

4SIGHT

CONSULTING






Ōrākei Local Board Natural Environment Enhancement Plan

For Auckland Council
Environmental Services – Biodiversity

September 2019

REPORT INFORMATION AND QUALITY CONTROL

Prepared for:	Callum Templeton Environmental Services – Biodiversity Auckland Council
----------------------	---

Author:	Dr Hannah Mueller Senior Ecology Consultant	
Reviewer:	Michael Lindgreen Director	
Approved for Release:	Michael Lindgreen Director	

Document Name	AA4551 Orakei Local Board Natural Environment Enhancement Plan v1.3
----------------------	---

Version History:	v1.0	24 May 2019
	v1.1	27 May 2019
	v1.2	02 July 2019
	v1.3	03 September 2019



1	INTRODUCTION	3
1.1	Context.....	3
1.2	Purpose	3
1.3	Objectives.....	3
2	ENHANCING BIODIVERSITY ACROSS THE ŌRĀKEI LOCAL BOARD.....	4
2.1	Ecological context	4
2.2	Waterways	4
2.3	Ecological corridors	4
2.4	Pest control	5
2.4.1	Animal pests.....	5
2.4.2	Plant pests.....	5
2.4.3	Planting	5
2.4.4	Plant diseases.....	5
3	CASE STUDIES OF KEY EXISTING ENVIRONMENTAL INITIATIVES.....	7
3.1	Wai Care	7
3.2	Eastern Bays Songbird Project	8
3.3	Waiatarua Wetland.....	9
3.4	Pourewa Restoration Group	9
3.5	Ngāti Whātua o Ōrākei restoration initiatives	10
3.6	Kepa Bush.....	10
3.7	Tahuna Torea Nature Reserve	10
4	GAP ANALYSIS	12
4.1	Geographical gaps.....	12
4.2	Types of initiatives	12
4.3	Community participation	12
4.4	Watercourse and riparian restoration	12
5	RECOMMENDATIONS FOR FUTURE INVESTMENT AND PRIORITY AREAS	15
5.1	Ecological corridors	15
5.2	Environmental education.....	15
5.3	Focus on private land	15
5.4	Implement WAR enhancement opportunity recommendations	15
5.5	Summary	15
6	REFERENCES.....	17

List of Tables

Table 1	Overview of types of initiative and ecosystems: number of initiatives that cover each aspect	7
---------	--	---

List of Figures

Figure 1	Wai Care: Enhancing and monitoring stream ecosystems. Photo: H Mueller, 4Sight	8
Figure 2	Eastern Bays Songbird Project. Photo: songbird.org.nz.....	8
Figure 3	Waiatarua Reserve. Photo: S Barns, 4Sight (left); Auckland Council (right)	9
Figure 4	Pourewa creek in the Pourewa Valley (photo: Martin Heffer, Pourewa Restoration Group)	9
Figure 5	Ngāti Whātua o Ōrākei plant nursery. Photos: Ngāti Whātua o Ōrākei	10
Figure 6:	WAR Central Eastern Bays Scope / Area	13
Figure 7:	WAR Central Glendowie Scope / Area	14



List of Appendices

Appendix A: Overview maps of environmental initiatives across the OLB area

Appendix B: Environmental Initiatives – Reproduction of Master Spreadsheet

1 INTRODUCTION

1.1 Context

The Auckland Council's Biodiversity Team is supporting the Ōrākei Local Board (OLB) in a stocktake of existing environmental enhancement initiatives across the OLB area, with an aim to improve and foster biodiversity and conservation outcomes in this area and wider Auckland region.

The OLB contains more than 130 parks and reserves covering around 437 ha and is an important buffer zone for predator free islands in the Hauraki Gulf. A small number of large reserves with high ecological value are present (e.g. Tahuna Torea, Kepa Bush, Dingle Dell and the Waiatarua Wetland (one of NZ's largest constructed wetland systems)), as well as a much higher number of smaller reserves. These reserve areas provide important environmental benefits, especially in a coastal setting, such as erosion control and habitat for a range of forest and marine birds, lizards and native plants.

