

PHARAZYN RESERVE MANAGEMENT PLAN



Prepared For: Kapiti Coast District Council
Prepared By: Boffa Miskell Ltd

August 2005

Pharazyn Reserve

Management Plan

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By Boffa Miskell Ltd

Preface

Kapiti Coast District Council (KCDC) is pleased to issue the Pharazyn Reserve Management Plan 2005. The Plan has been prepared in accordance with the provisions of the Reserves Act 1977.

Public Consultation

KCDC publicly notified its intention to prepare a management plan for Pharazyn Reserve in July /August 2004. Six submissions were received and considered in the preparation of the draft plan. The *Draft Pharazyn Reserve Management Plan* was notified for public comment in May 2005, and six submissions were received.

Acknowledgements

The Kapiti District Council wish to thank the members of the public and interested parties who have provided comments and suggestions through the submission process.

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Definitions

For the purposes of this document;

- Kapiti Coast District Council is referred to as 'the Council' or KCDC.

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Introduction

Pharazyn Reserve Overview

The Management Plan has been prepared for the reserve to be known as the Pharazyn Reserve. See Figure 1

Pharazyn Reserve is made up of two areas:

- **Decommissioned Waikanae sewerage treatment plant** that includes:
 - the ponds
 - the modified dune area, (previously used as an irrigation disposal area).
- **Existing reserve**, on the dune land west of the decommissioned treatment plant, between the coast and Rutherford Drive/ Paetawa Road

For the purposes of clarity for this document, the development and management of the reserve is discussed in terms of three distinct areas that make up the reserve land. The three areas are:

- *The ponds*
- *Modified dune area*
- *Dune reserve*

Management Plan Purpose

A management plan is a working document that sets out the objectives and policies for managing an area and how these will be achieved. As well as being a reference for consistent everyday management it sets out the strategy for on going development and planning. It is also a public statement that explains the governing principles and reasons for decisions to interested parties.

This Management Plan also incorporates a development plan that will guide the rehabilitation of the ponds and modified dune areas.

Management Plan Format

The management plan contains three parts;

Part 1 Background and Description

Describes the site, its past and intended development and the issues that need to be addressed by the objectives and policies in the Management Plan.

Part 2 Development Plan

Outlines the works and actions required to implement the rehabilitation of the ponds and modified dune area and their transformation into an area for wildlife habitat and public recreation.

Part 3 Management objectives and policies

Sets out the long and short-term objectives for the management of the area, and the policies identify how the objectives will be achieved.

Part 1

Background and Description

1.1 Relevant Statutory and Planning Framework

Reserves Act (1977)

Section 41 of the Act requires that a management plan be prepared by the administering body for each reserve under its control. A management plan should provide guidance to the Council that ensure the reserve is used managed, maintained and developed for the purpose for which the reserve is classified.

The land to be included in the Pharazyn reserve is currently made up of four titles, all of which are classified as Local Purpose Reserve, but with differing purposes. See Figure 2.

	Reserve Status
The Ponds	Local Purpose (sewerage treatment purposes)
Modified dune area (2 titles)	Local Purpose (disposal purposes)
Dune land reserve	Local Purpose (passive recreation)

The Council will seek to change the specified purpose for the three titles that comprise the pond and modified dune areas, to reflect the changed use, (from sewerage treatment to recreation and wildlife habitat).

New Zealand Coastal Policy Statement

The policies in the New Zealand Coastal Policy Statement (NZCPS) relate to the coastal environment of New Zealand. The Pharazyn Reserve lies within the coastal environment. The NZCPS states that *the preservation of the natural character of the coastal environment including protection from inappropriate subdivision, use and development is a national priority.*

Regional Policy Statement

The policy statement for the Wellington Region does not identify the Pharazyn Reserve area as either a nationally or regionally significant landscape, landform of ecological significance.

Kapiti Coast District Plan

The existing coastal reserve is zoned Open Space and the wastewater Treatment land is zoned Rural (designation D1109) in the District Plan.

All of the land lies within the Outstanding Landscape overlay that runs the length of the Kapiti Coast.

Te Harakiki Swamp (E66, designated as an ecological site of significant indigenous vegetation and significant habitats of indigenous flora) adjoins the site on the north and south boundaries.

Relevant District Plan provisions are noted in Appendix 1

Waikanae Wastewater Decommissioning and Rehabilitation Plan

The development strategies, management objectives and policies outlined in the Draft Management Plan, reflect the proposals/concepts adopted by KCDC as per the *Waikanae Wastewater Decommissioning and Rehabilitation Plan*¹.

KCDC commissioned the *Waikanae Wastewater Decommissioning and Rehabilitation Plan* in compliance with a resource consent condition,² prior to decommissioning of the wastewater ponds. The Decommissioning and Rehabilitation Plan, investigated the necessary works required to comply with consent conditions and evaluated the future use of the land and its rehabilitation.

Preparation of the plan involved ongoing consultation with stakeholder groups (Stakeholders listed in Appendix 2). The decommissioning and rehabilitation proposals put forward in the plan were accepted and endorsed by the stakeholders and Council in February 2002, and the sewerage treatment ponds ceased operation in March 2002.

The plan proposes that treatment ponds and adjoining land be rehabilitated as a public reserve that

- Provides wetland and open water habitat for wildlife, in particular waterfowl.
- Provides opportunities for the public enjoy the proposed wetland environment waterfowl that it will attract.
- Is suitable for passive recreational uses.

The two components addressed in the plan; are decommissioning and rehabilitation.

1. **Decommissioning** involves the initial phases and ongoing management of the physical and technical issues, associated with the existing infrastructure, health risks, pond sludge quality, soil contamination, hydrology and odours. The decommissioning included a two year plus, stand-down period, primarily to minimise potential public health risk issues. The initial two year has now passed. However the area is currently not suitable or available for public use and will be reviewed on an annual basis over the next three-five years.
2. **Rehabilitation** considers the future use and management of the area and outlines the physical development works necessary to transform the site into an attractive and safe public reserve.

Key Development Concepts

The key development concepts of *Waikanae Wastewater Decommissioning and Rehabilitation Plan* are listed below. The Management Plan is consistent with the concepts.

¹ 2000, Commissioned by KCDC and prepared by Boffa Miskell Ltd and Duffill Watts & Tse Ltd

² Greater Wellington Regional Council resource consent condition on the permit holder of the treatment facility.

- *Integrate the site as far as possible with the surrounding wetland landscape.*
- *Manage the area as part of the regionally significant wetlands that adjoin the site to the north and south.*
- *Reconfigure the shape of the ponds via a staged removal of bunds and 'soften' the straight edges of the ponds.*
- *Rehabilitate the edges of the treatment ponds to create a wetland buffer and habitat.*
- *Create open water habitat that would attract wildlife.*
- *Integrate the site with the adjoining dune land coastal reserve.*
- *Develop infrastructure for public recreation, access and use, including amenity planting, car parks walkways and signage.*
- *Allow for a future east-west link road between Ngarara Road and Rutherford Road.*
- *Provide space for sewerage overflow retention within the site (9000m³ for storm events).*
- *Monitor and manage external ongoing of decommissioning.*

1.2 Location and Legal Description

The Reserve is located in the coastal environment between Peka Peka and Waikanae Beach. (See Figure 1) The recently formed Rutherford Drive/ Paetawa Road link road, that runs in a north/south direction bisects the reserve. The road divides the Reserve into 'coastal' and 'inland' areas. On the coast the Reserve provides a large open space of dune land that acts as a buffer between blocks of rural residential development to the north and south. Inland (east of the road (Rutherford Drive/Paetawa Road link) the ponds lie between two privately owned wetlands to the north and south.

Several lifestyle blocks bound the reserve on the eastern boundary. The total area of the reserve is about 41 Ha and is made up of four land parcels. A 50m wide strip of esplanade reserve adjoins the coastal edge of the Pharazyn reserve, and extends beyond the reserve north and south. This section of esplanade reserve will be managed as part of the Pharazyn Reserve.

