



Awahuri Forest Kitchener Park

Management Plan

August 2019

www.mdc.govt.nz

Contents

| | |
|--|----|
| USER GUIDE | 7 |
| 1. ABOUT THE RESERVE | 10 |
| 2. VISION AND OBJECTIVES | 17 |
| 3. MANAGEMENT POLICIES | 20 |
| 4. DEVELOPMENT AND IMPLEMENTATION | 28 |
| Actions 2019-20 | 30 |
| Actions 2012-24 | 32 |
| Actions 2025-28 | 33 |
| References | 34 |
| Glossary | 36 |



User Guide

Purpose

The purpose of this management plan is to provide for use, enjoyment, protection, maintenance, preservation and development of the reserve. The plan establishes a vision, objectives and policy for long term management and development of the reserve and to guide everyday management decisions. This allows the community, Manawātū District Council (the Council) and the Awahuri Forest–Kitchener Park Trust (the Trust) to move forward with a clear vision and plan for management and development of the reserve as opportunities, resources and priorities allow.

Term

This plan has a term of up to 10 years or until it is comprehensively reviewed or amended. Once Council approves this plan it will be on the Council’s website.¹ A comprehensive review of this plan requires public notification and a public submission process as outlined in section 41 of the Reserves Act 1977. Corrections and amendments that the Council does not regard as comprehensive may be made during the plan’s term so that management of the reserve adapts to changing circumstances and increased knowledge.²

Structure

This plan has five sections:

Section 1: Outlines the reserve’s history, landscape, ecology, visitor facilities, the role of the Trust and existing plans for reserve development.

Section 2: Sets out the vision for the reserve and management objectives over the next 10 years.

Section 3: Sets out management policies.

Section 4: Outlines reserve development throughout the life of this management plan and actions, responsibilities and a timeline for development plan implementation.

¹ http://www.mdc.govt.nz/Living_Leisure/Parks_and_Reserves/Reserves/Reserve_Management_Plans.

² Reserves Act 1977 section 41 (3) (8) (9).

Plan development

The review of the current management plan and preparation of this draft plan follows the process according to section 41 of the Reserves Act 1977 (outlined in Figure 1 below). The plan was developed after public notice of the intention to review the current management plan, receiving comments from the public and incorporating these into the draft plan. Meetings and workshops were held with the Trust and Council officers.

Next steps

Once this draft plan has been approved by the Council it will be released to the public for a two-month submission process. After the public submission process, hearing and decision making, the final management plan will be put to the Council for adoption.

Figure 1: Process to review this management plan

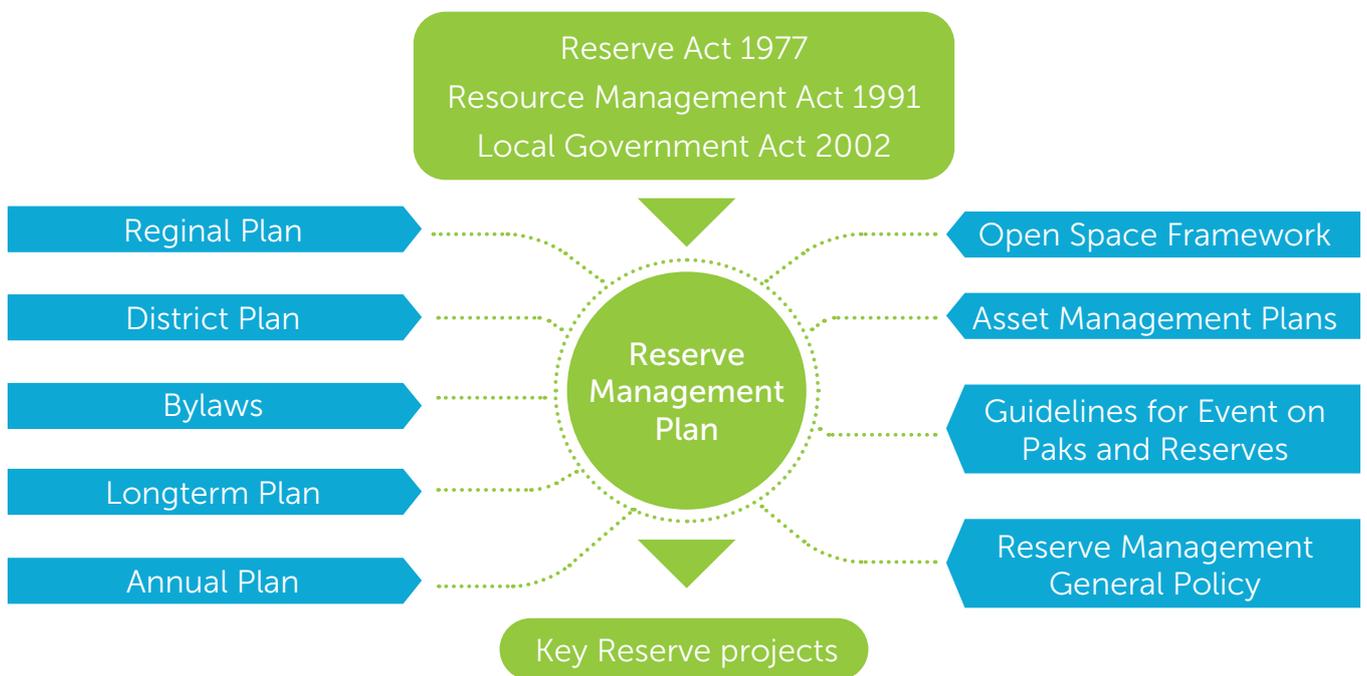


How to use this plan

This plan is specifically for Awahuri Forest-Kitchener Park. It recognises the special role the Trust has in management and development of the reserve.

The draft plan has links to a range of national and regional statutory requirements and policy statements and it should be read alongside the Reserve Management General Policy document and Council Bylaws, plans and strategies. Figure 2 illustrates the relationship between this plan, statutory requirements and other Council plans and strategies. Where there is an inconsistency between this plan and reserve general policy or other plans, policy and strategies, the provisions of this plan prevail.

Figure 2 - Relationship with Council plans and strategies



1. About the Reserve

The following section outlines the history of the reserve, its landscape and natural features, ecology, use and plans for its development. Issues for reserve management are identified in this section and are addressed in the policy and development sections of this plan (sections 3 and 4).

Location

The 13.9868 hectare reserve is 3 kilometres south-west of Feilding between Kawakawa Road and Awahuri-Feilding Road at the junction of the Mangaone West and Makino Streams). The reserve is within easy reach of Feilding by car along Awahuri-Feilding Road or Kawakawa Road, or by walking or cycling along the trail that runs along the Makino Stream from Rata Street. (See Figure 3).

Figure 3 – Location of the reserve within the immediate setting



History

Awahuri Forest-Kitchener Park was once part of the Kawakawa Block and protects a remnant of the larger semi-swamp podocarp forest. Ngāti Kauwhata settled in this area after migrating from Maungatautari in the early 1800s with many settling along the Oroua River. The iwi has had connections with the river for 200 years and has three maraes in the immediate area.³ Land losses when the native title was extinguished and replaced by individual ownership included lands where the reserve is located. Another iwi with connections to the area is Ngāti Apa (North Island), Rangitāne O Manawatū and Ngāti Toa Rangatira.

The park is under Treaty claim, the outcomes of which may change aspects of this plan. In 2019, Ngāti Kauwhata erected a whare/information kiosk Te Whare Matouranga.

³ Rauhuia Environmental Services Te Maru o Ruahine Trust and Ngā Kaitiaki o Ngāti Kauwhata, *Cultural Impact Assessment of the Feilding Sewage Treatment Plant Discharges upon the Cultural Values of Ngāti Kauwhata*, November 2012.