The OLB Area is predominantly defined by urban land use, with typical roads and residential development. Restoration initiatives can provide enhanced ecological value on private land in the form of additional native biodiversity, exotic weed and invasive pest animal control. For example, the Eastern Bays Songbird Project covers 1380 ha of urban residential areas in Glendowie, St Heliers, Kohimarama, Mission Bay and Ōrākei, with a vision to increase the diversity of birds and other native species through ecological restoration.

1.2 Purpose

Many initiatives aimed at the enhancement and restoration of the area's native ecosystems are taking place across the OLB area. The OLB has been funding restoration works in several prioritised reserves within the OLB area. To date, OLB funded restoration activities have focused on pest plant control and restoration planting (Wildlands 2019). In order to collate an overview of all environmental initiatives currently active or planned in the board area on both public and private land, OLB has commissioned 4Sight Consulting Limited (4Sight) to undertake a stocktake of environmental initiatives (i.e. restoration, conservation, biodiversity and water quality) being carried out across the OLB area. The main purpose of this stocktake termed the 'Ōrākei Local Board Natural Environment Enhancement Plan' (the 'Plan') is to guide future prioritised investment and ensure an integrated and coordinated approach.

The scope of this report was to offer a snapshot in time outlining currently active environmental initiatives that are working towards ecological enhancement across the board area. It is designed as an initial stocktake and collation of information, delivered in the form of a spreadsheet containing detailed information (reproduced in Appendix B:), and a Geospatial Information database, both supplied electronically.

1.3 Objectives

The purpose of this Plan is to inform strategic management and investment of indigenous biodiversity in the OLB area, the Plan is intended to provide a 'one-stop-shop' of all environmental enhancement projects and programmes occurring over the next three years. 4Sight have used the following steps towards the development of this resource:

- 1) Stocktake of all existing and planned environmental initiatives;
- 2) Workshop with Auckland Council staff to explore initiatives and their goals;
- 3) Inventory of initiatives outlining key goals, future plans, resources, capabilities and contacts;
- 4) GIS geodatabase creation and mapping of the initiatives, goals, future plans etc. identified above;
- 5) Gap analysis on a geographical, initiative type or outcome basis; and
- 6) High-level recommendations informed by gap analysis.

2 ENHANCING BIODIVERSITY ACROSS THE ŌRĀKEI LOCAL BOARD

2.1 Ecological context

The OLB is located in the Tāmaki Ecological District (ED), which historically has been characterised by northern North Island lowland forest types dominated by kauri, puriri and tairaire, with pōhutukawa dominant near the coast. Vegetation has been highly modified by clearance and development, and only 6.9% of indigenous cover remain in the Tāmaki ED (McEwen, 1987). Valuable remaining areas of indigenous cover in city parks include remnants of lowland forest and fringes of pōhutukawa on coastal cliffs.

32% of Tāmaki Ecological District lies on 'Acutely Threatened' Land Environments New Zealand (LENZ) classified land. The LENZ classification recognises that indigenous biodiversity in these environments has been severely reduced and remaining habitats are sparsely distributed in the landscape (Walker et al., 2015).

Fauna present in the OLB area include a number of threatened bird species, such as grey duck (*Anas superciliosa superciliosa*), banded dotterel (*Charadrius bicinctus bicinctus*), Northern NZ dotterel (*Charadrius obscurus aquilonius*), black-billed gull (*Larus bulleri*), red-billed gull (*Larus novaehollandiae scopulinus*) and reef heron (*Egretta sacra sacra*). Long-tailed bats (*Chalinolobus tuberculata*) have also been recorded in the Tāmaki ED.