See Figure 2

	Legal Description	Area Ha
The Ponds	Lot 4 DP 29919	15.1529
	Pt Lot 3 DP 20118	2.3069
Modified dune area	Lot 1 DP 20118	14.2146
Dune land reserve	Lot 2 DP 85459	9.1672
Esplanade reserve	Lot 4 DP85459	(8.2751)
TOTAL		*40.8416
* Total area does not include the Esplanade Reserve that adjoins Pharazyn Reserve		

1.3 Physical Environment

The Pharazyn Reserve is made up of several types of landform, extending from the coast to the foot of an old coastal terrace. The reserve includes fore dunes, back dunes, a small backswamp (former stream watercourse), older dunes (planted with pine trees), the modified dune area and the open water of the ponds.

Site History

The Kapiti Coast has a rich history of Maori occupation. The coastline provided an important route up and down the coast and numerous settlements and pa were established near the sea, river mouths and streams near the plentiful fishing resource of the area. Wakahuia Carkeek's Book *The Kapiti Coast*³ identifies a fishing Pa named Kukutauaki Pa in the vicinity of the Kukutauaki Stream⁴. The former watercourse of the Kukutauaki stream lies at the inland edge of the fore dunes within the reserve (see Figure 3). The location of the fishing Pa, which may also lie within the reserve, has not been identified to date and an archaeological survey has not been carried out as part of the preparation of this management plan.

Prior to construction of the ponds in the early 1970's, the site was part of the Te Harakeke wetlands⁵ that extended from the Waikanae Beach area to Peka Peka. The excavation of the ponds bisected the wetland, creating two separate smaller northern and southern wetlands. A drain, (the Black Drain) was constructed around the east side of the treatment ponds to connect the northern and southern wetlands. Queen Elizabeth II National Trust covenants are in place on both of the remaining wetlands. Part of the northern wetland was gifted to the Trust as a result of a land subdivision, and a resource consent condition provides for access across the wastewater treatment plant site for management of the Trust's land.

Two oxidation ponds were excavated with a combined area of 12.3ha. Bunds between and around the edge of the ponds formed from clean sand. The dunes to the west of the ponds were levelled and used as the land disposal spray irrigation area (modified dune area).

Landform and climate

The mild coastal climate is dominated by the predominating west-northwest wind that often reaches gale force. The pine trees planted on the dunes to the west of the ponds provide good shelter to the inland area.

The persistent wind has a major effect on the physical shape and ecology of the coastal environment. A dynamic sand dune system is the basis of the landform, with the prevailing wind forming an extensive network of sand dunes aligned parallel to the beach.

The dune system once extended into the area where the ponds are now situated. Pre 1970 aerial photography shows the area as coastal dunes and

³ WW.Carkeek the Kapiti Coast: *Maori tribal history and place names of the Paekakariki-Otaki District*. 1967. Reed publishing.

⁴ Map 4 p231

⁵ Also referred to as Te Harakiki Wetlands, Doc Foxton Ecological District

wetlands with open water⁶. Extensive modification during pond construction has left no evidence of the existing landforms, and the land adjacent to the ponds is generally flat with localised undulations.

The dune landforms and backswamp (raupo wetland) in an interdunal hollow are, however, relatively unmodified and the coastal part of the reserve has high natural character and is identified in the district plan as being part of an Outstanding Landscape.

Te Harakeke Wetland

Te Harakeke wetland, although now bisected by the treatment ponds, is a regionally significant ecosystem. The wetland is identified by the Department of Conservation (DoC), as Recommended Area for Protection (RAP), within the Foxton Ecological District 7 and Greater Wellington Regional Council (GWRC) have classified the area as a Key Native Ecosystem (KNE). KCDC have identified the wetland as Heritage site Ecological E66 in the District Plan.

The rehabilitation of the treatment ponds and their reintegration with Te Harakeke Wetland would assist the long-term viability of this significant ecosystem.

Site features/structures

The dune and reserve has some modifications and facilities that enhance public use of the area for recreation. However the ponds and modified dune areas have up till now not been part of the public domain and the only structures in this part of the reserve relate to its previous use as treatment ponds.

The dune land reserve area is crossed by two compacted gravel paths, one runs north-south (parallel to the road and coast, and is a part of the wider coastal walkway system. Another path provides access from the coastal walkway to the beach. The paths through the dune land are well used by pedestrians, as well as for cycle and horse riding. With the exception of route markers in the dune area there are no other structures.

Roadside car parking is provided at the northern and southern boundaries of the dune reserve area. A direct pedestrian connection between the coastal walkway, and the southern car park needs to be constructed to avoid pedestrians having to walk down the road to access the walkway.

The Rutherford Drive/Paetawa Road link road crosses the reserve and there is one formed vehicle entrance into modified dune and pond area. A security fence along the east side of the road currently excludes the public access to the pond and modified dune areas. The fence will remain in place until the Council is satisfied that public health and safety is not a risk and the initial development works have been initiated. This is expected to be in about five years.

⁶ Fig 10 Waikanae Wastewater Decommissioning and Rehabilitation Plan 2000,
⁷RAP 7

Most of the structures that were part of the treatment system in the pond and modified dune area will be, or have been, removed with the exception of the pumping station beside the south pond.

Redundant structures to be removed include floating baffles, inlet/outlet boardwalks and the above ground spray irrigation sprinklers, in the modified dune area. The pumping station continues operation, receiving wastewater from Waikanae east, via a gravity-fed main, pumping it directly to the upgraded Paraparaumu Wastewater Treatment Plant. In order to provide for situations where the pumps cannot handle the volumes as a result of a major storm event, space for short-term overflow storage is provided near the pumping station. An earth retention pond and bund, either side of the entrance road off Rutherford Drive, could provide 9000m³ of overflow storage. This storage would be for limited periods only (ie for hours, or at the most several days). The two ponds vary in depth, up to 2.4m, and have concrete wave bands around their perimeter.

Two Kapuni gas pipelines run in a north-south direction through the modified dune area just west of the ponds. Natural Gas Corporation (NGC) operated the pipelines, and would need to assess any earthworks proposed in the vicinity of the pipes, to ensure the protection of the underground infrastructure.

Trees and Vegetation

Vegetation on the dunes is a mixture of low growing native coastal species pest plants and the occasional wind-shorn tree such as kanuka, mahoe and coprosma. Native species include spinifex, muehlenbeckia, raupo and bracken. However exotic species and pest plants predominate, and include marram grass, boxthorn, blackberry, lupin, rank grass, brush wattle and wilding pines. The stand of semi mature pines, established on the dunes between the dune land and disposal area are a dominant feature of both dune and coastal areas. Currently, the trees visually and physically separate the areas.

Stands of semi mature and mature pine, macrocarpa and eucalyptus encircle the treatment pond area, providing shelter and visual enclosure. The land adjacent to the ponds is maintained as mown grass.

The Black Drain, at the eastern boundary, has permanent open water and supports a predominantly raupo, emergent vegetation. Two areas of Manchurian rice grass⁸ are established in the black drain.

Pest Plants

Manchurian rice grass in the black drain, is being controlled by Greater Wellington Regional Council (GWRC), who plan to have it eradicated in about five years. GWRC require that the soil in the vicinity of the Manchurian rice grass is not disturbed until it has been totally eradicated.

Other pest plants include blackberry, boxthorn, and willow. Blackberry occurs throughout the dune land area and is particularly invasive in the damp margins of the inter-dunal wetland. Blackberry on the grassed modified dune

⁸ *Zizania latifolia*, listed as an eradication plant pest by GWRC

land is being controlled by mowing. Boxthorn is a predominant pest in the dune land area, as it is in many coastal parts of the district. Council's current policy is to control rather than eradicate the boxthorn.

