

6.3 Ecological values

Kepa Bush is a site of very high ecological value.

- It is the largest area of indigenous forest on the central Auckland Isthmus,
- It comprises of native trees and bush of various age classes and quality, including some coastal forest remnants,
- Watercourses in the reserve are home to indigenous fish species,
- Indigenous birds common throughout the reserve include tui, kereru, grey warbler, silvereye, kingfisher and fantail,
- Birds visit the site and help regenerate the large-fruited indigenous species. They also bring pest plant seeds,
- New indigenous species will continue to establish as Kepa Bush continues to develop and become more humid,
- Kepa Bush plays an important role as seed source for regeneration of Pourewa Reserve, and potentially for other future bush regeneration / conservation projects in the local area,
- The site has many mature Kohekohe, including a 300 year old specimen.

Weed, possums and rodents have been managed since 2002 by volunteers and contractors.





7.0 Consultation summary

Pre-design consultation

To date, pre-design consultation has been carried out with the following parties:

- Andrew Brown, Planning Manager, Ngāti Whātua Ōrākei Whaia Maia Ltd (NWŌ) (November 2017)
- John La Roche, on behalf of Friends of Kepa Bush (meeting/site walk over - 13th December 2017)
- Community Facilities staff (maintenance and renewals coordinators)

Key points raised at these sessions is summarised in the adjacent table, along the design response.

Draft concept consultation

The draft plan was reviewed by Andrew Brown (NWŌ) in early March 2018, and John La Roche in early April 2018. Both parties were supportive of the plan and expressed a willingness to continue to work together on any improvements within the reserve and on adjacent land going forward.

NWŌ provided the indicative location of future paths within Pourewa Reserve, along with possible locations for a connection into Kepa Bush from Pourewa Reserve. These options have been incorporated into the plan.

STAKEHOLDER	KEY CONSULTATION FEEDBACK	DESIGN RESPONSES
Friends of Kepa Bush and Eastern Bays Songbird Project	<p>RESERVE VALUES</p> <ul style="list-style-type: none"> • Acknowledgment that the bush is the most important piece of bush in the central isthmus • Glow worms and kōkopu present in the creek • Important to retain the tranquillity of the reserve <p>INFRASTRUCTURE</p> <ul style="list-style-type: none"> • Improvements required to existing paths at the reserve entrance to remove trip hazards and sections of cracking and slumping • Improvement to existing bush tracks required, to fix scoured sections and stormwater damage • Entrance path at Kepa Road needs to connect up to the bush tracks • Signage is in a run down state and needs to be improved • Consideration of the inclusion of interpretative signage through the reserve <p>WEEDS/PEST CONTROL</p> <ul style="list-style-type: none"> • On-going predator control is carried out at the reserve (possums and rats) by volunteer groups and is essential for the reserve • Weed control required and encourage residents to remove seed heads from bangalow palm and phoenix palms to stop seedlings being carried into the park by birds • Planting is important but needs to be done with caution, with appropriate species planted in the right locations <p>MAINTENANCE AND DEVELOPMENT OPPORTUNITIES</p> <ul style="list-style-type: none"> • Fallen trees on site should be cut up with a chainsaw to allow native seedlings to survive • Opportunity to connect the reserve with the Pourewa Valley and Ōrākei Spine, however bike access to/ through the reserve should be restricted as this would destroy the tranquillity of the bush • Opportunity to use the site for environmental education, and partner with local schools and institutions • Investigate possible lookout point closer to Colenso Place park entrance • Rubbish dumping from some neighbouring properties into the reserve, volunteer groups looking to organise working bee to clean up • NWŌ would like to source seedlings from the bush for planting in the adjacent horse paddocks (Pourewa Reserve) 	<ul style="list-style-type: none"> • Tranquility of the bush to be maintained • Recommend pedestrian access only within the reserve • Signage and tracks renewal works planned • Two new sections of path proposed to connect entrance path to bush tracks • Locations for interpretative signage outlining the ecology and history of the site identified on plan • Plan to incorporate connections to Pourewa Valley and Ōrākei Spine
Ngāti Whātua Ōrākei	<ul style="list-style-type: none"> • Consider provision of a future connection from the Kepa Bush track network to the Pourewa Valley • Consider how the surrounding urban area could be developed with a network of ecological corridors and habitat patches to increase the ecological functionality and sustainability of the area and Kepa Bush • Consider opportunities to provide connection to the Eastridge Shopping Centre area north of the reserve • Improve opportunities for people to connect with nature and for ecological education • Consider opportunities for mana whenua expression • Allow for eco-sourcing of seeds from plant stock to restore the surrounding landscape 	<ul style="list-style-type: none"> • Inclusion of a future connection into Pourewa - final path location to be worked out in collaboration with NWŌ • Auckland Council has commissioned an ecological review in regards to increasing connectivity to other areas of ecological value within the wider landscape, on both public and private land, refer to appendices for draft report • An additional connection into the reserve from Eastridge Shopping Centre was investigated but is not supported at this time
Community Facilities	<ul style="list-style-type: none"> • Discussions held around the planned renewal projects for the reserve signage and paths/tracks • Discussions held around existing maintenance routines and any factors that should be considered or factored into the development of this plan 	<ul style="list-style-type: none"> • Information and locations of proposed renewal works has been incorporated into the development recommendations