Establishment of the reserve

The reserve is made up of four areas that were acquired by the Council at different periods. The former Feilding Borough Council purchased the original reserve area from the Riddiford family in 1914 to preserve Awahuri Forest. The Crown purchased the adjacent land for scenic purposes in 1914. In 1916 the reserve was named Kitchener Park after Lord Kitchener.⁴

In 1980, the reserve was classified a Scenic A Reserve. Feilding Borough Council was appointed to manage and control the reserve in 1986. The Council took over responsibility for the reserve in 1989 and since then the area west of the Makino Stream and other small pieces of land have been added to the reserve. The Council has delegated authority to manage all the lands that make up the reserve except for a 0.5466 hectare of Horizons Regional Council land. This area is classified under the Reserves Act for a Local Purpose: Soil Conservation and Flood Control (see Appendix 1 for details of the land parcels that make up the reserve).

Scenic A reserve

Section 19(1)(a) of the Reserves Act 1977 sets out that the main purpose of Scenic A Reserves, which is to protect and preserve:

... in perpetuity for their intrinsic worth and for the benefit, enjoyment, and use of the public, suitable areas possessing such qualities of scenic interest, beauty, or natural features or landscape that their protection and preservation are desirable in the public interest.

Management objectives of a reserve's Scenic A classification are set out below:

In general, the public is to have freedom of entry and access to the reserve although the Council has specific powers for managing and developing the reserve under Sections 55 and 56 of the Act. These include:

1. The ability to control entry to protect vegetation and grant leases and licences.
2. Indigenous flora and fauna, ecological associations and natural environment and beauty are to be preserved as far as possible.
3. Exotic flora and fauna are to be exterminated as far as possible.
4. Open portions of the reserve may be developed for amenities and facilities to allow the public to benefit and enjoy the reserve.
5. The soil, water and forest of the reserve are to be maintained.
6. Historic, archaeological, geological, biological and other scientific features are to be managed and protected.



⁴ Awahuri Forest-Kitchener Park Trust, Awahuri Forest – Kitchener Park. A short History and Information, Awahuri Forest , 2016.

Local Purpose Reserve

The area of reserve immediately to the south of the confluence of the Mangaone West Stream and the Makino Stream is classified a Local Purpose Reserve (s.23, Reserves Act 1977). In this case, the purpose is the conservation of soils and control of flooding. As well as managing this part of Awahuri Forest-Kitchener Park for this purpose, management objectives include protecting scenic, historic, archaeological, geological, biological or natural features, and maintaining value as soil, water and forest conservation.

Reserve restoration

In 1991 a local restoration initiative began to remove weeds that had smothered natural re-growth of indigenous seedlings and planted species that had been lost over the years. Tracks and a boardwalk were also constructed. However, much of this work was undone when a flood in 1998 brought in gravels and sediment that smothered plants, reintroduced weed species and damaged the boardwalk. Repairs were made and restoration work continued, but severe floods in 2004, 2015, 2016 and 2017 set back restoration work.

To help with management and development of the reserve, the Council appointed the Awahuri Forest-Kitchener Park Trust in 2014. The role of the Trust is to oversee continued ecological restoration and development of the reserve in accordance with its Scenic A classification (details of the Trust and its role in the management of the reserve are outlined on page 19).

Landscape and ecology

The reserve is on river terraces associated with the Oroua River. Oroua River, along with the Mangaone and Makino water catchment areas, form a floodplain within which both Feilding and the reserve lie.⁵ The reserve is surrounded by farmland with Feilding Wastewater Treatment Plant to the south and rolling hill country rising beyond Awahuri-Feilding Road to the west.

The original floodplain created environmental conditions for lowland semi-swamp podocarp forest to thrive. These environments and the ecosystems they support are now rare or uncommon in the Manawatū due to changed land use: milling, grazing stock, animal pests such as possums and rats, severe infestation from weeds, stream realignment and control, drought and floods. Never the less, the remnant has considerable value as an example of the original forest that once covered the Manawatū Plains.

Changes to environmental conditions

The Mangakino Stream (known as Makino Stream) flows through Feilding just three kilometres north of the reserve, through the reserve and eventually into Oroua River. The Mangaone West Stream and the Makino Stream meet at the northern boundary of the reserve. These streams would have earlier meandered over the floodplain and have created oxbows, low lying areas and seasonal stream channels within the reserve. This dynamic hydrological environment is where swamp podocarp/titoki forest flourishes.

Urban development in Feilding changed the flow of the Makino Stream. The hard, impervious surfaces in the urban area have reduced water infiltration, increased runoff and floodwaters are discharged more quickly. In addition, the original forest covering the wider flood plain was cleared to make way for agriculture. These changes in land use also modified hydrological conditions, which along with severe flood events have impacted on the remnant forest in the reserve.⁶

In an attempt to control streams and reduce the effect of floods, stop banks were constructed along the Makino Stream on the boundary of the reserve, but during flood events, the stream breached the stopbank and brought

⁵ See Horizons Regional Council flood mapping, accessible at <http://www.horizons.govt.nz/flood-emergency-management/flood-plain-mapping>.

⁶ The following information was sourced from Stu Farrant, Morphum Environmental, Kitchener Park Hydro-Ecological Assessment, 07/04/2016.

gravel and silt into the reserve. In a natural context, the Makino Stream would have distributed gravel and silt over a larger area, but the stream's meandering has been restricted by formalising and channelling the stream bed.

This restriction of the stream to a narrow channel has resulted in deposits raising the stream bed increasing the risk of the stream breaching the stopbank and depositing larger loads of sediments. These deposits against tree trunks during the February 2004 flood event resulted in many large trees in the reserve dying. This loss is significant because some of the trees were up to 800 years old.

Biodiversity

The reserve has very high biodiversity values. Canopy tree species include pukatea, totara, kahikatea, matai, hinau, pōkākā and tawa. Other trees are kowhai and titoki, including one of the largest kowhai in the country although unfortunately, it did not survive recent floods. The reserve has significant botanical importance with a collection of epiphyllous lichens and strong historic botanical significance. The regionally threatened plant species *Fuchsia perscandens* and *Teucrium parvifolium* are found in the reserve and it is a seed source for these and other indigenous plant species. The reserve figures in the scientific research and teachings of botanist H. H. Allen who in 1928 found 140 species in the reserve, 38 of them supporting lichens.⁷ Since H.H. Allan's time, 60 of the species he identified in the reserve have disappeared.

Pest and weed control

Pest and weed control in the reserve has been a major undertaking since 1991. As well as Wandering Willy (*Tradescantia fluminensis*) which is difficult to eradicate, other weed species include old man's beard, monbretia, bamboo, Japanese honeysuckle, German ivy and Cape ivy.

Weed clearance is ongoing, along with control of possums, rats and stoats. A sign of successful pest control is the recent identification of seedlings from the two 120 year old mature pōkākā (*elaeocarpus hookerianus*) trees in the reserve which up to now have not survived predation. Native birds nesting in the forest now include tui with resident and visitor wood pigeons/kereru, fantails/piwakawaka, silvereye/tauhou, bellbirds/korimako/komako, moreporks/ruru, grey warbler/riroriro, and native insects, spiders and worms.

Issues and challenges:

- Controlling flooding and the sediments and weeds that floods bring into the reserve
- Retaining the indigenous plant species found in the reserve and creating an environment into which plant species that are no longer found in the reserve can be re-introduced if genetically pure from local stock
- On-going control of weed species and animal and plant pests
- Public use versus biodiversity, protection and forest restoration.

Visitor facilities and use

A sign at the corner of Awahuri-Feilding Road and Kawakawa Road directs visitors to the main reserve entrance and carpark off Kawakawa Road. Vehicle access from Kawakawa Road to the carpark is controlled by a gate that is locked at dusk. Visitor toilets and reserve information are located in the entrance area.

Walking tracks and a timber boardwalk lead from the entrance area into the forest. The 1-kilometre loop track and boardwalk allows visitors to get closer to some of the oldest and most valuable trees. Information and interpretation of the forest, its flora and fauna and ecological niches add to the visitor experience. A trail along the Makino Stream links the reserve to Rata Street and Kowhai Park. Dog exercise is allowed in the reserve as

⁷ The Epiphyllous Lichens of Kitchener Park, Feilding, New Zealand. By A. Zahlbruckner, K. Keissler and H. H. Allan. [Read before the Philosophical Institute of Canterbury, 8th June, 1927; received by Editor, 20th April, 1928; issued separately, 10th August, 1928].

long as dogs are on leads and keep to the paths and boardwalk.

