Vision

Kohangapiripiri – Kohangatera - Kohanga Ora

Nests nurturing life and well-being



Triple Oranga Outcomes Indicators of life, health and well-being

Tuna Heke

Restoration of the eel and native fishery of the Lakes as a self-replenishing mahinga kai for Taranaki Whānui

Manu Korihi

Flourishing forested landscape and healthy wetland-lake ecosystem sustains multitudes of birds and indigenous species and a revitalisation of Taranaki Whānui cultural practices

Tangata Kaitiaki

Managers, Visitors and Taranaki Whānui are active Kaitiaki protecting the catchments as taonga which contributes to personal, community and tribal wellbeing

Principles for Management of the Parangarahu Lakes Area

1. **Kaitiakitanga** – Taranaki Whānui exercise kaitiakitanga over their taonga and all people involved in management or governance activities act to protect the mouri and ensure the Parangarahu Lakes Area are left in a better state for future generations.
2. **Co-Management** – Te Roopu Tiaki provides leadership for co-management of the Parangarahu Lakes Area, reflecting the Treaty Settlement and return of the Lakes to the Taranaki Whānui as cultural redress. The co-management partnership will foster community cohesion and participation.
3. **Integrated Catchment Management Approach** - Management of the Parangarahu Lakes Area will take into account the catchment areas of both Lakes notwithstanding the legal title and mixed ownership complexities. Water, wetlands, flora, fauna and people issues are not managed in isolation but as a living organic system with each part connected to the other parts.
4. **Mouri Ora** – Management decisions and actions will aim to improve, not degrade, the mouri of the Parangarahu Lakes Area. This principle means balancing preservation and enhancement of the Parangarahu Lakes Area for future generations with the provision of appropriate visitor activities and recreational use.[iii]

[iii] Mouri (or Mauri): an energy or life force that tangata whenua consider exists in all things in the natural works, including people. Mouri binds and animates all things in the physical world. Without mouri, mana cannot flow into a person or object. Spelling of Mouri is Taranaki Dialect.

He Kōrero Whakamarama

This section provides an explanatory narrative of the various parts of the Moemoeā – Vision framework.

The three eggs within the nest represent oranga outcomes (indicators of life, health and well-being).

The outcomes are: Tuna Heke, Manu Korihi and Tangata Kaitiaki.

Tuna Heke - Migrating Tuna

Tuna heke refers to the seasonal migrations of tuna (eels) between the Lakes and the sea, both ways. In this Moemoeā-Vision statement it also represents all native fish species and the acknowledgement that these Lakes were once a significant eel fishery and mahinga kai for Taranaki Whānui and other iwi over the centuries. The loss of eels through commercial eeling and overfishing in recent years is a serious concern for Taranaki Whānui and restoration of this taonga species and valuable food source is a priority objective expressed by many iwi members during the early consultation phase of this management plan. Positive indicators for the achievement of "Tuna Heke" in this Moemoeā-Vision statement include:

- A healthy fishery has a positive impact on the wellness of the people and aligns to the vision statement of PNBST - *To restore, revitalise, strengthen and enhance the cultural, social and economic well-being of Taranaki Whānui ki te Upoko o Te Ika*;
- Abundance of tuna, particularly mature migrating female tuna ready to leave the kohanga nursery of the Lakes to return to the moana (ocean) for spawning and continued cycle of life;
- Successful and functioning fish passages at the ocean entrances for both Lakes allowing tuna and other native species to migrate to and from the Lakes at appropriate times of the year;
- A self-replenishing fishery that can sustain customary harvest according to tikanga and ability for mana whenua to manaaki esteemed guests with traditional kai of high value;
- Clean healthy water and wetlands functioning as productive nursery and breeding habitats;
- Alignment with GWRC Parks Network Plan objectives for restoration of ecosystems;
- Matauranga Māori[iv] of tuna and tuna fishing is revitalised and enhanced with new research

[iv] Matauranga Maori refers to Maori knowledge or a Maori knowledge system and world view. Definition by Te Ahukaramu Charles Royal *Mätauranga Mäori is created by humans according to a world view entitled 'Te Ao Märama' and by the employment of methodologies derived from this world view to explain the human experience of the world,* Mätauranga Mäori Paradigms and Politics. A paper presented to the Ministry for Research, Science and Technology, 13 January 1998

2. Manu Korihi - Birdsong

Manu Korihi is the noisy, rousing chorus of birdsong heard in a healthy forest full of birds. In this Moemoeā-Vision statement it signals the return of a flourishing forested landscape that is capable of nurturing and sustaining life and large numbers of birds, insects and other native fauna. Restoring the indigenous flora and fauna of the Lakes area is a priority outcome sought by Taranaki Whānui and many individuals and groups who contributed to the development of this co-management plan. Positive indicators for the achievement of "Manu Korihi" in this Moemoeā-Vision statement include:

- A healthy ngahere (forest) has a positive impact on the wellness of the people;
- Increasing birdsong indicates successful planting programme and forest regeneration;
- Mouri of the ngahere is intact and the forest and valleys are replete with bird and insect life.
- Wairua is restored giving people a place for healing, re-energising, and respite from the city;
- Non-native animals and plants are managed to protect indigenous biodiversity;
- Self-regeneration of indigenous plants / species means less management resource over time
- Profusion of indigenous plants and animals is able to sustain future customary harvest e.g. feathers for weaving, wood for carving, kai for Taranaki Whānui marae, plants for rongoa
- Matauranga Māori relating to the ngahere is revitalised and enhanced with new research

3. Tangata Kaitiaki - People working together as Kaitiaki

Tangata Kaitiaki is the third oranga outcome in the Moemoeā-Vision. As mana whenua, Taranaki Whānui has a kaitiaki relationship and connection with the Lakes and surrounding whenua. The Treaty Settlement recognises this relationship. The return of the Lakes to Taranaki Whānui enables iwi members to better exercise kaitiakitanga responsibilities to protect their cultural heritage.

The Roopu Tiaki needs strong and enduring relationships with others to successfully manage the Parangarahu Lakes Area and to make significant progress towards achieving the 'Kohanga Ora' Moemoeā-Vision. It will require combined commitment, shared resources and sustained action over generations by many tangata kaitiaki. People working together as tangata kaitiaki include the Roopu Tiaki, elected decision makers, whanau, hapū, iwi of Taranaki Whānui, landowners, local and central government staff, scientists, heritage experts, recreational users, community groups, and other interested people. Positive indicators for the achievement of "Tangata Kaitiaki" include:

- Taranaki Whānui iwi members exercise kaitiakitanga according to their tikanga and in turn pass their knowledge on to new generations of iwi Kaitiaki.
- Roopu Tiaki leads best practice collaborative and innovative co-management between iwi and local government;

- Taranaki Whānui iwi members are participating in all areas of governance and management;
- Integrated catchment management approach is standard practice for Parangarahu area;
- Community groups and individuals are engaged in protecting the natural environment, waahi tapu, archaeological and heritage resources which positively impacts on well-being;
- Environmental monitoring systems incorporate Matauranga Māori methodology and cultural indicators as well as scientific assessment tools and technology;
- Iwi Kaitiaki regularly monitor the oranga of the Lake catchments, particularly the eel fishery.
- Dendroglyph (tree carvings) are recorded, preserved and protected with appropriate visitor interpretation, including Taranaki Whānui Kaitiaki Guides;
- Wānanga and educational activities at the Lakes contribute to economic, cultural, social and environmental wellbeing of Taranaki Whānui and the wider Wellington community.
- Appropriate recreational activities and amenities are provided without degrading mouri.

Site visit with Taranaki Whanui and GWRC staff.

Section 3: - Mahi Tangata – human activities and land transactions over the years

Introduction

As this is the first co-management plan to be developed post Treaty settlement, this section endeavours to give Parangarahu Lakes Area managers and interested readers some context for the management objectives and an insight into aspects of Māori history and values associated with the area that is perhaps less well known. The section is broadly chronological with an overview of Parangarahu land block history to demonstrate the Taranaki Whānui history of connection, loss and reconnection with this whenua and the lakes. The European settler and farming history and era of land management by Government and GWRC has been previously written about in the East Harbour Regional Park Resource Statement, 2007.

Early Maori

Kupe, the legendary Polynesian explorer and discoverer of New Zealand, was possibly one of the first visitors to the Parangarahu coastal area a thousand years ago as he sailed his waka Matahorua down the east coast of the North Island in pursuit of te wheke a Muturangi (the octopus of Muturangi).[11] Traditions tell that Kupe named many natural landscape features to mark significant events, people or places in his journey. There are no accounts of Kupe staying at Parangarahu but he may have sighted the entrance to the lakes or sea inlets as he sailed across what is now Fitzroy Bay before entering Wellington harbour at Te Rae-akiaki (Pencarrow Head). Traditions say that he stayed for a short time in Wellington harbour where his name is still remembered today in key coastal landmarks including Te Tangihanga-o-Kupe (Barrett Reef), Te Ure-o-Kupe (Steeple Rock), Matiu and Makaro (Somes and Ward islands in Wellington harbour).[12]

Some 600-700 years ago, the first settlers in the Parangarahu and Wellington area were Whatonga and his son Tara-ika by his first wife Hotuwaipara, and his son Tautoki by his second wife, Reretua. Tara and Tautoki had identified 'Para-ngarehu' and surrounding area as a potential settlement place during their famous exploratory journey from Mahia peninsular down the east coast and back through the centre of the island.

> After an examination of that district, they came on to Rangi-whaka-oma (Castle Point), thence to Okorewa (in Palliser Bay), thence to Para-ngarehu (Pencarrow Head), from which place they explored the surrounding district, and Tara remarked, "This is a place suitable for us."[13]

Leaving Mahia peninsular, Whatonga with his sons and families first settled on the island of Mātiu/Somes in the harbour which was named 'Te Whanganui-a-Tara' or the great harbour of Tara.[14] Tara and Whatonga then established a fortress called Whetu Kairangi on the hill above what is now Worser Bay on the Miramar Peninsula but which was an island (Motu Kairangi) in their time.

Tara's people (Ngai Tara) occupied areas around the west and south of Wellington, including Wellington harbour. Tautoki's people occupied the Wairarapa with the boundary being the

Heretaunga (Hutt river) up to the head and on to Te Rere-a-Mahanga (near Te Toko-o-Houmeu, on the range west of Featherston).[15]

Tautoki's fort was the first pā at Parangarahu (referred to as Para-ngarehu in historical accounts). It was situated on the eastern end of what is now called Fitzroy Bay, near Orua-Poua-Nui (Baring Head).

> the fort of Tautoki, that is Para-ngarehu, on the point of the eastern side (Pencarrow Head) was the site of Para-ngarehu, which was also a large fort, though not so large as Te Whetu-kairangi[16]

Inland of the Parangarahu pā was a place of refuge called Takapau-rangi and which is described as follows:

> The refuge hamlet prepared as a dwelling place for women, old men and children, when fleeing from a fallen fort, or battlefield, was located at Takapau-rangi, at the head of Wainui-o-mata, a lagoon to the eastward of the Great Harbour of Tara, inland of the fort of Para-ngarehu that refuge camp was situated[17]

In these early years of Māori settlement and inter-tribal warfare, Parangarahu pā provided a fortified and strategic position with views over the whole of Fitzroy Bay and proximity to both the kaimoana and sea fishing resources of the bay as well as access to the rich freshwater fishery of the eel lagoons, known now as Lake Kohangapiripiri and Lake Kohangatera. [18]

Tautoki married Waipuna, a descendant of Kupe, and their son Rangitāne was the eponymous ancestor of the Rangitāne iwi. The historical connection of Rangitane with the Parangarahu area is acknowledged here. The descendants of Whatonga and Ngai Tara continued living in the area for many generations and later intermarried with Ngati Ira who had migrated from Tolaga Bay.

Tangata Whenua from 1820

Ngāti Ira (and Ngāti Kahungunu) were acknowledged as tangata whenua in this era with pā and kainga on the eastern shores of the Wellington harbour and around the coast to Parangarahu and Orongorongo area. However, by the early 1830's Ngāti Ira had been driven out of the area by Ngāti Mutunga.

> Ngati-Ira were destroyed at Wai-whetu (Hutt valley), Te Mahau, Whio-rau at Okiwi (by Patu-kawenga), Kohanga-te-ra (just outside Pencarrow Head), Orongorongo (a little to the east of the above, on the coast), and at Paraoa-nui.[19]

Oral history accounts of this era also mention Ngāti Kahungunu in connection to the Parangarahu area:

> Te Kume-roa tells me that Ngati-Ira killed a Ngati-Kahungunu chief at a spot a little to the east of Pencarrow Head, and in the fight a valuable greenstone *mere* was lost there. It has often been searched for but never found.[20]

Ngāti Mutunga took over the old pā site and cultivations at Parangarahu after defeating Ngāti Ira but left these in the control of their Te Atiawa and Taranaki kin when they departed for the Chatham Islands in 1835. Te Atiawa have been in continuous occupation of Te Whanganui –a-Tara since that time maintaining ahi kaa (rights of occupation).

1839 Peace Agreement between Ngāti Kahungunu and Te Atiawa / Taranaki Whānui ki te Ūpoko o te Ika

Any remaining interests of Ngāti Kahungunu at Parangarahu or elsewhere on the Wellington side of the Rimutaka range were removed, and conflicts between the iwi were settled by the peace agreement between Te Atiawa rangatira, Te Wharepouri and Ngāti Kahungunu rangatira, Peehi Tu-te-pakihi-rangi. The date of the peace agreement was 23 September 1839 just days before the NZ Company 'purchase' of Port Nicholson.

When the peace making was being discussed by the two rangatira and their people at the Hutt, Peehi made the following remarks in his speech to Honiana Te Puni, to Ngatata, to Kiri-kumara, to Miti-kakau, to Taringa-kuri, and the assembled peoples of Awa and other tribes:—

> "List unto me, O ye peoples here assembled. I had given you no cause to come here and attack me and to take my land; by you I was forced to drift away and dwell upon the lands of strangers. I was induced to proceed to the region occupied by the people whose weapon is the musket, then I returned here to meet you folk now before me. Well, yonder is Te Whare-pouri dwelling at Nuku-taurua, whither he went to induce his friend Nuku Te Moko-ta-hou to return to these parts. Now Nuku is dead, and here am I and the chiefs of Kahungunu assembled before you. Now we are looking at this new folk, the *pakeha,* and his characteristics. Who can tell whether he is kind and just to man? For his weapon is an evil weapon, and his intentions may also be evil.
>
> This is my message to you:—I cannot occupy all the land. Yonder stands the great Tararua range, let the main range be as a shoulder for us. The gulches that descend on the western side, for you to drink the waters thereof; the gullies that descend on the eastern side, I will drink of their waters. Remain here as neighbours for me hence-forward."
>
> The offer of peace was accepted, both sides agreed thereto, with many, many speeches. The boundary between the two peoples ran from Turaki-rae along the main ridge to Remutaka, along that to Tararua, and on northward along its summit.[21]

Today at a point on the coast about three kilometres north of Castlepoint there is a commemorative stone cairn and plaque known as 'Te Wharepouri's mark'. It indicates the place of the original stone marker that was erected to honour the peace agreement between the two rangatira.[22]

The people of Te Atiawa / Taranaki Whānui ki te Upoko o te Ika have continued to exercise their tangata whenua rights at Parangarahu through eel fishing, coastal fishing, and seasonal harvest of cultural resources despite exclusion by farm leasing arrangements, alienation of land, public works takings and restrictive Crown policies.

Parangarahu Block reserve land title and alienation history

Introduction

In the development of this plan it has not been possible to complete a comprehensive block history to show all the land transactions, leases and alienations that occurred from 1840 to the present day. That is a potential future research project that could help to broaden iwi and community understanding about the history of the wider Parangarahu Lakes area and to learn more about the people who have connections to this whenua, to the Lakes and to its resources.

The following narrative is included to provide a brief historical overview of some examples of the leasing and alienations that occurred over the last 165 years to illustrate the loss of management control, connection, and access to the Parangarahu Lakes Area by Taranaki

Whānui. In doing so, it attempts to provide some context as to the importance of the 2009 treaty settlement and the significance of the return of the lakebeds and former esplanade reserves of Lake Kohangatera and Lake Kohangapiripiri and two culturally significant dendroglyph sites, to Taranaki Whānui iwi as part of cultural redress.

