



Te Kaunihera o
MANUKAU
City Council

Totara Park Management Plan

Final Subject to Classification

December 2001

A Manukau Premier Park

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Summary

At over 200 hectares, Totara Park is one of Manukau's premier parks and one of the largest areas of public open space in the City. It is readily accessible from most parts of the Auckland region, accommodates a wide range of activities and, while different in character to the adjoining Auckland Regional Botanic Gardens, is closely linked with them.

For these reasons it is a remarkable and valuable asset to Manukau City. The overriding vision for the park is to retain and enhance its natural and cultural attributes for the use and enjoyment of the public. Totara Park will be developed and managed as a "countryside" park, with the emphasis on the enhancement of the significant native bush and the retention of open pasture areas. Activities appropriate with this would be those that are associated with outdoor recreation pursuits.

The area around Totara Park is becoming increasingly built up with potentially harmful effects on the park and on Puhinui Stream. The management plan anticipates these effects and takes steps to avoid or remedy them.

From the Botanic Gardens it is already possible to walk through bush into Totara Park. In future, an extensive network of walking trails will be available, catering to a range of needs and abilities. Horses and their riders will ride bridle paths that occasionally cross the walking trails. Mountain bike riders will have plenty of opportunity to test their skills over challenging and exciting terrain, on separate trails to those for walkers and horse riders.

The park will generate some income from a forestry operation, harvesting and replanting macrocarpa, pines and other trees, and from the pastoral leases. Careful planning of bush regeneration and good fencing practices will ensure that stock is kept out of the bush. Leased pasture will be attractive to potential lessees because the land is leased as one unit.

1.0 Introduction

1.1 The Purpose of the Totara Management Plan

The Reserves Act 1977 requires administering authorities to prepare and regularly update management plans for reserves under their control. Although Totara Park is not gazetted under the Reserves Act as a reserve the same procedures are being followed.

A management plan is a statement of objectives and policies by which specific proposals may be evaluated. It outlines Council's general intentions for the use, development, management and maintenance of a reserve. The aim is to ensure that reserve development and enjoyment are based on sound land use planning and that the needs of the public are clearly identified. A management plan must also be flexible enough to cope with changing demands without compromising its integrity.

This management plan is divided into five sections:

- 1. Introduction**
This section outlines the purpose and structure of the management plan and also includes a brief history of the park.
- 2. Management Plan**
This section contains objectives and policies accompanied by brief explanations of the circumstances leading to their recommendations.
- 3. 10-Year Development Programme**
This section contains the proposed concept plan for future development and a cost estimate with capital works projects in order of priority over a ten-year period.
- 4. 1992 Management Plan Review**
This section outlines the main objectives and policies of the management plan for Totara Park and reviews the progress on the implementation of these policies.
- 5. Background**
The third section contains background information including legal descriptions, natural history and biophysical information. This section includes inventory maps, and sources of further information.

1.2 History of Totara Park¹

Manukau City Council acquired Totara Park in 1965² from the owner, Mr Charles Prevost, after agreeing to preserve the bush and develop the park for public use. Mr Prevost had already begun development in this direction before he sold the property, having cleared land for the tennis court, stable block and swimming pool.

¹ information courtesy of Manurewa Historical Society
² some sources cite 1968

Prior to Mr Prevost owning the property, it had changed hands several times. It was sold to the Manurewa Land Company by the Cowley brothers, and apparently acquired the name "Totara Park" from the land agent in charge of the sale, Enos S. Pegler. The Company sold the park in 1925 to Mr Gillies, who cleared part of the land to run sheep. In 1936 a former Mayor of Auckland, Sir James Gunson, became the owner and built the residence now used for the restaurant, Beaufords.

The last private owner was Mr Prevost. He extended his holding to 500 acres (approximately 200 hectares), taking in the land up to Redoubt Road and towards Hill Road and Wairere Road, much of the area now included in the park.

During the New Zealand Wars the land was covered in heavy bush. It was used as a safe route to transport artillery equipment from St Johns Redoubt down into the Waikato because the route was concealed from the Maori scouts keeping watch along Great South Road. The track was still clearly visible in the 1920s and forms part of the bridle path through the park. There are no known archaeological sites in Totara Park.

Since the 1960s the park has been added to and further development has taken place. The Porter Block, approximately 63 hectares, has been added to the park. As subdivision has taken place around the park, reserve contributions and purchases have added the Lookout, Orams Road extension, and access from Charles Prevost Drive. The boundaries along Goodwood Drive in the west have become more formalised. The formation of the Wairere Road car park and facilities reflects the increasing use and demands on the park.

The amalgamation of a number of pony clubs into the Totara Park Pony Club (now leased to the Totara Park Equestrian Centre Trust) has further rationalised land usage within the park. Other similar groups seeking to participate in events have approached the pony club to make use of their facilities.

The establishment of the Botanic Gardens adjacent has added to the attractions of Totara Park. Via connected walkways the area available for public recreation has been dramatically increased.

2.0 Management Plan

Principal Purpose of Totara Park

The principal purpose of Totara Park is to provide an integrated mix of passive and informal active recreation to cater to the needs of the city's inhabitants, while enhancing and protecting the native bush and maintaining the park's farm character.

Objectives

The primary objectives of the management plan are:

1. To provide for and encourage a range of outdoor recreation activities and uses throughout the park.
2. To protect and enhance the ecological integrity and natural qualities of the park.
3. To extend and enhance the character of Totara Park as a 'countryside' park and confine development to specific areas.

Issues

Issues affecting Totara Park are:

- Security for visitors to the park
- Vandalism and damage to the park from visitor vehicles
- On-going maintenance of fences and gates
- Safety for park visitors along the Redoubt Road frontage
- Vehicle and user pressure on the Wairere Road entrance
- Under-utilisation of other entrances
- Conflicts between passive and active recreation areas
- Access for disabled users
- Accommodation of existing utilities including the National Grid transmission line.

Clear policies with respect to the park's focus and purpose are needed in order to accommodate increasing demands on the park without compromising its natural qualities.

2.1 Recreational Opportunities

The park is heavily used in some areas and not in others. This places a strain on the heavily used areas and can create maintenance problems. By encouraging wider use of the park the impact is spread. Different activities can use different parts of the park, minimising potential conflicts between incompatible activities.

Objective

To provide for and encourage a range of outdoor recreation activities and uses throughout the park.

Policies

2.1.1 Identify all entrances clearly and encourage their use by providing targeted facilities at each.

Other entrances to the park are at Redoubt Road, the Lookout and Mill Road. These entrances are not prominently signposted and few facilities are provided at them. Providing specific facilities at these entrances will encourage visitors to use these entrances.

1. Signpost all entrances from the major roads around the park.
2. Design entrance area at Redoubt Road to provide for mountain biking and horse riding.
3. Provide for short stays at the Lookout entrance.
4. Develop the Mill Road entrance to encourage use by walkers and joggers.
5. Provide parking at all entrances except for Mill Road.
6. Connect tracks for activities to all entrances as part of loop tracks.
7. Develop an overflow parking area south of the former youth camp.

2.1.2 Extend existing walking tracks, bridle paths and internal roads to form networks to encourage exploration of the park and the terrain.

Loop tracks with multiple options for routes provide greater variety than "out and back" tracks. Connecting these tracks to other entrances will also broaden the range of opportunities available to visitors, and allow them to explore different areas of the park.

1. Connect tracks into loops with a variety of entry and exit points.
2. Lay out track loops so that there are options for distance and direction.
3. Provide a mix of some tracks that cross steep terrain and others that cross flat terrain.
4. Form a bridle path along the berm on Redoubt Rd by moving the stock fence further in.
5. Prepare a map of walking tracks and historic routes.
6. Identify the different walking tracks with colour coded markers and include this information in the map.

2.1.3 Separate or integrate tracks for new activities to ensure the enjoyment of the park is not compromised for any user groups.

New recreational activities will continue to place demands on public parks. The popularity of mountain biking has soared and Totara Park could provide ideal mountain biking terrain. Mountain biking is already taking place in the park but is not officially provided for and is therefore creating problems.

1. Provide for new activities in areas compatible with present uses.
2. Provide separate track networks for horses, bikes and walkers/runners.
3. Combine activities where speed of movement is similar e.g. walkers and bike riders going uphill.

2.1.4 Maintain walking tracks through the bush and their connections with the Botanic Gardens' tracks.

The Botanic Gardens is developing a "Gondwana" theme and extending its areas of native bush. By continuing to connect walking tracks through this area both Totara Park and the Botanic Gardens will enhance their facilities and extend the range of activities available to visitors.

1. Extend bush revegetation planting to meet the boundary with the Botanic Gardens.
2. Maintain the connection to the Botanic Gardens with the existing walking tracks.

2.1.5 Provide a range of areas that are accessible for users at all levels of mobility.

"Restricted mobility" includes the disabled, the elderly, and parents with strollers. Disabled parking is provided in the Wairere Road car park, but a wheelchair cannot move from the parking area into the park without encountering kerbs and difficult surfaces.

1. Ensure areas designed for restricted mobility are fully accessible from parking place to destination.
2. Use suitable surfaces in areas designed to be accessible to users at all levels of mobility.

2.1.6 Encourage use of the Pony Club facilities.

By encouraging the use of existing facilities a wider range of people will visit Totara Park. Greater use of the facilities will enable the upgrading of services and accommodate further groups. The idea for comprehensive management of the Equestrian Centre opens up possibilities for inclusion of other riding groups to use the facilities. At the time of preparing this plan an application is before Council for the development of the equestrian centre.

1. Encourage development of the Pony Club area, which is leased to the Totara Park Equestrian Centre Trust, to include a dressage arena, stables and washdown areas.

2.1.7 Maintain a high level of safety and maintenance for visitors to prevent abuse of the park's facilities.

Damage to the park and visitor's property is a concern. Break-ins are a problem at the Wairere Road car park and vandalism a problem at the Lookout. A high level of care discourages vandalism and encourages visitors to keep the area clean.

1. Remove rubbish, damaged plant material and vandalised property within the time period specified in the maintenance contracts.
2. Repair or replace damaged property within the time period specified in the maintenance contracts.
3. Provide some picnic areas close to parking areas.
4. Remove low shrub planting between parking lot and picnic area at Wairere Road.
5. Ensure management of the pool area is in line with the management of the park.

2.1.8 Design all facilities to minimise opportunities for destructive activities.

Destructive behaviour, particularly at the Lookout, is difficult to control by supervision. An effective long-term approach is to design new access areas to prevent damage by controlling where vehicles can go.