Schools, scientists, university groups and other interest groups use the reserve for educational purposes and scientific research. In recent years the reserve has been visited by academics including from overseas and a number of academic research papers have been written about the reserve.⁸

Issues and challenges:

- Developing public use of the reserve and quality visitor facilities within available resources
- The location of the entrance on Kawakawa Road has limited sightlines and entering and exiting the reserve safely is an issue

Awahuri Forest-Kitchener Park Trust

Established in March 2014, the Awahuri-Kitchener Park Trust is a Council Controlled Organisation and was set up to restore the ecology of Awahuri Forest-Kitchener Park.

The Trust receives an annual operational grant from the Council and also seeks external funding. The Trust is also expected to seek operational funding to support its administrative functions.⁹ The Trust has four to six members who are appointed by the Council, reports six-monthly to the Council and produces an annual 'Statement of Intent and Business Plan'. The Council monitors the Trust's performance by measuring performance against identified activities.

The Trust's vision for the reserve is "to be an ecological and educational showcase telling the story of the land and connections to people". A particular task of the Trust is to source funds that are not available to the Council. Table 4 sets out the responsibilities of the Trust.

The Trust is skills-based and its success depends on individual Trust members. Given the responsibilities of the Trust, a combination of specialist skills among Trust members is necessary and advisory Trustees may be co-opted from time to time.

Table 4 Trust responsibilities

- Assist in the ecological restoration, management and enhancement of the land at Kitchener Park¹⁰
- Steer and co-ordinate the raising of funds to assist the restoration, management, enhancement, promotion and further development of the land at Kitchener Park
- Encourage community access to Kitchener Park, and foster knowledge of and interest in the ecological restoration activity at Kitchener Park
- Ensure the continued protection and restoration of Kitchener Park where possible and restore biodiversity values
- Create a safe haven for native plant and animal species, controlled for plant and animal pests
- Collaborate with other relevant organisations and individuals to reintroduce locally extinct or threatened plant and animal species, to ensure their long term survival
- Develop self-sustaining threatened species populations which will act as source populations for the creation of future community restoration projects in the Manawatū District
- Care for some special collections, including the podocarp, epiphyte and lichen collections presently established at Kitchener Park

⁸ Awahuri Forest-Kitchener Park Trust, Awahuri Forest – Kitchener Park, 2016, page 10.

⁹ Manawatū District Plan 2016-2017, page 13.

¹⁰ Note that the objectives referred to Kitchener Park when the Trust was set up. The reserve is now Awahuri Forest-Kitchener Park.

- Support scientific and historic research of the Kitchener Park ecosystem or components thereof
- Educate the general public, especially school children, about the need to conserve and protect native forest environments in New Zealand

Issues and challenges

- Fundraising from outside Council in order to implement planned developments over the next 10 years
- Due to the Trust's mandate the range of skills and knowledge base within the trust has to be diverse and in depth.

Reserve development

A master plan for the reserve was developed in 2015 followed by an implementation and scoping plan in 2017 although neither of these plans was finalised. These plans may influence the development and implementation of the reserve outlined in section 4 of this plan.

Awahuri Forest-Kitchener Park Draft Master Plan January 2015

The Master Plan identified design principles, actions, concept ideas and a staging plan.¹¹

Five design principles:

1. Ecological enhancement and protection
2. Different experiences for reserve visitors
3. Tell the story of the land
4. A quality environment with the consistency of materials
5. A reserve that can be used for educational purposes

Key actions:

- Weed management and ecological restoration
- Information and interpretation
- Selection and installation of structures that do not affect ecological values
- Planting restoration
- Spaces for different types of use e.g. picnics, short walks
- Flexible areas for informal events
- Car and bus parking
- Information integrated into signage, seating and fences
- Integration into Feilding's recreational network of walkways and cycle tracks.

¹¹ Boffa Miskell, Awahuri Forest - Kitchener Park Draft Master Plan Report, January 2015.

Other design actions:

- New infrastructure must be uniform and reflect the aesthetics of the forest park

Staging:

The master plan identified management priority areas, provided for new planting and protection of the podocarp forest along the Makino Stream south of Kawakawa Road, the establishment of a new entrance, reserve visitor centre and nursery on farmland outside of the reserve's eastern boundary.

Scoping and Implementation Plan 2017

This plan revised the 2015 master plan.¹² Key recommendations included a new visitor entrance and visitor centre structure elevated in case of flooding and a wetland to attenuate flood flows, support birds, fish, insects and other biota and add to the visitor's experience.

Projects are organised under stormwater management, weed and pest species control, landscape and infrastructure, planting and revegetation. They are prioritised according to their ability to protect and/or enhance the forest remnant. Implementation has three phases: Phase 1 - Laying the foundations, Phase 2 - Building the experience, Phase 3 - Adding the finishing touches.

The 2015 Master Plan and the 2017 Implementation and Scoping Plan are useful guides for reserve protection and development. They identify that stormwater and flood management integrated with the semi-swamp forest of the reserve is key to the protection of the ecology of the reserve and that this aspect needs to be addressed before any further development of visitor facilities.

As well as the purchase of property on the north-west side of the reserve, the plans suggest that some of the Council-owned land to the east of the reserve between the Makino Stream and Kawakawa Road is utilised for protection of the forest. Once stormwater and flooding are better managed, the plan suggests planting broadleaf forest species along the eastern reserve boundary, developing a new reserve entrance and eventually a visitor and education centre on this Council-owned land.

The plans also include the part of Awahuri Forest that lies south of Kawakawa Road between the Feilding Waste Water Treatment Plant and Awahuri-Feilding Road. Plans for this area are weed and pest control, planting along the Makino Stream, planting podocarp species within the existing forest and broadleaf buffer planting between the forest and the Waste Water Treatment Plant.

Awahuri Forest-Kitchener Park Trust Vision for the Future 2019

This update on the Trust's vision for the reserve builds on the Draft Master Plan 2015 and Draft Scoping and Implementation Plan with storm and floodwater management. The Trust has successfully applied for funding to purchase property on the northern side of the reserve between the reserve and Awahuri-Feilding Road (see Section 3, Figures 5 and 6 for the location and details of this property).

The Makino Stream runs between this area and the reserve, along with the confluence of the stream with the Mangaone West Stream. It borders Horizons Regional Council land reserved for 'Soil Conservation and River Control'. The proposal is to widen the confluence of the two streams and construct a wetland to attenuate flood flows, add to the visitor's experience and support birds, fish, insects and other biota.

This 2019 update includes the development of a cycle trail through the reserve that links with the wider trail network in-line with the Council's Walking and Cycling Strategy. The Trust also aspires to develop a visitor education centre that would contribute to environmental education and extend visitor experiences.

¹² Boffa Miskell, Kitchener Park Scoping and Implementation Plan, 2017.

2. Vision and objectives

The vision for Awahuri Forest-Kitchener Park identifies what is important about the reserve and the objectives and policies in this draft plan have been developed to achieve this vision.

Vision

1. The reserve is resilient, protected, connected and enhanced to enable its forest to thrive for current and future generations.

The vision is a helpful touchstone to refer to when making decisions about the reserve's management, development and day to day maintenance.

Two questions to ask whenever a decision is being made for the reserve throughout the life of this management plan are:

1. In what way does this decision contribute to achieving the vision for the reserve?
2. Which objective is the decision meeting?
3. Will this decision promote a self-sustaining multi-generational forest for the future?



Reserve Management Objectives

The following objectives are grouped under four headings: resilience, protection, connection and development.



Resilience

- Harness hydrological processes to preserve conditions that allow the forest to survive
- Locate and design visitor facilities so that they can adapt to flood events ¹³
- Integrate visitor facilities into the reserve environment to provide a special visitor experience and insight into the landscapes that were once common in the Manawatū



Protection

- Extend reserve protection to the part of Awahuri Forest that lies south of Kawakawa Road between the Feilding Waste Water Plant and Awahuri–Feilding Road
- Widen the buffer around the reserve for forest edge protection and to attenuate storms and flood events
- Support the natural values and ecology of the reserve when making design, management and development decisions and when considering concessions
- Manage weeds, plant and animal pests
- Use indigenous plants propagated from within the reserve in planting programmes



Connections

Connections include physical connections such as tracks and trails as well as connections to iwi, the wider community, organisations and existing and potential funders.