Exotic tree species such as pine and brush wattle establishing in the dune land are a potential pest plant and will need to be monitored and controlled.

Control of the more invasive pest plant species will be an important aspect of the restoration planting around the ponds.

Wildlife

The open water of the ponds and the black drain attract a variety of indigenous and exotic waterfowl. The species recorded⁹ on and around the ponds include:

- Black swan
- Canada geese
- Cape Barren goose
- Paradise shelduck
- Mallard
- Grey duck
- New Zealand shoveler
- Grey teal
- New Zealand scaup
- New Zealand dabchick
- Pukeko
- Black shag
- Pied stilt
- White faced heron
- Black backed gull
- New Zealand harrier

The Council (in conjunction with Fish and Game) is currently addressing a problem with feral geese cross breeding with Canadian geese in the pond area. A programme to cull the feral geese has been planned in consultation with the adjoining property owners. The council do not envisage that this will be an on going issue.

Rabbits are evident throughout the reserve.

1.4 Current Management

KCDC administers the existing reserve as part its Parks operation and maintains the pond and modified dune area land.

1.5 Rehabilitation and Development

KCDC will carry out the initial rehabilitation of the wastewater pond area and development of the reserve. Physical works and planting will be concentrated in and around the pond area with the coastal reserve not requiring major development.

⁹ List supplied by Fish and Game, and is an indicative list of species that visit the ponds, and is not representative.

1.6 *Interpretation and Education*

Establishment of a regional wetland education and information centre in the reserve has been suggested through the submission process. KCDC supports the concept in principle, as a possibility in the long term. However, such a proposal would need to be considered (in terms of strategic fit, demand, and finance) as a development separate to current development plan for the reserve. In the short to medium term the rehabilitation of the ponds is focused on reducing any risk to public health (water and sediment quality) while enhancing the ecological quality of the ponds and wider wetland area.

KCDC recognises the opportunity to promote improved understanding and appreciation of the natural and ecological values of the reserve. This imperative is included in both the strategic vision of the Management Plan and also the development plan for the reserve, where provision has been made for public access, bird viewing hides and interpretation panels.

Part 2

Development Plan

The Development Plan details the works required to rehabilitate the ponds as a wildlife habitat area and the adjoining modified dune, and coastal dune area as a reserve for public enjoyment.

2.1 Development Objectives

The development plan includes initiatives and actions for all parts of the reserve. However, the majority of proposed development relates to the rehabilitation of the ponds, and establishment of wetland and riparian plantings. Development, including provision of facilities for passive recreation and interpretation and planting are planned for the modified dune area, with minor development works proposed for coastal dune reserve area.

Figure 3 shows the development and rehabilitation planned for the reserve over the next 10-15 years.

The long-term intention is to reintegrate the ponds with the adjoining Te Harakeke wetlands. However, the physical connection between the ponds and wetlands will be deferred until there is no risk of the pond sludge having an adverse effect on the wetlands down stream. It will also be dependent on a workable hydrological design between the ponds and adjacent wetlands. Eventually all of the pond edges will be modified, if required, to provide convoluted graded banks suitable for emergent vegetation¹⁰, but in the short to medium term works will be focused on the westward parts of the ponds.

The development process is planned in three stages, of five years, over a 15 year period. The development objectives for the three areas within the reserve are:

Ponds

The treatment ponds will be rehabilitated and will retain areas of open water with a planted wetland buffer. The rehabilitation works will visually and ecologically integrate the pond and disposal areas with the surrounding wetland/coastal environment. While the ponds will primarily provide open water and habitat for waterfowl, opportunities for public recreation such as viewing hides along the western margin are planned. The only public access to the ponds will be along the western edge. A broad buffer of raupo to be established along the pond edges will restrict access to the open water.

¹⁰ Figure 6 in *Waikanae Wastewater Decommissioning and Rehabilitation Plan 2000*, shows the long term intent for the pond edges.

Modified Dune Area

The land disposal area will be developed as a public open space including car parking, gravel walkways, toilets, signage and groves of native vegetation to provide shelter and shade. A new pedestrian link will provide access from this area west to the dune land.

Once new native shelter vegetation has established, a staged removal of the semi mature pine trees to the west will allow views to Kapiti Island and the dune land, from the eastern part of the reserve.

Dunelend Reserve

The coastal reserve is relatively unmodified and no significant development is planned. The main focus in this area will be the protection and enhancement of the open space and natural character of the coastal dune land and the control of pest plants.

2.2 *Reconfiguration of Pond Edges*

The straight concrete edges of the ponds will be reconfigured to create more 'natural' sinuous edges, to provide suitable growing conditions for raupo to establish. The vegetated buffer will provide wildlife habitat, discourage public access and act as a seed source for the remainder of the ponds.

The western edges of both ponds and bund dividing the ponds will be reconfigured, and sections of the central bund will be broken out to connect the two ponds. The remaining edges of the ponds will stay in place as a bund to separate the pond water and sludge from the black drain and surrounding wetlands. This may be reviewed, if and when there is no risk of contamination from the sludge and if a workable hydrological regime is possible.

The concrete wave barrier will be broken into small sections and pushed into the ponds and placed near the edge, to provide a foundation for the convoluted edge, and to moderate wave action on the freshly exposed edge.

It is anticipated that the fill will be sourced from local Council excavations/works. The fill must be clean and suitable for the purpose in particular not contaminated with water tolerant pest plants.

The fill will be placed into the water at the edge of the pond, and should be graded into the water over and around the concrete pieces, to provide a gently sloping 'beach' that will protect the edge from erosion and provide suitable substrate to establish raupo (in the first instance). The profile of the modified edges should be consistent with the *Draft Design Guidelines for Artificial Ponds*¹¹

Modification of the pond edge will be carried out in a sequential manner with timing depending on the availability of suitable fill. Work will begin on the shallower south pond, then the north pond, and finally the central bund.

¹¹ 2005, *Draft Design Guidelines for Artificial Ponds*. GWRC
Due to be published August 2005

Sand/soil fill from off-site will stockpiled in the short term along the west edge of the ponds until required.

The concrete wave band will only be broken out when there is enough fill to replace it (to avoid the risk of erosion of the exposed edge material).

KCDC will need to consult with Natural Gas Corporation regarding the proposed works in the vicinity of the pipelines, particularly in regard to heavy machinery/trucks crossing the pipeline and earthworks.

2.3 Access and Recreation

Vehicle access and car parks

A new vehicle entrance off the extension of Rutherford Drive will provide access to the southern end of the wastewater treatment area.

A car park located on the elevated area north west of the pumping station will provide some parks that offer outlooks toward the ponds.

A future road to provide an east-west link between Ngarara Road and Rutherford Drive is shown on the plan.

Bollards and vegetation assist in restricting vehicle access to only the access road and parking areas. However there would need to be provision to allow KCDC service vehicles to access other parts of the reserve.

Walking Paths and Pedestrian Links and Boardwalks

The security fence that currently restricts access to the pond and modified dune areas will remain in place until the western edges of the ponds have been rehabilitated and the raupo is established. This is likely to take up to five years.

Compacted gravel walkways will be constructed to provide walking routes through the modified dune area and along the western edge of the ponds.

Dense buffer planting around the margin of the ponds will restrict public access to the water, and security fences will prohibit public access around the other margins of the ponds. It is proposed that short boardwalks will extend from the land through the vegetation to the bird viewing hides.

A new pathway will connect the ponds with the dune area, crossing Rutherford Drive and via boardwalk over the small raupo wetland.

No other new paths are planned in the dune reserve area.

Interpretation and signage

A site wide signage strategy is will be developed that defines the location and content of the information and interpretation signs throughout the reserve. This would include one main information board/shelter in a central location.

Interpretation signage providing information on the geology, natural landforms, dune dynamics and ecology, would promote an enhanced understanding and enjoyment of the coastal and wetland environments.