1. Implement suitable means, such as planting borders and bollards, to prevent cars from driving onto the grass.

2.1.9 Ensure that the Countryside and Ecological values of the park are not compromised by recreational use.

1. Conduct regular surveys of use, subject to funding availability.
2. Monitor and limit high impact uses where these might compromise the Countryside and Ecological vision for the park.

2.2 Landscape and Environmental Management

Totara Park contains areas of high quality native bush that provide habitats for numerous species of wildlife. The Puhinui Stream flows through the park. Silt and sedimentation, as well as erosion, are serious management issues. The areas of native bush should be well protected from damage by both stock and human incursion. The continued presence of the bush will depend on its ability to regenerate successfully and assistance should be given to ensure this outcome.

Objective

To protect and enhance the natural qualities of Totara Park.

Policies

2.2.1 Protect and enhance the native bush.

The bush is popular for walking but other recreational activities may cause harm. Pasture is better suited to other activities such as horse riding and mountain biking. The bush and stream need to be protected from damage by both animals and humans.

1. Maintain the replanting programme to ensure that annual revegetation targets are met with particular emphasis on establishing early succession stages and allowing the later stages to establish naturally.
2. Limit recreational activity in the bush areas to walkers on formed tracks, or other activities that do not have a negative effect on the bush.
3. Block or close off short-cuts through bush areas.
4. Fence the bush and stream margins to keep stock out.
5. Protect and enhance bird habitat with the aim of increasing native populations.

2.2.2 Collaborate with the Botanic Gardens to ensure an integrated approach to the management of the bush contained within the two properties.

The Auckland Regional Council is developing an arboretum based on plants whose ancestors occurred in Gondwana. This will include an area

dedicated to native plants in the vicinity of Totara Park, using locally sourced seeds.

1. Co-ordinate with the Botanic Gardens for seed collection and growing-on of plant material for revegetation.
2. Support the formation of a community bush care group in association with the Botanic Gardens.

2.2.3 Recognise the importance of and protect the bush clad hill face that forms a backdrop to the Botanic Gardens.

The steep and bushy hill face of Totara Park that lies between the Botanic Gardens and Everglade Drive/Corokia Place/Nyssa Place is an extremely important visual element in creating the setting of the Botanic Gardens. The two properties form a contiguous landscape and should be managed in an integrated fashion.

1. Co-ordinate with the Botanic Gardens in the management of the landscape at the interface of Totara Park and the Gardens.

2.2.4 Commission a comprehensive vegetation survey.

The revegetation programme needs to be based on a scientific understanding of what species used to be present in the area and natural vegetation succession process. This needs to be balanced with realistic intentions for proposed replanting. The revegetation programme needs a comprehensive vision to drive it.

1. Undertake a comprehensive survey of species, ages, stages, succession patterns, and distribution of forest types of the existing and previous bush patterns. The survey should also chart earlier revegetation programmes and the use of non-eco-sourced material. The report should provide a comprehensive inventory of pests and control strategies.
2. Ensure that the report provides recommendations for the revegetation programme including strategies for managing disturbance.

2.2.5 Plant valleys and gullies with native plant material propagated from existing bush in the park.

Valleys and gullies in the park are currently supporting some native vegetation. To reduce the erosion of Puhinui Stream more planting is needed to slow the passage of water and reduce its scouring power. The planting will protect the riparian area from erosion.

1. Concentrate on valleys and gullies to reduce erosion along Puhinui Stream.
2. Replant stream banks with native plants derived from the local bush.
3. Create a wetland in the lower reaches of the stream to enhance wildlife habitat and protect the stream.

4. Replant to extend existing bush rather than establishing isolated fragments.
5. Where Council officers believe that sourcing plants from outside the park is advantageous, New Zealand Forest and Bird and/or the New Zealand Botanical Society will be consulted.

2.2.6 Identify the causes of the erosion and sedimentation problem, and implement a strategy to address them.

The erosion and sedimentation of the stream appears to have increased as a result of development around the park. The Totara Park catchment needs to be investigated and an appropriate mitigation strategy determined. Ponds and wetlands need to be designed to slow water/ the flood flow of water, reduce scouring and erosion, and provide habitats for plants and wildlife without damaging adjacent native vegetation.

1. Commission a study of the stream's dynamics with the requirement that the study present a range of mitigation works and associated costs.
2. Develop a design and planting programme for wetland identified on the Concept Plan, to hold water and reduce water / flood flow rates down the Puhinui Stream.
3. Identify any barriers to passage of fish along the stream, such as culverting, and modify them to facilitate fish passage.
4. Develop a design and planting programme for the dry pond identified at the Charles Prevost Drive entrance, to hold water temporarily and reduce flow rates in storms.
5. Ensure an integrated approach between the Reserve Management Plan and the Stormwater Catchment Management Plan.

2.2.7 Provide interpretation on bush replanting programmes.

Keeping visitors informed on the progress of bush replanting encourages them to respect instructions regarding track closure and user limitations.

1. Erect signs informing visitors of areas being replanted and request their co-operation in staying off these areas.

2.2.8 Undertake a regular weed control programme to eradicate weeds where practical, or to contain numbers and limit spread at a minimum.

Infrequent weed control is ineffective. A regular programme of weed control will keep weed numbers manageable, however control efforts are subject to funding.

1. Focus control efforts on plant pests as defined by Auckland Regional Council (see Appendix D) and any plant pest inventory prepared for the park.
2. Use control methods appropriate to the type and extent of infestation and restrict blanket spraying to serious and widespread infestations.

3. Remove gorse on lease blocks and ensure lessees keep gorse under control.
4. Where gorse is adjacent to native bush, retain it as a protective buffer and nursery for seedlings, but limit its spread.
5. Initially reduce and minimise threatening weed populations within the park.
6. Focus control effort to prevent new seed sources establishing within the park.
7. Focus maximum control effort on weed species that are likely to spread most rapidly and be most damaging, such as ground cover species.
8. Eradicate potentially damaging species that have only recently established in the park and are currently in small and confined populations that can be eradicated effectively in an inexpensive operation. Ongoing monitoring is needed to identify new intrusions, especially of vines, and control response should be rapid.
9. Liase with owners of neighbouring properties to encourage and help them to replace hedges or plantings of damaging species with more environmentally friendly plants.
10. Discourage deposit of garden refuse into the park - by advice, education, and if necessary enforcement.

2.2.9 Undertake a regular pest control programme and co-ordinate with the Botanic Gardens.

Pest control must be properly timed to be effective. Pests may use the park as a refuge if control efforts are not co-ordinated between the Botanic Gardens and Totara Park.

1. Establish and maintain a regular programme of possum control.
2. Co-ordinate timing of pest control programme with the Botanic Gardens' own schedule.
3. Target predators of native wildlife.

2.2.10 Separate trees and vegetation from the transmission lines and support towers.

Trees and vegetation must be adequately separated from the transmission lines and support towers to ensure that the continuity of electricity supply and to avoid health and safety risks to the public.

1. Select and locate tree and vegetation species to ensure that the height and spread of the tree will not grow into, or in close proximity to, the transmission lines or support towers.
2. The trimming or removal of vegetation is permitted where the operational integrity of transmission lines is compromised.
3. Consult with Transpower New Zealand Limited as to the required separation distances and trimming practices to maintain safety.

2.3 Management

Intensive development has been concentrated at the Wairere Road entrance. Pasture areas of sufficient size for leasing and grazing have remained undeveloped. Future development should avoid dissecting the pastoral areas or encroaching on the bush and stream. Carefully sited and designed facilities can be provided to encourage use of areas other than Wairere Road entrance.

Objective

To extend and enhance the character of Totara Park as a "countryside" park and confine development to specific areas.

Policies

2.3.1 Gazette the park as a Reserve under the Reserves Act 1977.

The park is currently zoned Public Open Space 1, 2, and 3 in the Manukau District Plan. Gazetting the park as a reserve under the Reserves Act will aid in the management of the park by Manukau City Council.

1. Identify current classification of holdings and preferred classification (see Appendix C).
2. Initiate the steps necessary to get the park gazetted.

2.3.2 Identify purchasing strategy for extending the park.

1. Concentrate immediate purchases and reserve contributions on the park boundaries.
2. Formulate a longer-term strategy for the purchase of other holdings.

2.3.3 Where possible change the classification of existing holdings to fit their park status.

1. Investigate the possibility of changing the classification of the unnamed road extension from Road Reserve to Recreation Reserve.

2.3.4 Manage the farm park land through grazing in a manner compatible with recreational uses and ecological objectives.

Previously the park was managed under four grazing leases. Each block was too small to form an economic unit. Maintenance and weed control on each block was inconsistent. Offering the land to fewer lessees improves its economic attractiveness and encourages greater investment in the farmland by the lessee.

1. Continue to lease the two largest blocks (approximately 75 hectares and 60 hectares) under one lease. Continue to lease smaller land-locked blocks for horses only and provide for an extension of the grazing lease area in close proximity to the existing lease area.
2. No stock over 2½ years old to be carried on the leased land.

3. Form a partnership with lessees to manage and enhance the farm operations and the recreational uses.
4. Prevent any entry of farm stock into the reforested areas.

2.3.5 Maintain vehicle access to those areas of the park where necessary for farm operations and park maintenance.

Vehicle access is required to maintain facilities in the park, and for lessees to carry out their farm operations.

1. Maintain locked gates on interior park roads.
2. Keep roads free of overhanging growth.
3. Remove fallen trees and branches as needed.
4. Undertake regular inspections of all vehicle accessways to ensure safety of users and re-gravel roads when required.

2.3.6 Limit new parking areas to the perimeter of the park.

Keeping cars and other motorised vehicles outside the park retains the open space for recreation use. This also minimises encroachment on the areas of bush.

1. Provide parking at existing entrances.
2. Keep entrance roads short.
3. Provide additional parking at Wairere Road in the area indicated on the concept plan.
4. Further extensions to parking should extend parallel to park boundaries where practicable.
5. Parking areas shall be kept well outside the drip line of mature trees.
6. In order to facilitate the Ellerslie Flower Show, temporary parking will be permitted on an annual basis for up to six days per year in the SW corner of the park adjacent to Calluna Crescent. (This is the June 2002 plan change).

2.3.7 Concentrate farm operations in one central area.

By concentrating operations in one area the number of interior roads is minimised. Operations are more efficient and more of the park is retained in open space for use by all visitors.