Priorities for protection in the area include coastal ecosystems (including estuarine systems, wetlands, shrublands and forests), and breeding sites and habitat for grey duck (Lindsay et al. 2009).

2.2 Waterways

There are a wide range of waterways within the OLB area that include streams, wetlands, estuarine systems and beaches. As with many parts of the region, watercourses in the OLB area are typically highly modified, provide an important stormwater conveyance function and are relatively short with many reaches confined to areas close to the coast. Threatened fish species such as giant kokopu (*Galaxias argenteus*), have been recorded in the area (Lindsay et al. 2009).

The OLB also includes one of the largest urban wetland restoration projects in New Zealand, the Waiatarua Reserve. Water quality and ecosystem health are important community values in this area, and one objective of the OLB Strategic Plan are pollution-free, healthy waterways (OLB 2014).

Stream, wetland and estuarine areas are an important component for biodiversity enhancement in the OLB areas as they provide critical habitat for native fish, insect and bird species. The enhancement of these freshwater habitats will also support the establishment of ecological corridors.

2.3 Ecological corridors

Ecological corridors, basically pathways of habitats along which animals can move, connect nature reserves, thereby connecting different habitat types (e.g. coastal and estuarine environments with terrestrial and wetland habitats further upstream in a catchment). Corridors enable movement of organisms between habitat patches, enable seasonal and migratory movements, and gradual population migration from one environmental area to another. These pathways can enhance the ecological value of connected reserves by decreasing rates of extinction and increasing rates of recolonisation (Thomas 1991).

Corridors are particularly important for smaller patches of habitat types, such as small parks and reserves, since these ecosystem areas often provide limited food, nesting and other habitat resources. Corridors can enable organisms to move seasonally, thereby enabling them to maximise use of available food sources.

The establishment and enhancement of ecological corridors is a critical component of enhancing biodiversity across the OLB area, linking freshwater, estuarine, coastal and terrestrial ecosystems and allowing organisms such as fish and bird species to move throughout the area seasonally depending on available resources.

Existing ecological corridors have been outlined in the enhancement plan map (Appendix A:) represented by Significant Ecological Areas (SEAs) identified in the Auckland Unitary Plan (operative in part, June 2019). SEAs are "identified areas of significant indigenous vegetation or significant habitats of indigenous fauna located either on land

or in freshwater environments. In order to maintain indigenous biodiversity these areas are protected from the adverse effects of subdivision, use and development.” (AUP 2019, Section D9.1.1).

2.4 Pest control

2.4.1 Animal pests

Animal species that are declared pests within the Auckland region (identified by the Auckland Regional Pest Management Strategy, RPMS 2012-2017) include mice, ship rats, Norway rats, weasels, stoats, ferrets, cats, possums, hedgehogs, rabbits, hares, goats, deer, magpies and mynas. Pest animal species include animals that prey on native birds and eggs, destroy native vegetation and degrade our natural environments. Wasps are also an emergent threat to native birds, lizards and bats that compete for resources and can kill juvenile animals.

Animal pest control is a critical component of biodiversity enhancement strategies to ensure the survival of native animal species, protect their nesting and food resources, and protect native plant species, in particular for newly planted areas.

2.4.2 Plant pests

Environment weeds or “Pest Plants” are plants that will outgrow those newly planted areas, as well as species that invade native ecosystems, such as the plant communities on the estuary margin, stream sides and in areas of native bush. There are several hundred environmentally damaging weeds in the Auckland Region. They include plants such as kikuyu grass, wild ginger, pampas, privet, as well as climbing weeds that smother other plants, like jasmine, climbing asparagus, moth plant and Japanese honeysuckle.

Controlling environmental weeds is a major component of any restoration project, and they need to be eradicated before planting, and monitored to ensure they do not recolonise an area.

2.4.3 Planting

Restoration planting involves the recovery of a native ecosystem that has previously been degraded, destroyed or damaged. Restoration planting involves planting new plants but should also include control of animal and plant pest species to ensure plantings become established and self-sustaining.