8.0 Development recommendations






LEGEND

-  Site boundary
-  Archaeological Site
-  Stream/waterway
-  Specimen tree
-  Vegetation
-  Development zone extents
-  Viewshafts



PATHS

-  Existing asphalt path
-  Proposed asphalt path
-  Existing gravel path
-  Proposed/future path connections
-  Boardwalk
-  Footbridge
-  Viewing platform
-  Proposed 'Ōrākei Spine' cycleway

SIGNAGE

-  Signage installed as part of upcoming renewals
-  Proposed entrance sign (pole or plinth) as part of future development
-  Proposed bollard wayfinding sign as part of future development

SITE FURNITURE AND STRUCTURES

-  Bench
-  Lookout Point

KEY

- 1 Path upgrades / improvements to remove trip hazards from park entrance path (as part of upcoming renewals).
- 2 New asphalt path connections from the end of existing sealed path to the beginning of the bush tracks.
- 3 Clear planting and or/crown lift vegetation around base of the trees within the picnic area to improve CPTED by opening up sightlines across this area.
- 4 New asphalt path connection into the park from Colenso Place.
- 5 Proposed options for path connection into Pourewa Reserve. NOTE only one connection proposed. Location to be selected in collaboration with NWŌ to ensure alignment with Pourewa Valley master plan.
- 6 Indicative location of future footbridge/ boardwalk connection across Pourewa Creek to link up to the 'Ōrākei Spine' cycleway.

PATH HIERARCHY PLAN



KEY DEVELOPMENT PRINCIPLES

• LOW IMPACT DEVELOPMENT



Development other than tracks, paths and lookouts to be restricted to the open grassed areas at the Kepa Road and Colenso Place entrances to protect the ecological values of the bush

• ECOLOGICAL CONNECTIVITY



Increase connectivity to other areas of ecological value within the wider landscape

9.0 Action plan

DELIVERY :
 Short term: 1-5 years
 Medium term: 5-10 years
 Long term: 10+ years

ITEM/PROJECT	DESCRIPTION	NOTES	DELIVERY	INDICATIVE COST
1. Path upgrades	Maintenance, repairs and upgrades to parts of the track network to address areas that are a health and safety risk, and to minimise damage to vegetation, or control erosion and run-off as per proposed renewal works	By others - work scheduled to commence soon	Short term	Budget approx. \$385k - Renewals
2. Signage upgrades	Removal of deteriorated, damaged and redundant signage and replacement with new signage	By others - works scheduled to commence soon	Short term	Budget approx. \$25k - Renewals
3. Vegetation Clearance	Removal of self seeded vegetation from the base of the existing trees and crown lift existing trees (where appropriate) in the grassed/picnic area at the Kepa Bush entrance to open up sight lines across this area		Short term	TBC
4. Path connections through picnic area	Provision of sealed path (i.e. asphalt to match existing path from Kepa Road) from the end of the existing path, across the grassed area to the beginning of the two bush tracks to provide all weather access	Assumes 1.8m wide path	Short term	TBC
5. Colenso Place path connection	Provision of sealed path across an existing area of grass from Colenso Place footpath to the beginning of the Kepa Bush track	Assumes 1.8m wide path	Short term	TBC
6. Pourewa Valley path connection	Investigate new/future path connection into Pourewa Valley, location to be decided in collaboration with Ngāti Whātua Ōrākei to ensure it ties into the Pourewa Valley Masterplan works	Ongoing co-ordination required as projects progress. Paths in Kepa Bush to be installed in conjunction with works/path connections occurring on Pourewa Valley	TBC	TBC
7. Ōrākei Spine connection	Investigate new/future path connection via a boardwalk or bridge across Pourewa Creek to the proposed Ōrākei Spine cycleway	Dependent on construction of cycleway and negotiations with landowners around the boardwalk/bridge crossing	TBC	TBC