1. Keep farm operations in the area currently used.
2. Locate new or proposed operations in this area whenever possible.

2.3.8 Install and maintain stock-proof fencing throughout the park and provide gates and cattle stops to permit free access by the public, subject to the farm calendar.

Stock control by fencing is required for visitor safety, for the farm operation, and to protect the natural features of the park. However, visitors need to

be able to pass through, over or around the fences where those fences cross tracks and paths.

1. Install pedestrian gates or stiles where fences cross walking tracks.
2. Install gates where fences cross horse, bike, or restricted-mobility paths.
3. Use half-width cattle stops where fences cross mountain bike tracks.
4. Provide signage at entrances announcing track closures when required by the farming calendar.
5. Use only professional fencers, to ensure fences are stock proof and well constructed.

2.3.9 Manage exotic tree planting in the park to retain the farm park character.

Existing plantings of macrocarpa and gums contribute to the character of the site as a farm park, as these trees were commonly planted as farm shelterbelts. The timber is merchantable and this will contribute to the cost of harvesting and replanting.

1. Harvest over-mature trees and clear-fell stands.
2. Replant macrocarpa, pines and other commercially viable species in stands for stock shelter and for wind protection, as indicated on the concept plan.
3. Use professional forestry contractors to harvest and replant.

Proposed Forestry Programme

3 - 4 years after planting	Remove every second tree and sell as Christmas trees
6 - 8 years after planting	Remove every second tree for fence post production
20 - 25 years after planting	Remove all the mature trees for milling

2.3.10 The operational and maintenance requirements of the existing electricity transmission lines, which traverse Totara Park, must be provided for and the necessary separation distances complied with.

The electricity transmission lines which traverse Totara Park are existing facilities which must be recognised and provided for in the Management Plan. New buildings and activities must be located to comply with the relevant separation distances from the transition lines and support towers to avoid any health and safety risks to the public and/or an outage or loss of electricity supply to the Auckland region.

1. To provide for the continued inspection, operation and maintenance of the existing electricity infrastructure which traverses Totara Park.

2. To consider any upgrading of the electricity infrastructure in consultation with the operator and any stakeholders and interested parties associated with Totara Park.
3. All new buildings and activities (including earthworks and associated machinery movements) which occur on Totara Park must comply with the New Zealand Electrical Code of Practice 1993.
4. Activities and buildings shall be located and designed to discourage public access to the electricity infrastructure.

2.3.11 Identify and protect sites of cultural heritage significance.

There are a number of known sites and objects of heritage significance at Totara Park. It is also quite possible that there are unknown sites which may or may not be identified in the future. It is important that correct procedures are taken in respect of recording and protecting such sites.

1. Undertake an archaeological survey for Totara Park, subject to available funding. Procedures for recording and protecting archaeological sites will be in accordance with the Historic Places Act 1993, Council's own policy and the advice of the Historic Places Trust.
2. Install historic markers along the transport route used during the New Zealand Wars.
3. Beauford Reception Centre is a scheduled building in the Manukau Proposed District Plan. A conservation plan will be prepared for this building to ensure protection of its heritage values. Ongoing management of the building will comply with the Historic Places Act 1993.

3.0 Ten Year Development Programme

This programme is a guide for planned development for the reserve and is dependent on Council Annual Plan funding. This cost estimate is based on the revised concept plan dated 28 July 1999. It is not a detailed cost estimate, and prices may vary from final tendered prices.

This programme is indicative only as funding is subject to the Annual Plan process and the availability of grants.

Year 1

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	I.s.	1	15,000.00	15,000.00
Fencing before planting	I.s.	1	5,000.00	5,000.00
				20,000.00 \$20,000.00
Mountain bike trail				
Mountain bike trail, 2m wide	M	5,500	15.00	82,500.00
Cattle stops, 1.5m width	Ea	8	2,100.00	16,800.00
Concrete aprons	m2	20	60.00	1,200.00
Bike racks (at Wairere Road entry)	Ea	2	800.00	1,600.00
Bike racks (at Redoubt Road entry)	Ea	2	800.00	1,600.00
Directional signage	Ea	15	250.00	3,750.00
				107,450.00 \$107,450.00
Subtotal for Year 1				\$127,450.00
10% contingency				\$12,745.00
Total for Year 1				\$140,195.00

Year 2

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	I.s.	1	15,000.00	15,000.00
Fencing before planting	I.s.	1	5,000.00	5,000.00
				20,000.00 \$20,000.00
Bridle trail				
Trail formation, Redoubt Road	M	4,300	20.00	86,000.00
Gates	Ea	6	400.00	2,400.00
Fencing	M	1,800	25.00	45,000.00
				133,400.00 \$133,400.00
Subtotal for Year 2				\$153,400.00
10% contingency				\$15,340.00
Total for Year 2				\$168,740.00

Year 3

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	15,000.00	15,000.00
Fencing before planting	l.s.	1	5,000.00	5,000.00
				20,000.00 \$20,000.00
Forestry planting				
Site preparation and clearance	Ha	2	600	1,200.00
Planting	Ha	2	14000	28,000.00
				29,200.00 \$29,200.00
Redoubt Road Entry 2				
Wash-down area	l.s.	1	8,000.00	8,000.00
Parking and entrance	m2	450	100.00	45,000.00
Signage	Ea	1	400.00	400.00
				53,400.00 \$53,400.00
Subtotal for Year 3				\$102,600.00
10% contingency				\$10,260.00
Total for Year 3				\$112,860.00

Year 4

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	15,000.00	15,000.00
Fencing before planting	l.s.	1	5,000.00	5,000.00
				20,000.00 \$20,000.00
Walking tracks				
Track formation	M	2,300	20.00	46,000.00
Pedestrian gates	Ea	8	500.00	4,000.00
Signage	Ea	25	250	6,250.00
Bollards	Ea	550	35.00	19,250.00
Boardwalk	m2	230	75.00	17,250.00
				92,750.00 \$92,750.00
Subtotal for Year 4				\$112,750.00
10% contingency				\$11,275.00
Total for Year 4				\$124,025.00

Year 5

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	15,000.00	15,000.00
Fencing before planting	l.s.	1	5,000.00	5,000.00
				20,000.00 \$20,000.00
Forestry planting				
Site preparation and clearance	Ha	2	600	1,200.00
Planting	Ha	2	14000	28,000.00
				29,200.00 \$29,200.00
Bridle trail				
Trail formation, Mill Road	M	1,800	20.00	36,000.00

Gates	Ea	4	400.00	1,600.00	
Fencing	M	1,800	25.00	45,000.00	
					82,600.00 \$82,600.00

Subtotal for Year 5	\$131,800.00
10% contingency	\$13,180.00
Total for Year 5	\$144,980.00

Year 6

Description	Unit	Qty	Rate	Total	
Revegetation planting					
As shown on concept plan	I.s.	1	15,000.00	15,000.00	
Fencing before planting	I.s.	1	5,000.00	5,000.00	
					20,000.00 \$20,000.00

Entrance upgrading

Toilet block, Redoubt Road entrance	I.s.	1	\$120,000	120,000	\$120,000.00
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Subtotal for Year 6	\$140,000.00
10% contingency	\$14,000.00
Total for Year 6	\$154,000.00

Year 7

Description	Unit	Qty	Rate	Total	
Revegetation planting					
As shown on concept plan	I.s.	1	15,000.00	15,000.00	
Fencing before planting	I.s.	1	5,000.00	5,000.00	
					20,000.00 \$20,000.00

Parking expansion

Road extension, ARC	m2	450	100.00	45,000.00	
Parking lot, ARC	m2	800	100.00	80,000.00	
					125,000.00 \$125,000.00

Entrance upgrading

Entrance signage, Redoubt Road	Ea	2	400.00	800.00	
Stone walls, Redoubt Road	Pair	4	4,000.00	16,000.00	
Rubbish bins, Redoubt Road	Ea	10	700.00	7,000.00	
Seating, Lookout	Ea	4	1,200.00	4,800.00	
Signage, pedestrian entry Mill Road	Ea	1	400.00	400.00	
					29,000.00 \$29,000.00

Subtotal for Year 7	\$174,000.00
10% contingency	\$17,400.00
Total for Year 7	\$191,400.00

Year 8

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	50,000.00	50,000.00
Fencing before planting	l.s.	1	15,000.00	15,000.00
				65,000.00 \$65,000.00
Parking expansion				
Overflow parking, ARC	m2	750	50.00	37,500.00
Overflow parking, Wairere Road	m2	750	50.00	37,500.00
				75,000.00 \$75,000.00
Subtotal for Year 8				\$140,000.00
10% contingency				\$14,000.00
Total for Year 8				\$154,000.00

Year 9

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	50,000.00	50,000.00
Fencing before planting	l.s.	1	15,000.00	15,000.00
				65,000.00 \$65,000.00
Subtotal for Year 9				\$65,000.00
10% contingency				\$6,500.00
Total for Year 9				\$71,500.00

Year 10

Description	Unit	Qty	Rate	Total
Revegetation planting				
As shown on concept plan	l.s.	1	50,000.00	50,000.00
Fencing before planting	l.s.	1	15,000.00	15,000.00
				65,000.00 \$65,000.00
Subtotal for Year 10				\$65,000.00
10% contingency				\$6,500.00
Total for Year 10				\$71,500.00

GRAND TOTAL over 10 years**\$1,333,200.00**

4.0 Totara Park Management Plan Review

The previous Management Plan was prepared in 1992. The following report outlines the principal policies of that Plan, and progress made towards them.

4.1 Landscape

Objective 1

To enhance the landscape character of the park by protecting and, where practicable, extending the 'natural' environment and confining intensive development to specific areas.

Progress

1. Replanting of native species in the gullies and along the stream.
2. Development has been confined to existing areas.

Objective 2

To ensure that future development within the park is sympathetic to the landscape of the park.

Progress

No unsympathetic development has taken place.

4.2 Classification

Objective

To have all lands shown as reserve on the redevelopment concept plan gazetted under the Reserves Act 1977 and classified as Recreation Reserve.

Progress

No progress has been made. Areas are currently zoned Public Open Space under the Manukau City Council District Plan.

4.3 Farm Operation

Objective

To amalgamate the grazed areas into a single unit to be managed as a farm park.

Progress

This has been substantially achieved, with the five leases now reduced to three.

4.4 Public Recreation and Use

Objective

To develop and maintain Totara Park as a farm park without compromising its landscape values

Progress

The farm park operation appears to be successfully integrated with the recreational and use demands of the park. The landscape character of the park remains intact.