Restoration planting provides a wide range of benefits including increasing native biodiversity, creating habitat for native wildlife (insects, frogs, reptiles and birds), stabilising soil, recreating linkages and vegetation sequences, enhancing water quality and landscapes.

The OLB has established a grant programme to fund trees to encourage the plantings of native species across the board area. This grant will be established later in 2019, thereby further supporting restoration plantings in the area, especially on private land.

2.4.4 Plant diseases

2.4.4.1 Kauri dieback

Kauri dieback disease is spread by *Phytophthora agathidicida*, a pathogen that leads to rot in the roots and base of kauri (*Agathis australis*) trees. It can also involve bleeding of resin and yellowing of the leaves. While some progress has been made, there is no reliable cure for kauri dieback at this point, and once infected most, if not all, trees will be killed by the disease.

The pathogen, and therefore the disease, is spread very small amounts of soil (as much as a pinhead is sufficient), and the disease is a significant threat that may lead to the extinction of kauri.

Disease management so far involves closing of tracks and whole forests (e.g. in the Waitakere Ranges), footwear cleaning stations, and treatment with compounds such as antifungal agents. Kauri dieback has been identified as a

risk to Auckland's ecosystems in the proposed Regional Pest Management Plan (2018¹). This plan prioritises the protection of these disease-free areas with the implementation of exclusion zones and increased hygiene measures.

Kauri trees can be found throughout the OLB area, in private yards as well as public reserves such as Waiatarua Reserve. There are many resources that describe ways to prevent the spread of kauri dieback, including brochures for a variety of recreational activities described as part of the 'Keep Kauri standing' campaign².

2.4.4.2 Myrtle rust

Myrtle rust is a fungal disease that severely attacks plants in the myrtle family including pōhutukawa, mānuka and rātā. It is a particularly damaging and invasive form of rust because it can infect the entire myrtle family, and there are hundreds of known susceptible hosts. Myrtle rust attacks young, soft, actively growing leaves, shoot tips and young stems.

Myrtle rust has been discovered in the OLB area in several locations, including to the north of Kepa Bush Reserve (north of Kepa Road), and in Selwyn Reserve in Mission Bay³.

The first visible symptoms are powdery, bright yellow or orange-yellow pustules that develop on leaves, tips and stems. The pustules can progress into wounds on the plant and may cause leaves and shoots to become misshapen or disfigured and die off. The disease can cause deformed leaves, heavy leaf loss from branches, damaged fruits, canopy dieback, stunted plant growth, and eventually may lead to plant death.

Further information on what to do if myrtle rust is observed can be found on the Department of Conservation website⁴. A vast resource of information on myrtle rust including online learning modules can be found on the Myrtle Rust New Zealand website⁵.

¹ <https://www.aucklandcouncil.govt.nz/have-your-say/topics-you-can-have-your-say-on/regional-pest-management-plan/Documents/summary-document.pdf>

² <https://www.kauridieback.co.nz/how-to-guides/>

³ <https://www.myrtlerust.org.nz/about-myrtle-rust/where-is-myrtle-rust/>

⁴ <https://www.doc.govt.nz/nature/pests-and-threats/diseases/myrtle-rust/>

⁵ <https://www.myrtlerust.org.nz>

3 CASE STUDIES OF KEY EXISTING ENVIRONMENTAL INITIATIVES

Many environmental initiatives spanning across weed control, animal pest control, restoration planting, ecosystem monitoring and environmental education are taking place across the local board area, involving public reserves, schools and private backyards in an engaged community.

As part of this Plan, a total of 67 environmental initiatives currently active across the OLB area have been identified. These initiatives cover a wide range of ecosystems, predominantly involving public recreational reserves, schools, parks and open spaces. Coastal cliffs, walkways and private backyards are also represented in the locations of initiatives assessed. Appendix A: provides an overview map of all environmental initiatives collated as part of this plan.