Trail connections

- Develop walking and cycle trails within the reserve in line with the Council Walking and Cycling Strategy
- Develop connections between the reserve and the wider trail network. This allows the reserve to become part of the wider trail network as well as a destination for walkers and cyclists
- Develop safe walk and cycle access between Awahuri Forest – Kitchener Park Reserve and walking and cycling trails on the south side of Kawakawa Road

Connections with people

- Engage with mana whenua on reserve management and access to cultural sites and materials
- Engage with the wider community and organisations to increase understanding, awareness and interest in the reserve
- Engage with schools and universities to increase knowledge and encourage research

¹³ A term coined for an approach that works with hydrological processes rather than seeking to control them is Make friends with flooding. This term was applied to an alternative solution to floodwalls for flood control in the Chinese City of Jinhua City which resulted in a park with water permeable areas and adaptive visitor facilities with paths, ramps, pavilions and bridges.

Connections with funders

- Develop a strategy to seek funding from external organisations and individuals for reserve development and on-going relationships with funders



Development

- Provide a welcoming visitor entrance
- Provide visitor and tourist facilities
- Enhance the visitor and tourist experience

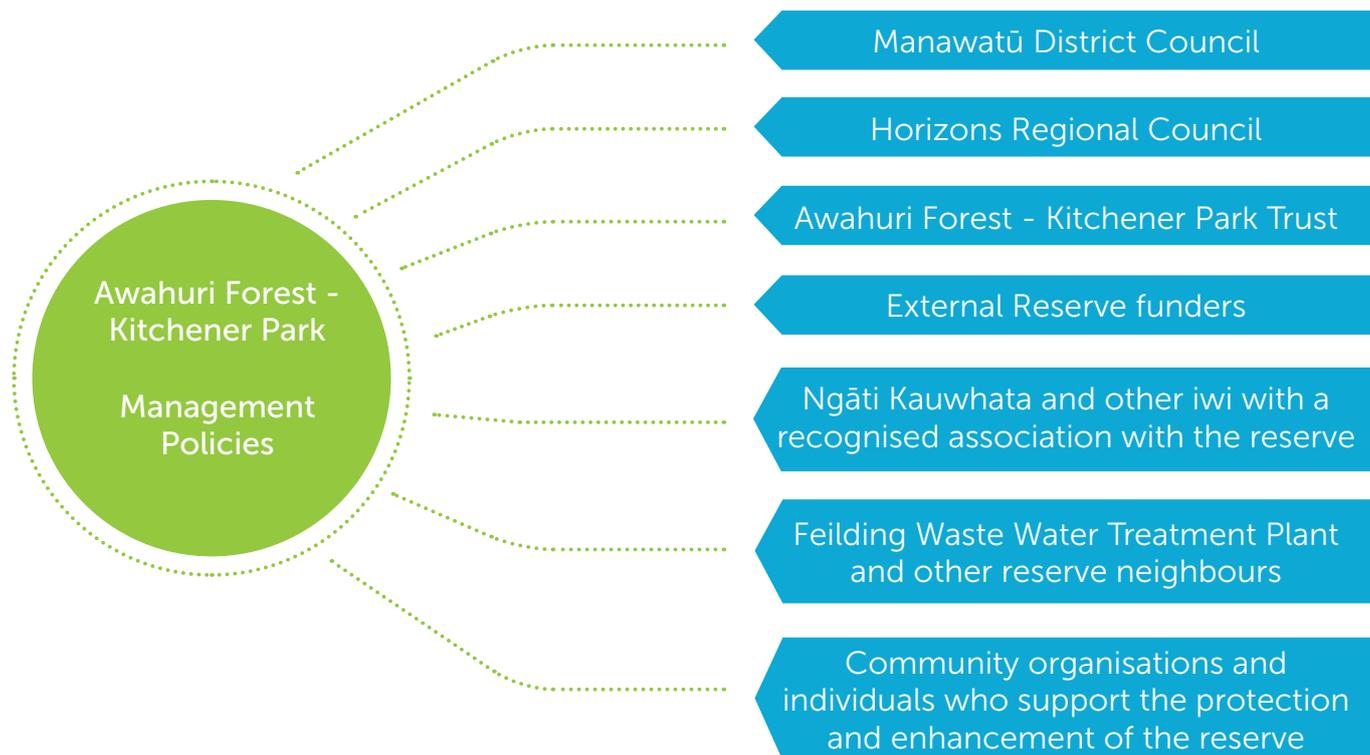


3. Management Policies

Introduction

The policies in this section are a guide to all people and organisations undertaking activities on or near Awahuri Forest-Kitchener Park (see Figure 4). These policies refer to all lands that make up the reserve, including the area, classified Local Purpose and administered by Horizons Regional Council.

Figure 4 People and organisations who may use or refer to the management plan



Resilience

The following policies are aimed at retaining the reserve’s forest and its ecosystems. This is a challenge because land uses in the area surrounding the reserve have changed the hydrological processes which sustain the forest.

POLICIES

1. The indigenous forest on the reserve will be managed as a self-sustaining ecosystem.
2. Measures will be taken to integrate stormwater and flood management with management of the reserve’s semi-swamp forest.
3. Actions that establish foundations for restoration of the reserve’s ecosystems identified in section 4 of this management plan will be implemented subject to funding and resourcing.

Comment

Stormwater and flood management and restoration of wetlands and seasonal waterways are important for the reserve’s ecology. Visitor experience of these landscape features and their interpretation would connect visitors to the forest and the conditions which enable the forest to survive. Section 4 of this management plan identifies a number of projects which lay the foundations for restoration of the reserve’s ecosystem:

4. Opportunities to widen the confluence of the Mangaone West and Makino Streams will be investigated.
5. The establishment of wetlands in buffer areas will be investigated (see Figure 5).

Comment

The Trust has received external funding to purchase property on the northwest reserve boundary (see Appendix 1 for details of this property). This area is prone to flooding and the intention is to develop it for a wetland. Such a low point could provide some protection when the water flow is higher than usual and also contribute to biodiversity and to the visitor experience.

Purchase of this area is also an opportunity to widen the modified confluence of the Mangaone West and Makino Streams, provide a more naturalistic connection, improve the water flow and dissipate some of the energy through this stream section.¹⁴

These works would require working closely with Horizons Regional Council and require resource consent.

6. Tracks near the stream and in low lying floodable areas will be designed and constructed so that they can be realigned after flooding.
7. Floodable tracks and boardwalks will be integrated.

Comment

Tracks and boardwalks in all areas of the park must be designed and constructed so that they can recover after flooding i.e. constructed with technology and materials that make the least impact on the park so that they can easily and inexpensively be realigned and reconstructed. Walking and cycling tracks that have hard surfaces should avoid the low lying and wetter areas.

Figure 5 – Area identified for wetlands



KEY

Areas identified for wetlands

¹⁴ Morphum Environmental, Kitchener Park Hydro-Ecological Assessment. April 2016.



Protection

The following policies are aimed at protecting the forest and its ecology by adding land to the reserve to reduce flood damage and strengthen recreational connections. Protection also includes ensuring that any concessions, utilities, rights of ways or easements and reserve maintenance are appropriate.

POLICIES

Extend reserve protection

8. The Council will declare reserve and manage the area of Awahuri Forest and the Makino Stream south of Kawakawa Road between Awahuri-Feilding Road and the Feilding Waste Water Treatment Plant and manage this area under the policies of this management plan (see Figure 6 for the location of this area).

Comment

This area of just over 8 hectares (Lot 1 DP 468955) was subdivided from land purchased for the Feilding Waste Water Treatment Plant. The intention was to make this land reserve to complement the existing Awahuri Forest-Kitchener Park, give long term protection to this part of the Makino Stream and allow public access.¹⁵ Managing this area of podocarp forest under the policies of this management plan would further protect the forest and stream and allow for recreational connections.