Parangarahu Block - Pitone No. 2 Block (McCleverty's Deed 1847)

The Parangarau (Parangarahu) block comprised 4704 acres, 2 roods, 1 perches of unsurveyed land at Parangarau and the eel lagoons; Whangatera and Whangapiripiri.

It is noted that the spelling of Parangarahu here is without the 'h', being Parangarau. This may reflect the dropped 'h' in Taranaki spoken dialect. Also noteworthy in the 1847 Deed is the spelling of the names of the Lakes, being Whangatera and Whangapiripiri, without the prefix 'Ko' which may be explained as a particle used before a proper noun, for example, Ko Pitone te pa, Ko Korokoro te awa. 'Whanga' could be interpreted as bay, inlet, or harbour which supports the geological evidence that the lakes were once arms or inlets of the sea.

The land block was formed on the written record as part of the Pitone Block Deed signed on 13 October 1847 by Lieutenant-Colonel William McCleverty and these twenty-one Māori rangatira and people of Pitone pā: [23]

Ko te Puni;	Tuari;	E. Paki Taura;
Aperahama;	Hohua te Atua;	Hone te Meke;
Paruku Pani;	Patara te Tapetu;	Hakopa Rerewa
Wiremu Patene;	Haimona;	Hohua Parete;
Waitaratioro;	Kopu;	Panapa Pitione;
Henere Te Ware;	Manihera te Toru;	Watene;
Napaki;	Mohi Taiata;	Wirihana Puremu

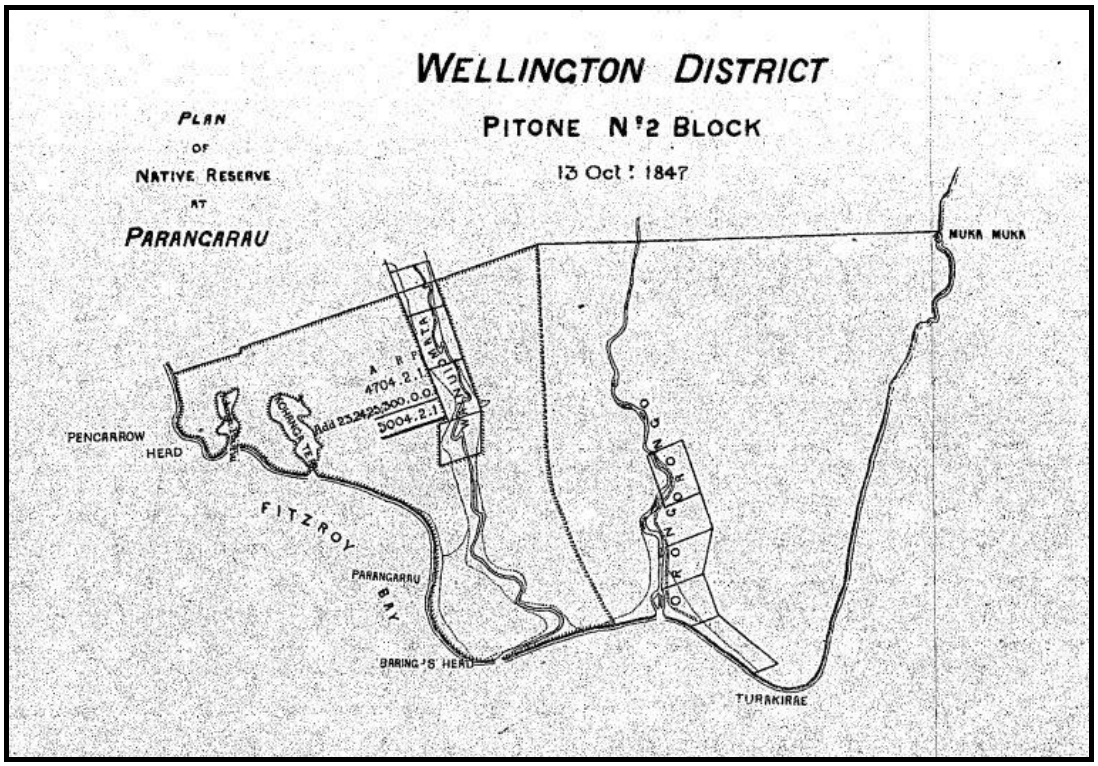


Figure 2: Plan of Native Reserve at Parangarau attached to Pitone Block (McCleverty's Deed), Wellington District, 13 October 1847[24]

The McCleverty transactions concerned Māori cultivations on sections claimed by settlers. McCleverty assigned land to Wellington Māori in 'exchange' for their cultivations. These transactions were investigated by the Waitangi Tribunal which found that no genuine exchange took place, because the land assigned to Māori by McCleverty belonged to them already.

> As a consequence, the valuable Māori cultivations were obtained at virtually no cost to the Crown or the company but at considerable cost to Māori, who lost much of their best land.[25]

The Parangarahu block was one of the four largest outlying McCleverty reserves which included Orongorongo (6990 acres), Korokoro (1214 acres), Parangarau (Wainuiomata) (4704 acres), and Opau (Ohariu) (91431 acres). Notwithstanding the large extent of land in terms of acreage, the Waitangi Tribunal noted and recorded McCleverty's own comments in his final report dated 20 November 1847:

> …may appear large in extent, but in reality they possess little land available for cultivation, particularly those at Orongorongo and Parangarau[26]

European settlers and early farming at Parangarahu

As early as 1841, some six years before the McCleverty Deed of 1847, at least one European colonist, William Barnard (Barney) Rhodes, was leasing land at Parangarahu from local Māori for grazing cattle.[27] In 1842 Rhodes looked to develop his farming enterprise by erecting a stockyard, placing this advertisement in the local paper, the New Zealand Colonist and Port Nicholson Advertiser:

> TO FENCERS.
> WANTED, a Stockyard erected near Pencarrow Head persons willing to contract to put up the above may apply at the Stores of W. B. RHODES & CO. Wellington, August 17, 1842.[28]

A later survey plan (SO 10240) of the Parangarahu block shows at least two settlers owning land in the Parangarahu Block. W.B. Rhodes is shown as the owner of a 30 acre block (section 69, possibly Crown grant 852) on the harbour side of the Pencarrow coast, just north of the Lighthouse reserve. John Cameron is shown as the owner of the upper catchment land of both Lakes.[29] Of whakapapa interest, Rhodes had no children by his two Pākehā wives[30], but had a daughter (Mary Ann Rhodes-Moorhouse) who was born to a Taranaki Māori woman of Ngāti Ruanui, whose name was Otahi or Otahui.[31]

In 1850, H. Tacy Kemp visited Māori pā around the Wellington region to carry out a census of the Native population. Kemp observed that the owners at Parangarahu and Orongorongo were leasing land to Europeans and, in his opinion, earning 'fair annual rents' on land that 'would probably otherwise lie unoccupied'.

38th Settlement. Mukamuka, Pa-rangarahu, and Orongorongo

Three small fishing villages belonging to Kaiwara, Pitone, and Pipitea, on the coast between Wairarapa and Wellington, are occasionally visited by Natives from those Pas, who are included in the census taken of those Settlements, with Report and Table for the Wellington District.

The Blocks or reserves at Parangarahu and Orongorongo, within a short distance of the Beacon at the heads, are now, and have been for some time past, let by the Native owners as Cattle and Sheep Runs to Europeans at very fair annual rents, and as these arrangements are now made with a much better understanding than they formerly were, (the runs being clearly defined) there is a mutual benefit: The contractors have their fat cattle within a short distance of town, and the Natives derive an annual and almost certain income from the rents of land which would probably otherwise lie unoccupied. [32]

Figure 3: 'Pencarrow Head Fitzroy Bay', engraving by Samuel Charles Brees published in London in 1849. Looks west from the ridge between the two lakes. In the foreground, travellers on the coastal track from the Wairarapa heading towards Mt Cameron and the eastern bays. The structure is not the lighthouse but a round timber tower to act as one of two beacons.[33]

Beacon and lighthouse at Pencarrow Head (Te Rae-akiaki)

The entrance to Wellington harbour was treacherous for shipping and early settlers were vocal in their calls to get coastal lighting erected at Te Rae-akiaki (Pencarrow Head). Initially in 1842 there was only a beacon in the bay window of a cottage and then in 1844, a 37 foot beacon was erected [and] painted white with a red flag.[34] Key dates below show the early establishment history of the Pencarrow lighthouse and residence for lighthouse keepers:

July 1857	• Tender accepted for the casting of the lighthouse from Messrs Cochrane and Company of Woodside Iron Works, Dudley, UK.
21 June 1858	• The lighthouse arrives on board the barque *Ambrosine* in 480 packages.
1 January 1859	• New Zealand's first lighthouse is lit for the first time.
1863	• Control of the lighthouse transferred from provincial government to Marine Board.
1865	• The lighthouse is sold to the general government.
1871	• New residences for lighthouse keepers erected.[35]

It is not known whether the Māori land owners were consulted, or agreed to, the erection of the beacon or the more permanent lighthouse. The archival records suggested however that the Pitone pā owners had for some years made compensation demands to the Government for firewood cutting or firewood taking, and for cattle trespass on their lands at or near the lighthouse.

In any case, it wasn't until 24 September 1873 that the Crown purchased sixty-nine acres of land situated at Te Raiakiaki or Pencarrow Head and paid the Māori owners £138 plus £35 rental payment for occupation from 1 July 1865.

Māori signatories to the Deed of Sale are recorded as:

Henare te Puni;
Ngapaki te Puni;
Hana te Puni;
Mawene Hohua; and
Makareta.

They signed in their capacity as awardees or successors of awardees of the McCleverty award of 13 October 1847 of Pitoni lands. [36] The sketch attached to the Deed of Sale document shows the lighthouse block in pink comprising 60 acres which reaches right to the sea outlet of Lake Kohangapiripiri and onto the foreshore below the high tide mark.

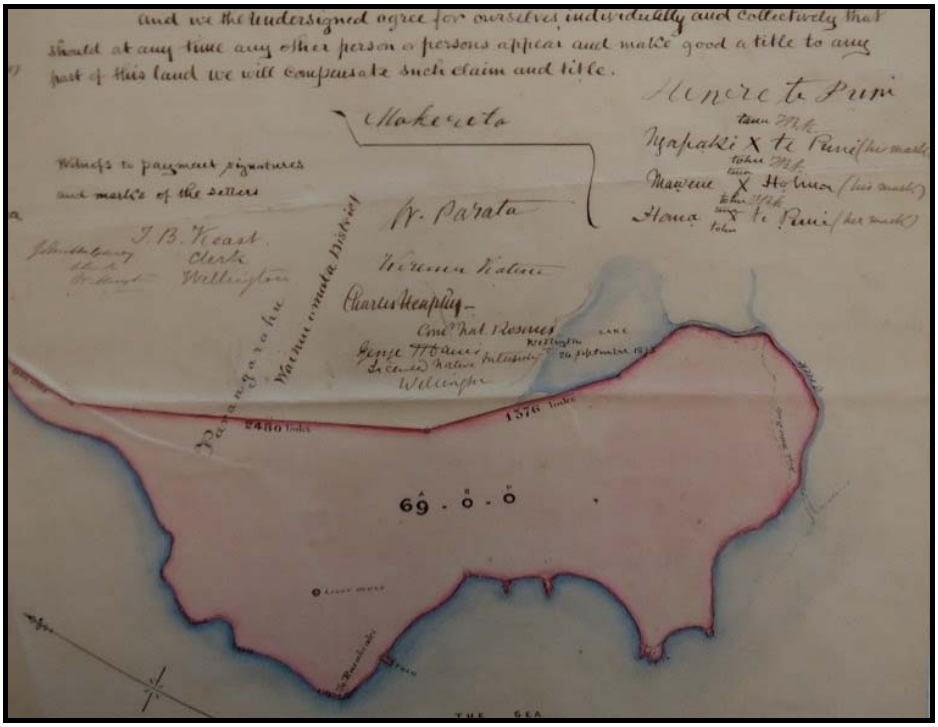


Figure 4: Document signed by Māori for receipt of payment of £138 sterling for sale of Te Raiakiaki block at Parangarahu[37]

Title investigation

Title investigations to the Parangarahu block (5150 acres) commenced in the Native Land Court in August of 1867. On 5 September 1867, Judge Smith made an order for the issue of a Certificate of Title in favour of Henare te Puni and Ngapaki te Puni as trustees for the members of the Ngati Tawhirikura branch of the Ngatiawa tribe if, within six months, Henare te Puni shall furnish a proper survey.[38]

It is significant that the 1867 Judge's order specified that the Parangarahu block "includes two salt water lakes for eel fishing". This is a strong indicator that Pitone Māori, in 1867, were maintaining their connection with the Parangarahu Lakes area and considered the eel fishery of those Lakes to be of such significance that they made this clear to the Judge, who included the above wording in the title order. The description of the lakes as 'salt water' lakes is interesting and may contribute to future cultural and scientific research on eel populations and salinity levels.

In its investigation into the adequacy of the 1847 McCleverty reserves, the Waitangi Tribunal noted that the Parangarau reserve assigned to Pitone Māori, although situated on a rugged, relatively barren coastal block distant from their pā on the Wellington harbour, did contain some cultivations, plus eel weirs, and fishing stations.[39] As such it afforded Pitone Māori with some means with which to meet their subsistence needs in the short term, if not their long-term economic needs that land closer to the new town of Wellington could have provided.

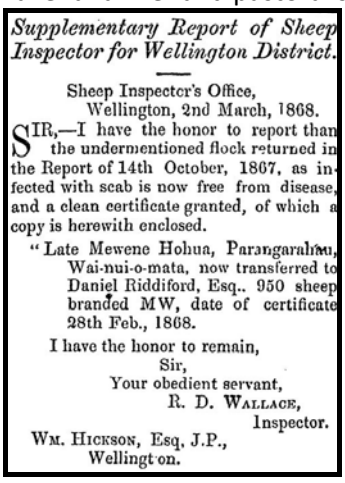
> The Tribunal finds that the Crown neglected to protect the rights of Māori living in the Port Nicholson district who were parties to the McCleverty deeds by failing to set aside reserves which left them with an adequate land base for both their short- and their long-term cultivation and resource-gathering needs, and which made adequate provision for Māori to develop on an equal footing with Pākehā (particularly by taking up pastoralism or other farming and land-use activities), and that such Māori were seriously prejudiced thereby.[40]

Māori sheep farming

Pitone Māori leased some of their reserved land at Parangarahu to Pākehā pastoralists and were among the few Māori owners in Wellington with sufficient land and opportunity to own and run their own sheep farming business. For example, Henare Te Puni is one of 15 Natives listed as a 'flock owner' in the Wellington Sheep Inspector's report dated 28 July 1868.[41] His two flocks of sheep numbering 300 sheep at Pitone and 1500 sheep at Parangarahau[42] indicates a substantial enterprise and that he held a position of some importance in terms of Wellington pastoralism. The Waitangi Tribunal noted this was not the 'norm' for Wellington Māori and it didn't last for long.

> Significantly, Maori failed for the most part to take up pastoralism, which required considerable capital, instead renting their reserve land to Pakeha pastoralists who could use it more effectively by incorporating it into their already large runs. An exception were the Petone Maori who were recorded as running sheep on the Parangarau block in 1867, but a few years later a Pakeha was leasing the block as a sheep run in their place.[43]

Mawene Hohua, another Māori of Petone pā, was also in the business of sheep farming with his own branded flock until around 1868 when after his death it seems that his flock of 950 sheep were 'transferred' to local Pakeha farmer and pastoralist Daniel Riddiford. [44]



Supplementary Report of Sheep Inspector for Wellington District.

Sheep Inspector's Office,
Wellington, 2nd March, 1868.

SIR,—I have the honor to report that the undermentioned flock returned in the Report of 14th October, 1867, as infected with scab is now free from disease, and a clean certificate granted, of which a copy is herewith enclosed.