4.5 Interpretation

Objective

To provide interpretation for park visitors where considered appropriate.

Progress

Interpretation has been undertaken where appropriate. More signs may be required as land use activities change and as more users place heavier demands on the resources of the park.

4.6 Buildings

Objective

The use of new and existing buildings shall be confined to activities related to the farm park.

Progress

1. The pony club building has been moved onto the park.
2. Uses of the existing buildings continue to be appropriate to the existing activities.

4.7 Vehicular Access and Parking

Objective 1

To maintain existing motor vehicle access, roads and parking for the benefit of park users and to the extent they are necessary for the proper use and management of the park.

Progress

Vehicle access has been maintained.

Objective 2

To provide other motor vehicle access and parking areas in response to proven needs but within the limitations set by the need to preserve the natural qualities of the parkland.

Progress

New vehicle access has been provided where demand has required it. The new access at the Lookout has been appropriately sited and developed.

Objective 3

To limit new parking areas to the perimeter of the park.

Progress

The new parking areas have been on the park's periphery.

4.8 Pedestrian Access

Objective

To provide and maintain satisfactory pedestrian access through the park.

Progress

Existing tracks have been maintained but there has been little new development of pedestrian tracks.

4.9 Equestrian Use

Objective

To retain a bridle path link and to investigate the demand for an Equestrian Centre within the park. The future siting of the Pony Club is to be in conjunction with the development of a future Equestrian Centre.

Progress

1. The bridle path links through the park but there is still no safe access along Redoubt Road and around the perimeter of the park.
2. The pony club has been relocated and the new location provides sufficient room to incorporate an Equestrian Centre should demand arise.

4.10 Fences

Objective

To define the boundaries of the Park and to limit public access to specified points.

Progress

1. The park has been re-fenced with post-and-wire farm fencing.
2. Public access is controlled.
3. Internal fencing has been maintained.

4.11 Vegetation

Objective

To conserve existing bush and ensure that new planting retains and enhances the landscape character and visual amenity of Totara Park.

Progress

1. The existing bush is protected with stock-proof fencing.
2. New planting has been primarily in natives.
3. The exotic plantings need to be managed as a resource including replanting and harvesting.

4.12 Children's Playground

Objective

To replace the existing children's play structure with one that meets current New Zealand Safety Standards for playgrounds.

Progress

Completed.

4.13 Swimming Pools

Objective

To provide public swimming pools which are a low key part of the overall park experience.

Progress

No further expansion of facilities is proposed.

4.14 Youth Camp

Objective

To increase enjoyment of the camp as a base from which various groups can enjoy the park.

Progress

The camp has closed.

4.15 Park Furniture

Objective

To provide seats, litter bins, signs and other park furniture of a design appropriate to the park to facilitate public use and enjoyment of the park.

Progress

1. Furniture has been provided at some locations.
2. Signs and entrance facilities are needed in some locations.

4.16 Leases

Objective

To honour all existing lease agreements and to renew them on a long or short-term basis as is considered appropriate to the development of the farm park concept.

Progress

The leases have been consolidated, and are renewed on a regular basis.

4.17 Noxious Animals

Objective

To minimise the numbers and impact of noxious animals.

Progress

Pest control has been done, but needs to be co-ordinated with the Botanic Gardens to be more effective.

5.0 Background

5.1 Legal Site Description

Most of Totara Park is held in fee simple. The land is not gazetted under the Reserves Act 1977 as Reserve but it is zoned Public Open Space 1, 2 or 3 in the Manukau City Council District Plan. See Figure 2.

Appendix C contains a list of the park titles and their respective areas. The total area of the park is 216.7475 hectares.

5.2 Physical site description

Totara Park lies between about 45m and 135m above mean sea level. It is approximately four kilometres due east of the Manukau City Centre. Its geographic position is E. long. 174°55' S. lat. 37°00'.

5.3 Existing Land Use and Facilities

There are a wide variety of public recreational activities that occur in Totara Park. Most of these activities tend to be concentrated at the Wairere Road end of the park, as this is where most of the development of public facilities has occurred. See Figure 3.

Swimming Pool Complex

The pool complex consists of two outdoor pools, changing rooms and toilets, barbecues, a pool filter plant and a staff room. The complex is currently open to the public free of charge. The pool complex is popular with children up to 14 years of age. School groups use the pools during the week with family groups using the pools over the weekends and school holidays. The pools are only open over the summer period, from November to March.

Picnic and Barbecue Facilities

The barbecue facilities within the pool area are well used. In addition to these facilities informal picnicking occurs on the grassed areas surrounding the reception lounge. Recent tree planting in the grassed areas by the pool complex and Beauford's Reception Lounge has improved this area for picnicking.

Tennis Court and Playgrounds

A tennis court is located in the open space area near the picnic and pool complex. The tennis court is available free to the public.

There are two playgrounds in the park. One of the playgrounds is an adventure playground located a short walk into the park from the picnic area on Wairere Road. The other is a junior playground located near the pool complex.

Totara Park Pony Club

An area of Totara Park off Redoubt Road is leased to the Totara Park Pony Club. The club has moved onto the park a club building in late 1995/early 1996. Activities that the club runs include ribbon days, training days and cross-country. The club uses part of leased area for grazing of its ponies.

Vehicle Access and Parking

The main car park for the users of Totara Park is a 92-space car park at the end of Wairere Road. A loop road provides access to the Reception Lounge and additional parking adjacent to the tennis court. There is a gravel car park located off Redoubt Road at the northern end of the park. A gravel service road provides access through the grazed area and links Redoubt Road to Wairere Road.

Beauford's Reception Lounge

Beauford's Reception Lounge is located within the old homestead building. It is predominantly used as a reception lounge for weddings and other functions (catering for approximately 60 guests) and for evening meals and lunches. The building has been leased for this purpose since 1969.

5.4 Topography

Totara Park lies in a south-facing bowl, sloping generally from north to south. In summer this provides some welcome relief from the hot sun; in winter it means the land stays wet and damp and there are areas that do not receive sun for much of the day. See Figure 4.

Slopes are steeper on the western side of the stream where several gullies and smaller streams dissect the slopes. The tops of the ridges are rounded and the ridges tend to flatten out as they meet the valley floor. Overall the landscape is gently undulating, with steeper escarpments at the head of the stream.

The Redoubt Road entrance is on top of the western ridge and faces south-east over the park. The Ridge Road Lookout is on a knoll on the western ridge. The Wairere Road entrance and facilities occupy flat land at the southern end of the valley.

5.5 Drainage and Waterways

The Puhinui Stream and its tributaries drain the park. The stream rises east of Mill Road and flows south and west through Totara Park and the Botanic Gardens before entering the Manukau Harbour at Puhinui Creek. The stream has one major tributary that flows in from the south parallel to Wairere Road³. See Figure 4.

An issue of much concern to all parties associated with Totara Park is the increased erosion of Puhinui Stream following development of sites surrounding the park. This issue needs to be addressed with strategies effective both inside and outside the park boundaries.

The development of stormwater catchment ponds is currently in progress to remedy flooding problems in the vicinity of Charles Prevost Drive.

5.6 Climate

The nearest weather stations are at Otara (six kilometres north-west) and at Auckland International Airport (11 kilometres west). The weather conditions at Totara Park will be similar to those recorded at these stations.

3 Topomap R11 Auckland, 1:50 000, Edition 2 1994, Infomap

Mean annual rainfall at is between 1100mm and 1238mm⁴. The rainfall is evenly distributed throughout the year.

Temperatures are moderate, average mean between 14°C and 15°C.

Microclimates differ through the park. On the open ridge tops the exposure to wind means greater temperature fluctuations and drier soils. In the valleys where there is vegetation cover temperatures are more stable and soil moisture levels are higher. Ridge tops are pleasant on calm days and during periods of less favourable weather the valleys provide shelter from wind so the park can be enjoyed all year round.

5.7 Vegetation

There are two distinct groups of dominant plant material in Totara Park, reflecting its natural and human history. The valleys tend to be covered in native mixed podocarp/broadleaf forest of a high quality⁵, while the farmland supports exotic groups of trees planted for shelter or timber. There are also remnant native trees in pastures. See Figure 5.

There are several experimental tree plots of various species and types within the park. Many of the original exotic trees are nearing the end of their life and need to be removed to prevent possible safety risks.

Appendix A lists the major tree species present in the park.

5.8 Soils

The soils are leached clay alluvial soils originating from sandstone. They are generally well developed on the rolling to moderately steep slopes, and probably originally supported podocarp forest. See Figure 6.

Silt loams lie in the flood plain of the Puhinui Stream and along the intermittent streams. These soils typically have a high water table for much of the year. Planting in these areas must tolerate wet soils.

5.9 Wildlife

Totara Park supports a large number of bird species because it contains a variety of habitats, is a large area, and is augmented by the proximity of the Botanical Gardens. The species are listed in the Appendix A.

Animal pests are also present, including possums (*Trichosaurus vulpecula*), domestic and feral cats, rabbits (*Oryctolagus cuniculus*) and hares (*Lepus europaeus*). Council staff regularly undertake pest control and these measures appear to be successful.