Information about the site's history, including the construction and decommissioning of the ponds would also assist public appreciation of the reserve.

Way finding signage to assist navigation within and beyond the site would be planned to integrate with the existing signage of the locality.

Additional KCDC signage advising;

- Public safety issues relating to the ponds and surrounding land.
- Operational detail in particular overflow storage areas.
- KCDC bylaws such as dogs, horses.

Facilities and Site furniture

A new toilet facility will be necessary once the pond and modified dune areas are open to the public. The toilets would be discreetly located in the vicinity of the car park, near the pumping station.

The modified dune area will be retained as a predominantly grassed open space with groves of native vegetation planted to provide shade and shelter. This area will be suitable for passive recreational use, such as walking, informal recreation and picnics.

Recreational site furniture would include, bench seating at strategic points, picnic tables, barbeques and rubbish bins.

A central information point in the form of information panels with a roof structure would be located in the vicinity of the car park near the ponds.

Lighting will not be provided.

2.4 Planting

Pond buffer planting

Establishment of a dense buffer of vegetation in the shallow water of the pond margins will be a priority, once the fill is in place, or pond water levels are reduced. The western pond margins will be seeded with locally sourced raupo distributed by hand along the margins. The seeding method is considered to be the most effective way to establish a large area of raupo.¹²

¹² Pers Comm Tim Park, KCDC officer.

Raupo is a voracious coloniser, and will quickly establish and spread to form a dense vegetative edge.

Other native species associated with wetland margins will be established on the landward edges of the pond to provide a diverse mix of species. These will include manuka, flax, cabbage tree and ngaio.

Additional planting in and around the pond edges should be designed to provide habitat diversity, such as bird roosting and nesting sites.

It is anticipated that once introduced into the western edge of the ponds raupo will colonise naturally in other parts of the ponds wherever conditions are suitable. Ideally approximately 50% of the total pond area should be maintained as open water to provide bird feeding and fish habitat.

Recreational shelter and shade planting

The existing grassed area of the modified dune area will generally be left as an open grassed space with groves of coastal native trees to provide, wind shelter and shade. The vegetation will be used to create a partial visual buffer between the area and the road. The vegetation will enhance the natural character of the modified dune and pond area, by visually screening the road from the recreational area and moderating the traffic noise.

Planting locally sourced native species will enhance the biodiversity of the locality and will attract a wider range of birds to the reserve.

Scattered groves of trees will provide a vertical element that breaks down the single open space into a series of smaller areas. This layout would add visual and recreational interest.

Suggested native species to provide shade and shelter:

- Karaka
- Ngaio
- Cabbage Tree
- Manuka
- Kanuka
- Kohekohe
- Kahikatea

Additional planting of native species at the walkway entrances to the dune area, (from the two car parks) would enhance and visually define the entrance points

Structural Planting

In addition to planting that would enhance recreational use, carefully designed planting would also assist structures such as the toilet block and car park to be integrated into the site.

Replacement of pine trees

Sections of the western stand of pine trees will be progressively removed to provide views to Kapiti Island and the dune land, from the inland parts of the reserve. The pines will be removed in small groups and native vegetation, appropriate to the site, established in their place.

2.5 Health and Safety

The security fence that ring fences the pond and modified dune area will remain in place to exclude public access until the Council are satisfied that any health and safety risks are acceptable.

2.6 Development Strategy and Staging

The development will be staged over about 15 years and has been divided into three stages of five years each. (see Figure 3)

Pest plant control, although not development as such, is essential for the development of the reserve and has been included in the table below.

	Development Activity	Stage 1 year 0-5	Stage 2 year 5-10	Stage 3 year 10-15
		2005-2010	2010-2015	2015-2020
PONDS				
	Rehabilitate and seed south pond edge			
	Rehabilitate and seed north pond edge			
	Break-out, rehabilitate and seed central bund			
	Security fence to restrict access around ponds			
	Construct bird viewing hides			
	Weed control, (manchurian wild rice)			
MODIFIED DUNE AREA				
	Establish native shelter trees			
	Plant native buffer along pond edge			
	Plant native buffer and groves of amenity trees			
	Construct access road and car park			
	Construct toilet block			
	Construct information/shelter near main carpark.			
	Construct walkway and boardwalk link to dune-land area			
	Remove security fence between dune reserve and pine trees			
	Remove sections of pine trees, replant with native vegetation, to provide views to west.			
	Site furniture, picnic tables, barbecues			
	Weed control and mow grass areas			
DUNELAND RESERVE AREA				
	Construct pedestrian entrance at Rutherford drive car park			

	Enhancement planting at entrance points			
	Bench seats			
	Weed control, boxthorn, blackberry, exotic tree seedlings			
SITE WIDE				
	Develop and implement interpretation/signage strategy.			
	Rubbish bins			
	Bench seats, sand ladders if required			

Part 3

Strategic Vision Management Objectives and Policies

The strategic vision is the over-arching purpose of the Management Plan. It is a statement of intent for the Reserve and serves as the reference point for the development plan and the objectives and policies in the Management Plan

The management objectives and policies define how the reserve will be managed in the short and long term.

3.1 Strategic Vision

The Strategic Vision for the Pharazyn Reserve is:
Pharazyn Reserve will be developed and managed to provide opportunities for passive recreation and learning about the natural environment, while protecting and enhancing site's coastal and wetland values.

3.2 Management Objectives and Policies

3.2.1 Administration and Management

The Pharazyn Reserve is administered by the Parks and Recreation Department, of the Kapiti Coast District Council, under the direction of the Parks and Recreation Manager. Administration includes day to day management, budget planning and long-term development planning. Specialist advice or service may be sought for specific management issues such as tree maintenance.

Policies

- i) The reserve shall be managed by the Parks and Recreation Department of the Kapiti Coast District Council, in accordance with the appropriate classifications of reserve land
- ii) The Management Plan shall be reviewed regularly and amended where necessary in accordance with the requirements of the Reserves Act (1977)
- iii) The Council shall support the establishment and activities of one community group whose purpose is advocacy, for and development of the reserve, as a wildlife and passive recreational space.

3.2.2 Landscape character

The Pharazyn Reserve has two distinct areas of landscape character that are physically and visually separated by a stand of semi mature pine trees and a public road.

1. The coastal dune land area is bounded by the Tasman Sea and link road (Rutherford/Paetawa Road), with expansive views to Kapiti Island. The dune landform is largely unmodified and includes small raupo back-

swamp. Although the vegetation is mainly exotic species and pest plants the area retains a strong natural character.

2. The landforms of the inland part of the reserve are highly modified as a result of the treatment pond construction. Apart from the stands of pine trees on the perimeter, the area is devoid of significant vegetation, and this contrasts strongly with the adjacent densely vegetated wetlands.

The Reserve is located in the coastal environment on the outskirts of a rapidly expanding urban area. As residential development intensifies in the area the reserve will become more and more important as a recreational open space. Implementation of the Development Plan will greatly enhance the natural and amenity values of the old sewerage treatment areas and will also reconnect the coastal and inland areas.

Policies

- i) The landscape character and natural values of the Reserve shall be protected, maintained and enhanced.
- ii) There shall be no earthworks or built structures in the dune area west of the road, with the exception of signage, rubbish bins, boardwalks and bench seats.
- iii) The Council shall promote the protection of the dune environment and landforms from inappropriate use through public education, monitoring and action.
- iv) Mountain bikers and horse riders must stay on the formed gravel pathways in the dune area, and pedestrians shall be encouraged to use the formed tracks.
- v) New pathways shall only be constructed through the dunes area where there is a clear need, and where a formed path would protect the dune landforms from pedestrian traffic.