"Late Mewene Hohua, Parangarahau, Wai-nui-o-mata, now transferred to Daniel Riddiford, Esq.. 950 sheep branded MW, date of certificate 28th Feb., 1868.

I have the honor to remain,
Sir,
Your obedient servant,
R. D. WALLACE,
Inspector.

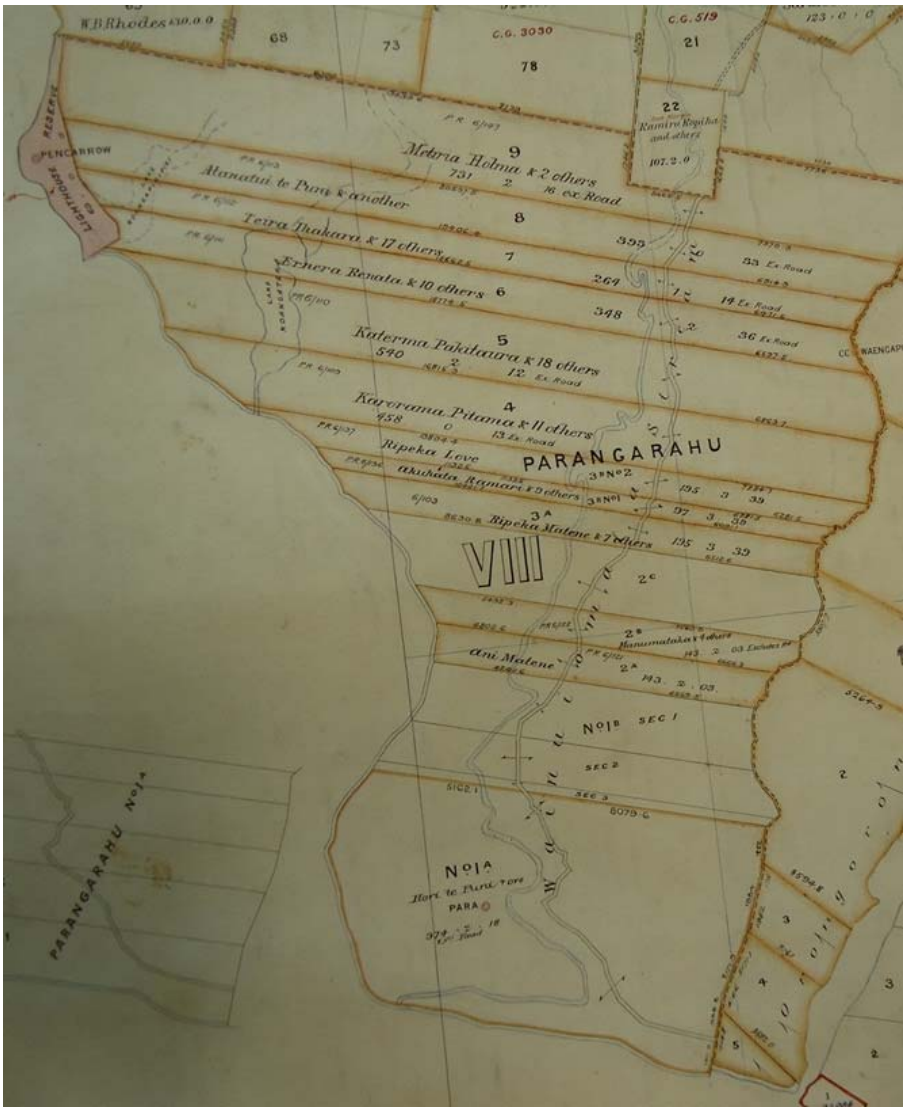
WM. HICKSON, Esq, J.P.,
Wellington.

Figure 5: Wellington Independent, Volume XXII, Issue 2666, 11 April 1868, Page 3

Partition of Parangarahu Block

In September 1889 Henare te Puni and others made an application to the Native Land Court for the partition of the Parangarahu block into eight parcels. Various people gave evidence about who had cultivations at Parangarahu, who had been to collect karaka berries from Parangarahu, and which individuals belonged to Ngatitawhirikura hapu, in order to identify entitlement to the eight parcels.[45]

On 21 September 1911 the Native Minister applied to cancel the 1889 partition as the Partition Orders had not been registered under the Land Transfer Act of 1908. It was not until the following year on 12 June 1912 that Judge Gilfedder made the final partition orders and the Parangarahu block was divided into nine parcels of Native freehold land and individual shareholders were named. At the same time, the Judge made succession orders for a number of the deceased owners.[46]



Plan of Parangarahu Block showing partition into 9 sub-blocks, c 1912, Archives NZ

Public works takings

In 1932 the Government decided to build a new lighthouse at Baring Head situated on part of the Parangarahu 1A block. The Proclamation for this public work taking was advertised in the Evening Post on 27 January 1939.[47]

> NOTICE IS HEREBY GIVEN that by a Proclamation dated 23rd December, 1938, and published in the New Zealand Gazette, 1938, page 2, the land described in the Schedule hereto was taken for the purposes of a lighthouse in terms of the Public Works Act, 1928.
> SCHEDULE: Approximate area of the piece of land taken, 42 acres 2 roods, being portion of Subdivisions 1, 2, and 3,Parangarahu No. la Block, situated in Block VIII, Pencarrow Survey District, in the Wellington Land District; as the same is more particularly delineated on the plan marked P.W.D. 99626, deposited in the office of the Minister of Public Works.—
> N. E. HUTCHINGS, Assistant Under-Secretary. Public Works Dept., Wellington, 24/1/39

A short history of the Baring Head lighthouse on the Maritime New Zealand website states that the lighthouse was built on land presented to the Government by a local farmer, Mr Eric Riddiford.[48] This suggests that the Parangarahu 1A block had passed out of Māori ownership before 1938.

Another public works taking by the Hutt Valley Drainage Board occurred around 1962-1965 for the purposes of a sewer outfall near the Lake Kohangapiripiri sea outlet. This affected the Parangarahu 5B and 6 blocks. It appears that the land was still in Māori ownership at the time of taking as archive records refer to the Māori Trustee.[49]

Sewer outfall signage and infrastructure near the entrance to Lake Kohangapiripiri

The detail of any consultation or compensation payments for these public works takings has not been researched here. There is, however, some evidence that Māori owners considered that some specific public works takings, including those of the Parangarahu block for lighthouse purposes (182 acres) and sewer outfall purpose (25 acres), constituted a breach of the Treaty as set out in the Wai 145 fourth amended statement of claim.[50]

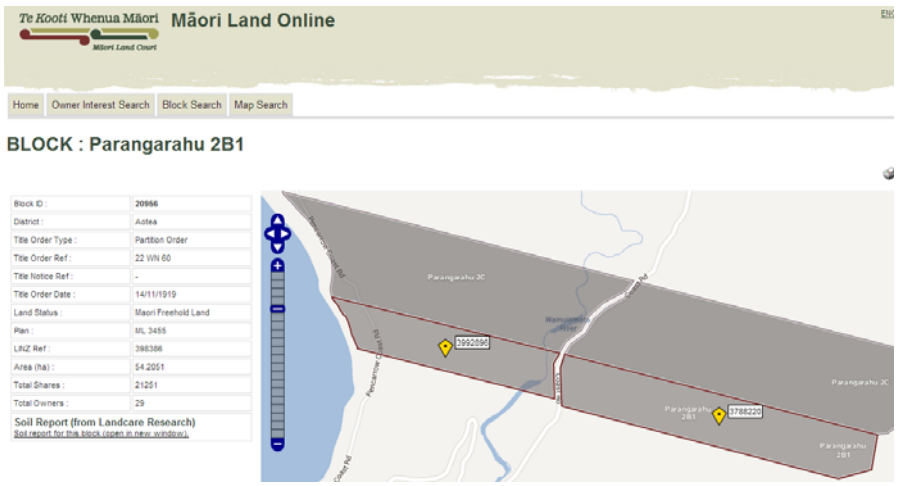
The Waitangi Tribunal was not persuaded by the claimants' arguments to reach a finding of a Treaty breach, stating that 'while the overall reduction of the area of reserved land left to Wellington Māori is regrettable, the Tribunal has insufficient evidence about these particular cases to make findings'.[51]

Remnants of Parangarahu block reserved land

In 2013 there are only two parcels of the original Parangarahu block (5150 acres) remaining in Māori ownership, namely:

- Parangarahu 2B1 Block (54.2051 hectares) with 29 owners; and
- Parangarahu 2C Block (123.3481 hectares) with the same 29 owners.

Both blocks are administered by the Tupoki-Takarangi Ahu Whenua Trust set up in 1996 and the current four Responsible trustees listed on the Maori Land Court database are: Marama Josephine Kipo Butler-Monu, Eva Lianne Hemara, Lee Hunter and Debra-Ann Okeroa-Garner.[52]



Parangarahu 2B1 and Parangarahu 2C blocks www.maorilandonline.govt.nz

Parangarahu Lakes Area as part of East Harbour Regional Park

Throughout much of the 20th century the Gollans Farm and Orongorongo Station, including the hills surrounding the lakes right down to the shoreline, were grazed by sheep and cattle. In the 1970s the concept of creating a Pencarrow Regional Park was mooted, but opposition by the private land owners halted any progress.

In 1981, during the subdivision of the Orongorongo station, the Department of Lands and Survey acquired the beds of the two 'Pencarrow lakes' and a 20 metre strip around the lakes was vested in the then Hutt County Council as esplanade reserve. In December 1987, the lakes were transferred into the Department of Conservation estate and designated as Wildlife Management Reserves.

While the Lakes and esplanade strip were protected, the land surrounding the Lakes did not have public protection. In 1992 the area, then known as Burden Block of Orongorongo Station was purchased for $215,000 by the Wellington Regional Council and the Department of Conservation and several environmental groups (The Lower Hutt Royal Forest and Bird Protection Society, the East Harbour Environment Association and the Queen Elizabeth II Trust).

This purchase expanded East Harbour Regional Park, allowing public access to this area and bringing into public protection the outstanding cultural, natural and landscape values. Recreation reserve status was sought for the 360 ha and a grazing licence granted to Mr Mike Curtis, the adjacent landowner to the east of the area.

The first management plan for the area was developed in 1995, attempting to coordinate management of land by the Department of Conservation, Hutt City Council and Greater Wellington. Over time plans developed for improving the tracks and infrastructure and undertaking environmental restoration in the park. At this point in time the area was known as the Pencarrow Lakes Block which reflected only the more recent European farming and lighthouse history. As a result of the Treaty Settlement in 2009 there was a review of the names used for the area, with Parangarahu Lakes Area adopted at that time.

Around this time Hutt City Council transferred the strips surrounding the lakes to the Crown, making the land available for the settlement.

Post Treaty Settlement - a new era of partnership (PNBST & GWRC)

The Port Nicholson Block (Taranaki Whanui ki Te Upoko o Te Ika) Claims Settlement Act 2009 came into force on 5 August 2009. As part of cultural redress to settle the historical Treaty claims of Taranaki Whānui ki Te Ūpoko o Te Ika (Taranaki Whānui)[v], ownership of the lakebeds of Lake Kohangapiripiri and Lake Kohangatera, the esplanade land surrounding both lakes, and the dendroglyph site was vested in the Trustees of the Port Nicholson Block Settlement Trust (PNBST).

A conservation covenant is included over the lakebeds and the esplanade land. The area surrounding the esplanade land is owned by Greater Wellington and is managed as a recreation reserve. The Crown retains ownership of the water and air strata above both Lake Kohangapiripiri and Lake Kohangatera.

In recognising the need to manage this area holistically and in partnership, GWRC and PNBST held discussions post-settlement in relation to collaborative management of the Parangarahu Lakes Area. The outcome was to sign a Memorandum of Understanding and the development of this co-management plan.

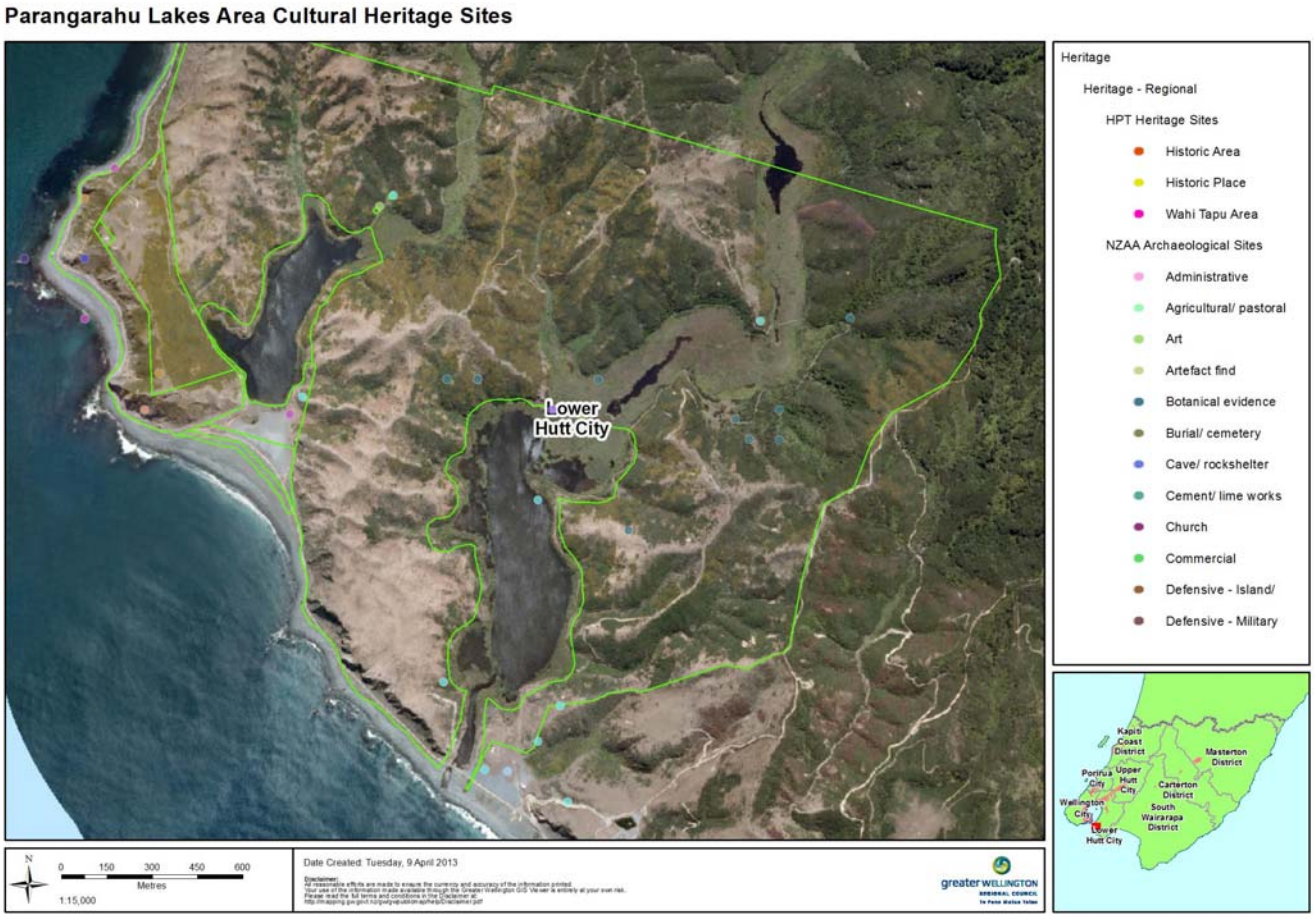
Archaeological sites

There are a number and variety of recorded archaeological sites along the eastern side of Wellington Harbour, of both Māori and European origin. The majority of recorded sites in or near of the Parangarahu Lakes Area are located on the coastal platform or around the two lakes. [53] Sites from the pre-European period indicate the lifestyle of Māori occupants of the coast, for example pā, pits, terraces, middens, stone rows and dendroglyphs.

[v] Taranaki Whānui are people descended from one or more of the recognised tūpuna of Te Ati Awa, Taranaki, Ngāti Ruanui, Ngāti Tama and other iwi from the Taranaki area.