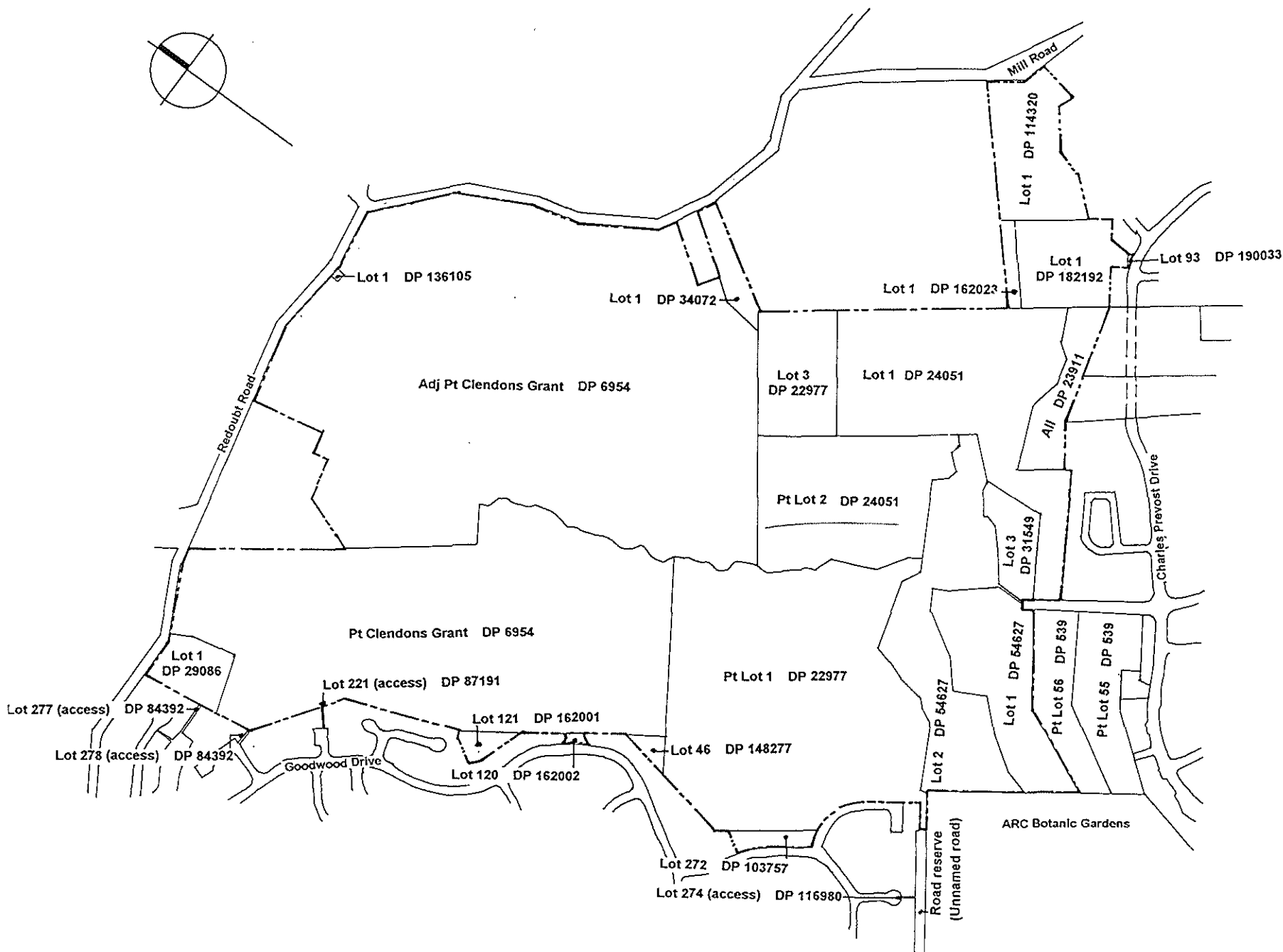
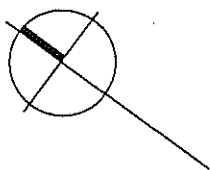
Stoats (*Mustela erminea*) and rats (*Rattus* spp.) may also be present in small numbers.

4 NZ Meteorological Service

5 NZ Forest and Bird Society; Auckland Regional Council

6 Auckland Regional Botanic Gardens Management Plan, ARC Parks Services, 1995

Vertebrate stream life may include long-finned eel (tuna) (*Anguilla dieffenbachii*); freshwater crayfish (koura) (*Paranephrops planifrons*) and the green tree frog and golden bell frog (*Litoria* spp.)³.



Drawing series
TOTARA PARK

Sheet title
LEGAL STATUS

Drawing number

2

for
Manukau City Council

Scale
1:10000 @ A3

0 200m

Date
30 June 1999

Do not dimension from this drawing
Check all measurements on site
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Legend

- ① Redoubt Road entrance
- ② Wairere Road entrance
- ③ Pony Club
- ④ Beauford's; swimming pool
- ⑤ Children's playground
- ⑥ Youth camp (closed)
- ⑦ To Botanic Garden
- ⑧ Farm operations area



Drawing series
TOTARA PARK
Sheet title
EXISTING FACILITIES

Drawing number
3
for
Manukau City Council

Scale
1:10000 @ A3
0 200m

Date
30 June 1999

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Drawing series
TOTARA PARK

Sheet title
**TOPOGRAPHY &
WATERWAYS**

Drawing number
4

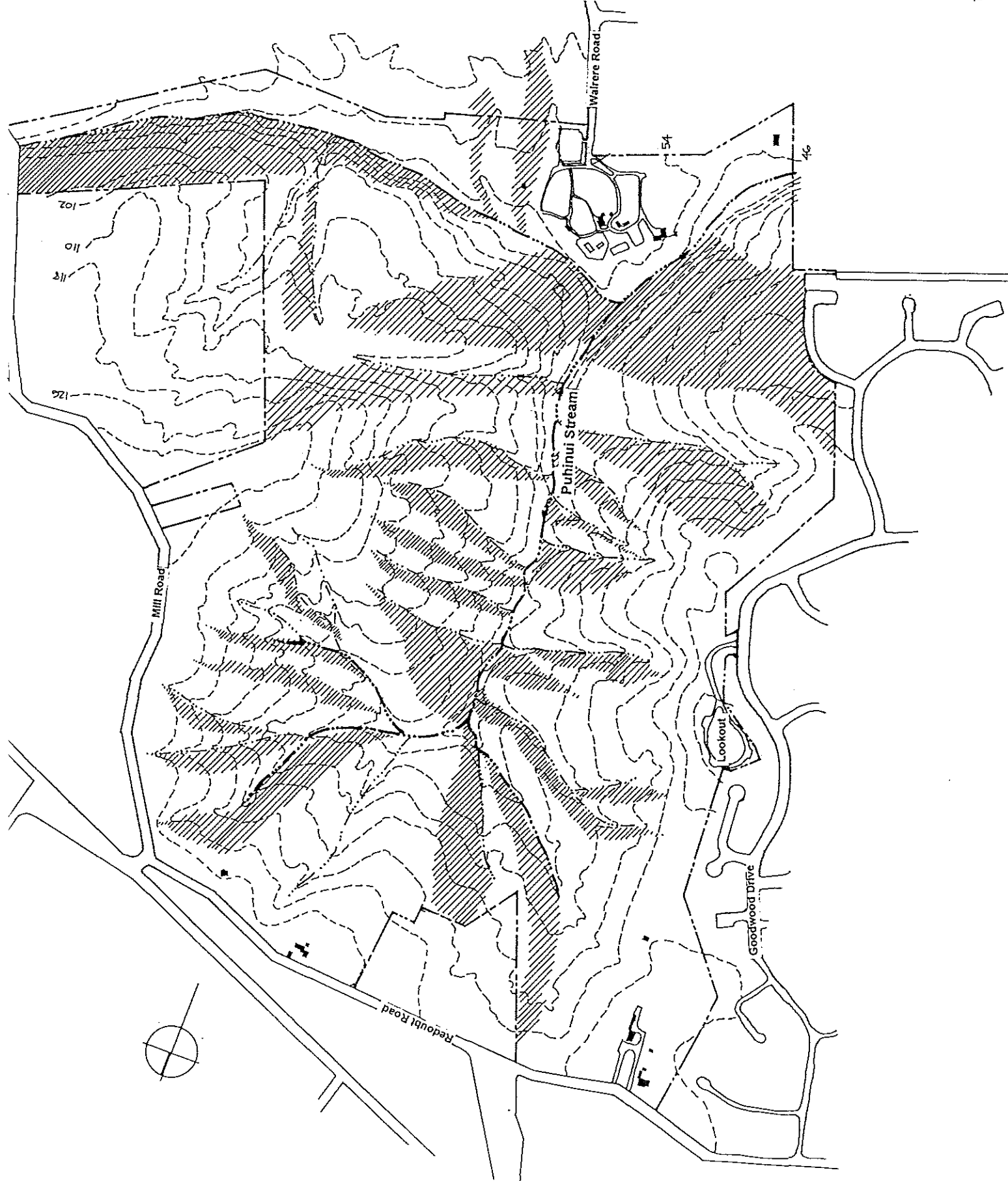
for
Manukau City Council

Scale
1 : 10000 @ A3

• 0 200m

Date
30 June 1999

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Key



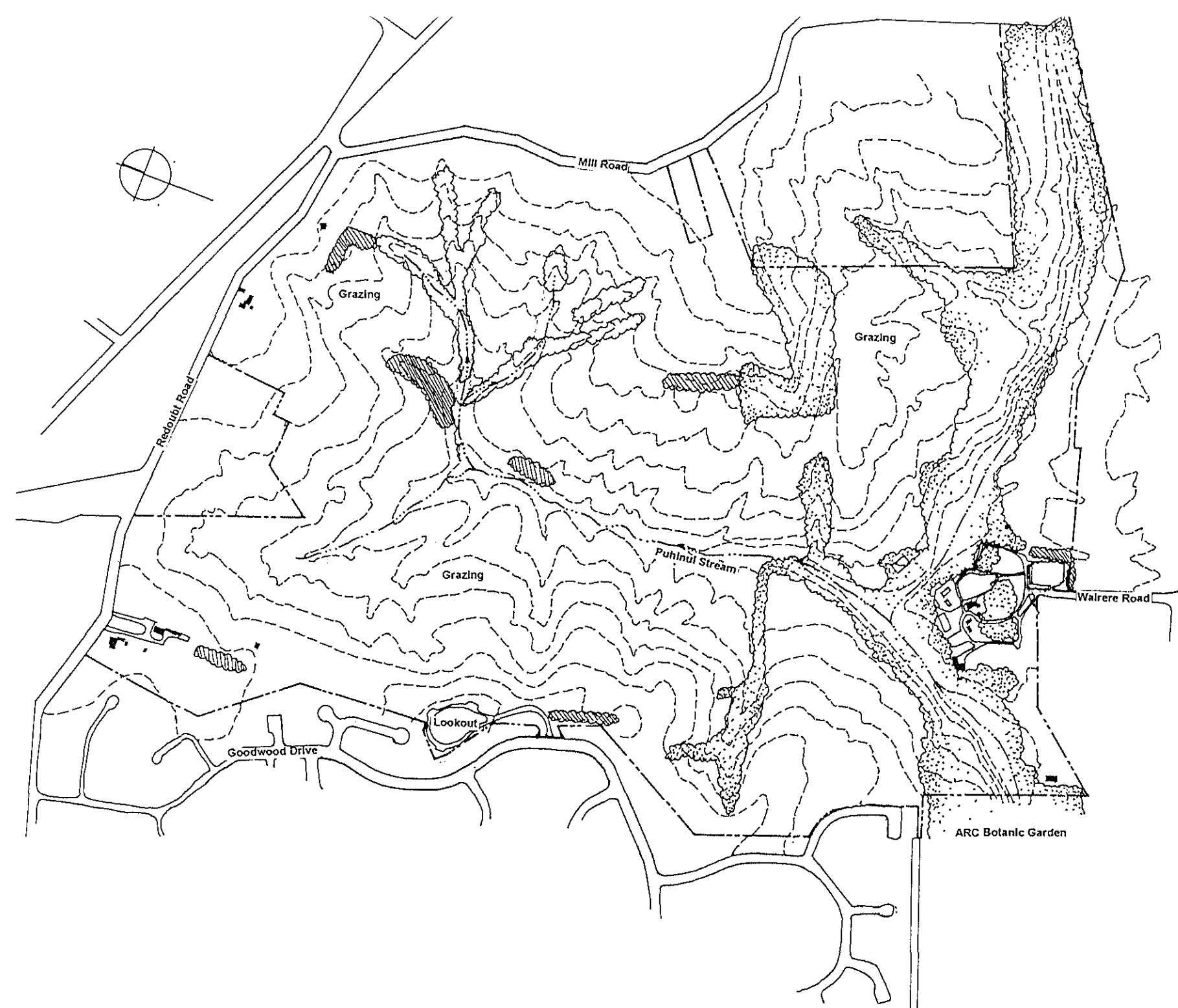
Exotic plantings
e.g. *macrocarpa*, *eucalyptus*