3.2.3 Ecological values and wildlife

The Reserve is a small part of the coastal dune land strip that runs the length of the Kapiti Coast, and has particular value in that it runs inland, connecting the coastal edge with the inland wetland systems. The rehabilitation of the ponds into a wetland/open water system will greatly improve the ecological value of the area, and will go some way to re-establish the wetlands that were lost when the ponds were constructed. Improved habitat in the form of wide buffer planting of raupo will encourage additional species of waterfowl to visit and breed in and around the ponds. Establishment of areas of native vegetation as part of the development plan will also enhance the ecological integrity of the reserve and the whole wetland complex.

Control of pest plants and animals will be an important part of enhancing the ecological integrity of the ponds and reserve. This includes exotic plants, fish and animals.

Recent problems with feral geese in the reserve are not expected to be ongoing, however, there may be times when control of wildlife is required to control numbers of undesirable populations.

Policies

- i) The rehabilitation works including planting shall be carried out in accordance with the Development Plan.
- ii) The ponds shall be rehabilitated and managed to create waterfowl habitat and shall not be used for recreational water activities such as swimming, fishing or boating.
- iii) There shall be no public access into the wetland margins, or open water apart from purpose built boardwalks to authorised bird viewing hides.
- iv) All vegetation planted in the reserve shall be locally sourced native species.
- v) No exotic vegetation shall be planted in the Reserve.
- vi) No exotic fish species shall be introduced into the ponds.
- vii) Measures to control nuisance wild fowl populations may be planned and undertaken, in consultation and with agreement from, all relevant parties, authorities and neighbours.

3.2.4 Vegetation Management

The pine trees that separate the coastal and inland parts of the site provide shelter to the to the inland area from the prevailing winds, however they also block views to Kapiti Island and the coastal dune area. Progressive replacement of sections of pine trees with native vegetation will create view shafts would help to unify the two parts of the reserve.

Weeds and exotic species are a continual threat to the natural character of the dune environment, Although boxthorn is a major pest species, other weeds such as blackberry, pine and brush wattle are also a threat. The Council policy for boxthorn is control rather than eradication. Weeds such as blackberry, pine and brush wattle need continual monitoring and control. The manchurian wild rice grass in the black drain is being eradicated by GWRC.

Policies

- i) The Council shall maintain the pine and other large trees, to minimise risks to the public of falling trees or branches.
- ii) Existing pine trees shall only be removed as part of a planned progressive replacement strategy, to provide views out from the inland area (unless they are considered dangerous)
- iii) Pest plant species shall be monitored and regularly controlled to protect the ecological and natural values of the Reserve.

3.2.5 Recreation and Access

Pharazyn Reserve is an area for passive recreational uses such as walking, picnicking and play. The pond area is being developed to encourage water fowl to visit the area and viewing hides will be provided to encourage bird watching with minimal disturbance to the birds. The existing pathways

through the dune land area are part of the wider local cycle, walkway and bridle way route system, along the coast and beyond.

Policies

- i) The Reserve shall only be used for passive recreational activity.
- ii) Fishing in the ponds is not permitted.
- iii) Horses and mountain bikes are permitted to use the formed gravel paths within the dune area.
- iv) No public access is allowed, beyond the security fences, to the north, east and south margins of the ponds.
- v) Motorised vehicles may only use the access road and car park, and are not permitted elsewhere in the Reserve.
- vi) Authorised service vehicles may access the modified dune and pond areas to carrying out Council operations.
- vii) Access through the reserve to the QEII National Trust property (north of the reserve), shall be permitted as appropriate to authorised QEII National Trust representatives.

3.2.6 Buildings structures and furniture

The only existing built facilities within the reserve relate to the sewerage pumping facility. The development plan describes the facilities that will be provided to enhance the use of the reserve for passive recreational activities, including site furniture, interpretation panels, toilet facilities, boardwalks and security fences.

The design and location of buildings, structures and site furniture can have a major positive or negative impact on the visual appeal of a reserve. As a general principle constructed features should be complementary to the open space qualities of the Reserve and this can be achieved by

- Design appropriate to the site and unified throughout;
- Locations chosen to reduce the visual impact or enhance the natural features.

A sheltered interpretation structure, near the main car park will be the main information point, with other information panels throughout the reserve. The interpretation and information panels will include information about the site's history, natural features, and ecology.

Site furniture such as bench seating, vehicle barriers, rubbish bins, although small in scale, need to be sensitively designed and located to avoid visual clutter of the reserve.

Picnic tables and barbeques should be located where they are most appropriate, in association with planted areas that provide shade and shelter, rather than in the middle of large open spaces.

Rubbish bins must be easily seen and placed where they will be used, but must of a scale and colour, so not to appear prominent within the Reserve.

With the addition of the sewerage pond area to the existing reserve the signage throughout the reserve will need to be reviewed. The entrance points need to be clearly identified and visitor information will be required at several points. The signage will need to include interpretation, way finding and site information.

Policies

- i) The Council shall provide built facilities to facilitate and enhance the use of the Reserve for passive recreational activities as described in the Development Plan.
- ii) Design and locations of the proposed bird-watch hides will be located and designed to ensure their use creates minimal, visual impact and disturbance to the wildfowl.
- iii) The Council shall provide site wide signage that specifies wayfinding and site information to the public.
- iv) Signs shall be of a consistent style that is appropriate to the natural character of the site.

3.2.7 Maintenance and Pest Management

The public use and condition of the Reserve needs to be monitored and appropriate action taken to ensure

- The enjoyment and safety of visitors;
- Protection of the natural character, including landforms, vegetation and ecology.
- The provision of suitable habitat for wetland bird species, including areas of open water.

Approximately 50% of the total pond should be maintained as open water to provide feeding and breeding habitat for birds and fish. This may require removal of raupo or other emergent vegetation from time to time.

The council must undertake sound environmental management of the Reserve including the control of pest plants, invasive plants, pest animals and fish, skilled tree maintenance and planting techniques. Pest plants in the dune area would include wilding pine and other self-sown exotic tree species that could threaten the natural character of the dunes.

From time to time it may be necessary to restrict public access to the east part of the Reserve for public health and safety reasons. In the event that sewerage system requires use of the short-term overflow storage areas east of the road, this part of the reserve may be closed to public access for short periods.

Policies

- i) The Reserve shall be maintained regularly to a high standard and damage or environmental problems attended to quickly.
- ii) The council shall monitor and control pest plants, animals and fish on a regular basis.

- iii) The council shall implement vegetation control measures as required to maintain approximately 50% of the total pond area as open water.
- iv) Use of herbicide for vegetation control within and around the ponds must comply with GWRC list of approved herbicides for use in fresh water.
- v) All buildings and site furniture shall be maintained in a good state of repair.
- vi) The toilets shall be maintained to a high standard.
- vii) Rubbish bins shall be of adequate size and number, appropriate to the demand, and emptied in a timely manner as use dictates.

3.2.8 Controls and Prohibitions

Conflicts can occur in public Reserves when recreational activity or use is incompatible with the Reserve's objectives. The Council seeks to encourage use of the Reserve for passive recreation while also protecting and enhancing the natural qualities of the site. Controls and prohibitions seek to avoid management problems and conflicts between recreational use and the long-term integrity of the site's natural features.

Policies

- i) Activities that adversely affect the reserve, its landforms, vegetation, natural character or recreational values may be prohibited if incompatible with Reserve objectives and policies.
- ii) Horses, mountain bikes and motorised vehicles are prohibited from the dune area unless using the designated formed paths.
- iii) Motorised vehicles (see 3.2.5 iv,v,vi)
- iv) Dogs shall only be permitted in the reserve if kept strictly under control on a leash.

APPENDIX 1

Relevant District Plan Provisions

C.10 LANDSCAPE

Objective 1. That the district's outstanding landscapes are identified and protected from the adverse environmental effects of subdivision, use and development.