Later European sites in the area include the Pencarrow Lighthouse, the first lighthouse in New Zealand. The current structure is registered as a Category 1 historic place by the NZHPT and was built in 1858 and operated until 1935. A newer automated light is located on the coastal flat below the Pencarrow Lighthouse. Remnants of activities associated with the lighthouse operations include two house sites, a zig-zag track down to the beach, a former tramline/cable car path, and a probable ditch and bank fence. A child's grave rests just below the original lighthouse on the northern side. It is the grave of Evelyn Violet Amy Wood (daughter of a lighthouse keeper) who died in March 1896.

This stretch of coastline is notable for the number of shipwrecks that have occurred. The Paiaka was a steamer that was wrecked in Fitzroy Bay in 1906. The iron hull of the ship has been lifted out of the tidal zone and can be seen lying beside the coast road to Fitzroy Bay. The Devon was wrecked on Pencarrow Head in 1913 during a violent storm. It was caught on the rocks, eventually broke up and was scattered along the coast.



Map 3: Cultural Heritage Sites at Parangarahu Lakes (Source: NZAA and NZHPT)

Potential for discovery of unrecorded heritage sites

Both NZHPT and the NZ Archaeological Association maintain a record of heritage sites. Appendix 3 lists the recorded sites for the whole of the East Harbour Regional Park. The Parangarahu Lakes Area has been studied by many archaeologists over the years and the majority of sites are likely to have been located. However there has been a large and active human population along this coast and there remains the potential for further sites to be discovered, especially from the pre-European period[54]. The sea and weather along the coast can be very violent, and can occasionally reveal buried shipwrecks or potentially koiwi (human bones). Such new discoveries should be treated with care and dealt with appropriately, as guided by the principles of this plan and by the policies the GWRC Parks Network Plan and the current GWRC Accidental Discovery Protocol.

Karaka trees and dendroglyphs (tree carvings)

Karaka trees with dendroglyph (April 2013)

The European discovery of dendroglyphs on karaka trees at Waimikomiko swamp on the western side of Lake Kohangapiripiri was made by George R Bull and G Leslie Adkin on 27 September 1959. Adkin records the significance of the discovery in his Notebook dated 19 December 1959 on the occasion of his second visit to the Kohangapiripiri Dendroglyphs:[vi]

> The discovery in New Zealand of dendroglyphs on karaka trees can be regarded as an event of considerable ethnologic importance and one opening up interesting problems of cultural connection and symbolic significance… When the occurrence was brought to the notice of Dr T T Barrow, Chief Ethnologist Dominion Museum, he was desirous to observe the phenomenon for himself….The single tree was examined first and Dr Barrow was not only satisfied with the authenticity of the dendroglyphs previously found but soon noticed additional examples.

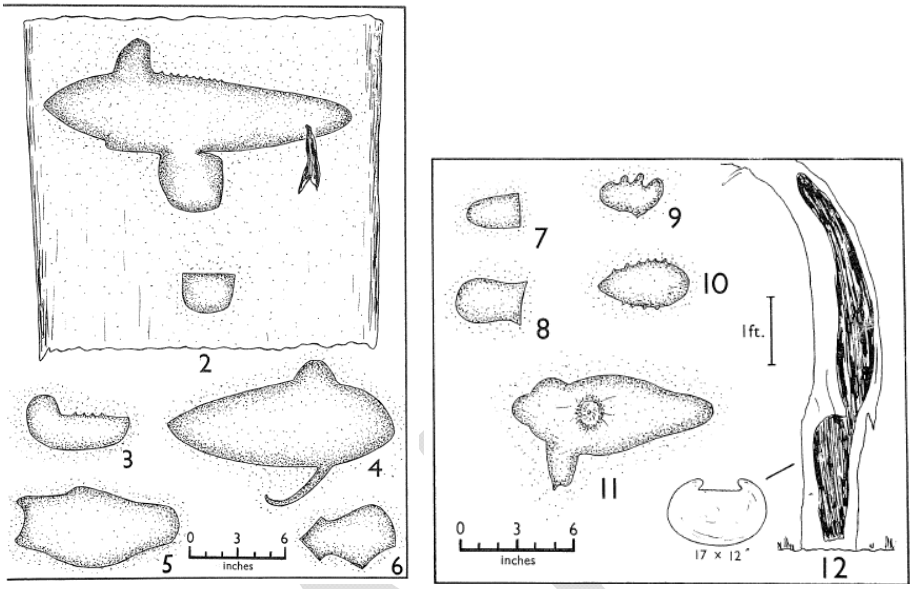
Archaeologist reports on dendroglyphs

In 1959, Mr G. L. Adkin and Dr. T. Barrow supplied material and illustrations for an article (NZ's First Tree Carvings) published in the Dominion newspaper on 1 July 1961. No further reports were published until archaeologist Ian Keyes wrote his article in 1968[55] to further establish the record and

[vi] **Adkin, George Leslie, 1888-1964 : Ethnological notebooks Ref:MS-Papers-6061-45 Comprises notes on second and third visits to examine the kohangapiripiri dendroglyphs, 19 Dec 1959, 16 Jan 1960 (with maps, drawings and photographs), Maori notebook (vol 44), http://natlib.govt.nz**

provide NZ field archaeologists with information which could lead to similar discoveries elsewhere. Keyes noted that dendroglyphs are simplified motifs incised into the trunks of living trees and are an extremely rare form of Maori art in mainland NZ.

Keyes - Illustrations of glyphs on karaka trees at Kohangapiripiri



Keyes suggests that figures 2, 4, and 11 lend themselves to possible identification as they do not show tail outlines but have prominent dorsal and ventral fins which suggest stylised motifs that portray whales or dolphins. Fig 2 could possibly represent a killer whale (Orcinus orca), the largest of the dolphin family and a species well known in the Cook Strait area.

In 1988, Walton and McFadgen[56] conducted a further archaeological survey at Fitzroy Bay, including the Parangarahu Lakes Area. With respect to the dendroglyphs described by Keyes in 1968, they noted that Tree 1 survives and at least one glyph (fig 2 in Keyes 1968) is in a poor condition and no information is available on the other trees. They also noted that the glyphs are likely to be less than about 200 years old, being the likely maximum age for the trees. (Keyes 1968:109). Their article also lists a number of karaka trees around Lake Kohangatera which have been assigned archaeological reference numbers.

Recognition of significance of dendroglyphs

The Hutt City District Plan includes the dendroglyphs as a Significant Archaeological Resource; R27/62 - Northeast of Lake Kohangapiripiri - Dendroglyphs.

The NZHPT Sustainable Management of Historic Heritage Guidance Series – Fire Safety and Heritage Places also notes that at Lake Kohangapiripiri, there are ancient dendroglyphs (tree carvings) recorded as archaeological sites that could be lost forever by wildfire.[57]

Section 47 of the Port Nicholson Block (Taranaki Whānui ki Te Upoko o Te Ika) Claims Settlement Act 2009[58] provides for the dendroglyph site:

- to vest in trustees
- to be set apart as a Maori Reservation for the purposes of a place of cultural and historical interest
- to be held for the benefit of Taranaki Whanui ki te Upoko o Te Ika

- not to be rateable
- to be accessible by a right of way easement from GWRC.

Recent archaeological assessment

To assist the development of appropriate management objectives in relation to the dendroglyphs, GWRC engaged archaeologist Ian Barber[59] to conduct further archaeological assessment of the dendroglyphs at Lake Kohangapiripiri.

The following statements are taken from Barber's unpublished report to GWRC in 2013. It is his opinion that 'there is no unequivocal evidence that East Harbour karaka trees were deliberately carved'.

> The purported 'dendroglyphs' above Kohangapiripiri have been re-assessed by Barber (2013) from field visits (December 2012, April 2013) and archival research. In the north-western gully, only two of the four karaka trees recorded by Adkin can be identified currently. Adkin Trees A and B4 are each fenced in reserve areas that are accessible from, and close to, the walking track at the base of the gullies. Shrub vegetation including gorse encroaches on the upslope margins of both fenced areas. The lower aspect of both gullies is otherwise open and in grass.
>
> In the 1959 photograph the trunk scars that now appear immediately below this shape are not present. This means that the trunk of Adkin Tree A has been scarred naturally since 1959 in a pattern of exfoliation that could also account for the earlier bark damage interpreted as dendroglyphs. It is possible that people have contributed to this damage since 1959 or even before. However, there is no compelling reason to argue that any scar shapes on Tree A were deliberately carved.

Barber concludes that:

While there is no unequivocal evidence that East Harbour karaka trees were deliberately carved, they do at least represent a cultural connection to the past. Maori introduced karaka to the lower North Island and South Island for the food value of the tree's nutritious drupes. Karaka tree locations can serve as important reminders of the patterns of earlier settlement and food production management in this region. The moderate size of the remaining Kohangapiripiri trees allows for the possibility of a nineteenth century age at least.

The Roopu Tiaki discussed the Barber report in October 2013 and, notwithstanding his opinion, considers that the karaka trees and dendroglyphs/tree markings are special and unique. The ambiguity of their origin and meaning should be embraced and the Roopu Tiaki encourages ongoing korero and debate to add to the mana of the site. In a practical management sense, the GWRC and Taranaki Whanui members of the Roopu Tiaki agree that the site requires continued protection, pest control, and interpretation.

Kakara trees as taonga tuku iho; cultural heritage and resource important to Maori, is discussed in pages 45-47.

Section 4: Te Taiao – Natural Environment

The Parangarahu Lakes area is regarded by Taranaki Whānui and the Roopu Tiaki as a taonga. The area encompasses landscape, geological, ecological and cultural heritage features of significant value and some of these unique aspects are highlighted in this section.

Landscape and geology

The geological history of Parangarahu coastal area can be mapped by looking at the shape of the landscape. The large gravel bars between the lakes and the sea, the uplifted beaches and the wave-cut cliffs are unique and impressive features that show how earthquakes and coastal weather patterns have shaped the geological landscape.

The lakes, Kohangapiripiri in the west and Kohangatera to the east, are thought to have once been river valleys, or narrow inlets of the sea.[60] Earthquakes have uplifted the area so that the lakes are now cut off from the sea and do not drain at low tide. The most recent tectonic uplift in 1855 lowered water levels of both lakes by over a metre and created extensive swamp and wetlands.

Lake Kohangapiripiri: fed by Camerons Creek from the north and enclosed by the shingle beach to the south. Photo: Lloyd Homer ©Institute of Geological & Nuclear Science Ltd.

Although the lakes are very close to each other, they are fed by quite different catchments. Kohangapirirpiri is the smaller of the two lakes and is fed by Cameron Creek (Waimikomiko Stream) which flows from Mt Cameron (260m). The catchment is 280ha which includes intact bush, wetlands and regenerating bush that was once farmed. Kohangatera is the larger lake and also has a much larger catchment of 1700ha. The main stream is Gollans Stream, which flows down from Mt Lowry (373m) through beech forest, farms and wetlands.

[Place holder – PHOTO OF Lake Kohangatera.]

The hydrology of the lakes is dominated by the infrequent breaching of the gravel barriers that separate them from the sea. This occurs during flood or storm events and can cause lake levels to drop very quickly.[61]

Ecosystems

The Parangarahu Lakes are nationally outstanding examples of lowland lagoon systems. The brackish water vegetation of coastal lagoons has become increasingly rare across New Zealand as a result of land use intensification around these shallow lowland lakes.[62]

Despite being so close to urban areas the lakes are very healthy. Because of this, they provide habitat for a number of indigenous fish, birds and other animals, and also a range of interesting plants. The uniqueness of the Parangarahu Lakes makes them ideal candidates for recognition through Waters of National Importance or RAMSAR designation.[63]

Refer GWRC Key Native Ecosystems Plan for a list of threatened species present in the area.

State of the lakes and wetlands

NIWA surveys lakes around New Zealand, noting the diversity and extent of native vegetation and the extent and impact of invasive weeds, referred to as the Lake SPI Index.In 2011, NIWA surveyed both lakes at Parangarahu and found Lake Kohangatera's condition is 'excellent', with nationally outstanding botanical values, placing it at 10th best out of NZ lakes. Lake Kohangapirpiri's condition is 'high', placing it 47th.[64]

The wetlands located at the northern ends of the lakes, while historically impacted by grazing, and more recently by aquatic weeds, are in excellent condition today. In 2006 Landcare Research assessed Lake Kohangapiripiri wetland as being in excellent condition, second out of the 177 swamps assessed in NZ (Bev Clarkson pers. comm. 2013).

Fauna

Tuna (Eels) and Native fish

Several native fish species are known to be present some or all of the time in the lakes or further up in their catchments, including short and longfin eel, common bullies, lamprey, inanga, giant and banded kōkopu, and smelt. However, only low numbers of fish are present, primarily due to the compromise of migratory pathways. Because most native fish need access to or from the sea to complete their lifecycles (they are diadromous), the fish communities of the lakes are influenced by the pattern of breaching of the gravel bars between the lakes and the coast. The presence of endemic freshwater fish highlights the need to maintain the natural cycle of beach breaching during high stream flows (see fish passage text box).

Tuna / Eels in Kohangapiripiri and Kohangatera

In the early survey maps of the lakes they are described as eel lagoons. This signified their importance to the iwi of Te Atiawa/Taranaki whānui and the earlier iwi of the region. That

significance waned over the years as adjacent areas were converted to pasture for cattle and sheep and later to recreational and wildlife reserves.

Tuna have certain requirements for successful seasonal migration between the sea and freshwater. The incoming larva, having drifted across the Pacific Ocean, will home in on sources of fresh water and some will arrive on the coast at the entrance to the lake outlets, changing to glass eels. When fresh water flows out from the lakes and there is sufficient hydraulic connection, the glass eels will commence their journey from the salt water of the sea to the fresh water and start to make the transition to an elver and develop colour and the form of a juvenile eel. For this to happen there needs to be sufficient water levels in the lakes and sufficient flow through or over the gravels in springtime to get the elvers through the passage / culverts and into the lakes.

The elver stage is the most difficult time for survival in the life cycle for eels in these lakes. In earlier Māori times elver survival rates were probably more certain with higher lake levels and a shorter length of sand and gravel between the lakes and the sea. The stream catchments above the lakes most likely provided a better habitat for tuna /eels prior to the clearing of the land for farming.

The eels will usually find their way into the catchment streams to live to maturity however some will remain in the lakes living off the invertebrate community and other species that fall or live in the waters. The lakes have been home to the endemic long finned eel (*Anguilla dieffenbachii*), which has a long life span with females reaching maturity in around 30 years before they have the urge to join the tuna heke. The males are usually younger when they join the females to migrate. The short-finned eel (*Anguilla australis*) is also indigenous but is found in places like Australia as well. The short fin has a shorter life span and reaches sexual maturity faster. It is smaller when it migrates. It also occupies a different niche in the ecosystem when it is maturing.