10.0 References

- Auckland Unitary Plan (Operative in Part)
- Blom, W. M. (27-28 March 2015). *Pourewa and Kepa Bush BioBlitz, A summary report of the species found*. Auckland War Memorial Museum
- Cusens, J. (February 2018). *Ecological Input for the Kepa Bush Integrated Plan*. Wildlands
- Collett, G. (4 May 2017). *Kepa Bush, Mission Bay - Proposed track upgrade (Stage 2, 2017), Arboricultural review of the proposed work & Tree Protection Procedure for proposed works*. Geotree Limited
- Foster, R. (March 2017). *Kepa Bush Reserve: Path Renewals Stage II, Archeological Assessment*. Russell Foster and Associates
- Gardner, R. (15 August 2009). *Kepa Bush Reserve, Ōrākei*. Retrieved from: [http://bts.nzpcn.org.nz/bts_pdf/ABJ64\(2\)2009-141-42-Kepa.pdf](http://bts.nzpcn.org.nz/bts_pdf/ABJ64(2)2009-141-42-Kepa.pdf)
- Richmond, T. (May 2017). *Assessment of Environmental Effects, Kepa Bush pedestrian track works (stage 2)*. Richmond Planning Limited



APPENDICES

Appendices

A. Te Aranga Design Principles

The New Zealand Urban Design Protocol (UDP) was published by the Ministry for the Environment in March 2005. It was recognised that a clear Māori voice and meaningful involvement in the creation of the UDP had been absent, and that the process undertaken did not adequately engage with Māori interests.

In response to this, and with the support of the Ministry for the Environment and Te Puni Kōkiri, a hui of Māori professionals working across the design disciplines, the resource management sector and representatives of iwi/hapū organisations from across Aotearoa gathered at Waitākere in June 2006 and then in November 2006 at Te Aranga Marae in Flaxmere to discuss and formulate a draft National Māori Cultural Landscape Strategy. The resulting Te Aranga Māori Cultural Landscape Strategy represented the first concerted and cohesive effort by Māori to articulate Māori interests and design aspirations in the built environment.

The Te Aranga Māori Design Principles are a set of outcome-based principles founded on intrinsic Māori cultural values and designed to provide practical guidance for enhancing outcomes for the built environment. The principles have arisen from a widely held desire to enhance mana whenua presence, visibility and participation in the design of the physical realm.

The Te Aranga Design Principles:

1 MANA Rangatiratanga, Authority



Outcome:

The status of Iwi and Hapū as mana whenua is recognised and respected as a council partner.

- *Ngāti Whātua Ōrākei identified as mana whenua of the area*

2 WHAKAPAPA Names and Naming



Outcome:

Māori names are celebrated.
Naming opportunities are supported.

- *Investigate naming opportunities*

3 TOHU The Wider Cultural Landscape



Outcome:

Opportunities should be taken through the design of proposals, to promote cultural heritage and incorporate mana whenua creative expression.

- *Ensure visual and physical connections to the wider landscape are made, including views to Pourewa Creek and physical connections to the 'Ōrākei Spine' and Pourewa Valley*

4 TAIAO

The Natural Environment



Outcomes:
The natural environment is protected, restored and enhanced.

- *Protection and enhancement of all native ecosystems*

5 MAURI TU

Environmental Health



Outcomes:
Environmental health is protected, maintained and/or enhanced.

- *Allow for eco-sourcing of seeds for plant stock to restore the surrounding landscape*
- *Eradication of plant and animal pests*

6 MAHI TOI

Creative Expression



Outcomes:
Iwi/hapū narratives are captured and expressed creatively and appropriately through engagement with mana whenua.

- *Investigate art opportunities*

7 AHI KA

The Living Presence



Outcomes:
Mana whenua live, work and play within their own role.