Widen the buffer

9. Once the property immediately north of the reserve has been purchased, the lands will be declared reserve, classified under the Reserves Act and managed under the policies of this management plan (Lot 2 DP78894, Pt Lots 34 DP330 Sec 362 and Sec 361).
10. The Council will investigate options for managing this Council-owned land on the reserve’s eastern boundary under the policies of this management plan (Lot 4 DP 82414 held in Fee Simple, 10.2100 hectares).

Comment

Planting with broadleaf species along the Scenic Reserve’s western boundary would protect the podocarp forest edge. In addition, development of a wetland adjacent to the confluence of the Mangaone West Stream and the Makino Stream as part of flood mitigation would further protect the reserve.

This area has also been identified as a location for a new reserve entrance and carpark with safer turning into and out of Kawakawa Road. Once storm water and flooding are better managed, the development of a new visitor and education centre could be explored. The balance of the land could continue to be used for grazing with fencing between the reserve and grazed land.

Support natural values and ecology

11. Natural values and ecology ¹⁶ of the reserve will be protected from potential adverse effects of management activities, reserve visitor activities and facilities.

¹⁵ Feilding Wastewater Treatment Plant Resource Consents and AEE 2013, Section 10 pages 225 and 242.

¹⁶ Natural values include all types of indigenous land based and aquatic flora and fauna (birds, bats, insects, plants, lichens and moss, invertebrates, fish) and their habitats.

12. Indigenous vegetation, biodiversity and ecosystems will be identified, maintained and enhanced to ensure long-term sustainability.
13. Cycle trails proposed for the reserve by the Trust will be constructed in locations where established trees are avoided and their construction and use do not negatively affect the ecology of the reserve.
14. The database of flora and fauna on the reserve will be regularly revised along with condition assessment and maintenance programmes to keep them in a healthy state as part of the Reserves Asset Management Plan (AMP) database and as part of the ongoing management of the reserve.
15. The reserves will be monitored for the impact of activities on the reserve such as wandering stock, domestic animals, dumping garden waste and other impacts arising from general activities on or adjacent to the reserves. Public awareness of the effects of these activities will also be raised i.e removal of small trees, firewood collection and vandalism.

Figure 6 – Areas proposed to be managed under the policies of this management plan



16. The Council will work with the Trust, Horizons Regional Council and owners of neighbouring properties to improve the ecology of the reserve by facilitating:
 - Weed control on adjacent land along reserve boundaries and along the Mangaone West Stream and the Makino Stream upstream of the reserve
 - Indigenous riparian planting along the streams and neighbouring low-lying wet areas
 - Planting of indigenous species in neighbouring properties along reserve boundaries, prioritising plants propagated from sources within the reserve
 - Maintaining fencing to protect the reserve from wandering stock
17. Vehicle access to the reserve will be closed nightly unless special arrangements are made for specific events or activities.

Concessions

18. Concessions (leases, licences or permits) will be considered for activities that:
 - Are appropriate to the reserve and its Scenic Reserve classification
 - Will help achieve management plan objectives
 - Will have no adverse impact on the reserve and existing activities
19. Concessions will be assessed against the following criteria:
 - The applicant demonstrates the ability to avoid, remedy or mitigate adverse effects on the natural, historic and cultural values of the reserve
 - Undertakes conservation activities of the reserve
 - Demonstrates an understanding of Ngāti Kauwhata’s interests, cultural values and tikanga
20. When assessing applications for concessions the Council will consult with the Trust and have particular regard to their view.
21. The placement of utilities, rights of way, other easements or communication stations within the reserve will generally not be allowed unless exceptional circumstances apply.¹⁷
22. Where exceptional circumstances apply and rights of way, other easements or communication stations are placed on, over or through the reserve, they will be placed unobtrusively with minimal impact on the functioning and amenity values of the reserve. Power must go underground or be solar.
23. With the prior consent of the administering body, network utility operators with existing works on the reserve will be permitted conditional access to the reserve to inspect, maintain, operate or carry out minor upgrade or replacement of these works subject to the provisions of the relevant empowering Acts and Regulations.¹⁸

Comment

The reserve currently has an easement to convey water and electricity. The easement runs north to south parallel to Awahuri-Feilding Road.

The Reserves Act 1977 and the RMA set out the types of rights of way, other easements or communication stations permitted on reserves and the processes required to be undertaken.

In addition, the RMA sets out the requirements for public notification of any proposed work involving utilities, consideration of alternative sites, assessment of effects and avoiding, remedying or mitigating adverse effects.

These policies on utilities, rights of way and easements are additional to the Resource Management Act and Reserves Act requirements.



Connections

Policies in this section cover trail connections, connections between people, connections between the Council, the Trust and other organisations.

¹⁷ Exceptional circumstances’ allows for the placement of a utility on a reserve to be considered (rights of way, other easements or communications infrastructure) when the reserve affords the only site available and all other sites or options are proven to be unsuitable and when the utility is an essential service for wider community benefit. Impacts will be taken into account and the normal notification and consultation process would apply prior to making a decision for approval or otherwise. This does not preclude requirements under both the RMA resource consent process and delegated authority under the Reserves Act.

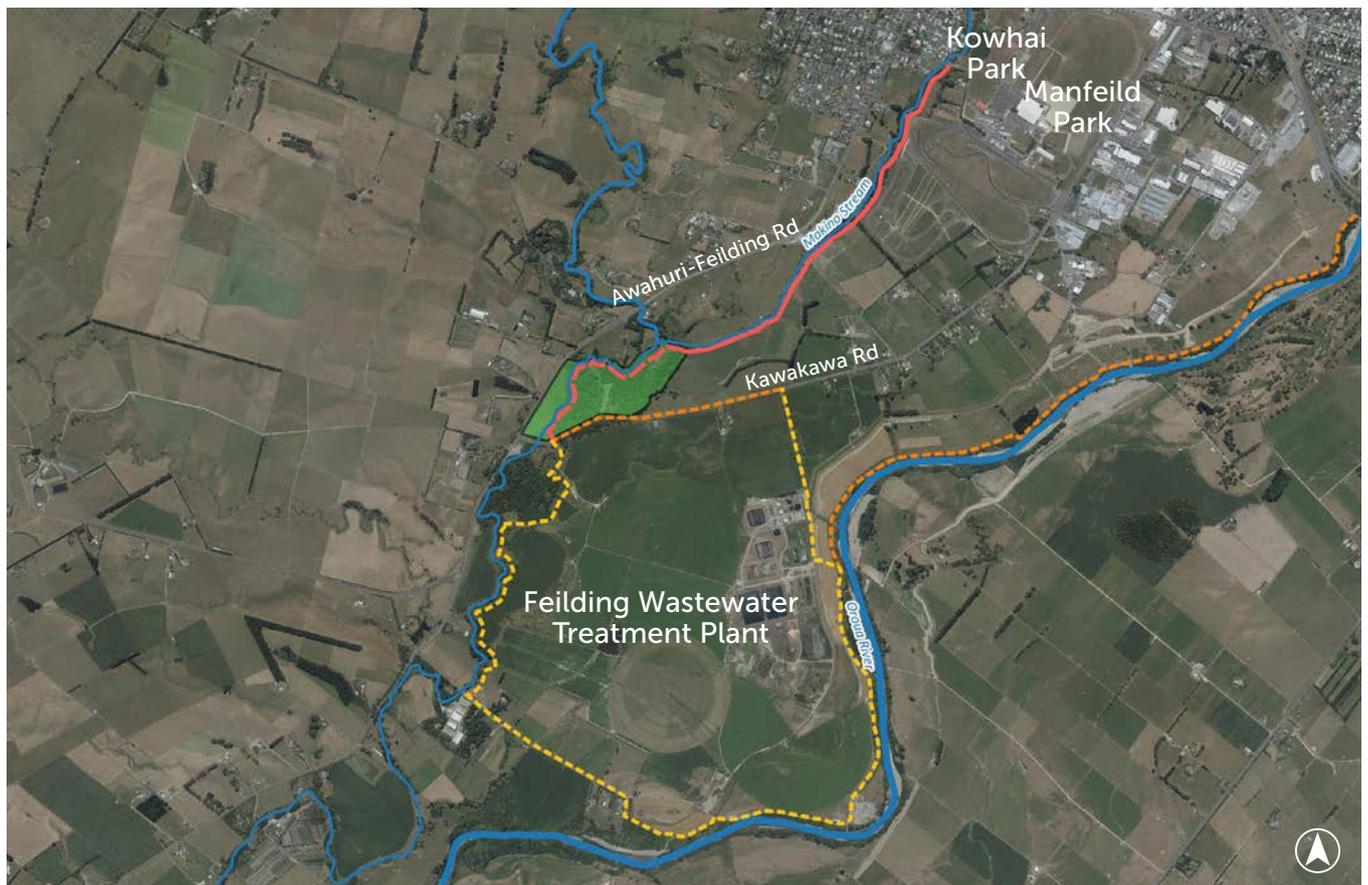
¹⁸ The Electricity Industry Act 2010, Electricity Act 1992, Electricity (Safety) Regulations 2010, NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances and Electricity Engineers Association Safety manual – Electricity Industry (SM-EI).

