# **KEPA BUSH RESERVE INTEGRATED PLAN** Adopted by Ōrākei Local Board . September 2018





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### **1.0 Introduction**

#### 1.1 The site

Kepa Bush Reserve is situated on the south-facing slope between Kepa Road and Pourewa Creek in Örākei, 6km southeast of the city. The reserve is located within the Tamaki Ecological District. It covers 14 hectares and was established in 1962 when Auckland City Council purchased it from St Johns Theological College. Kepa Bush Reserve described as Lot 1 DP 49361, is currently held in fee simple by the Auckland Council as an unclassified reserve and subject to the provisions of the Reserves Act 1977.

With the exception of the Hillsborough-Blockhouse Bay coastal strip, the Kepa Bush Reserve is the largest piece of native bush on the Auckland isthmus (Gardner 2009), and one of the last remaining areas of urban forest in the city. The reserve is largely covered by mature remnant coastal forest and forms an important part of a green belt stretching from Örākei to Glen Innes.

Acccess to the reserve is from 9 Colenso Place, between 251 and 255 Kepa Road and from 35 Thatcher Street.

#### 1.2 Project scope

Given the high ecological significance of Kepa Bush Reserve, the intent of this plan is to improve the ecological functioning of the reserve, through increasing connectivity to other areas of ecological value within the wider landscape.

This plan will be developed in collaboration with Ngāti Whātua Ōrākei (NWŌ), the community and stakeholder groups. It aims to:

- ٠ articulate the vision for the reserve
- outline the reserve's ecological context and significance ٠
- align with existing and proposed developments, including:
- Auckland Transport's 'Ōrākei Spine' cycleway \_
- the Pourewa Valley management plan being developed by NWŌ