- *Educate through restoration*

B. Planting List

Based on BioBlitz survey report held in March 2015

Botanical Name	Common Name	Location
<i>Alectryon excelsus</i>	Titoki	Uncommon
<i>Apodasmia similis</i>	Oioi	Fringe of bolboschoenus area
<i>Avicennia marina</i>	Grey mangrove	Fringe of the open front edge bolboschoenus area
<i>Beilschmiedia tarairi</i>	Taraire	Uncommon
<i>Bolboschoenus medianus</i>	Purua grass	Eastern of Kepa Bush Creek entering tidal Pourewa Creek
<i>Carex geminata</i>	Cutty grass	In the freshwater behind the edge of bolboschoenus area
<i>Carex virgata</i>	Swamp sedge	In the freshwater behind the edge of bolboschoenus area
<i>Carpodetus serratus</i>	Putaputaweta	Gully bottom and forest area
<i>Coriaria arborea</i>	Tutu	Below Thatcher St over the tidal creek
<i>Cordyline australis</i>	Cabbage tree	Entrance area
<i>Corynocarpus laevigatus</i>	Karaka	Gully bottom, especially below Thatcher St over the tidal creek
<i>Cyathea dealbata</i>	Ponga	Common throughout gully bottom
<i>Dicksonia squarrosa</i>	Wheki	Eastern gully floor
<i>Dysoxylum spectabile</i>	Kohekohe	Dominant on site
<i>Elatostema rugosa</i>	Parataniwha	Along the stream bank (planted on June 2013 by Te Ngahere)
<i>Grevillea robusta</i>	Silky oak	Near the centre of Kepa Bush
<i>Griselinia lucida</i>	Akapuka	Entrance area
<i>Hebe stricta</i>	Koromiko	Entrance area
<i>Hedycarya arborea</i>	Pigeonwood	Forest area
<i>Hoheria populnea</i>	Houhere	Higher slope
<i>Hymenophyllum flabellatum</i>	Filmy fern	Eastern gully floor
<i>Hymenophyllum rarum</i>	Narrow filmy fern	Eastern gully floor
<i>Juncus kraussii</i>	Sea rush	Fringe of bolboschoenus area
<i>Knightia excelsa</i>	Rewarewa	Above Pohutukawa canopy and along track margins
<i>Kunzea ericoides</i>	Kanuka	Higher slope and entrance area
<i>Laurelia novae-zelandiae</i>	Pukatea	
<i>Leptospermum scoparium</i>	Manuka	Higher slope and entrance area
<i>Meliccytus ramiflorus</i>	Mahoe	Gully bottom
<i>Meryta sinclairii</i>	Puka	Entrance area
<i>Metrosideros excelsa</i>	Pohutukawa	Main ridge and estuarine ridge
<i>Myoporum laetum</i>	Ngaio	Entrance area

<i>Myrsine australis</i>	Mapou	Fringe of bolboschoenus area
<i>Olearia solandri</i>	Coastal daisy	Fringe of bolboschoenus area
<i>Pittosporum crassifolium</i>	Karo	Entrance area and behind the supermarket
<i>Pittosporum eugenioides</i>	Tarata	Entrance area and behind the supermarket
<i>Pittosporum tenuifolia</i> cultivars	Black matipo	Entrance area and behind the supermarket
<i>Phormium tenax</i>	Harakeke	Entrance area
<i>Plagianthus divaricatus</i>	Saltmarsh ribbonwood	Fringe of bolboschoenus area
<i>Planchonella costata</i>	Tawapou	Entrance area
<i>Podocarpus totara</i>	Totara	Occasional and entrance area
<i>Pseudopanax arboreus</i>	Whauwhaupaku	Gully bottom
<i>Rhopalostylis sapida</i>	Nikau	Uncommon
<i>Schefflera digitata</i>	Pate	Eastern gully floor
<i>Sophora chathamica</i>	Kowhai	Occasional
<i>Trichomanes venosum</i>	Veined filmy fern	Eastern gully floor
<i>Vitex lucens</i>	Puriri	Uncommon and entrance area

C. Kepa Bush Integrated Plan Priority Sites

DRAFT

Extracted from Wildlands *ECOLOGICAL INPUT FOR THE KEPA BUSH INTEGRATED PLAN*, Report no. 4751, DRAFT, February 2018