C.11.1 ECOLOGY OBJECTIVES AND POLICIES

A. Natural Environment

Policy 8. Encourage planting of locally sourced indigenous species adjacent to water bodies and other areas that will restore linkages and ecological corridors.

Policy 9. Encourage restoration of degraded habitats with locally sourced (genetically appropriate) native vegetation.

Policy 10. Advocate for the protection of areas identified as suitable for providing linking corridors for fauna.

Policy 11. Maintain and enhance the natural landscape values of the district.

B. Tangata Whenua

Policy 1. Provide for Tangata Whenua input into the decision-making process, regarding proposals affecting policies and the natural resources of importance to Tangata Whenua.

Policy 3. Recognise and provide for Kaitiakitanga by Tangata Whenua in the management of the natural environment.

C.12 OPEN SPACES AND RESERVES

Objective 1. To identify, maintain and enhance the open space and recreation resources of the district to ensure that the present and future needs of the district for recreational opportunities and open areas are met without adverse effects on the physical values of the natural environment.

Policy 1. Recognise the open space amenity value of reserves and areas of significant scenic, ecological, scientific and national importance, including native trees, significant landforms and natural character.

Policy 2. Identify and ensure the development of a walking and cycleway system in co-operation with landowners and other agencies, linking areas of open space, ecological reserves, schools, commercial and community facilities, public transport and residential adjoining landowners.

Policy 3. Provide for a wide range of recreational activities while ensuring that adverse effects on the environment are avoided or mitigated.

Policy 6. Protect the open space value of both private and public land being used for open space and recreation.

APPENDIX 2

Consultation

Preparation of the Waikanae Wastewater Decommissioning and Rehabilitation Plan 2002

Groups consulted during the preparation of the Waikanae Wastewater Decommissioning and Rehabilitation Plan.

- Waikanae Community Board
- Community Wastewater Liaison Group
- Department of Conservation
- Greater Wellington Regional Council
- Te Runanga O Ati Awa Ki Whakaongatai
- Kapiti Environmental Action
- Guardians of the Waikanae Estuary
- Royal Forest and Bird Society- Kapiti Branch
- QEII National Trust

Preparation of the Draft Management Plan 2005

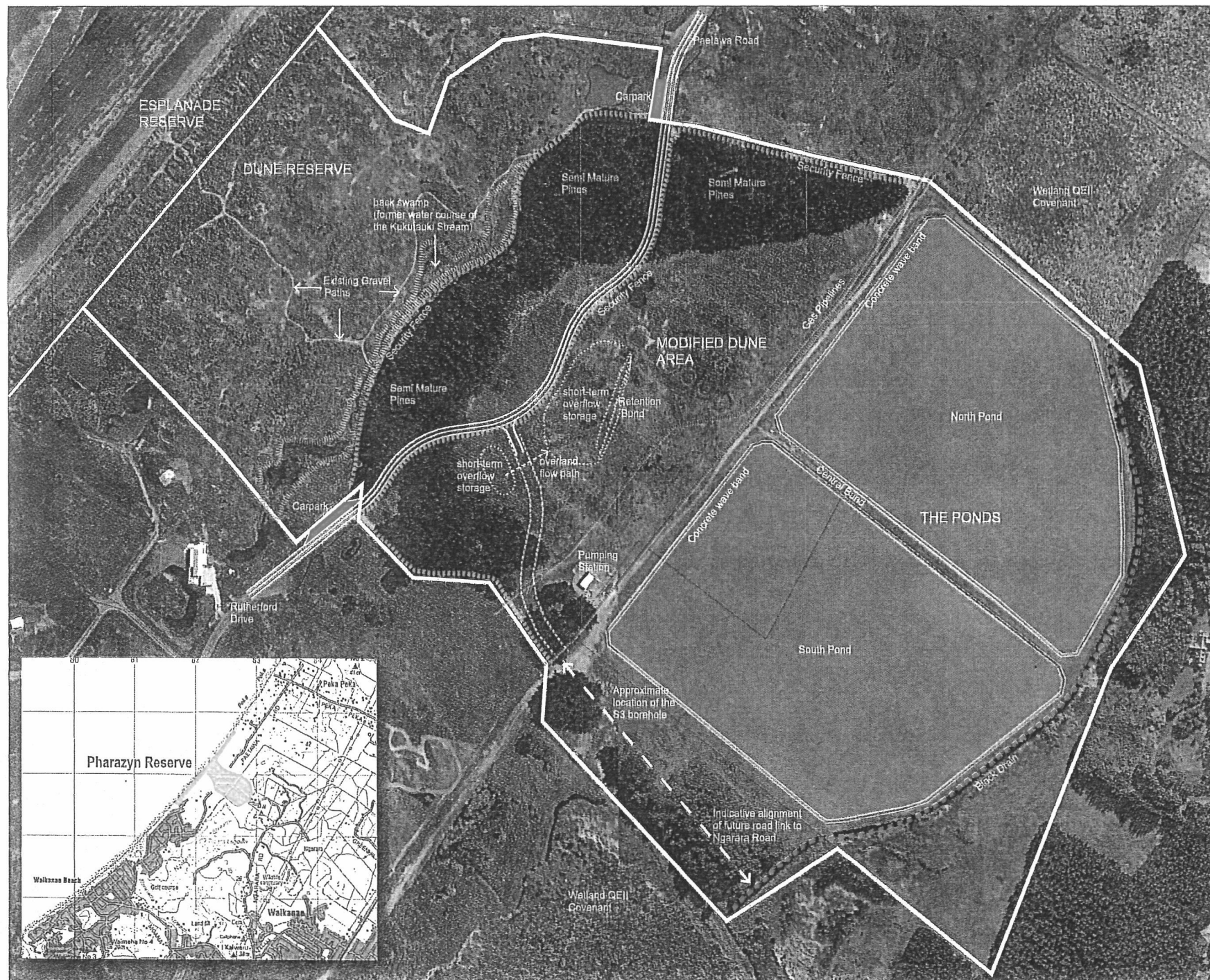
KCDC publicly notified its intention to prepare a management plan for The Pharazyn Reserve (decommissioned Waikanae sewerage ponds) in July /August 2004. Six submissions were received and considered in the preparation of the draft plan.

The following parties were consulted during the preparation of proposal and methods for the Development Plan (included in the Draft Management Plan)

Kapiti Coast District Council, council officers
Greater Wellington Regional Council
QEII National Trust
Department of Conservation
Duffell, Watts, Tse
Fish and Game

Preparation of the Pharazyn Reserve Management Plan 2005

The *Draft Pharazyn Reserve Management Plan* was notified for public comment in May 2005, and six submissions were received. Many comments from the submissions were considered and adopted into the final version of the plan. Submitters who had requested to be heard met with KCDC on site at the reserve to discuss the submissions and changes made to the plan.