New Zealand Longfin eel (Anguilla dieffenbachii) seen in a river at night in the Tararua Ranges, http://en.wikipedia.org/

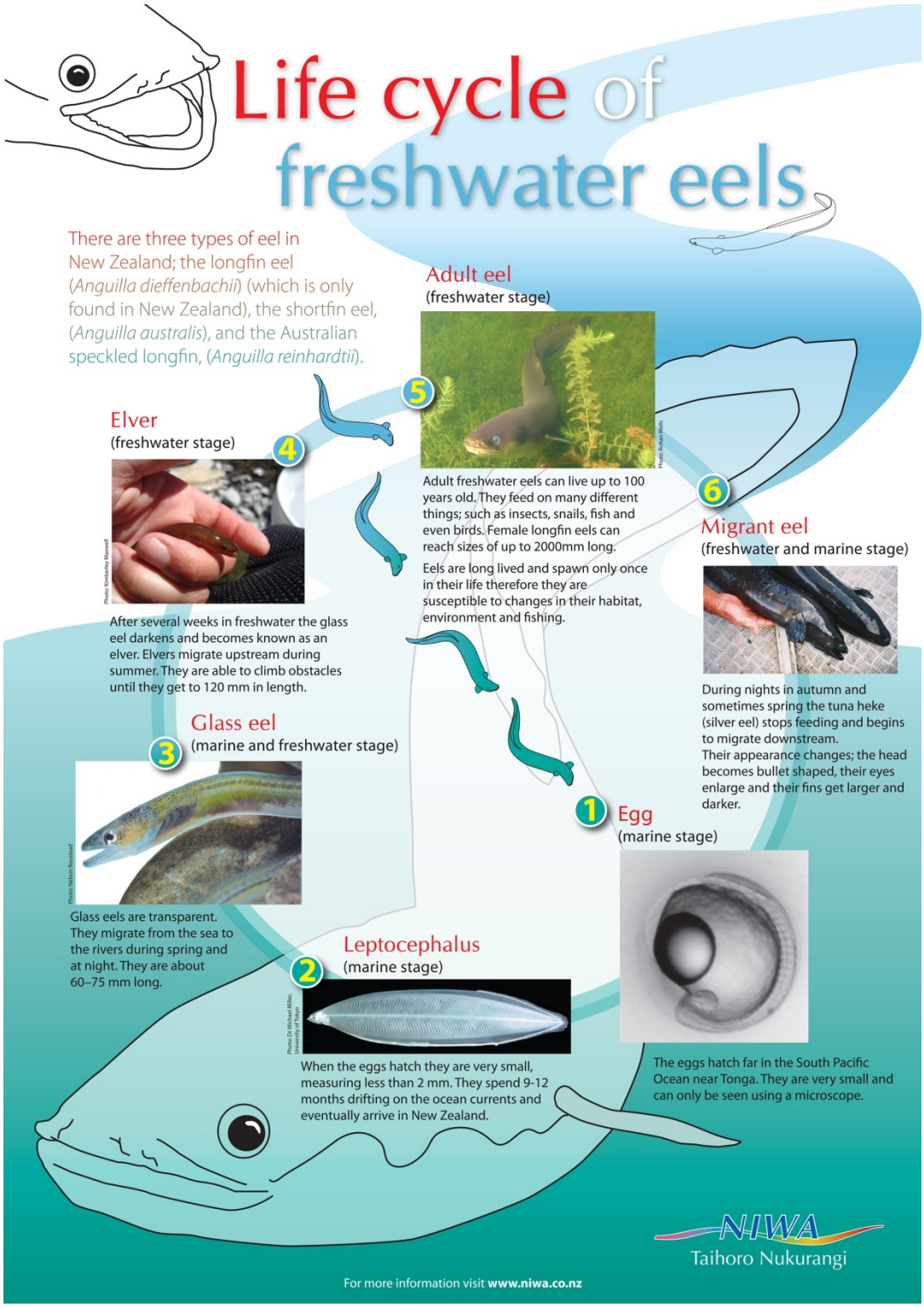
The lakes are no longer a high quality tuna / eel environment because of the uncertainty of recruitment of the glass eel into the lakes environment (see fish passage text box).

The tuna / eel is an iconic species for Māori. These lakes are off limits for commercial eeling, although the feeder streams are not. Te Atiawa/Taranaki Whānui do not envisage tuna / eels being harvested until such time as the eel population has been restored to considerable numbers, which

may be many years away. The eel habitat would degrade if pest fish such as carp, perch, tench, Rudd and the like were introduced, although that is unlikely to happen without human intervention. Trout could arrive if the sea passage was opened up and improved, however eel can cope with the trout.

In tradition, Māori connect to tuna / eels by whakapapa and many Māori a see the eel as being closely connected with the mouri of a water body. If the eels are healthy then so is the water body. These lakes and their dwindling eel population need a helping hand and when the eel populations are restored then the tangata whenua will consider that the mouri of lakes has been restored.

A tuna heke from the Mōkau River. Note the enlarged eye and pointed nose as its body starts to change and get ready for its long ocean journey. Credit: NIWA http://www.niwa.co.nz/



The lifecycle of freshwater eels. Credit: Pauline Roberts, Royal Society of New Zealand Primary Science Teacher Fellowship (2009) http://www.niwa.co.nz

TEXT BOX: Fish Passage

The hydrology and geography of the lakes changed with tectonic uplifts over the centuries and from the effects of the movement of sand and gravels from the rivers of Orongorongo and Wainuiomata. The lake to sea outlets have generally been subject to the accretion of sand and gravel build-up, with some reduction from sand mining. This has all had the effect of reducing the connection to the lakes for sea migratory species such as tuna, inanga, kokopu and other indigenous fish species.

Since the 1960s the outlets of both lakes have been culverted to provide for a road around the coastline. This has changed the functioning of the lakes. Lake Kohangapiripiri has a single concrete culvert which is perched, creating a 500mm vertical drop from the lake bed to the gravels downstream. This presents a barrier to the passage of fish. Lake Kohangatera has three concrete culverts and a less obstructive alignment.

In 2007 Sinclair Knight Mertz examined the issue and concluded that changes to the culverts at the outlet of both lakes were required to improve fish passage through improved lake hydrology.[i65] Subsequent recordings of breach events at the lakes have shown that the Lake Kohangapiripiri culvert is of greatest concern.

In 2013, fresh water ecologist Amber McEwan, investigated options to improve fish passage at the mouth of Lake Kohangapiripiri. McEwan consider culvert design that will allow native fish to migrate while deterring exotic fish from entering the Lakes. Intervention on the beach in the form of channel-cutting may also be necessary during key fish migration periods.[66]

McEwan recommends that a number of future management initiatives including culvert monitoring, species monitoring and biosecurity measures will promote the conservation and restoration of native fish biodiversity of the Parangarahu Lakes.[67]

The Fisheries Trust has advocated for many years to restore the eel fishery at Parangarahu Lakes and strongly supports the opening of the lake to sea outlets at critical periods for seasonal migrations. The Fisheries Trust has also identified key work programmes such as regular fish surveys, species research, and cultural environmental monitoring by members of Te Atiawa/Taranaki Whānui that would contribute to the long term goal of re-establishing the Parangarahu Lakes as a healthy nursery and freshwater habitat for native fish species, able to sustain customary harvest and supply traditional kai for the marae tables.

Native birds

The area provides significant habitat for many native birds, a number of which are threatened species. The lakes themselves provide excellent open water and wetland habitat for waterfowl, including grey duck, NZ dabchick, Australasian bittern, pied stilt and spotless crake. The shingle beaches are important breeding habitat for banded dotterel and variable oystercatchers.

Also present are NZ pipit, NZ scaup (black teal), NZ shoveler, bellbird, terns and shags. NZ falcon are known to visit and hunt at the site. Other common species often sighted at the lakes are Californian quail, fantail, pukeko, black swan, mallard and paradise duck.

Native lizards, frogs and invertebrates

Parangarahu Lakes Area has the greatest abundance of lizards of all the regional parks and is a significant mainland lizard site for Wellington. Common gecko, common skinks and a copper skink have been observed in the coastal habitats where boulder beds and creviced cliff faces provide protection from predation.[68]

Reporting and monitoring of frogs and invertebrates at the lakes hasn't improved from when Gibbs described them as "almost completely ignored" in 2002. Frogs and tadpoles observed at the Lakes will be widespread Australian species e.g. Southern Bell Frog.

New Zealand's freshwater mussel, *kakahi* is present at the lakes however they are heavily dependent on migratory fish to complete their lifecycle (see fish passage text box).

Flora

Forest

The plant cover of the Parangarahu Lakes area has changed significantly over the years. During settlement by Māori and, later, with European farming, the hill-slopes were modified to the extent that little indigenous vegetation remains. The only remaining forest flora in the park is a small area of primary and secondary (regenerated) inland hill forest in the north-west corner, and a small patch on private land immediately to the north. This means that the seed sources available for plants to recolonize, or be replanted, are very limited in quantity and diversity.

Members of the community group Mainland Island Restoration Operation (MIRO) are assisting the regeneration process by creating native plant nodes in the southern area of the block. Once established, the nodes will provide native seed source for birds to disperse across the area and help to 'kick-start' the ecological processes of returning the block to something like its former natural state. Six nodes have been fenced and planted as per a landscape restoration plan (Park, 2007) and the focus is now to extend the planting outside the fenced plots.

Since the Parangarahu Lakes Area was retired from grazing in 2004, there has been substantial shrub regeneration and gorse, tauhinu and mānuka now dominate much of the area. For accessible areas along the coastal escarpment between the lakes, measures to control gorse and stop it establishing have been in place since 2007.

MIRO member at work in one of the fenced restoration areas (photo: Owen Spearpoint).

Forest sink covenant

In 2013, GWRC registered a 50 year Forest Sink Covenant over the majority of the GWRC recreation reserve at Parangarahu Lakes. This covenant identifies both natural and assisted (planted) native vegetation regeneration. It also recognises the contribution this land use makes to the sequestration of atmospheric carbon (CO2), which is a greenhouse gas. The covenant provides the additional benefit of legal protection for native vegetation and the habitat it provides at the site.

Wetland plants

The main vegetation assemblages that make up the wetland, interspersed with stretches of open water, are Raupo reedland, toetoe grassland, *Cyperus ustulatus* sedgeland*, Carex geminata* sedgeland, plus small areas of harakeke flaxland. A useful summary of the wetland species is provided by Gibbs (2002).

TEXT BOX: Aquatic weeds

There are significant threats already present to the outstanding condition of these lakes and wetlands. Lake Kohangatera has the invasive oxygen weed Elodea canadensis present in the main body of the lake and Egeria densia in its upper catchment.

Egeria was found in the open area of water within the Gollans Stream in 2011 and by 2013 NIWA found that it had expanded rapidly and is becoming more entrenched. It is now the dominant plant (90%) in the open water of the lakelet where it occurs. It has formed large weed beds and also has expanded out from the edges into adjacent native vegetation.i Egeria is a competitive plant in shallow nutrient enriched lakes with poor water clarity, capable of forming 4 to 5 m tall surface reaching weed beds. The thick vegation of Gollans Swamp has so

far acted as a natural barrier to prevent Egeria's migration downstream and into the lake. Elodea is also a successful coloniser in disturbed environments and is capable of forming dense, single-species beds in shallow water bodies.[69]

These invasive weeds pose a significant threat to the lakes' ecological values, and care must be taken to prevent their spread. Other potential threats, such as hornwort which is tolerant of the salinity levels of the lakesi, also require control/containment. Given that the weeds are transferred by people, for example via contaminated equipment, boats, or nets, it is important to place strict controls on activities in or on the lakes. It is also important to consider the options for controlling these aquatic weeds to protect the values of the lakes (see the GWRC Key Native Ecosystem Plan for more information).

Beach and cliff vegetation

The raised coastal shingle beaches comprise some of the lake landscape's most unique biotic communities, which are also some of the most delicate and fragile.[70] Several rare and endemic plant and animal species can be found, including *Muehlenbeckia ephedroides.*[71] Sections of the beach have previously been subject to sand quarrying, road construction and 4WD traffic, but are now regenerating naturally in the absence of disturbance or weeds.

Above the beaches, the coastal escarpment and terraces contain numerous rare plants and animal species. These areas have been fenced and there is an ongoing programme of gorse control between the lakes, making the area relatively gorse free. The rocky bluffs contain an interesting flora, with the species determined by the direction each bluff faces, for example the hot dry bluffs with a north westerly aspect have a "hot rocks" flora.

TEXT BOX A success story: beating back Marram Grass.

In 2008 Landcare Research conducted a survey of the coastal dunes bordering the Lakes area. It was found that the coastal plant community in the area was quite unique with a number of rare cushion plant species being present on the gravel dunes immediately below Lake Kohangapiripiri. The dunes are considered to be of national importance due to shingle size, pristine nature, rare plants, moths, and plant-insect interactions.

The survey identified that the natural values of the gravel dunes were being threatened by the invasion of marram grass (Ammophila arenaria). In 2009 a partnership was formed between HCC, DOC and GWRC to fund a marram control programme on the dunes. Since then control work has been undertaken annually. Significant progress has been made and the native dune cushion plant community has thrived in the areas cleared. Destruction of the marram has also provided a suitable breeding habitat for the banded dotterel.

As the density of the marram grass has been reduced GWRC is now looking at controlling various other weeds on the dunes. Extensive control work targeting horned poppy (Glaucium flavum) has been carried out along the dunes from Burdans gate to Rocky Point (in conjunction with the marram grass spraying programme).

Key Native Ecosystems

Parangarahu Lakes Area contains a number of ecosystems that are the best remaining examples of their type, regionally and nationally. Because of this, is part of the GWRC Key Native Ecosystem programme, through which the management and protection of its biodiversity values is funded.

The Key Native Ecosystems programme aims to provide ongoing protection to maintain or restore the native plants and animals, as well as the ecological function by managing threats, like pest plants and animals.

Any operational activities planned to manage and protect the Parangarahu Lakes' biodiversity values will be set out more specifically in the GWRC Key Native Ecosystem Plan (KNEP)[72]. The KNEP describes the biodiversity objectives that GWRC aims to achieve for the area, as well as the necessary actions that will be taken to achieve them. The KNEP objectives compliment and strengthen the Moemoea-vision of this plan.

Cultural heritage resources

Karaka Groves around Parangarahu Lakes and Wetlands

The presence of karaka groves beside the wetland areas and edges of both Lake Kohangapiripiri and Lake Kohangatera is regarded as an indicator of occupation sites and cultivation by Māori.[73] Karaka trees do not occur naturally in the Wellington region but groves such as these were likely to have been deliberately planted to provide a nutritious food source and dietary supplement to sustain local Māori populations. Some Wellington karaka groves were very extensive. On the south Wellington coast a single grove still covered 6 ha (15 acres) as late as 1890 and in 1859 a grove of karaka extended for half a mile (0.8 km) along the lower Wainui-o-mata valley.[74]

The seasonal harvest of karaka berries and the presence of 'cultivations' at Parangarahu is recorded in evidence given in the Native Land Court on 13 September 1889:

> *Page 225*
> *Ruta Paruka belongs to Ngati Tawhirikura was a cousin of Pakitaura….[Whakapapa table]*
> *Ruta had cultivations on the land now occupied by the Europeans but not at Parangarahu. Pakitaura cultivated at Parangraahu. Eruera te Uku belonged to Ngatitu. Rangiahuta belonged to Ngatitu and Ngatihine. Mu Tahua belonged to Ngatitu and Ngatihine. Eruera te Uku came with the heke of Rauakitua and others to Pitoone…*
> *Page 226 …Saw Mu at Parangarahu he went with us. Did not see Wikiriwha and ka Mangaringa at Parangarahu. He lived at Pitoone. When the people went to Parangarahu to get Berries Mu and others went there. Many people went there to get Berries who had no right there. The persons who had cultivated previously were [list of 27 names]*

Today the remnants of these karaka groves can still be visited using the marked tracks around the Lakes. However, it is easy to imagine old time waka being paddled up the lakes to these sheltered

places where summer camps and the preserving of food stocks (berries, eels, fish etc) would have involved young and older members of the hapū over the harvest season.

The karaka groves are seen by Taranaki Whānui iwi as a significant part of their history and important to the cultural heritage landscape of the Parangarahu Lakes Area requiring protection. Some of the karaka trees, especially around Lake Kohangapiripiri, are bark-damaged, surrounded by gorse, and generally not in good health. Re-establishing karaka groves or 'orchards' may form part of the cultural revitalisation and reforestation programme for the Parangarahu Lakes Area.