#### 1.3 Location map

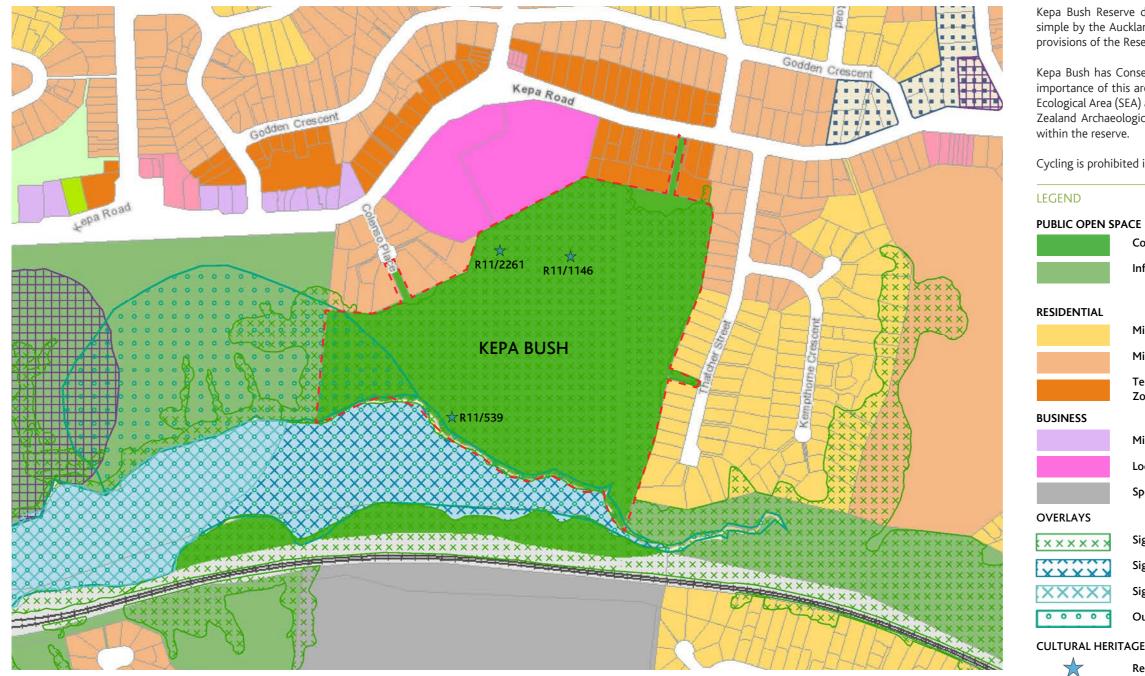


Aerial extracted from Auckland Council GIS . Not to scale



### 2.0 Statutory context

Unitary Plan Zoning



The Auckland Unitary Plan - extracted from Auckland Council GIS



Kepa Bush Reserve described as Lot 1 DP 49361, is currently held in fee simple by the Auckland Council as an unclassified reserve and subject to the provisions of the Reserves Act 1977.

Kepa Bush has Conservation Zoning under the Unitary Plan. The ecological importance of this area of habitat is underlined by its status as a Significant Ecological Area (SEA) and a 'Tranche 2 Biodiversity Focus Area'. There are New Zealand Archaeological Association sites associated with Maori Occupation

Cycling is prohibited in Kepa Bush Reserve.

- **Conservation Zone**
- Informal Recreation Zone
- Mixed Housing Suburban Zone
- Mixed Housing Urban Zone
- **Terrace Housing and Apartment Buildings** Zone
- Mixed Use Zone
- Local Centre Zone
- Special Purpose Zone
- Significant Ecological Area- Terrestrial
- Significant Ecological Area- Marine 1
- Significant Ecological Area- Marine 2
- **Outstanding Nature Features**

#### CULTURAL HERITAGE INVENTORY

**Recorded Archaeological Site** 

### 3.0 Recent site history



Bishop Selwyn purchased 150 ha as a site for St John's Theological College

Pourewa Creek, High Water, John Kinder 1878. Auckland Art Gallery Toi o Tāmaki







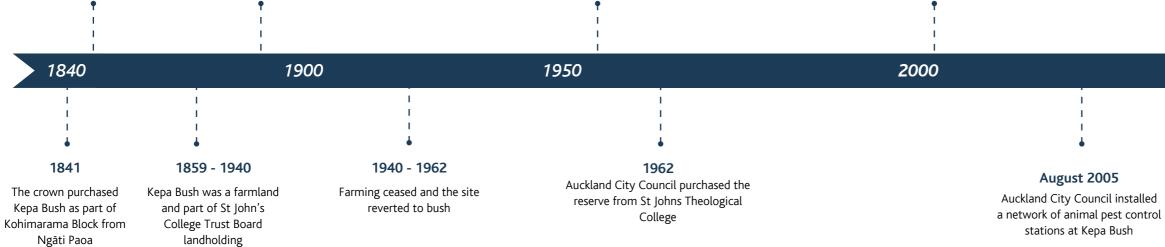
1956

1956 aerial photo





Auckland City Council introduced specialist weed management to help promote native bush regeneration 2001





1940 aerial photo



1968 aerial photo



2016 aerial photo



Ngāti Whātua Ōrākei invited BioBlitz survey to find, record, and identify as many species as possible at Kepa Bush and Pourewa March 2015





## 4.0 Existing site photographs



Park entrance from Kepa Road



View towards Purewa Cemetery from one of the lookout points

Footpath from Kepa Road entrance leading into the reserve



Grassed / picnic area at Kepa Road entrance



Wayfinding signage

Mangrove lined Pourewa Creek at the reserves southern boundary South-eastern reserve entry



Grassed / picnic area at Kepa Road entrance



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### 5.0 Review of related plans and projects

#### **5.1 Proposed Development Projects**

The Pourewa Valley has two significant development projects in the planning stages, which will affect Kepa Bush Reserve:

#### • 'Ōrākei Spine' cycleway

Led by Auckland Transport, the Örākei Spine cycleway proposes a shared path running between Glen Innes and Örākei. When completed it will run all the way from Glen Innes, through the Pourewa Valley, around the Ōrākei Lagoon to Tamaki Drive. The project is due to be delivered in four sections. Section two runs along the southern side of Pourewa Creek.