POLICIES

Trail connections

24. Connections between tracks within the reserve and the wider trail network will be improved and developed in line with the Council's Walking and Cycling Strategy. This allows the reserve to become part of the wider trail network as well as a destination for walkers, cyclists and dog walkers. (See Figure 7).

Figure 7 – Proposed trail connections



KEY

| | | | |
|--|--|--|---|
| | Existing walk and cycleway | | Walk and cycleway proposed as part of Feilding Wastewater Treatment Plant |
| | Walk and cycleway extension within Awahuri Forest-Kitchener Park | | Possible walk and cycleway connections |

25. Developing safer walk and cycle access between parts of Awahuri Forest on both sides of Kawakawa Road will be investigated once a trail has been constructed in the area between Awahuri Forest south of Kawakawa Road and the Feilding Wastewater Treatment Plant.

26. Access, walkways and tracks within the reserve will be accessible where possible for people who have restricted mobility.

Comment

Improvement of the walking and cycling trail along the Makino Stream between Feilding and the reserve will enable more walkers and cyclists to access the reserve. Connections with the wider trail network will mean that the reserve will become a feature along trails and help the reserve and its special features to become better known.

Connections with tangata whenua

27. Ngāti Kauwhata will be engaged with through consultation regarding the management of the reserve where major developments are proposed and activities are likely to disturb or impact on the cultural significance of the reserve.

Comment

Ngāti Kauwhata has three marae in the immediate area (Aorangi Marae, Kauwhata Marae and Te Iwa Marae). The Council committee Ngā Manu Tāiko Manawatū represents Māori of the district and will have a say in Council decision making regarding this draft plan.

The environment is integral to Māori identity and culture. Māori sees the environment as an interconnected whole and gain a sense of identity and belonging from their connection with the natural environment. Iwi, hapū and whānau derive their sense of mana (authority and prestige) through this connection.

The degradation of the natural environment can weaken this connection, with consequences for individual and social well-being. Enduring and effective partnerships with iwi, hapū and whānau achieve enhanced conservation of natural, historic and cultural values.

Meaningful and early engagement through consultation on issues that affect their interests in the reserve is important in forming and maintaining these partnerships.

The types of activities where consultation may be required include flood management, development of pest and weed eradication plans and indigenous revegetation plans, toilet facilities, sewage disposal, identification, research and protection of cultural heritage, information, interpretation, signage and changes to management plans.

28. Tangata whenua access to cultural materials will be facilitated in accordance with legislative requirements.
29. If activities or work on the reserve uncovers archeological sites the Accidental Discovery protocol will be followed. Archaeological sites include oven stones, charcoal, shell middens, ditches, banks, pits, building foundations, artefacts of Māori and European origin or human burials (see Appendix 3 for the Accidental Discovery Protocol).

Connections with the Trust, the wider community, reserve neighbours, statutory agencies and external funding agencies.

30. The Council and the Trust will work together to develop reserve resilience and to protect and enhance the reserve, its ecology and visitor facilities according to the vision, objectives and policies of this management plan.
31. The Council and the Trust will provide opportunities for the community to get involved and work with the Council and the Trust in a way that supports the management of the reserve. This may include:
 - Activities with Enviroschools



- Skills-based volunteering that utilises specialised skills of individuals
- Scientific studies and research into the ecology of the reserve, particularly where this will assist in more effective management of the reserve

Comment

The Council manages the reserve on behalf of the community, and in doing so, recognises that many people and groups have an interest in how the reserve is managed. These interests reflect the motivations of different people and groups.

The Trust and the Council can advance programmes for the reserve by utilising volunteer, public environmental education programmes.

32. The Council and the Trust will work with private landowners of neighbouring properties to maintain stock proof fences on reserve boundaries, plant and animal pest and weed control, buffer indigenous species planting along boundaries using plants propagated from the reserve where possible and other issues.
33. The Council and the Trust will work with the Department of Conservation on matters to do with the reserve and with Horizons Regional Council on management of the Local Purpose Reserve (Section 359), weed, animal and plant pest management, and flood management at the reserve as well as any flood protection work directly upstream of the reserve.

Comment

Flood protection activities undertaken by Horizons Regional Council on or outside of reserve boundaries may influence or affect the reserve. For example, raising the stopbank immediately upstream of the reserve may increase velocity and risk to the forest in the reserve downstream.¹⁹

The Council and Horizons Regional Council have an agreement to work together over the weed management of the Local Purpose Reserve.²⁰

34. The Trust will seek funding from external organisations and individuals and establish on-going relationships with funders.

Comment

The Council funds capital works that are part of core services for reserves. However, levels of service are limited to the level of funding available through rates and other sources. The Council's Long Term Plan 2018-28 has allocated funding to Awahuri Forest – Kitchener Park projects.

Community aspirations for the reserve, represented by the Trust, are higher than this level of funding available for core reserve services. Therefore, one of the key responsibilities of the Trust is to seek external funding to meet management and development objectives for the reserve.

¹⁹ Boffa Miskell, Kitchener Park Scoping and Implementation Plan, 2017, SW03 page 8.

²⁰ Horizons Regional Council, Kitchener Park Weed Management Plan.

4. Development and Implementation

The development plan establishes a direction for change that will help achieve the vision and objectives for the reserve (see Figure 8). The implementation plan identifies a series of actions, responsibilities and suggests a timeline for implementation.

Implementation of the development plan depends on resourcing. There is no requirement for the Council or the Trust to implement the plan, but both the development and implementation plan will enable them to strategically plan ahead.