Members of Roopu Tiaki, Taranaki Whanui iwi and staff of GWRC stop for morning tea by Karaka Grove, Lake Kohangatera, 12 October 2013

Karaka Berries

Karaka flowers at Lake Kohangapiripiri, 6 Sept 2012
Photo: Kim Skelton

Karaka fruit
Photo: Murray Parsons

Karaka fruit ripen late summer and the raw flesh of the bright orange fruit is edible and has a strong apricot flavour. The kernels however are poisonous if consumed raw, causing severe muscle spasms, convulsion, permanent disfigurement and even death. The kernels were carefully prepared so as to remove the poison by boiling or steaming for up to 12 hours, then immersed in running stream water for one or two weeks. Once soaked, the berries become free of the tough husk and by cutting the husk around the middle with a shell and pressing each half between the thumb and forefinger it was possible to get the soft substance out for eating. Cooked and preserved karaka berries could be stored for several months and re-cooked to soften them for eating. [75] [76] [77]

Maori group roasting karaka berries at Whakarongotai, Waikanae.[78]

Raupō (bulrush)

Raupō is a well-known swamp-loving plant found in abundance in the wetlands of Lake Kohangapiripiri and Lake Kohangatera. Māori traditionally used all parts of this taonga species. The long 1 – 4m stalks were used for thatching the walls and roofs of whare and storehouses and bundles of stalks could be made into temporary rafts. The leaves were used for canoe sails, kites and woven hats. The dried leaves are the traditional covering material for poi, while the inside of the poi is stuffed with the fluffy down of raupō seed heads. The starchy rhizomes were a food source and the yellow pollen from the flower spikes was baked into a cake.[79]

Raupo (bulrush) is a distinctive and abundant wetland plant. It is a vigorous plant that will grow from fairly deep and permanent waters to seasonally inundated areas that may be very dry in the summer months. Raupo can be the dominant plant over hectares of fertile swamp. Spotless crake and the threatened Australasian bittern make their home in these larger areas of raupo. Raupo dies back over winter and grows again in the spring from starch filled rhizomes (underground stems). It has tiny flowers, which are densely clumped into a single, long, brown spike (bulrush head). The spikes release fluffy seeds, which early European settlers used to stuff their pillows and mattresses. Maori collected the abundant wind-blown pollen from the flower spikes, mixed with water, and baked it into cakes called pungapunga. The abundant wind blown pollen was collected from the flower spikes, mixed with water, and baked into cakes called pungapunga.

http://www.gw.govt.nz/raupo/

Women and raupo whare, Karaka Bay, Wellington.[80]

Weaving plants and materials

The Parangarahu Lakes Area was once forested and the hillsides, valleys, wetlands and lakes contained a wide variety of indigenous trees and plants and supported various bird species. Plant material and bird feathers were traditionally used by Māori for weaving garments, cloaks, kete, rope, tukutuku panels, thatching, bird cages and eel traps. There is a growing demand by Taranaki Whānui weavers and other Wellington-based weavers for access to local, sustainable plantations of weaving plants and bird feathers, some of which are usually found in swamp or wetland areas. An example is Kuta (bamboo spike sedge) which is sought after by some weavers but not listed as a native species found at Parangarahu Lakes.

Landcare Research has produced a list of weaving plants which should be considered as priority taonga plant species for the cultural planting programme at Parangarahu Lakes Area.[81]

Māori name	Other common name	Scientific name
Harakeke	New Zealand flax	*Phormium tenax*
Houhere	lacebark	*Hoheria* sextylosa
Kāpūngāwhā	lake clubrush	*Schoenoplectus tabernaemontani*
Kāretu	holy grass	*Hierochloe redolens*
Kiekie	kiekie	*Freycinetia banksii*
Neinei	grass tree	*Dracophyllum* spp.
Pīngao	golden sand sedge	*Ficinia spiralis*
Raupō	bulrush	*Typha orientalis*
Ti kōuka	cabbage tree	*Cordyline australis*
Toetoe	toetoe	*Cortaderia* spp.
Whaririki	mountain flax	*Phormium cookianum*

Threats

There are a range threats to the ecological values of Parangarahu Lakes. Some particular issues have been identified and are listed below.

- Restricted fish passage between the lakes and the sea (see fish passage text box)
- Aquatic weeds, including *Ranunculus trichophyllus Potamogeton crispus, Elodea Canadensis, Egeria densia* and hornwort (see aquatic weeds text box)
- Terrestrial weeds: staged removal of gorse from the coastal scarp where it is not yet dominant ; the control of the exotic wetland edge species *Beggar's ticks*; the control of boneseed beyond Burdans Gate to prevent spread; marram control.
- Animal pests: most pest animals species present at Parangarahu Lakes are being controlled to some degree. The following animals are the main focus of control:

  Possum: The Animal Health Board has undertaken possum control in the block since 2006, as part of a wider-scale operation throughout the lower East Harbour area. Their programme aims to control the vectors of bovine tuberculosis (TB), mainly through the use of toxins and traps.

  Mustelids (stoats, ferrets & weasels), rats, cats and hedgehogs: These mustelids predate on coastal and wetland birds and their eggs. Investigation into the nesting success of the banded dotterels on the shingle beaches has indicated that hedgehogs and perhaps feral cats are a major predator of these threatened birds. Trapping has occurred since 2009 and will continue as part of implementing the KNE Plan.

  Ungulates (stock, deer, goats & pigs): Despite the removal of stock from the area, there continues to be incursions of goats and pigs as well as sheep and cattle - largely due to inadequate boundary fencing. As fences are upgraded this issue will lessen but in the interim goats and pigs that are sighted within the block are shot by GWRC officers and farmers made aware of wandering stock.

- Human activities:
  - Raised beach flora and fauna communities are vulnerable to being trodden or disturbed by human activity including off-road vehicle use.
  - Introduction and transfer of weeds, specifically aquatic weeds to or between the lakes.
  - Impacts of increased visitor numbers to the park.

Refer Objectives 2 & 7 for actions to address these threats.

Section 5: Management of the land as a regional park

Parangarahu Lakes land as part of East Harbour Regional Park (see also pages 30-31)

In 1992 GWRC with the support of DOC and several environmental groups purchased 360 Ha of farmland that surrounded the Parangarahu Lakes in recognition of the importance of the lakes and wetlands. This purchase allowed public into the area, bringing awareness and protection to the outstanding cultural, landscape and natural values of the area. Recreation Reserve status was sought and the land, then referred to as the Pencarrow Lakes Block, was included within the East Harbour Regional Park (EHRP). A grazing licence was granted however this ceased in 2004.

The first management plan for the public lands that formed EHRP was developed in 1995. Over time plans have been prepared for improved park infrastructure and undertaking environmental restoration. The current management plan for regional parks and forests is the GWRC Parks Network Plan (2011), which includes a section on the 360 Ha of GWRC land and the 14 Ha of Crown land vested in GWRC [recreation reserve]. To recognise and give effect to this co-management plan, GWRC have amendment the EHRP chapter of the Parks Network Plan - to accommodate the relevant policies of this plan as they apply to reserve land GWRC has delegated management responsibility for under the Reserves Act 1977.

As a result of Treaty Settlement, in 2009 the lakebeds, former esplanade strips of the two lakes, and the dendroglyph sites were returned to Taranaki Whanaui, and from this, a new era of co-management has evolved.

Recreation

The tracks and activities provided for in the park are illustrated on Map 4. The primary recreation activities are walking and mountain biking and the area has become a popular location for bird watching and photography. Visitors can enjoy views of the rugged coast, panoramic scenes at the lakes, and from higher vantage points, wide vistas over Wellington harbour and further out to sea and cross to the South Island.

The majority of visitors will follow the path up the escarpment to the historic Pencarrow lighthouse and then venture into the lakes if time and energy permits. Until recently visitors have been able to circumnavigate each of the Lakes however the boardwalk north of Lake Kohangatera was removed in 2013. Completion of an alternative loop track along the side of Kohangatera is an immediate action proposed by this plan.

The heritage values of this area are exceptional (refer section 3).Evidence of Pre-European and ongoing Maori use, the historic lighthouse and shipwrecks are visible and well recorded. However, recent visitor surveys disclosed that cultural and heritage values don't feature as a reason people visit the reserve.[82] The new co-management relationship provides opportunity to share this knowledge and improve interpretation of these values within the park and this is an objective of this plan.

There has been no camping allowed in the area, and horse riding has previously been managed by permit and restricted to specific tracks. Dogs are not permitted at the lakes due to the high

ecological values however there has been an exception for dogs associated with duck shooting activities. Duck shooting attracts a small group of dedicated shooters each year and is managed at the Lakes by permit from DOC. The Lakes' previous reserve classification of Wildlife Management Reserve allowed recreational shooting by permit on the lakes; however the new classification of Scientific Reserve shifts the primary management focus to the preservation of indigenous flora and fauna and preservation of the qualities unique to the Lakes (refer text box: From Wildlife to Scientific)

Access

Access to the lakes is by foot or cycle via the Pencarrow Coast Road from Burdans Gate road end. Pencarrow Coast Road provides important access to the lakes and beyond for the public, management agencies, private landowners, Pencarrow Lodge visitors, contractors and Horokiwi Quarry. The road, owned and managed by HCC runs between Burdens Gate and the sewer outfall west of Kohangapiripiri outlet. Public Access beyond the HCC owned road is desirable for recreational cyclists and walkers wanting to access Baring Head and the Rimutaka Cycle route. Securing ongoing access for the public beyond the lakes, will require permissions from Orongorongo Station and Takarangi Block owners.

Text Box – From Wildlife to Scientific

Wildlife Reserves are administered under the Reserves Act 1977. Section 50(1) of this Act relates to the taking or killing of fauna. The taking or killing of fauna for commercial purposes is prohibited unless the taking was a condition of the establishment of the reserve. This question has sometimes been raised in relation to commercial eeling at the Parangarahu Lakes. The Lakes were transferred into the DOC estate as Wildlife Management Reserves in 1987 and the gazette notice (18th February 1988) makes no mention of commercial purpose and therefore commercial taking of eels is prohibited. Prior to 1984 the Lakes were formally part of Orongorongo Station and eeling could take place by consent of the landowner. This continues to be the case for the tributaries of the Lakes that exist on private land.

Duck hunting at the lakes is a popular pastime of a small group of hunters. In recent years, since the discovery of the invasive aquatic weeds, hunting has had some restrictions placed on where in the lakes it can occur and more rigor given to 'check, clean, dry' principles. Exclusion areas include the open water within Gollans Wetland where the main infestation of Egeria occurs and any movement between the lakes is prohibited. The change from wildlife reserve to scientific reserve status for the lakes (crown stratum) gives a strong weighting to protecting the unique values within and exterminating exotic species. Recommendation from NIWA and fresh water ecologists is to restrict any recreational access to the lakes as a way to stop the spread of aquatic lake weeds within and between the lakes.

Map 4: Parangarahu Lakes Area, map of recreational activities

Education, research and monitoring

Right from the early 1900s the area has been the subject of scientific research. Initially the focus was on geology as the area provides some important clues for understanding the wider changes that have happened along Wellington's south coast. In the 1950s studies focused on the native plants and trees of the area. Botanists such as Ruth Mason and N. T. Moar focused on recording the ecology and have formed the basis for plant species lists. In 1959 Adkin discovered the dendroglyph in the karaka groves.

Certainly, since the area came into public ownership there has been greater opportunity for monitoring and research at the Lakes. As part of GWRCs biodiversity monitoring program National Vegetation Survey plots were installed in 2004 and photo points were established to record the changes that occurred after grazing was stopped. In 2006 vegetation mapping was undertaken. Both Lakes are now included in the Landcare Research's national wetland condition monitoring and NIWAs LakeSPI (Submerged Plant Indicators) assessment. Bird, fish and lizard surveys have also been completed. OSNZ (Ornithological Society of New Zealand) has been involved in bird monitoring around the lakes and on the coast and a specialist investigation of the nesting success of banded dotterel has been undertaken.

Land management, pest control

Plant and animal pests are being controlled to some degree due to combined efforts by responsible agencies and volunteers. Management of pest animal and plant threats are discussed in Chapter 4, Natural Environment.

Land management includes establishing and maintaining good relationships with adjacent landowners. Refer Objective 8.

Section 6: Management Objectives and Actions

Introduction

This section provides the management objectives and actions to be undertaken during the life of this plan (and beyond). The objectives provide the focus for the Roopu Tiaki in working towards the Moemoeā – Vision. Under each objective various actions are described and have been categorised based on priority:

- Current activities: those that are already being undertaken and are considered 'business as usual'
- Immediate priority: those that demand resources and focus in the immediate future (within the next three years)
- Medium priority: those activities that may either follow on from activities that are an immediate priority, require funding bids to achieve, or can wait to be achieved. This would occur within a 3-10 year timeframe.
- Possible long-term opportunities: those actions that are inter-generational and may not occur within the life of this plan but could contribute to the Moemoeā – Vision. They are likely to have significant funding and resource implications.

The implementation of this plan relies on the strengths that each partner brings to the co-management relationship. Each policy/action has a lead agency noted alongside. It is anticipated that the lead agency may change over time as capacity (skills, resources and experience) are built up within GWRC and Taranaki Whānui. In the immediate future, GWRC is the main agency resourced for undertaking implementation of the policy, including the administration of concessions for activities on reserve land.

Objectives and Actions

Objective 1: Restore the mouri and maintain the ecological integrity of the Parangarahu Lakes Area ecosystem to sustain vital and healthy indigenous flora and fauna populations in and around the Lakes.

Adopting an integrated catchment approach recognises the interconnectedness of the various ecosystems that contribute to the oranga and overall health of the Parangarahu Lakes Area. Some ecosystems are highly modified or degraded, others remain more intact. There is scope to improve the oranga of the Parangarahu Lakes Area through human action. As actions are undertaken, we will see ecosystems that are increasingly self-sustaining and in some instances thriving, with potential to allow customary harvest in the future.

Actions:

	Current activity (business as usual)	*LEAD*
1.1	To encourage the return of native plant/tree species through active replanting using plants sourced within the Cook Strait and Tararua Ecological Districts.	GWRC
1.2	To ensure the protocol between DOC and PNBST is considered when managing the Parangarahu Lakes Area.[vii]	TW/DOC
1.3	To work collaboratively with HCC and other adjoining landowners including regular communication and early notice of any biosecurity issues or other management actions that may affect these owners.	GWRC/TW/ HCC
	Immediate priority	*LEAD*
1.4	To manage biodiversity in the area through the Parangarahu Lakes Key Native Ecosystem Plan, in a manner consistent with this plan.	GWRC
1.5	To manage replanting to optimise growing conditions, protect sites of significance, maintain view shafts and include potential sites and species that may be accessed for cultural use (such as rongoa, kai, weaving of baskets and nets).	
	Medium priority	*LEAD*
1.6	To improve the native fish habitat through restoration planting on riparian margins and the protection of lake margins, wetlands and upper catchment streams from erosion and discharges.	TW/GWRC

[vii] DOC Protocol as contained in Port Nicholson Block (Taranaki Whanui ki te Upoko o te Ika) Deed of Settlement

	Possible long term opportunity	*LEAD*
1.7	To reintroduce 'once present' species where conditions can be controlled to provide a high chance of their survival in the Parangarahu Lakes Area, with priority given to taonga species that enable Taranaki Whānui to maintain and express their cultural values and practices.	TW/GWRC

Objective 2: Control pest plants/animals where these interfere with the oranga of the Parangarahu Lakes Area.

The second aspect of improving environmental health is reducing or eliminating the negative effects of primarily exotic pest plants and animals.

As the Lakes have scientific reserve classification, there is a requirement to as far as possible exterminate exotic flora and fauna and preserve indigenous flora and fauna. The presence of two types of invasive aquatic pest plant in the lakes and wetlands highlights the fragility of this highly valued site and the potential for new infestations if biosecurity measures are not carefully adhered to. This must be balanced against the conservation covenant for the lake beds which specifically provides for customary harvest for Taranaki Whānui.