Pourewa Valley masterplan led by Ngāti Whātua Ōrākei Currently underway.

#### **5.2 Community Projects**

A number of community groups currently carry out weed and pest control and restoration planting within the reserve, including:

- Eastern Bays Songbird Project ٠
- Friends of Kepa Bush
- Friends of Pourewa Valley

#### **5.3 Planned Council Renewals Projects**

- Kepa Bush path renewals planned for 2017/2018 • 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
- Signage upgrades all signage to be upgraded 2017/2018, developed in conjunction with Ngāti Whātua Ōrākei and John La Roche, on behalf of Friends of Kepa Bush

Tracks and signage upgrades beginning soon.

#### 5.4 Ecological Input

Consultants were commissioned to provide ecological input into the Kepa Bush Integrated Plan to increase the connectivity of Kepa Bush to other areas of high ecological value within the wider landscape. It provides recommendations for inclusion into the plan, including:

- 1. Mapping and descriptions of vegetation and habitats present.
- 2. Ecological values, vegetation and habitats.
- Opportunities to enhance ecological functioning and 3. connectivity of Kepa Bush.

Refer to appendices.

Kepa Bush Reserve in relation to 'Orākei Spine' cycleway and Orākei Greenways



#### LEGEND

- Kepa Bush Reserve
- Proposed Auckland Transport 'Örākei Spine' cycleway
- Proposed Örākei greenways connection\*

- Proposed Örākei greenways connection\* (walking route only - cycling prohibited in reserve)
- Meadowbank Railway Station
- Proposed Selwyn Railway Station

projects).

\* Greenways routes are taken from the Örākei Greenways Plan (Adopted August 2016). These routes show an aspirational long term network. The final location of these paths is dependent on a range of factors including permission from landowner(s) and feasibility (contours, access, timing/staging, funding and related

#### 'Ōrākei Spine' cycleway map and visualisation

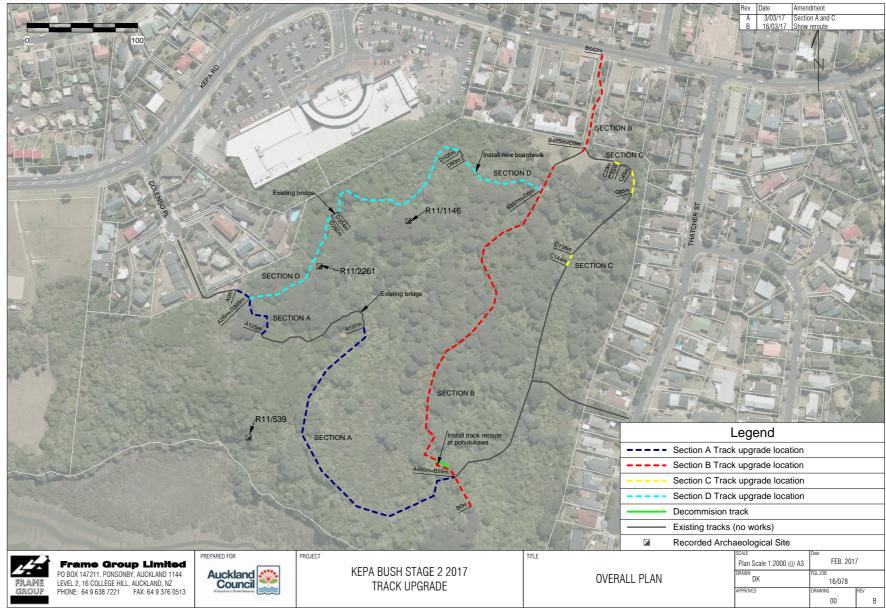


'Ōrākei Spine' cycleway section two: St Johns Road to Ōrākei Basin



Auckland Transport visualisation of 'Ōrākei Spine' Cycleway rail crossing near Purewa Cemetery