Native bush
Replanted and original



Scrub
Regenerating natives; gorse



Drawing series
TOTARA PARK

Sheet title
**EXISTING
VEGETATION**

Drawing number
5

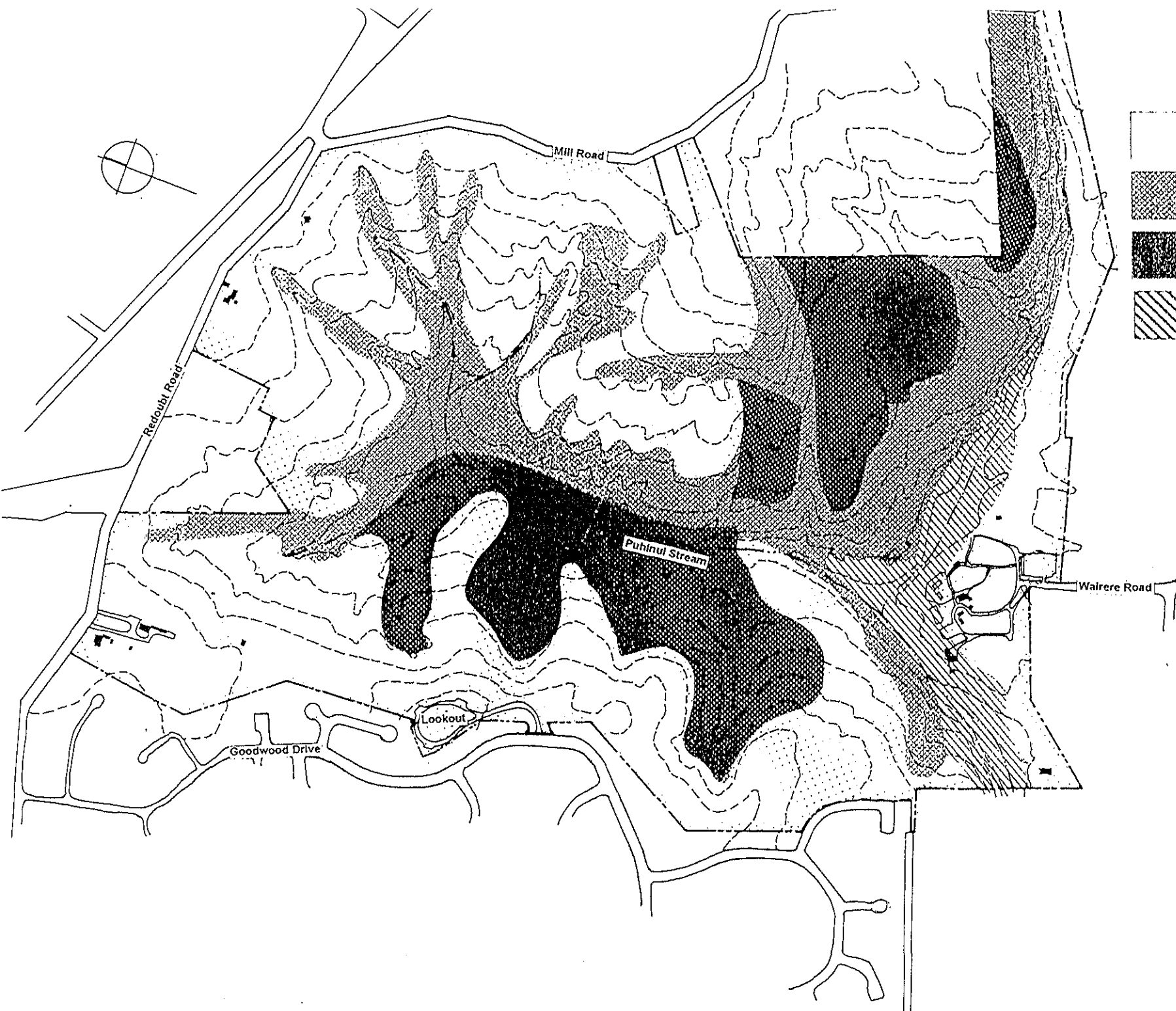
for
Manukau City Council

Scale
1:10000 @ A3

0 200m

Date
30 June 1999

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Key

-  Manurewa silt loam 1
Water-logged topsoil, poorly drained
-  Manurewa silt loam 2
Poorly drained, steep slopes
-  Manurewa silt loam 3
Water-logged topsoil, poorly drained
-  Yellow Cleveland silt loam
High water table, poor drainage

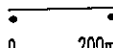
Drawing series
TOTARA PARK

Sheet title
SOILS

Drawing number
6

for
Manukau City Council

Scale
1:10000 @ A3


0 200m

Date
30 June 1999

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Appendices

Appendix A	Auckland Regional Botanic Gardens Native Forest & Totara Park <i>List of Native Vascular Plants</i>
Appendix B	Bird Species in Totara Park
Appendix C	Legal Titles and Classifications in Totara Park
Appendix D	Plant Pests of the Auckland Region
Appendix E	Definition and Purpose of a Management Plan
Appendix F	Protocols for Waahi Tapu and Burial Sites
Appendix G	Manukau District Plan - Public Open Space Definitions



AUCKLAND REGIONAL BOTANIC GARDENS NATIVE FOREST & TOTARA PARK

List of Native Vascular Plants :

Ferns and fern allies (Pteridophytes and allies)

Adiantum cunninghamii - maidenhair fern
Adiantum fulvum - maidenhair fern
Anarthropteris lanceolata
Asplenium bulbiferum - mouku
Asplenium flaccidum - drooping spleenwort
Asplenium oblongifolium - shining spleenwort
Asplenium polyodon - sickle spleenwort
Blechnum chambersii
Blechnum discolor - crown fern
Blechnum filiforme - thread fern
Blechnum fluviatile - kiwikiwi
Blechnum fraseri
Blechnum membranaceum
Blechnum novae-zelandiae - kiokio
Cyathea cunninghamii - gulley fern
Cyathea dealbata - ponga
Cyathea medullaris - mamaku
Dicksonia squarrosa - wheki
Doodia australis - pukupuku
Hymenophyllum demissum - filmy fern
Hymenophyllum flabellatum - filmy fern
Lastreopsis glabella
Lastreopsis hispida - hairy fern
Lastreopsis microsoris
Leptopteris hymenophylloides
Lycopodium deuterodensum
Lygodium articulatum - mangemange
Microsorium pustulatum - hound's tongue fern
Microsorium scandens - mokimoki
Paesia scaberula - ring fern
Pneumatopteris pennigera - gulley fern
Pteridium esculentum - bracken fern
Pteris macilenta - sweet fern
Pteris tremula - turawera
Pyrrosia eleagnifolia - leather leaf fern
Tmesipteris elongata
Tmesipteris lanceolata
Trichomanes elongatum
Trichomanes venosum

Conifers (Gymnosperms)

Agathis australis - kauri
Dacrycarpus dacrydioides - kahikatea
Dacrydium cupressinum - rimu
Phyllocladus trichomanoides - celery pine
Podocarpus totara - totara
Prumnopitys ferruginea - miro
Prumnopitys taxifolia - matai

Flowering plants (Angiosperms)

Dicotyledons

Acaena sp.
Alectryon excelsus - titoki
Alseuosmia macrophylla - toropapa
Beilschmiedia tarairi - tarairé
Beilschmiedia tawa - tawa
Brachyglottis repanda - rangiora
Callitriche muelleri
Carmichaelia australis
Carpodetus serratus - putaputaweta
Centella uniflora
Clematis paniculata
Coprosma arborea - mamangi
Coprosma grandifolia - kanono
Coprosma lucida - karamu
Coprosma robusta - karamu
Coprosma spathulata
Corynocarpus laevigatus - karaka
Dichondra repens
Dysoxylum spectabile - kohekohe
Fuchsia excorticata - kotukutuku
Geniostoma rupestre - hangehange
Gonocarpus incanus
Griselinia lucida - puka
Haloragis erecta
Hebe ? stricta - koromiko
Hedycarya arborea - porokaiwhiri
Hoheria populnea - houhere
Hydrocotyle ? elongata
Hydrocotyle moschata
Knighitia excelsa - rewarewa
Kunzea ericoides - kanuka
Laurelia novae-zelandiae - pukatea
Leptospermum scoparium - manuka
Leucopogon fasciculatus - mingimingi
Lobelia anceps
Macropiper excelsum - kawakawa
Melicope simplex
Melicytus micranthus
Melicytus ramiflorus - mahoe
Metrosideros diffusa - white climbing rata
Metrosideros fulgens - rata vine
Metrosideros perforata - small white rata
Metrosideros robusta - northern rata
Mida salicifolia - willow-leaved rata
Muehlenbeckia australis - pohuehue
Myrsine australis - mapou
Nertera dichondrifolia
Nestegis lanceolata - maire
Olearia furfuracea - akepiro

Olearia rani - heketara
Parsonsia heterophylla - New Zealand jasmine
Passiflora tetrandra - kohia
Pennantia corymbosa - kaikomako
Pittosporum cornifolium - perching pittosporum
Pittosporum tenuifolium - kohuhu
Pratia angulata - panakenake
Pseudopanax arboreus - whauwhaupaku
Pseudopanax crassifolius - horoeke
Ranunculus reflexus - hairy buttercup
Rubus australis - tataramoa
Rubus cissoides - tataramoa
Schefflera digitata - pate
Senecio minimus
Solanum aviculare - poroporo
Sophora microphylla - kowhai
Streblus heterophyllus
Vitex lucens - puriri
Wahlenbergia sp.