Actions:

	Current activity (business as usual)	*LEAD*
2.1	To work with DOC as managers of the lakes to respond to any serious pest fish incursions through appropriate eradication processes which do not compromise the mouri of the Lakes.	GWRC
2.2	To undertake pest animal control with a focus on reducing predators and improving native bird life (e.g. banded dotterel), including: a) To control mustelids (stoats, ferrets and weasels), hedgehogs, ungulates (goats and pigs) through traps and shooting b) To ensure ongoing eradiation management of possums c) To investigate local control measures using Taranaki Whānui iwi members and GWRC staff. d) To partner with appropriate agencies to control exotic waterfowl on the lakes. A range of chemical, manual or mechanical methods will be tolerated depending on the scale and nature of pest control desired, budget and effect on other species and the receiving environment.	GWRC

2.3	To work with HCC and DOC to do targeted control of pest plants, with a current focus on: gorse, marram grass, horned poppy, beggars ticks and boneseed, plus ongoing surveillance and appropriate control of any new occurrences of pest plants.	GWRC
2.4	To support the continuation of the current MAF prohibition of commercial eel fishing and use appropriate tikanga processes to manage customary freshwater fisheries in partnership with the Te Atiawa ki te Upoko o te Ika a Maui Trust (Fisheries Trust).	TW/GWRC/ Fisheries Trust
2.5	To work with adjoining landowners to install and maintain stock-proof boundary fencing, eliminating goats, sheep, pigs and cattle from the Parangarahu Lakes Area.	GWRC
	Immediate priority	LEAD
2.6	To control infestations of *Elodea canadensis* and *Egeria densa* by prohibiting all activities within the exclusion area[viii] apart from those necessary for management or research.	GWRC
2.7	To adopt, or where appropriate advocate to DOC and other landowners to adopt, the following measures to ensure that there is no further spread of invasive weed in the Lakes: a. Prohibit all types of recreational access to the areas and buffer zone where egeria densia (Brazilian waterweed) and elodia Canadensis (Canadian pondweed) are found b. Prohibit duck hunting on the lakes c. Notwithstanding (a) and (b) above, limit access to the water body for research, cultural harvest and management purposes only. All access must adhere to the phytosanitary practices (disinfectant cleansing of equipment – Check, Clean, Dry principles) d. Determine through survey the extent of each weed to ensure and identify management options for control and/or eradication e. Control the movement of equipment between Lakes Kohangatera and Kohangapiripiri through the use of Standard Operation Procedures[ix] and signage on site f. Educate the public through signage, online and written publications	GWRC/DOC

[viii] Exclusion areas are areas where aquatic weeds have been found and access to these areas is excluded from permits to avoid contact with and spread of these weeds.

[ix] At the time of print, GWRC is developing a Machinery Hygiene SOP.

	on the aquatic weed infestations and biosecurity threats.	
2.8	To trial solutions that target *Elodea canadensis* and *Egeria densa* with minimal effect on native aquatic fauna.	GWRC
2.9	Work with the landowner(s) to control or remove, where practical, invasive aquatic weed infestations. Enhance native vegetative buffers to wetlands and streams on properties in the catchment.	GWRC

Objective 3: Restore the eel fishery of Lake Kohangapiripiri and Lake Kohangatera and catchments.

The Lakes were once recognised as a major eel fishery and mahinga kai for tangata whenua over many generations. A combination of commercial eeling, overfishing, farming activities, changes to the sea outlets caused by natural factors such as raised gravel beaches, and alteration of the fish passage through roading culverts have all contributed to the collapse of this eel fishery. Tuna (eels) are a taonga species that are vital to Taranaki Whanui in maintaining their cultural practices and tikanga, especially the ability to provide traditional kai at marae to manaaki manuhiri. Restoration of the eel fishery in the Parangarahu Lakes area is a priority objective of this management plan.

Actions:

	Current activity (business as usual)	LEAD
4.1	To review and analyse current hydrology system of both Lakes and identify best option for improving water flow through the channels and culverts and opening of the sea outlets to allow native fish migrations in the appropriate seasons.	All
	Immediate priority	LEAD
4.2	To seek funding for necessary construction works to improve the channels and culverts, with priority given to Lake Kohangapiripiri, which currently has a perched outlet.	All
4.3	To carry out regular monitoring of the quality of eel habitats and eel stocks in both lakes and catchments and to collect and store data for analysis and management decision making purposes, using Taranaki Whanui iwi kaitiaki where possible.	TW
	Medium priority	LEAD
4.4	To facilitate and support research projects that increase scientific knowledge and matauranga Maori of the eel fishery at the Parangarahu	TW

	Lakes area.	
4.5	To facilitate and support educational programmes and wānanga that contribute to the revitalisation of Taranaki Whanui cultural practices and tikanga associated with the eel fishery.	TW
	Possible long term opportunity	LEAD
4.6	To develop an appropriate tikanga based policy for customary eel fishing in the Parangarahu Lakes Area working in partnership with iwi kaitiaki and the Te Atiawa ki te Upoko o te Ika a Maui Potiki Trust (Fisheries Trust).	TW

Objective 4: Protect and manage the historic and cultural heritage, sites of significance and other waahi taonga of the Parangarahu Lakes Area in accordance with kaitiakitanga principles.

That the significance of the cultural and natural features of the landscape is understood and their histories (oral and written) preserved.

This objective is focused firstly on the physical sites found within the Parangarahu Lakes Area. While these are primarily of Maori origin, it is recognised that there are significant sites relating to European occupation too. For a list of the currently recorded archaeological sites refer to Appendix 3. Further, this objective refers to the intangible aspects of cultural heritage, with a focus on preserving the oral histories and associated te reo.

Actions:

	Current activity (business as usual)	LEAD
3.1	To ensure that environmental restoration plans, visitor amenities and park activities develop in a way that avoids, or minimises impacts on historic and cultural heritage and waahi taonga.	GWRC/TW
3.2	To protect the Parangarahu Lakes Area and catchments from inappropriate use and development or activities that conflict with the moemoea-vision of this management plan.	GWRC/TW
3.3	To advocate for the protection of geological features, the raised beaches and interglacial marine terraces along the southern coast, from inappropriate use and development.	GWRC/TW
3.4	To follow the GWRC Accidental Discovery Protocol should any	GWRC

	archaeological sites be disturbed in the course of work. [x]	
3.5	To work with the Historic Places Trust NZ to protect the historic Pencarrow Lighthouse from vandalism, damage, destruction and degradation.	GWRC
	Immediate priority	LEAD
3.6	To protect the dendroglyph (tree carvings) from vandalism, damage, destruction and degradation.	TW
3.7	To research traditional Māori names of features within the area and where appropriate indicate using signage and maps.	TW/GWRC
	Medium priority	LEAD
3.8	To maintain a database of archaeological and historic sites, waahi taonga and related historical information	GWRC/TW
3.9	To provide appropriate information to raise public awareness about the values of the historic, archaeological and cultural heritage and waahi taonga, for example, to promote protection or to minimise damage, destruction and degradation, of this heritage.	GWRC/TW
3.10	To promote the retelling of stories of the area through various mediums (e.g. tours, events, web and written documents, interpretative panels) and wherever possible using Taranaki Whānui iwi members as key communicators or guides.	TW
	Possible long term opportunity	LEAD
3.11	To record cultural knowledge about Lakes area through Cultural Heritage Mapping project using GIS technology and including a cultural layer with history of Maori names, oral histories, video interviews, links to relevant maps, Maori land court minute evidence or other documents relating to the place.	TW

[x] PNBST represent the tangata whenua for this area.

Objective 5: Foster kaitiakitanga and greater participation in activities at the lakes and management by Taranaki Whānui iwi and the community.

The Treaty Settlement cultural redress package and co management opens up new opportunities for mātauranga to be passed on to new generations of iwi kaitiaki. There is a continuum of engagement that is available to Taranaki Whānui which ranges from: governance >> paid management >> internships >> voluntary work >> education >> visitors. The Roopu Tiaki group sits in the governance/management level of engagement and it is hoped that there will be increased engagement at all levels for example, through staffing, volunteering, education activities, environmental restoration, cultural wānanga, manaaki manuhiri (hosting and/or guiding of visitors).

This is important for both the Council and Taranaki Whānui to demonstrate co-governance in practice, and to fulfil statutory management and kaitiakitanga responsibilities.

The continued support and involvement of community members is vital to achieving measurable progress towards the Moemoea-vision.

Actions:

	Current activity (business as usual)	LEAD
5.1	To facilitate a Roopu Tiaki approval process for the introduction, use or removal of cultural materials[xi] by Taranaki Whānui iwi members.	GWRC/TW
5.2	To identify opportunities for involving Taranaki Whānui iwi members, with an emphasis on increasing awareness of the values of the area and fostering a sense of guardianship and applying the principles of kaitiakitanga.	TW
5.3	To monitor and report yearly on the uptake of opportunities for participation.	GWRC/TW
	Immediate priority	LEAD
5.4	To facilitate collaborative projects that engage agencies, the community and Taranaki Whānui iwi members in environmental restoration (e.g. planting, pest control, monitoring).	GWRC/TW/ HCC
	Medium priority	LEAD

[xi] Cultural Materials include plants, plant materials, and materials derived from animals, marine mammals or birds which are important to Taranaki Whanui in maintaining and expressing cultural values and practices (see Cultural Materials section in DOC Protocol signed with PNBST as part of Deed of Settlement)

5.5	To facilitate day and overnight wānanga by Taranaki Whānui to restore tikanga / cultural practices, to replenish their cultural pātaka, and to develop mātauranga Māori about the Parangarahu Lakes Area and the taonga therein.	TW
5.6	To revive cultural practices undertaken by Taranaki Whānui in the area, such as seasonal harvest of karaka berries and other kai, sustainable customary eel fishing, gathering of plants for rongoa or weaving.	TW
5.7	To investigate options for the active preservation of karaka groves for the purpose of cultural harvest.	TW

Objective 6: Lakes management decision-making is informed from Maori and non-Maori-perspectives, and impacts are measured and reported in a useful and practical manner for all tangata kaitiaki[xii].

There have been a number of studies completed by various agencies that provide a base for future monitoring. However, to date, there has been little emphasis on understanding cultural importance of this area to Maori and being able to report on ecosystem health from a Maori perspective.

Physical elements that reflect the state of mouri of the lake ecosystem include:

- aesthetic qualities e.g. clarity and smell of water;
- life supporting capacity and presence of indigenous flora and fauna;
- depth and flow of water;
- continuity of flow of water from the upper catchment to wetland, to lake and out to sea;
- fitness for cultural usage;
- productive capacity[xiii].

Actions:

	Immediate priority	LEAD
6.1	To establish a monitoring framework and programme that enables reporting using scientific and cultural indicators related to the oranga elements of the vision. The aim is to build a stronger understanding of the overall health and vitality of the Parangarahu Lakes Area to enable	GW/TW

[xii] Kaitiaki for the purposes of this plan means iwi kaitiaki who have cultural obligations as mana whenua, and other tangata tiaki who act as guardians, protectors and caretakers and who are involved in the protection of the taonga of the Parangarahu Lakes Area so that these taonga are available for use and enjoyment by future generations in as good a quality, if not better quality, than today.

[xiii] Adapted from mauri indicators in Te Runanga o Ngai Tahu Freshwater Policy, page 13

	informed decision making by managers	
6.2	To carry out regular monitoring of the water flow and levels and types of fish migration through the sea outlets, particularly during eel migration times.	GWRC/TW
	Medium priority	LEAD
6.3	To revitalise and enhance matauranga Maori about eel and other native fish species in the Lakes area with new technology and innovative research undertaken to protect and sustain the indigenous fishery for the future.	TW
6.4	To revitalise and enhance matauranga Maori relating to ngahere (forest) with new research.	TW

Objective 7: Recreation opportunities lead to appreciation of the natural environment and being refreshed and nurtured from the experience.

Currently tracks allow visitors to circumnavigate Lake Kohangapiripiri and access a number of higher lookout points, including the Pencarrow lighthouse. However, the remoteness of the lakes from the car park and urban area means relatively low visitor numbers and a visitor experience that reflects this isolation.

It is important to understand the capacity of the area to absorb use and where limits may need to be put in place. It is also important to direct visitors to areas and activities that are appropriate and not into areas that may be culturally or ecologically unsuitable.

Actions:

	Current activity (business as usual)	LEAD
7.1	To maintain a track network to a walking track standard that provides for some shared use by walkers and mountain bikers.	GWRC
7.2	To include tours of the area in the annual Great Outdoors Summer Events programme.	GWRC
7.3	To administer concessions for activities that are consistent with the vision and objectives of this plan (refer to Section 7 Rules for use and development).	GWRC/ TW
7.4	To monitor visitor use and impact, as well as visitor experience, with	GWRC

	annual reporting to the Roopu Tiaki.	
	To temporarily close parts of the site to public access for	
	Immediate priority	LEAD
7.5	To revive the use of traditional Maori names for places and landmarks.	TW
	Medium priority	LEAD
7.6	To provide and maintain to an appropriate standard, amenities that will allow visitors to extend their stay and enjoyment of the area, whilst: • avoiding natural hazards such as unstable land or erosion • avoiding areas of outstanding environmental quality and ecological and cultural sensitivity • ensuring that design reflects the setting and heritage of the area For example, a picnic area near the lake, in the lee of the wind and basic toilet facilities at a suitable location.	GWRC
7.7	To develop innovative ways to tell the stories of the area, both natural and cultural – using both people and written/visual interpretation.	TW/GWRC/ HPTNZ
7.8	To build capacity of the local iwi to guide groups.	TW

Objective 8: Strategic partnerships between agencies, landowners and community groups are developed to achieve the Moemoea-vision of the plan

Actions:

	Current activity (business as usual)	LEAD
8.1	To work with community groups in environmental restoration of the Parangarahu Lakes Area.	GWRC
	Immediate priority	LEAD
8.2	To develop partnerships that will support contributions of resources (time, money, skills) to be used in meeting the objectives of this plan, and improve awareness among stakeholders of the vision, values and objectives in this plan.	All

8.3	To meet annually with adjacent landowners and agencies involved in land management to discuss the yearly work programme and progress towards the vision.	GWRC/DOC/ HCC/TW
	Possible long term opportunity	LEAD
8.4	To see the vision recognised and implement beyond the legal boundaries of land covered within this plan.	

Section 7: Rules for use and development

This part of the plan outlines the rules relating to the provision for and management of customary activities and recreational pursuits at Parangarahu Lakes Area. Legislation under the Reserves Act 1977 and Resource Management Act 1991 provides some constraints on the type of activities that can occur as of right and others that require a concession (in the form of a lease, licence or easement) or resource consent. However, for the protection of the values of the Parangarahu Lakes Area and the experience that people receive through visiting also requires some restrictions of use (through prohibitions, limits and conditions).

This section states what permissions are required for various activities and the process required for obtaining consent. This section does not apply to activities carried out for management purposes.

Allowed activities

These activities may be undertaken in the park but may be subject to restrictions to protect the park values and provide for the health, safety and well-being of visitors. The following activities are allowed to be undertaken by individuals or groups (of less than 30 people):

a. Walking, running, hiking, tramping on all trails

b. Picnicking (including the use of gas stoves) in designated picnic areas

c. Filming or photography for personal, family and non-commercial purposes

d. Mountain biking on designated shared trails, with consideration to other users on shared trails.

Approvals required:

Allowed activities may occur as of right at Parangarahu Lakes Area so no approvals are required. There may be restrictions of access where continued access will cause environmental or cultural degradation of a particular site, or where there is a danger to the public, which may be from (but not limited to) natural hazards, park maintenance and pest control. Sometimes, restricting access is an obligation under a specific Act, such as the Biosecurity Act, Forest Rural Fire Act or the Public Health Act.

Taranaki Whānui kaitiaki activities

Recognising that this area is now in joint ownership it is imperative that iwi are able to exercise their kaitiaki responsibilities. To promote Taranaki Whānui taking up their role as kaitiaki of the area, the following activities may occur subject to tikanga being followed and Roopu Tiaki oversight.

a. cultural harvest of karaka, ronga and plant species suitable for weaving

b. collection of natural materials for other purposes e.g. seed and mouri stones

c. planting of native vegetation and restocking of eel

d. cultural health index monitoring

e. day/overnight wananga[xiv]

f. conducting research

Approvals required:
These activities are part of park management and will be planned and undertaken with the approval of the Roopu Tiaki (refer objective 5.1). This differs from other Regional Parks where some of these activities require permits which are processed by Greater Wellington. Where there are short timeframes involved, approval may be granted by agreement between a GWRC and PNBST representative and then retrospectively granted by the Roopu Tiaki at their next meeting.

Managed activities

These activities are generally undertaken in a specific location and may involve temporary allocation of a park area or structure for a specific use. Permits are used where there is a need to regulate temporary exclusive use of an area, and to avoid over-allocation of resources and conflict between users. Allocation is made through a permit system or ranger approval:

a. Specified site and park facilities reservations for groups

b. Conducting research or educational tours**

c. Collection of natural material e.g. seed collection**

** Not associated with tangata whenua activities.

Approvals required
These activities are handled through the permit system which is administered by Greater Wellington. Applications can generally be made online and will be dealt with by the relevant officer. All permits will require approval (either in advance or retrospective) from the Roopu Tiaki.