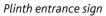
#### Track upgrades plan



Auckland Council Kepa Bush Track upgrades overall plan

#### Signage upgrades



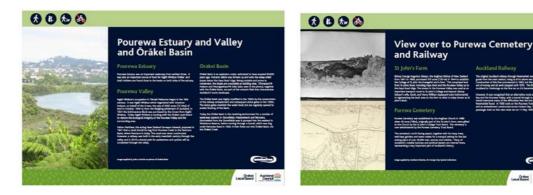




Pole sign



Double bollard sign



Interpretive signs

#### Signage icons



## 6.0 Site analysis

### 6.1 Existing park assets and circulation





#### LEGEND

- Site boundaryPathwayBoardwalk
- \_\_\_\_ Boul Gwall
- Footbridge
- Primary park entrance
- Secondary park entrance
- Platform
- Existing signage
- Existing park bench
- **Existing picnic table**
- Existing bin
- \_\_\_\_ Stream
- Existing specimen trees
- Existing indigenous forest
  - Existing lawn areas
  - Existing bus stop
- Existing bus route

### Existing park asset photographs







Boxed steps



Exposed manhole on asphalt footpath creating a trip hazard



Exposed manhole on grassed area



Timber culvert





Boardwalk



Timber bench at lookout





Deteriorated signage at park entrance



Rubbish bin



Way finding singage within reserve



Bike barriers / no bike signage

#### 6.2 Hydrology and Vegetation







The reserve is almost completely covered in indigenous vegetation and is characterised by native coastal forest grading into a tidal estuary along the banks of Pourewa Creek.

Two gullies dominated by ponga-mamaku tree and fernland support watercourses approximately 350m long that empty into the upper estuarine reaches of the Pourewa Creek. The watercourses are of high quality and support indigenous fish species such as the banded kõkopu, shortfin eel and bullies.

#### 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-fruiting • 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:

- ٠ 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 ٠ renewals coordinators)

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

#### Draft concept consultation

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

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

	STAKEHOLDER	KEY CONSULTATION FEEDBACK	DESIGN RES	POI
out Ja (7) h ) the VŌ) ypril and r on cent aths ons rve.	Friends of Kepa Bush and Eastern Bays Songbird Project	<ul> <li>RESERVE VALUES</li> <li>Acknowledgment that the bush is the most important piece of bush in the central isthmus</li> <li>Glow worms and kökopu present in the creek</li> <li>Important to retain the tranquillity of the reserve</li> <li>INFRASTRUCTURE</li> <li>Improvements required to existing paths at the reserve entrance to remove trip hazards and sections of cracking and slumping</li> <li>Improvement to existing bush tracks required, to fix scoured sections and stormwater damage</li> <li>Entrance path at Kepa Road needs to connect up to the bush tracks</li> <li>Signage is in a run down state and needs to be improved</li> <li>Consideration of the inclusion of interpretative signage through the reserve</li> <li>WEEDS/PEST CONTROL</li> <li>On-going predator control is carried out at the reserve (possums and rats) by volunteer groups and is essential for the reserve</li> <li>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</li> <li>Planting is important but needs to be done with caution, with appropriate species planted in the right locations</li> <li>MAINTENANCE AND DEVELOPMENT OPPORTUNITIES</li> <li>Fallen trees on site should be cut up with a chainsaw to allow native seedlings to survive</li> <li>Opportunity to connect the reserve with the Pourewa Valley and Orakei Spine, however bike access to/ through the reserve should be restricted as this would destroy the tranquility of the bush</li> <li>Opportunity to use the site for environmental education, and partner with local schools and institutions</li> <li>Investigate possible lookout point closer to Colenso Place park entrance</li> <li>Rubbish dumping from some neighbouring properties into the reserve, volunteer groups looking to organise working bee to clean up</li> <li>NWO would like to source seedlings from the bush for planting in the adjacent horse paddocks (Pourewa Reserve)</li> </ul>	<ul> <li>Tranquility of</li> <li>Recommend</li> <li>Signage and f</li> <li>Two new sectracks</li> <li>Locations for the site ident</li> <li>Plan to incorport</li> </ul>	pede tracks tions inter tified
	Ngāti Whātua Õrākei	<ul> <li>Consider provision of a future connection from the Kepa Bush track network to the Pourewa Valley</li> <li>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</li> <li>Consider opportunities to provide connection to the Eastridge Shopping Centre area north of the reserve</li> <li>Improve opportunities for people to connect with nature and for ecological education</li> <li>Consider opportunities for mana whenua expression</li> <li>Allow for eco-sourcing of seeds from plant stock to restore the surrounding landscape</li> </ul>	<ul> <li>Inclusion of a worked out in</li> <li>Auckland Cou increasing co wider landsca draft report</li> <li>An additiona Centre was in</li> </ul>	n coll uncil onnect ape, c l coni
	Community Facilities	<ul> <li>Discussions held around the planned renewal projects for the reserve signage and paths/tracks</li> <li>Discussions held around existing maintenance routines and any factors that should be considered or factored into the development of this plan</li> </ul>	<ul> <li>Information a incorporated</li> </ul>	