Types of initiatives that have been identified have been grouped into five different categories. These categories were:

- Weed control
- Predator control
- Restoration planting
- Monitoring
- Environmental education

Many initiatives identified covered several areas of activities, typically restoration planting and weed control, alongside predator control.

The table below outlines an overview of initiative types, ecosystems targeted across the initiatives that were assessed. A full record of initiatives, activity types and further detail is contained in a spreadsheet and GIS geodatabase accompanying this enhancement plan (Appendix B:).

Of the 67 initiatives, 47 take place on public land; six take place on private land; and seven on a combination of public and private land. At least eight schools are involved in a range of environmental initiatives. Many schools have received funding for environmental initiatives by the OLB, including funding for native trees.

Table 1 Overview of types of initiative and ecosystems: number of initiatives that cover each aspect

	Type of initiative					Ecosystem type		
	Weed control	Predator control	Restoration planting	Monitoring	Environmental education	Terrestrial	Coastal	Freshwater
Number of initiatives	31	33	23	23	5	43	7	27

Below is a selection of case studies describing some of the larger initiatives currently taking place across the OLB area. Details of all 67 initiatives assessed as part of this plan are contained in Appendix B:.

3.1 Wai Care

Wai Care is a community monitoring and education programme across the Auckland region that involves community groups, schools, businesses and individuals. Wai Care activities can include waterway education, water quality monitoring, weed control, planting, and litter removal from stream and wetland ecosystems. A main objective of the initiative is to increase public awareness of waterway and catchment health, to offer a forum to share information, and to support community-led action.

The OLB includes at least 19 different Wai Care sites across the board area. These sites cover public reserve areas, schools and private property. The main purpose of these sites is water quality monitoring (including physical and biological components), and at a community level environmental education and learning opportunities related to stream and riparian health.



Figure 1 Wai Care: Enhancing and monitoring stream ecosystems. Photo: H Mueller, 4Sight

3.2 Eastern Bays Songbird Project

The Eastern Bays are located between Auckland city and the predator free islands of the Hauraki Gulf. The key vision of the Eastern Bays Songbird project is to create urban ecosystems abundant with native bird life. The project covers an urban area of 1380 ha between Hobson Bay and the Tāmaki estuary.

The initiative is founded on a non-governmental organisation and aims to restore and enhance ecosystem of the Eastern Bays with a focus on bird life across the area. Driven to reconnect communities with natural ecosystems, the initiative involved restoration activities on private property and public land to enhance ecosystems and foster habitat that supports flourishing bird and insect populations.

Due to its focus on connecting communities and green spaces alike, this initiative is a great example of the establishment of ecological corridors, including in the wider ecological context of the Hauraki Gulf bird sanctuaries.



Figure 2 Eastern Bays Songbird Project. Photo: songbird.org.nz

3.3 Waiatarua Wetland

Waiatarua Reserve was restored in 2004 to re-instate the natural wetland system and restore some of its functions such as flood control, contaminant filtration, habitat and recreational values. The wetland functions as a stormwater treatment wetland for surrounding residential areas. Additional aims of the restoration project were to enhance bird habitat and recreational use of the wetland and reserve area.

Community initiatives at the wetland now include restoration planting focusing on native trees and shrubs that offer food resources for birds throughout the year. A volunteer pest control programme is also part of the ongoing initiative at this location.

Auckland Council is currently in the process of developing a Wetland Restoration and Enhancement Plan for continued enhancement of the reserve. An enhancement plan involving weed and predator control and restoration planting is also being prepared for the adjacent Remuera Golf Course.



Figure 3 Waiatarua Reserve. Photo: S Barns, 4Sight (left); Auckland Council (right)

3.4 Pourewa Restoration Group

Pourewa Valley is classified as an area of 'ecological significance' by the Auckland City Council and has significant historical value. The valley is situated 6km south east of the city centre and is one of the last remaining area of urban forest in Auckland City and contributes an important part to ecological corridors through the city.