PHARAZYN RESERVE MANAGEMENT PLAN

SITE FEATURES

Figure. 1

Prepared By: Boffa Miskell Ltd
Prepared For: Kapiti Coast
District Council

August 2005



PHARAZYN RESERVE MANAGEMENT PLAN

CADASTRAL BOUNDARIES

Figure. 2

Prepared By: Boffa Miskell Ltd
Prepared For: Kapiti Coast District Council

August 2005



Scale 1:6000 @ A3

10-15 Year Development Strategy

Stage 1, Years 0-5

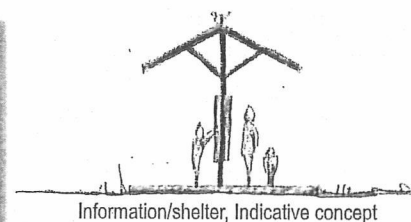
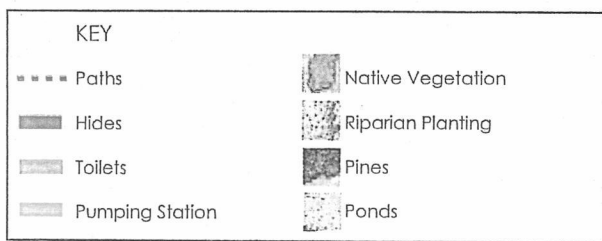
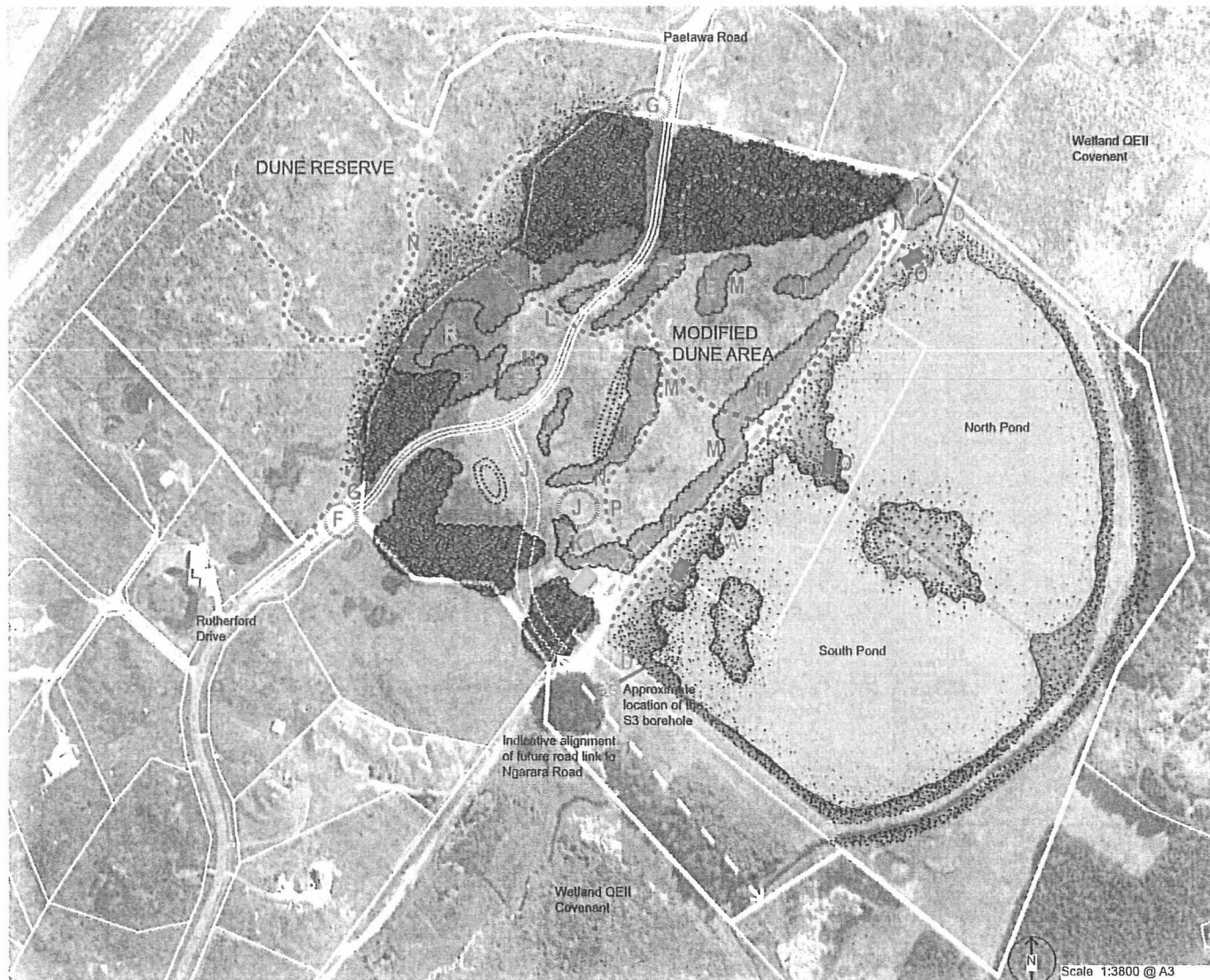
- A Rehabilitate and seed south pond edge
- B Rehabilitate and seed north pond edge
- C Break-out, rehabilitate and seed central bund
- D Security fence to restrict access around ponds
- E Establish native shelter trees
- F Enhance pedestrian entrance at Rutherford Drive car park
- G Enhancement planting at entrance points

Stage 2, Years 5-10

- H Plant native buffer along pond edge
- I Plant native buffer and groves of amenity trees
- J Construct access road and car park
- K Construct toilet block
- L Construct walkway and board walk link to dune land area
- M Site furniture, picnic tables
- N Bench seats and pedestrian sand ladders, (if required)
- O Construct viewing hides
- P Construct information/shelter near main car park
- Q Remove security fence between dune reserve and pine trees