Aims

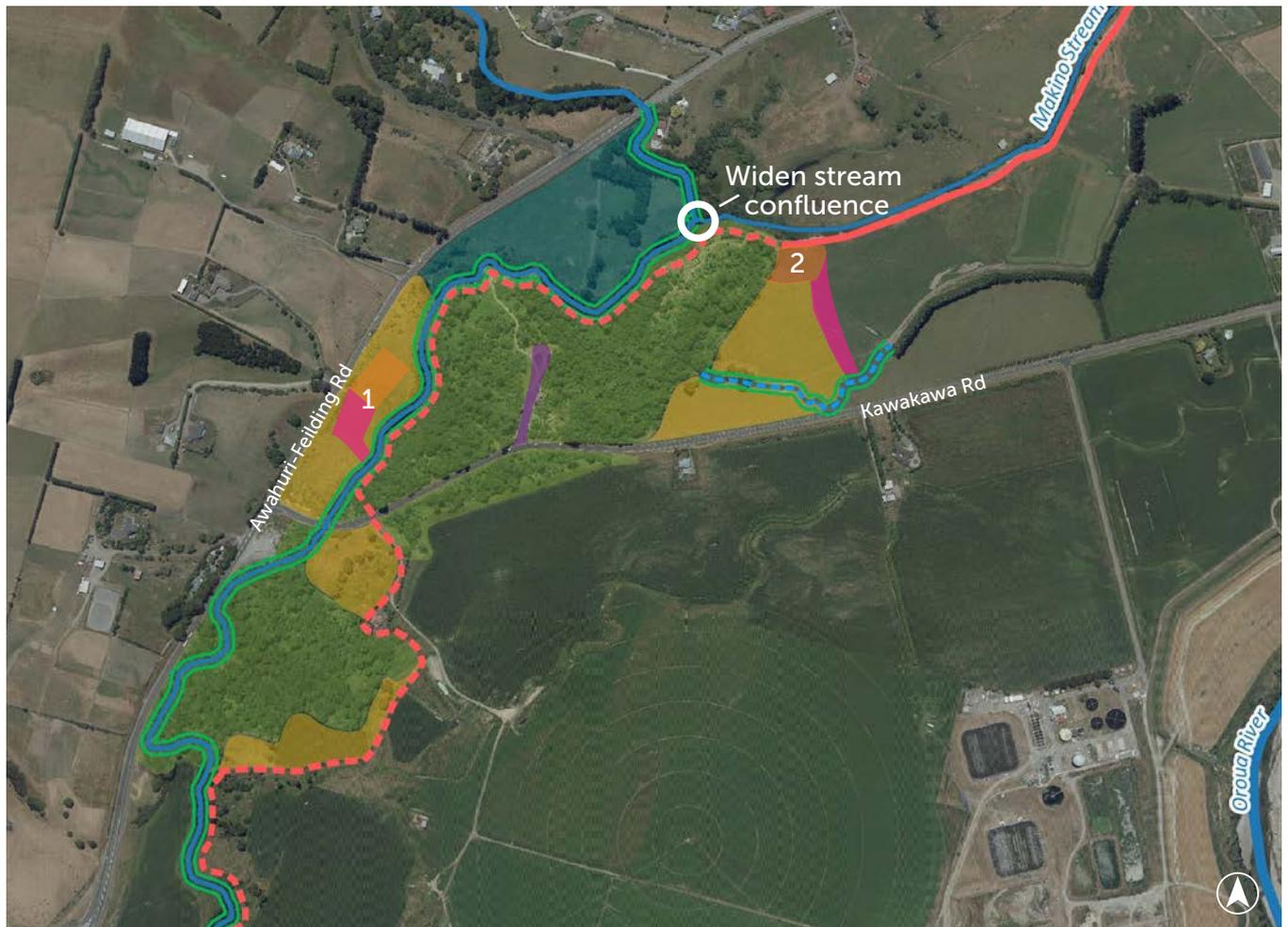
- Control weed, plant and animal pests
- Plant oxbows, wetlands and seasonal streams using riparian plant species
- Plant broadleaf forest species at the edges of the podocarp forest with visitor trails and picnic areas
- Develop a new reserve entrance with safe turning into and out of the reserve, more capacity for car and bus parking, visitor information and wayfinding
- Develop visitor access, wayfinding and interpretation of the reserve's natural and cultural features
- Develop walk and cycleway connections through the reserve as part of the District's walking and cycling network
- Develop a new visitor and education centre

POLICIES

35. Development and improvement of the reserve and visitor experience of the reserve will be based on the Development Plan (see Figure 8).
36. Development and improvement of the reserve, signs and interpretation will reflect European and Māori interest in the reserve and its values.
37. Implementation of the development plan will be based on the actions identified in the Implementation Plan.
38. The location of walk and cycleway connections through the reserve will be identified in consultation with the Awahuri Forest-Kitchener Park Trust.
39. Signage will be consistent, kept to a minimum and used to direct and inform visitors and interpret reserve features and processes.w



Figure 8 –Development Plan



KEY

- | | | | |
|---|---|--|---|
|  | Podocarp forest with riparian planting of oxbows and seasonal streams, weed and pest species control and visitor access along boardwalks and trails |  | Existing entrance upgraded |
|  | Wetland areas with interpretation |  | Broadleaf forest for edge protection with infill podocarp planting, visitor trails and picnic areas |
|  | Options 1 and 2 for new entrance and parking location |  | Options 1 and 2 for visitor/tourist/education centre location |
|  | Existing walk and cycleway |  | Walk and cycleway proposed as part of Feilding Wastewater Treatment Plant |
|  | Walk and cycleway extension within Awahuri Forest-Kitchener Park |  | Possible walk and cycleway connections |

Implementation

This section outlines implementation throughout the life of this management plan according to the vision, objectives, policies and the development plan in Figure 8. Implementation is divided into three stages: the emphasis in Stage 1 is on planning and raising funds, in stage 2 on physical works and in stage 3 on long term reserve management, protection and development.

ACTIONS

NOTES

RESPONSIBILITY

During this stage, the emphasis is on planning and raising funds:

| | | |
|---|---|---------------------------------|
| <p>1. Workshop with Horizons Regional Council on a strategy and plan to reduce the effects of high rainfall and flood events:</p> <ul style="list-style-type: none"> Widen the confluence of the Mangaone West and Makino Streams Develop wetlands on low-lying land on the reserve's northern boundary and Council-owned land west of the reserve on the true left bank of the Makino Stream Upstream weed management | <p>Flood mitigation work and work upstream from the reserve along the Makino Stream would need to be carried out with Horizons Regional Council.</p> <p>Expertise required:</p> <ul style="list-style-type: none"> surveyor ecological engineer ecologist landscape architect | <p>Trust with MDC & HRC</p> |
| <p>2. Survey ephemeral oxbows and water courses</p> | | <p>Trust</p> |
| <p>3. Develop a riparian management plan for the streams, wetlands and oxbows</p> | | <p>Trust with HRC</p> |
| <p>4. Develop detailed plans and apply for resource consent for physical works to do with streams, wetlands and detention area</p> | | <p>Trust with MDC & HRC</p> |
| <p>5. Develop a flood response plan for remedial work after flood events</p> | | <p>Trust with MDC & HRC</p> |
| <p>6. Plan for seed collection, their propagation and care</p> | | <p>Trust</p> |
| <p>7. Prioritise areas for weed control and follow-up planting</p> | | <p>Trust</p> |

| | | |
|--|---|--------------------------|
| 8. Plan for pest and weed control identifying pests and weeds, prioritising control and identifying methods and monitoring | | Trust with HRC |
| 9. Weed removal upstream from the reserve along the Mangaone West and Makino Streams, plant and maintain to reduce reinfestation | Public awareness programme and voluntary groups for weed management and riparian planting upstream of the reserve | MDC with the Trust & HRC |
| 10. Develop plans for a new and safer visitor entrance and parking area | <p>Expertise required:</p> <ul style="list-style-type: none"> • A traffic engineer for location and design of the entrance • A landscape architect for the design of the entrance and parking | Trust with MDC |
| 11. Develop design guidelines for signage, interpretation, seating, platforms along boardwalks, barriers, gates, fences and other structures ²¹ | <p>Expertise required:</p> <ul style="list-style-type: none"> • Designer signage, interpretation, platforms, seating, barriers, gates, fences | Trust with MDC |
| 12. Declare the purchased land on the reserve's northern boundary reserve and classify under the Reserves Act | | MDC |
| 13. Declare Awahuri Forest south of Kawakawa Road reserve and classify under the Reserves Act | | MDC |

²¹ Preliminary Boardwalk Routes and Interpretation Concepts were developed by Boffa Miskell in 2015. A sign 'family' that is consistent throughout the reserve is to be confirmed.