Schoenus tendo
Thelymitra sp.
Uncinia banksii - hooked sedge
Uncinia distans - hooked sedge
Uncinia uncinata - hooked sedge
Uncinia zotovii - hooked sedge

28th September 1999

Flowering plants

(Grasses, grass-like plants and orchids)

Monocotyledons

Acianthus sinclairii
Astelia grandis
Astelia solandri - perching astelia
Astelia trinervia
Carex dissita
Carex geminata agg.
Carex lambertiana
Carex ochrasaccus
Carex solandri
Carex virgata
Collospermum hastatum - kahakaha
Cordyline australis - ti kouka
Cordyline banksii - ti ngahere
Dianella nigra - turutu
Drymoanthus adversus
Earina mucronata - peka-a-waka
Freycinetia banksii - kiekie
Gahnia lacera - cutty grass
Gahnia pauciflora - cutty grass
Gahnia setifolia - cutty grass
Gahnia xanthocarpa - cutty grass
Isolepis ? inundata
Isolepis reticulatus
Juncus australis - rush
Juncus gregiflorus - rush
Juncus planifolius - rush
Lemna minor
Microlaena avenacea
Microlaena stipoides - meadow rice grass
Oplismenus imbecillis
Phormium tenax - harakeke
Poa anceps
Pterostylis alobula
Rhopalostylis sapida - nikau
Ripogonum scandens - kareao / supplejack

Appendix B Bird Species in Totara Park

Native birds observed:

Fantail	Piwakawaka	<i>Rhipidura fuliginosa</i>
Grey warbler	Riroriro	<i>Gerygone igata</i>
Harrier hawk	Kahu	<i>Circus approximans</i>
Kingfisher	Kotare	<i>Halcyon sancta</i>
Morepork	Ruru	<i>Ninox novaeseelandiae</i>
Pipit	Pihoihoi	<i>Anthus novaeseelandiae</i>
Pukeko	Pukeko	<i>Porphyrio porphyrio</i>
Shining cuckoo	Pipiwaharauoa	<i>Chrysococcyx lucidus</i>
Silvereye	Tauhou	<i>Zosterpos lateralis</i>
Tui	Tui	<i>Prothemadera novaeseelandiae</i>
Wood pigeon	Kereru	<i>Hemiphaga novaeseelandiae</i>

Possibly present:

Black shag	Kawau-tua-whenua	<i>Phalacrocorax carbo</i>
Kaka	Kaka	<i>Nestor meridionalis</i>
Little shag		<i>Phalacrocorax melanoleucos brevirostris</i>

Introduced birds observed:

Blackbird	<i>Turdus merula</i>
Californian quail	<i>Lophortyx californica</i>
Chaffinch	<i>Fringilla coelebs</i>
Dove	<i>Streptopelia</i> spp.
Eastern rosella	<i>Platycercus eximius</i>
Goldfinch	<i>Carduelis britannica</i>
Greenfinch	<i>Carduelis chloris</i>
Mallard duck	<i>Anas platyrhynchos</i>
Myna	<i>Acridotheres tristis</i>
Pheasant	<i>Phasianus colchicus</i>
Redpoll	<i>Carduelis flammea</i>
Skylark	<i>Alauda arvensis</i>
Song thrush	<i>Turdus philomelos</i>
Sparrow	<i>Passer</i> spp.
Spotted dove	<i>Streptopelia chinensis</i>
Starling	<i>Sturnus vulgaris</i>
Welcome swallow	<i>Hirundo neoxena</i>
Whitebacked magpie	<i>Gymnorhina hypoleuca</i>
White-faced heron	<i>Ardea novaehollandiae</i>
Yellowhammer	<i>Emberiza citrinella</i>

Appendix C Legal Titles and Classifications in Totara Park

Title <i>Description</i>	DP no.	Size (ha)	District Plan Zone		Classification	
			<i>Existing</i>	<i>Proposed</i>	<i>Existing</i>	<i>Proposed</i>
Adj Pt Clendons Grant	6954	62.9731	POS 2, 3	POS 2, 3		Recreation
Pt Clendons Grant	6954	40.1271	POS 2	POS 2		Recreation
Lot 3	22977	4.4829	POS 2	POS 2		Recreation
Pt Lot 1	22977	36.1917	POS 2	POS 2		Recreation
All	23911	2.5211	POS 2	POS 2		Recreation
Lot 1	24051	15.2035	POS 2	POS 2		Recreation
× Pt Lot 2	24051	23.6234*	POS 2	POS 2		Recreation
Lot 1	29086	1.8674	POS 2	POS 2		Recreation
Lot 3	31549	1.8741	POS 1	POS 1		Recreation
Lot 1	34072	1.3265	POS 2	POS 2		Recreation
Lot 1	54627	6.1992	POS 1, 2	POS 1, 2		Recreation
Lot 2	54627	9.5885	POS 1	POS 1		Recreation
Lot 272	103757	0.6454	POS 2	POS 2		Recreation
Lot 1	114320	4.7765	POS 1	POS 1		Recreation
Lot 1	136105	0.0334	POS 2	POS 2		Recreation
Lot 46	148277	0.3432	POS 2	POS 2	Recreation	Recreation
Lot 121	162001	0.5470	POS 2	POS 2		Recreation
Lot 120	162002	0.0974	POS 2	POS 2	Recreation	Recreation
Lot 1	162023	0.5131	POS 2	POS 2		Recreation
Lot 1	182192	3.7442	POS 2	POS 2		Recreation
Lot 93	190033	0.0331	POS 2	POS 2		Recreation
Lot 277 (access)	84392	0.0137		POS 2		Recreation
Lot 278 (access)	84392	0.0065		POS 2		Recreation
Lot 221 (access)	87191	0.0093		POS 2		Recreation
Lot 274 (access)	116980	0.0062		POS 2		Recreation
Total		216.7480				

Proposed Additions

Title <i>Description</i>	DP no.	Size (ha)	District Plan Zone		Classification	
			<i>Existing</i>	<i>Proposed</i>	<i>Existing</i>	<i>Proposed</i>
Pt Lot 56	539	3.0647		POS 2		Recreation
Part of Pt Lot 55	539			POS 2		Recreation
Road reserve (Unnamed road)	approx.	12.3200*		POS 2	Road	Recreation
Total		15.3827				

* The area may be inaccurate as no data was available on the cadastral map.

Appendix D Plant Pests of the Auckland Region

Total Control Plant Pests

These plants *must* be treated when found growing. They are banned from sale, propagation and distribution.

Nodding thistle	<i>Carduus nutans</i>
Ragwort	<i>Senecio jacobaea</i>
Variegated thistle	<i>Silybum marianum</i>
Bathurst Bur	<i>Xanthium spinosum</i>
Woolly nightshade	<i>Solanum mauritianum</i>
Smilax	<i>Asparagus asparagoides</i>
Moth Plant	<i>Araujia sericifera</i>
Mignonette vine	<i>Auredera cordifolia</i>
Kahili ginger	<i>Hedychium gardnerianum</i>
Yellow ginger	<i>Hedychium flavescens</i>
Evergreen buckthorn	<i>Rhamnus alaternus</i>

Boundary Control Plant Pests

These plants need to be controlled on rural properties so they do not infest neighbouring areas. They are banned from sale, propagation and distribution.

Gorse	<i>Ulex spp.</i>
Australian sedge	<i>Carex longibrachiata</i>

Service Delivery Plant Pests

These plants are of limited distribution throughout the Auckland Region, but must be controlled when identified to prevent their becoming widespread. They are banned from sale, propagation and distribution.

Green Cestrum	<i>Cestrum parqui</i>
Old Man's Beard	<i>Clematis vitalba</i>
Cathedral bells	<i>Cobaea scandens</i>
Broom	<i>Cytisus scoparius</i>
Senegal tea	<i>Gymnocoronis spilanthoides</i>
Houttuynia	<i>Houttuynia cordata</i>
Water poppy	<i>Hydrocleys nymphoides</i>
Marshwort	<i>Nymphoides geminata</i>
Fringed water lily	<i>Nymphoides peltata</i>
African feather grass	<i>Pennisetum macrourum</i>
Sagittaria	<i>Sagittaria graminea ssp. Platyphylla</i>
Arrowhead	<i>Sagittaria montevidensis</i>
White-edged Nightshade	<i>Solanum marginatum</i>
Chilean needle grass	<i>Stipa neesiana</i>
Needle Grass	<i>Stipa rudis</i>
Nasella tussock	<i>Stipa trichotoma</i>
	<i>Stipa tenuissima</i>
Manchurian Wild Rice	<i>Zizania latifolia</i>

Monitoring Plant Pests

These plants are being monitored to prevent their becoming a pest problem. They are banned from sale, propagation and distribution.

Bushy Asparagus
Purple Nut Sedge
Lantana
Sweet Pea shrub

Asparagus densiflorus
Cyperus rotundis
Lantana camara var. *aculeata*
Polygala myrtifolia

Appendix E Definition and Purpose of a Management Plan

The Reserves Act 1977 requires that all administering bodies prepare management plans for reserves under their control. The Act originally required this to be done within five years after its commencement, but this proviso has since been relaxed and Local Authorities are to devise their own priorities and timetables.

Where a reserve is not subject to conflicts of use or is not especially complex from a management point of view the management plan will consist of simple statements under pertinent headings. Other plans may be more complex and detailed as needs dictate. The format may be adapted to suit varying circumstances.

A management plan is not a design document (which is finite and definitive) but a statement of objectives and policies by which specific proposals (e.g. for development) are assessed.

Because of its basis in objectives and policy statements a management plan can cope with changing circumstances, whereas a design plan can be suddenly rendered invalid by, for example, the introduction of a new and previously unforeseen activity.

Management plans should be kept under continuous review by way of minor amendments from time to time. Approximately every five years a comprehensive review should be undertaken to ensure the document's continued relevance.

Procedure for Preparation of a Plan

Under the Reserves Act the Council must follow a set procedure for management plans. In order to facilitate greater responsiveness to public opinion and to make the public more aware of reasons for decisions, there are opportunities for public representation within this procedure. The following table summarises the statutory procedure for the preparation of Management Plans.