Stage 3, Years 10-15

- R Remove sections of pine trees, replant with native vegetation



PHARAZYN RESERVE
MANAGEMENT PLAN

DEVELOPMENT STRATEGY

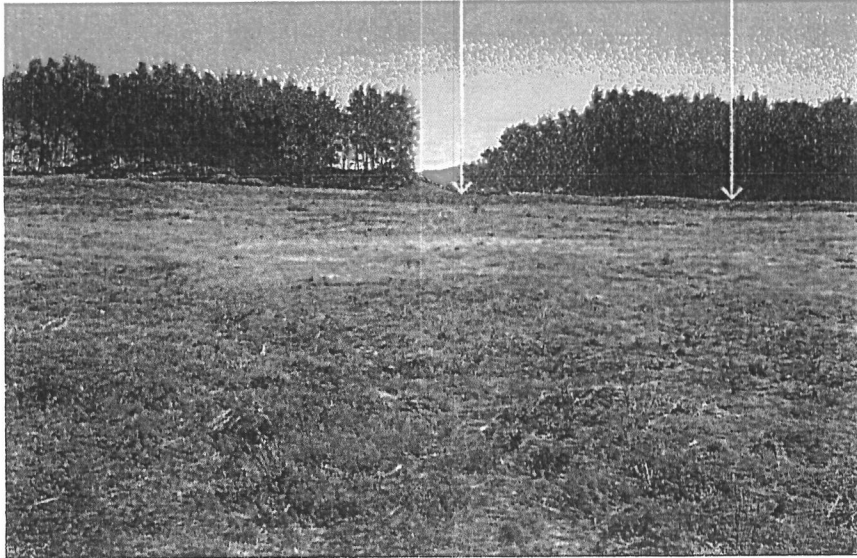
Figure. 3

Prepared By: Boffa Miskell Ltd
Prepared For: Kapiti Coast
District Council

August 2005

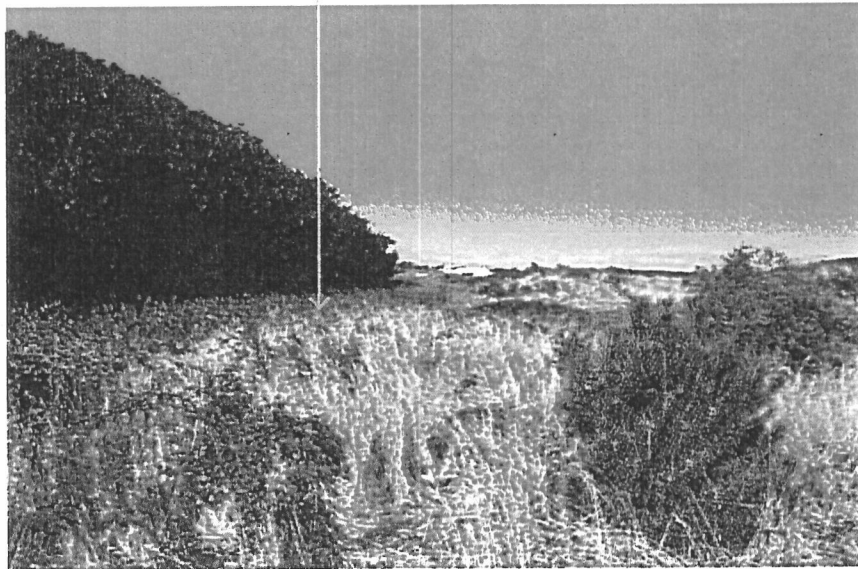
Vehicle Entrance off
Rutherford Drive

Rutherford Drive/Paetawa
Road link

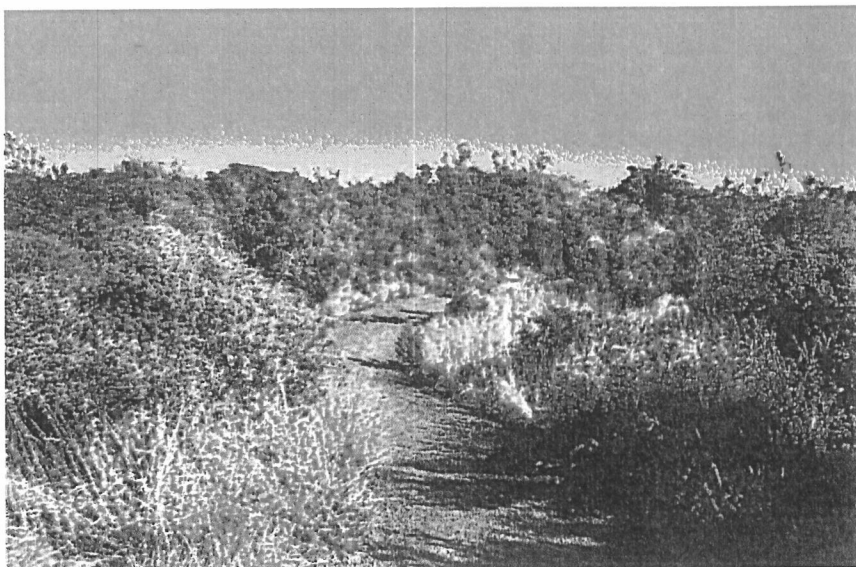


Kapiti Island is just visible between the gap in the trees where Rutherford Drive crosses the reserve. The development plan proposes staged removal of small sections of pine trees and replanting with lower stature native species, to allow views to Kapiti Island and the coastal dune area.

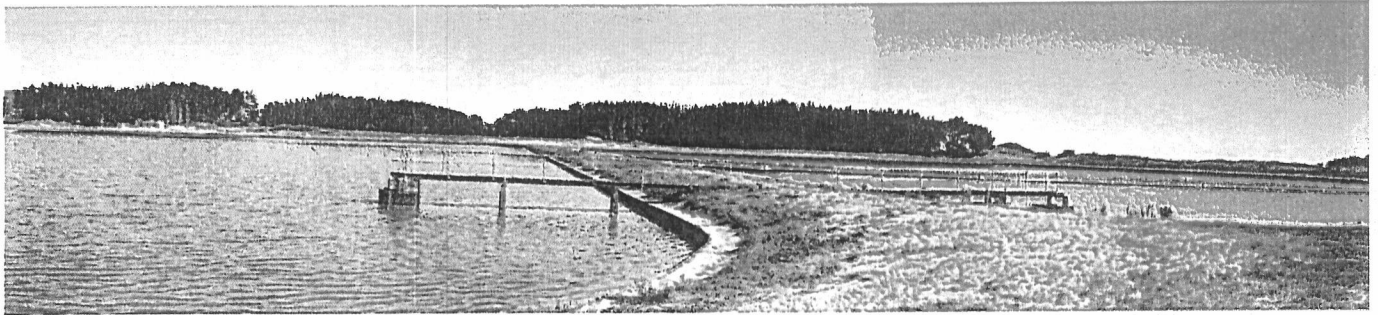
Back swamp



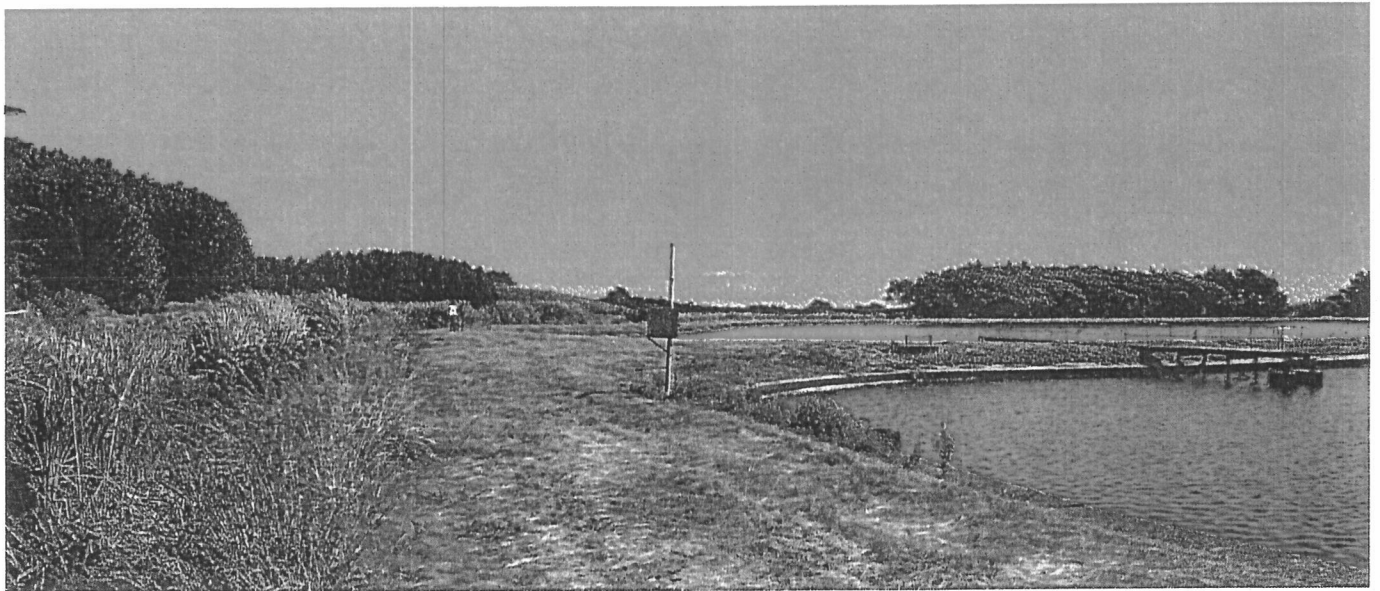
The pine trees (left) separate the dune reserve area from the western parts of the reserve (ponds and modified dune areas). A small back swamp is vegetated with raupo. Pest plants throughout the dune area include wilding pine, blackberry and boxthorn.



Two formed paths provide access across the reserve (north-south) and west to the sea. Boxthorn is the most prominent vegetation in the dune area.



The decommissioned ponds will be rehabilitated to provide enhanced wildlife habitat and the central bund will eventually be reformed to become an island, and redundant structures (foreground) removed. Beyond the ponds the modified dune area is enclosed by several stands of semi-mature pine trees. The dune reserve area lies beyond the pines.



The Black Drain (left of photo) connects the wetlands to the north and south of the ponds. The dense vegetation in the drain is predominantly raupo, and the development plan proposes that a buffer of raupo be established in the margins of the ponds, to enhance wildlife habitat and restrict public access to the water. Manchurian rice grass in the drain will be eradicated by the Greater Wellington Regional Council.



The modified dune area is relatively flat sandy ground, that will provide an open space for passive recreation. Groves of native vegetation will be established to provide shade and shelter. Redundant structures such as the irrigation sprinklers (front left) will be removed. The pump house (centre) will remain, as it continues to function as part of the current wastewater reticulation system.