ACTIONS

NOTES

RESPONSIBILITY

This stage is about physical works:

| | | |
|---|---|------------------------------------|
| <p>14. Carry out physical works to do with:</p> <ul style="list-style-type: none"> • Shaping seasonal oxbows, wetlands and water courses within the reserve • Widening the confluence of the Mangaone West and Makino Streams | | Trust with MDC |
| <p>15. Carry out physical works for wetlands</p> | | Trust with HRC |
| <p>16. Plant wetland areas and ephemeral oxbows and streams</p> | | Trust |
| <p>17. Weed removal in medium priority areas and plant to reduce weed reinfestation</p> | | Trust |
| <p>18. Construct the new reserve entrance and parking area</p> | | Trust with MDC |
| <p>19. Identify locations for and install new paths within the reserve that connect to the existing and proposed wider walking and cycling trail network</p> | <p>Walk and cycle connections through the reserve are part of the wider walking and cycling trail network and funded by MDC. This work is scheduled for 2025-26 in Council's Long Term Plan 2018-28</p> | MDC in consultation with the Trust |
| <p>20. Construct a safer crossing for walkers and cyclists on Kawakawa Road between northern and southern parts of Awahuri Forest</p> | | MDC |
| <p>21. Install way finding signage, interpretation, seating and platforms along paths and boardwalks</p> | | |

ACTIONS

NOTES

RESPONSIBILITY

This stage concerns long term management of the reserve and its forest, streams and wetlands, protection through buffer planting and development of visitor/tourist/education facilities:

| | | |
|---|--|----------------|
| 22. Plant broadleaf forest colonising species on Council-owned land along the reserve's eastern boundary as a buffer to the podocarp forest. Develop open picnic areas | | Trust with MDC |
| 23. Plant podocarps amongst broadleaf colonising species | | Trust |
| 24. Release young trees from weeds in the reserve area along Awahuri-Feilding Road | | Trust |
| 25. Weed removal in low priority areas and plant to reduce weed reinfestation | | Trust |
| 26. Develop a new visitor/tourist/education centre. A feasibility study would assist the Trust in establishing the viability of the centre and support applications for external funding. The study would include analysis of visitor and tourist attractions in the wider Manawatū and the contribution the reserve makes to tourism | <p>Expertise required:</p> <ul style="list-style-type: none"> • Visitor and tourism resource consultant to assess the feasibility of a centre • A landscape architect for visitor centre location, associated wetland and centre amenity areas • A architect for visitor centre elevated in a wetland area • A designer for interpretation | Trust |

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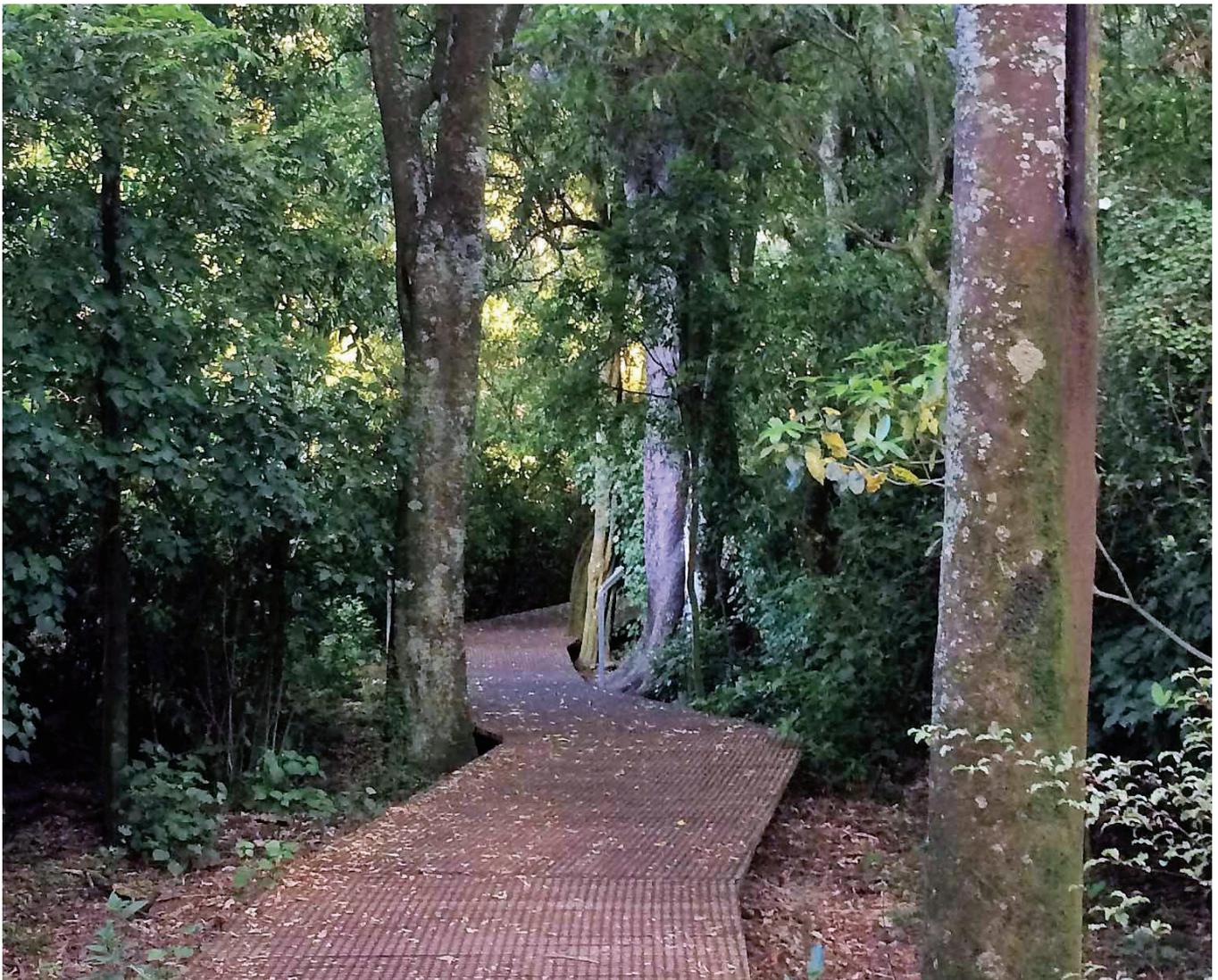




Glossary

| | |
|---------------------------------|--|
| Asset | Something of value that the Council owns on behalf of the people of Manawātū District Council, such as roads, drains, parks and buildings. |
| Asset management | Strategy which helps with the physical and financial management of Council assets. |
| Amenity values | Natural or physical qualities and characteristics of an area that contributes to peoples appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes (Resource Management Act). |
| Biodiversity | The variety of all biological life – plants, animals, fungi and micro-organisms. |
| Council Controlled Organisation | A trust or similar organisation with a majority of Council controlled votes or Council-appointed trustees. |
| Cultural heritage | Includes archaeological, traditional, historic and commemorative sites, buildings, objects, areas and trees. |
| Cultural sites | Includes Māori cultural heritage sites, traditional sites, Wahi Tapu sites. |
| Cultural materials | Plants, plant materials, and materials derived from animals, aquatic life or birds within the reserve and which are important to Māori in maintaining and expressing cultural values and practices. |
| Environment | Includes: <ul style="list-style-type: none">a) Ecosystems and their constituent parts, including people and communities; andb) All natural and physical resources; andc) Amenity values; andd) The social, economic, aesthetic, and cultural conditions which affect the conditions stated in paragraphs (a) to (c) (Resource Management Act). |
| Facilities | Buildings, structures, equipment or resources that enable recreational use and enjoyment of a reserve. |
| Indigenous Vegetation | Any naturally occurring association of indigenous plant species. |
| Iwi | Tribe, people (Waitangi Tribunal Report [Wai27] 1991). |
| Mana whenua | Refers to the iwi and hapū who have traditional authority over land and power associated with possession and occupation of tribal land. |
| Natural features | Includes features on a reserve that are part of nature and may include individual plant or tree specimens and ecosystems that by their nature require special care and attention for their preservation. |
| Natural resources | Includes plants and animals and their habitats, landscape and landforms, geological features, systems of interacting living organisms, and their environment (Conservation Act). |

| | |
|----------------|--|
| Natural values | Natural values include all types of indigenous land based and aquatic flora and fauna (birds, bats, insects, plants, lichens and moss, invertebrates, fish) and their habitats. |
| Open space | Any area of land or water with recreational, ecological, landscape, cultural and/or historic value which provides public access. |
| Resilience | A concept that underpins management of the reserve and refers to the ability to recover from an event such as flooding. |
| Riparian | The area along streams, rivers, lakes and wetland. These areas have important roles in retaining nutrients and soil, habitat biodiversity and cleaner water. |
| Reserve | Any open space, plantation, park, garden or ground set apart for public recreation or enjoyment which is under the management or control of the Council and includes all land administered by the Council under the Reserves Act. |
| Sustainability | A process of ensuring the wise use and management of all resources within a framework in which environmental, social, cultural and economic wellbeing are integrated and balanced. It means meeting the needs of today without adversely impacting on the needs of future generations. |







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