Restricted activities

These are activities that are not specifically 'allowed' or 'managed' or are not 'prohibited' in this management plan. By their nature, a case-by-case assessment is needed as to whether the activity is approved. Each application is considered on its individual merits, compatibility and appropriateness to the location. Some applications may need to be publicly notified and can be either approved, subject to conditions, or declined.

They may:

- Be activities that require a lease, licence or easement under the Reserves Act 1977 or other legislation.
    - The Reserves Act sets out specific provisions around what activities require a concession to occur on recreation or scientific reserve.

[xiv] Wananga **(verb)** (-hia,-tia) to meet and discuss. **(noun)** seminar, conference, forum, educational seminar. **(noun)** tribal knowledge, lore, learning. http://www.maoridictionary.co.nz

- Involve the exclusive use of an area for an extended period of time or be large scale events
- Be of a commercial nature

The processing of all concessions will be managed by Greater Wellington using the guidelines set out in the Parks Network Plan 2011 and the GWRC Parks and Forests Concession Guidelines 2013. The Roopu Tiaki will be the initial decision making body for all concessions, and where necessary recommending the approval or decline of a concession to GWRC, Port Nicholson Block Settlement Trust or DOC where legislation requires that a particular body makes the final decision.

Approvals required

All decisions on restricted activities will be initially considered by the Roopu Tiaki and recommendations on a course of action made but final decision making remains the responsibility of the landowner or agency as the administering body where there is a delegation to make a decision. Refer to Section 1 of this plan for the areas and land titles covered by the plan to understand the jurisdiction of each agency.

Prohibited Activities

These activities are considered inappropriate because of their permanent adverse effects on the environment, on other approved activities or are incompatible with the values being safeguarded.

Enforcement of all activities will generally be through the Greater Wellington Regional Parks, Forests and Reserve Bylaw 2009.

The following activities are prohibited:

a. Spreading of ashes or body parts[xv]
b. Erection of private dwellings and structures
c. Depositing rubbish
d. Lighting fires
e. Fireworks
f. Horse riding
g. Dog walking
h. Wilderness camping (not associated with an overnight whananga, refer to Tangata Whenua activities)
i. Motorised recreation
j. Hang gliding and parapenting
k. Recreational hunting
l. Quarrying

[xv] Note that where disinterment occurs of koiwi that a suitable location would be found to re-bury within the area.

m. All mining activities

Rules applying to activities in the Parangarahu Lakes Area

*This table is included in the GWRC Parks Network Plan East Harbour Regional Park – Parangarahu Lakes Area.

Explanation: Approval for managed activities and Taranaki Whānui kaitiaki activities is given by the Roopu Tiaki.

DOC retains control of the issuing of permits for activities on the lakes (Scientific Reserve Crown Stratum).

ACTIVITY CATEGORY: ✓ Allowed ○ Managed ➔Restricted ✖ Prohibited

ACTIVITY IN PARKS	*Activity category*	SPECIFIC RULES
Aircraft landings	➔	
Animals, excluding dogs/horses	✖	
Ashes – burial/spreading	✖	
Camping (designated sites) **	✖	*Not associated with overnight wananga,*
Camping (wilderness based) **	✖	
Collecting natural materials**	○	*Includes conducting research.*
Commercial activity	➔	
Dog walking	✖	
Events (commercial, or larger than 30 people)	➔	
Filming (commercial)	➔	
Firearms (refer also to Hunting)	✖	
Fires (open)	✖	
Fireworks	✖	
Fishing**	✖	
Hang gliding / parapenting	✖	
Horse riding	✖	
Hunting	✖	*Hunting on GWRC administered land is undertaken only for management purposes. Note: DOC retains control of the issuing of permits for Duck Shooting on*

ACTIVITY IN PARKS	*Activity category*	SPECIFIC RULES
		the Lakes (Scientific Reserves Crown Stratum).
Informal games	n/a	
Lease/licence	➔	*Note: This area is subject to requirements of the Reserves Act 1977 for any applications for a lease or licence.*
Motorised recreation (Cat A: club/casual)	✖	*Pencarrow Road access is controlled by HCC via a permit system. There is a maximum number of recreational vehicles permitted per day.*
Motorised recreation (Cat B: special events)	✖	
Mountain biking	✓	
Picnicking	✓	*Includes the use of gas stoves in designated places (for less than 30 people)*
Swimming/Boating/Waka	✖	*Unless for management purposes. Note: DOC retains control of the issuing of permits for activities on the Lakes (Scientific Reserves Crown Stratum).*
Tangata Whenua kaitiaki activiites	✓	*Subject to tikanga beign followed and Roopu Tiaki approval. Includes: Cultural harvest, collection of natural materials, restocking of natural flora and fauna, wananga, cultural monitoring and research.*
Walking, tramping, running	✓	

**Excluding that associated with Taranaki Whānui kaitiaki activities.

Section 8: Implementation monitoring and review.

Works programming and funding

Under the current regime, the majority of funding is through GWRC and is approved through the Long Term and Annual Plan processes set out in the Local Government Act 2002.

While this plan sets out the breadth of actions to be implemented, limited funding requires these to be prioritised. The Roopu Tiaki, informed by monitoring and reporting, will recommend a three yearly work programme and advise on priorities for funding, identifying those actions to be included in the GWRC Long Term and Annual Plans and those that require alternative funding or support. Where additional funding is obtained, there is opportunity to achieve these actions earlier.

Where applicable, GWRC will include the recommended work programme in their annual Parks Operational Plan.

Monitoring

This plan will be monitored against the 8 objectives and multiple actions stated in section 7. Monitoring will measure the extent to which the objectives are being met and the way in which the co-governance partners are working together to do so. Many of the objectives are long-term in their focus and will not be fully achieved in the timeframe of this first Co-Management Plan.

Information gathered through environmental monitoring, cultural monitoring, visitor surveys, permits and concessions issued and research projects will be used to assess the effectives of this plan.

Reporting

Reporting against the 8 objectives of this plan will be carried out three yearly by the Roopu Tiaki, for the purpose of assessing the effectiveness of the plan. These reports will assist in programming works and identifying areas for review (refer Figure 6).

Review

The plan will be reviewed at least every 10 years to ensure the plan remains relevant, unless a review or variation is initiated earlier as a result of monitoring, new management issues that require policy or changes in legislation. Plan reviews will follow the procedure set out in Section 41 of the Reserves Act 1977, as applicable.

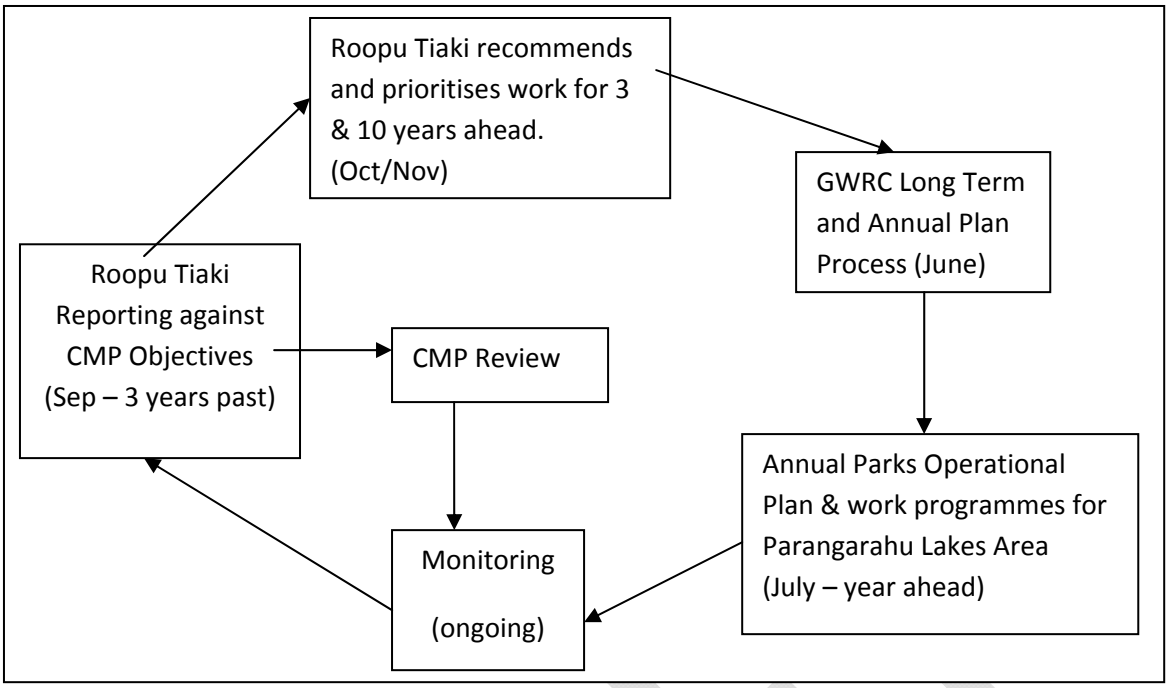


Figure 6: Plan review and reporting process.

Appendix 1: List of lands and legal descriptions

Plan Ref	Owner	Purpose	Area Ha	Title Number	Legal description	Description
C	Crown, vested in GWRC	Pencarrow Head Recreation Reserve (NZG 2006 No. 118, p. 3528)	14.32	CFR 488810	Section 2 Block V Pencarrow Survey District	Area above coastal escarpment adjacent to Pencarrow Lighthouse
D	PNBST	* Subject to conservation covenant (s77 of the Reserves Act and s27 Conservation Act)	8.79 3.51 3.25(strip)	CFR 503492	Lot 9 DP 53891 Section 1 SO 406979 and Lot 10 DP 53891	Lakebed of Kohangapiripiri, but excludes outlet of the lake. Includes former esplanade strip.
E	PNBST	Maori Reservation (Te Ture Whenua Maori Act)	0.0507 (507m²)	CFR 498572	Section 1-2 Survey SO 406982	2 parcels containing dendroglyph
Above D	Crown	Scientific Reserve	12.30	N/A	Water and air above Lot 9 DP 53891 & Section 1 SO 406979	Water and air column above Kohangapiripiri. Proposed to be vested in GWRC.
F	GWRC	Parangarahu Recreation Reserve (NZG 1995, p. 234).	362.48	CFR WN41A/384	Section 3 SO 406982 (formally Lot 1 DP74247)	Larger land parcel surrounding the Lakes
G	PNBST	* Subject to conservation covenant (s77 of the Reserves Act and s27 Conservation Act)	33.06 (lake bed) 7.8 (strip)	CFR 503493	Section 2 SO 409042 and Lot 11 DP 53891	Lakebed of Kohangatera and strip on either side of the outlet. Includes former esplanade strip.
Above G	Crown	Scientific Reserve	33.06	N/A	Water and air above Section 2 SO 409042	Water and air column above Kohangatera. Proposed to be vested in GWRC.
H	Crown	Government Purpose (wildlife management) Reserve. Proposed to be vested in GWRC as Scientific Reserve	1.26	CFR unknown	Section 1 SO 409042	Dryland outlet area of Kohangatera.

Plan Ref	Owner	Purpose	Area Ha	Title Number	Legal description	Description
A	HCC	Main sewer	30.34	WNB2/620	Section 84 Harbour District and Section 1 Block V Pencarrow Survey District	Road along Pencarrow Coast
A	HCC	Held in fee simple (originally acquired in the name of Hutt City Drainage Board)	6.9698	WND1/1106	Section 2 SO 460979 and Part Parangarahu 5B Block	Area between Kohangapiripiri and sea/legal road.
B	HPTNZ	Historic Reserve	0.24 (2400m²)		Section 3 Block V Pencarrow	Historic Pencarrow Lighthouse
	J & J Martin	Fee simple	1366.71	CFR280816	Lot 2 DP 369053	Farmland, to northern boundary of Lakes
	M & J Curtis	Fee simple Profit-a-pendre right to Fitzroy Bay Sand Company Ltd	205.35	WN47C/264	Part Lot 8 DP 53890	Farmland, to eastern boundary of Lakes

Appendix 2: Recorded archaeological sites

The New Zealand Archaeological Association (NZAA) Site Recording Scheme is a national system for recording information on archaeological sites[xvi]. Sites are referred to by the map sheet on which they are located and then by their site number. So R27/62 is the 62nd site recorded on the R27 map sheet. The following listings have been extracted from the City of lower Hutt District Plan.[xvii]

Map sheet/Site Number	General Location	Site type	Date recorded
R27/62	Northeast of Lake Kohangapiripiri	dendroglyphs	1987
R27/64	Pencarrow Head	Pa	1987
R27/65	Pencarrow Head	Pa	1987
R27/66	East of Lake Kohangapiripiri	Terraces	1962
R27/67	South of Lake Kohangapiripiri	midden/ovens	1987
R27/68	Northeast of Lake Kohangapiripiri	Terraces	1987
R27/69	East of Lake Kohangatera	pits/terraces	1987
R27/71	West of Lake Kohangatera	Terraces	1967
R2772	North of of Lake Kohangatera	karaka trees	1963
R27/73	North of of Lake Kohangatera	karaka trees	1963
R27/74	North of of Lake Kohangatera	karaka trees	1963
R27/75	North of of Lake Kohangatera	karaka trees	1963
R27/76	North of of Lake Kohangatera	stone lines	1970
R27/77	Northeast of of Lake Kohangatera	Terraces	1987
R27/78	Northeast of of Lake Kohangatera	karaka grove	1963
R27/79	East of Lake Kohangatera	Karakas	1963
R27/80	East of Lake Kohangatera	karaka trees	1963
R27/81	East of Lake Kohangatera	karaka trees	1963
R27/82	East of Lake Kohangatera	karaka trees	1963
R27/83	Northeast of of Lake Kohangatera	karaka trees	1963
R27/84	East of Lake Kohangatera	Karakas	1963
R27/93	On the coast, between Eastbourne and Pencarrow Head	karakas/midden	1966
R27/105	On the coast, between Eastbourne and Pencarrow Head	Midden/ovens	

[xvi] New Zealand Archaeological Association's Archaeological Site Recording Scheme website http://www.archsite.org.nz/: accessed 10/04/2013

[xvii] Significant Archeologicla Resources, Pg 14E/17, City of Lower Hutt District Plan, 2004

R27/106	On the coast, between Eastbourne and Pencarrow Head	Midden	1962
R27/107	On the coast, between Eastbourne and Pencarrow Head	midden/oven	1962
R27/108	On the coast, between Eastbourne and Pencarrow Head	Midden	1956
R27/109	On the coast, between Eastbourne and Pencarrow Head	house	1956
R27/110	Pencarrow Head	Midden	1956
R27/111	Pencarrow Head	Midden	1956
R27/199	Pencarrow Head	Lighthouse	1999
R27/206		Shipwreck (Devon)	1995
R28/4	Near Fitzroy Bay	karaka trees	1963
R28/5	Fitzroy Bay	karaka grove	1963
R28/6	Fitzroy Bay	stone rows	1987
R28/7	Fitzroy Bay	Midden	1987
R28/8	Fitzroy Bay	pits/ovens/midden	1995
R28/9	Fitzroy Bay	wall/midden/pits	1995
R28/10	Fitzroy Bay	pits/ovens	1994
R28/11	South of Lake Kohangatera	Terraces	1982
R28/12	Baring Head	Ovens	1964
R28/14	Fitzroy Bay	cooking area	1982
R28/15	Baring Head	rock shelter	1964
R28/16	At the end of Coast Rd	pits/stone walls	1987
R28/17	Fitzroy Bay	Terraces	1963
R28/18	Fitzroy Bay	Karakas	1963
R28/20	South of Lake Kohangatera	Terraces	1963
R28/30	South of Lake Kohangatera	ovens/workshop	1994
R28/36	Baring Head	Burial	1963
R28/37	Baring Head	cave with midden	1963
R28/38	Fitzroy Bay	midden/ovens	1963
R28/39	Fitzroy Bay	midden/ovens	1963
R28/42		Shipwreck (Paiaka)	1994
R28/43		Pits	1995
R28/247		Dugouts	2004

Appendix 3: Submission Form and Information on submission/workshop process [to be completed]

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