Stage Statutory Procedure

- | | |
|-----|---|
| I | If thought necessary Council can give public notice of the intention to prepare management plan calling for suggestions. |
| II | Submissions are received over a two-month period following the date of public notification. |
| III | The Council prepares the draft management plan, then gives public notice that the plan is available for inspection and invites persons and interested organisations to make written suggestions and/or objections. A copy of the draft plan is submitted to the Department of Conservation. |
| IV | Submissions to the management plan are received over a two-month period following the date of public notification. |
| V | The Council holds a Reserves Act Hearing consider any submissions received. |
| VI | All or part of the reserve is classified in accordance with the draft management plan where the reserve is not already classified or where the classification needs changing. |
| VII | Preparation of the final management plan takes place. |

Monitoring and Changes to the Plan

1. Monitoring

Public use and operational factors are monitored by staff in their daily surveillance and servicing of reserves. Planning matters, such as regional planning and harbour planning, are monitored by the Manukau City Council's planning staff. Changes to a management plan to accommodate changing circumstances or needs may be made as follows.

2. Criteria for Undertaking a Plan Change

A plan change, as detailed below, will be initiated for any one of the following reasons:

- To accommodate a proposed new use, activity, facility or development which is not provided for the plan but which is consistent with the management philosophy and objectives of the plan.
- In response to a proposal for a new or amended lease or concession operation in the reserve.
- Any statutory or legislative change which would render the plan inoperable or illegal.
- Any major change in recreation needs or any other factor which the manager of that reserve sees as warranting a change to the plan.

3. Plan Change Procedure (841, Reserves Act 1977)

1. Council publicly advertises the proposed change and makes a copy of the proposed change available to the public.
2. Council notifies, in writing, any person or organisation, which it considers, will be significantly affected by the proposed change.
3. Council receives written submissions on the proposed change for a period of not less than two months after the first public advertisement.
4. Council considers the submissions and the proposed plan change and adopts, rejects or amends and adopts the change.

Appendix F Protocols for Waahi Tapu and Burial Sites

The following procedure should be followed when human remains and Maori artefacts are unearthed by development practices or other activity. (Police involvement is only relevant in the case of unearthing human remains).

1. Immediately it becomes apparent that a burial site or Maori artefacts have been uncovered, earthmoving operations will stop.
2. The plant operator will shut down all machinery or activity immediately, leave the area and advise his/her supervisor of the occurrence.
3. The supervisor is responsible for advising his/her superior who will take immediate steps to secure the area in a way that ensures human remains, or artefacts are untouched.
4. The supervisor's superior is responsible for notifying the Police and the Department of Conservation that he or she suspects human remains, or artefacts have been uncovered.
5. The Department of Conservation will advise Huakina Development Trust that the Department suspects either that human remains, or artefacts have been uncovered.
6. The office of Huakina Development Trust will contact the kaumatua of the mana o te whenua. The kaumatua of the area will make the decision on which other kaumatua need to be advised and will contact these kaumatua.
7. The supervisor of the site will see that staff are available to meet and guide Police, Department of Conservation staff and kaumatua to the site assisting with any requests that they may make.
8. Earthmoving operations will remain halted until the Police, Department of Conservation and kaumatua have marked off the area around the site and have given approval for earthmoving operations to recommence.
9. If the kaumatua are satisfied that the remains are of Maori origin, the kaumatua will decide what happens to the remains and will give their decision to the Police.
10. The kaumatua will decide what happens to any artefacts that are returned into their keeping.

Appendix G Manukau District Plan - Public Open Space Definitions

15.9.2 Public Open Space Zone 2 - Passive Outdoor Informal Recreation

This zone will protect some public open space for passive outdoor informal recreation such as walking, resting, picnicking, enjoying nature or jogging. Areas zoned Public Open Space 2 also contribute to the greening and beautifying of the urban environment, and to the City's walkway and cycleway network. Neighbourhood reserves are also included in this zone. Facilities on land zoned P.O.S 2 are generally limited to accessory buildings or structures such as playground equipment and toilet blocks with some opportunity for small community buildings.

Activities in Public Open Space 2 Zone

Permitted Activities

All Permitted Activities shall comply with 15.11.1 General Development and Performance Standards and any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2.

- Children's playgrounds and related structures
- Farming (except factory farming, pig farming and horticulture) and grazing as part of a management programme for the public open space and associated buildings
- Formed recreational walkways and cycleways excluding motorised vehicles
- Gardens (including botanic gardens)
- Informal recreation and leisure
- Maintenance of buildings and grounds on public open space
- Park depot including implement and storage sheds
- Park furniture
- Cleanfill activities involving the depositing of less than 200 m³ of material per site

Controlled Activities

All Controlled Activities shall comply with 15.11.1 General Development and Performance Standards including any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2 and Council shall exercise control over those matters specified in Rule 15.12.1.

- Bridle Trails
- Demolition of buildings and structures
- Residential accommodation for a caretaker, grounds staff, or manager
- Skateboard bowls, outdoor skating rinks, confidence courses
- The relocation of any building or structure and/or external alterations or additions to any building or structure (except those listed in Chapter 6 - Schedule 6A)
- Clean fill activities involving the depositing of more than 200 m³ but less than 500 m³ of material per site

Restricted Discretionary Activities

All Restricted Discretionary Activities shall comply with 15.11.1 General Development and Performance Standards including any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2 and Council shall exercise its discretion over those matters for discretion specified in Rule 15.13.1

- Any permitted activity/building/structure that lies within the 100-year flood return level
- Community buildings (not exceeding 150 m²) subject to additional rule 15.11.2.2
- Kiosks subject to additional rules 15.11.2.2 and 15.11.2.3

- Plant nurseries and accessory buildings, including greenhouses
- Public and club operated boating facilities including boat launching ramps, facilities for storage, repair and maintenance and the supply of fuel to pleasure craft

Discretionary Activities

All Discretionary Activities will be assessed against 15.14.1 General Assessment Criteria - Discretionary Activities together with the relevant matters set out in S104 of the Act.

- Any building or structure that does not comply with development and performance standards in Rule 15.11
- Clean fill activities involving the depositing of more than 500 m³ of material per site

Non-Complying Activities

- Floodlights including additions or alterations to existing installations subject to additional rule 15.11.2.1.
- Information Centre and interpretation facilities including viewing platforms in conjunction with the public open space or adjacent water area.
- Public address system.
- Sports Clubrooms within 50m of a residential boundary.
- Sports Clubrooms not within 50m of a residential boundary.
- Sportsfields and associated grounds, courts and greens.
- Stands and grandstands
- Equestrian Activities and Pony Clubs
- Community buildings and facilities (exceeding 150 m²) which are within 50 metres of a residential boundary.
- Dog racing including ancillary kennel facilities

Any activity not listed in shall be deemed to be a non-complying activity.

15.9.3 Public Open Space Zone 3 - Active Outdoor Recreation/Organised Sports

This zone will protect some public open space for active outdoor recreation and organised sports. It applies to mainly larger public open space areas in which sports fields and hard court areas or greens tend to predominate and where stands and grandstands and clubrooms associated with and necessary for the use of the public open space for outdoor recreation and sports are located. Opportunity is made for a public address system and floodlighting to operate on areas zoned P.O.S 3. Although it is designed to cater primarily for outdoor recreation and sports the zone also allows for sports facilities, for example, track cycling and dog racing at the Manukau Sports Bowl. This zone also accommodates boating facilities which are fixed structures regularly used for active recreation and organised sports.

Activities in Public Open Space 3 Zone

Permitted Activities

All Permitted Activities shall comply with 15.11.1 General Development and Performance Standards and any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2.

- Children's playgrounds and related structures
- Farming (except factory farming, pig farming and horticulture) and grazing as part of a management programme for the public open space and associated buildings
- Floodlights including additions or alterations to existing installations subject to additional rule 15.11.2.1
- Formed recreational walkways and cycleways excluding motorised vehicles

- Gardens (including botanic gardens)
- Informal recreation and leisure
- Maintenance of buildings and grounds on public open space
- Park depot including implement and storage sheds
- Park furniture
- Public address system
- Public toilets, shelters, restrooms, changing rooms, and first aid rooms
- Residential accommodation for a caretaker, grounds staff, or manager
- Skateboard bowls, outdoor skating rinks, confidence courses
- Sportsfields and associated grounds, courts and greens
- Stands and grandstands
- Clean fill activities involving the depositing of less than 200 m³ of material per site
- Equestrian Activities and Pony Club

Controlled Activities

All Controlled Activities shall comply with 15.11.1 General Development and Performance Standards including any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2 and Council shall exercise control over those matters specified in Rule 15.12.1.

- Demolition of buildings and structures
- Kiosks subject to additional rules 15.11.2.2 and 15.11.2.3
- Sports Clubrooms not within 50m of a residential boundary
- The relocation of any building or structure and/or external alterations or additions to any building or structure (except those listed in Chapter 6 - Schedule 6A)
- Clean fill activities involving the depositing of more than 200 m³ but less than 500 m³ of material per site

Restricted Discretionary Activities

All Restricted Discretionary Activities shall comply with 15.11.1 General Development and Performance Standards including any relevant Additional Development and Performance Standards for Specified Activities in Rule 15.11.2 and Council shall exercise its discretion over those matters for discretion specified in Rule 15.13.1

- Any permitted activity/building/structure that lies within the 100-year flood return level
- Dog racing including ancillary kennel facilities
- Plant nurseries and accessory buildings, including greenhouses
- Public and club operated boating facilities including boat launching ramps, facilities for storage, repair and maintenance and the supply of fuel to pleasure craft

Discretionary Activities

All Discretionary Activities will be assessed against 15.14.1 General Assessment Criteria - Discretionary Activities together with the relevant matters set out in S104 of the Act.

- Any building or structure that does not comply with development and performance standards in Rule 15.11
- Community buildings (not exceeding 150 m²) subject to additional rule 15.11.2.2
- Sports Clubrooms within 50m of a residential boundary
- Clean fill activities involving the depositing of more than 500 m³ of material per site

Non-Complying Activity

- Bridle Trails
- Community buildings and facilities (exceeding 150 m²) which are within 50 metres of a residential boundary.

- Community buildings and facilities (exceeding 150 m²) which are not within 50 metres of a residential boundary
- Information Centre and interpretation facilities including viewing platforms in conjunction with the public open space or adjacent water area

Any activity not listed in shall be deemed to be a non-complying activity.