#### ONSES

- ne bush to be maintained
- destrian access only within the reserve
- cks renewal works planned
- ns of path proposed to connect entrance path to bush
- terpretative signage outlining the ecology and history of ed on plan
- ate connections to Pourewa Valley and Ōrākei Spine

ture connection into Pourewa - final path location to be ollaboration with NWŌ

il has commissioned an ecological review in regards to ectivity to other areas of ecological value within the , on both public and private land, refer to appendices for

onnection into the reserve from Eastridge Shopping stigated but is not supported at this time

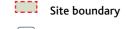
l locations of proposed renewal works has been to the development recommendations

## 8.0 Development recommendations





#### LEGEND



- Archaeological Site Stream/waterway
- 000 Specimen tree
- Vegetation
- Development zone extents
- PATHS
- Existing asphalt path

Viewshafts

- 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  $\bigcirc$ of future development
- 0 Proposed bollard wayfinding sign as part of future development

#### SITE FURNITURE AND STRUCTURES

- Bench
- 7 Lookout Point

#### KEY

- 1 Path upgrades / improvements to remove trip hazards from park entrance path (as part of upcoming renewals).
- New asphalt path connections from the end of existing 2 sealed path to the beginning of the bush tracks.
- B 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.
- New asphalt path connection into the park from 4 Colenso Place.
- Proposed options for path connection into Pourewa 5 Reserve. NOTE only one connection proposed. Location to be selected in collaboration with NWO 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.



#### **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

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 com- mence 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	ТВС
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

#### DELIVERY :

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

### **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, Örākei. Retrieved from: http://bts.nzpcn.org.nz/bts\_pdf/ABJ64(2)2009-141-٠ 42-Kepa.pdf
- Richmond, T. (May 2017). Assessment of Environmental Effects, Kepa Bush pedestrian track works (stage 2). Richmond Planning Limited

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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 Kökiri, 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 outcomebased 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:

MANA Rangatiratanga, Authority

#### **Outcome:**

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

WHAKAPAPA Names and Naming

#### Outcome:

Māori names are celebrated. Naming opportunities are supported.

3

ā

 Ngāti Whātua Ōrākei identified as mana whenua of the area

Investigate naming opportunities



### 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

restored and enhanced.

The natural environment is protected,

**Outcomes:** 



5

### **MAURI TU**

Environmental Health

### **Outcomes:**

Environmental health is protected, maintained and/or enhanced.

 $\mathbf{C}$ 

#### MAHI TOI 6 Creative Expression



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

- Protection and enhancement of all native ecosystems
- Allow for eco-sourcing of seeds for plant stock to restore the surrounding landscape
- Eradication of plant and animal pests

• Investigate art opportunities





AHI KA The Living Presence



Mana whenua live, work and play within their

Educate through restoration



### **B. Planting List**

Based on BioBlitz survey report held in March 2015

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

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

### C. Kepa Bush Integrated Plan Priority Sites

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

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### DRAFT