The Pourewa Restoration Group has been formed as an umbrella group to promote the valley and the groups involved in restoring the valley. The vision shared by the Friends of the Pourewa Valley volunteers is for the Pourewa valley to become an oasis of native bush in the heart of an expanding Auckland cityscape.

Many volunteers are involved in this group, and activities include weed control, and restoration planting of native trees to encourage native birdlife back into the area.



Figure 4 Pourewa creek in the Pourewa Valley (photo: Martin Heffer, Pourewa Restoration Group)

3.5 Ngāti Whātua o Ōrākei restoration initiatives

Various restoration activities are taking place in the Ngāti Whātua o Ōrākei rōhe, and within the OLB area this includes the Ōrākei Marae at Ōkahu Bay (Appendix A:). Activities include weed control, predator control, restoration planting and a native plant nursery. The nursery was developed to help increase the biodiversity of birdlife, plants, insects and habitats which incorporates a combination of Ngāti Whātua o Ōrākei's organic, ethical and sustainability values. The tree supply from the nursery is expected to increase to 400,000 trees over the coming year.

The Ōkahu Bay Ecological Restoration Plan (ŌCERP) has been developed in order to implement the Whenua Rangatira Reserves Management Plan and the Ngāti Whātua Ōrākei Heritage and Resource Management Kaupapa, Strategy and Policy 2010-2011.

As outlined in the ŌCERP, one objective is for Ōkahu Bay to be safe for swimming and collecting Kai Moana. The ŌCERP looks to promote, develop and enhance Ōkahu Bay as the public face or gateway to the Whenua Rangatira, while respecting its existing cultural and spiritual value to the Tangata Whenua and enhancing its relationship with the Waitematā.



Figure 5 Ngāti Whātua o Ōrākei plant nursery. Photos: Ngāti Whātua o Ōrākei

3.6 Kepa Bush

Kepa Bush Reserve is an ecological reserve situated on the eastern slopes of the Purewa stream that flows past the Ōrākei Basin (continuing on to Hobson Bay). Covering an area of approximately 14 ha, the reserve was established in 1962. The native bush includes species such as mature kanuka (*Kunzea ericoides*), putaputaweta (*Carpodetus serratus*), pigeonwood (*Hedycarya arborea*) and pohutukawa (*Metrosideros excelsa*). The gully slopes feature native ground and tree fern species including silver fern (*Cyathea dealbata*).

The reserve is home to various native animal species such as ornate skink, tui, kereru, grey warbler and native stick insects.

A number of initiatives take place in this area focussing on the protection and enhancement of the ecological values of Kepa Bush. These include Friends of Kepa Bush and Conservation Volunteers NZ. Conservation activities taking place in the reserve include weed control and animal pest control to enhance habitat for native birds.

3.7 Tahuna Torea Nature Reserve

Tahuna Torea is a nature reserve covering an area of approximately 25 ha, situated on a long sand bank extending out into the Tāmaki estuary. The reserve features native bush alongside freshwater and saltwater wetlands, and provides habitat for a range of native animal and plant species.

A number of initiatives are active to protect the ecological values of this area, including the Tahuna Torea Rangers and the Tamaki Estuary Environmental Forum. Activities focus on the suppression of weed species, encouraging growth of native plants, and animal predator control to enhance habitat for native species. Restoration planting is also taking place, enhancing ecosystem functions and resilience, and benefitting native animals and plants.

An enhancement plan for the reserve was recently completed, and further activities investigations of how mangrove removal impacts existing fish dams in the lagoon. Protection of the fish dams is a critical aspect of conservation for the nature reserve, and a OLB study has found that the removal of mangroves to improve the establishment of native vegetation has not been successful and the fish dam is increasingly exposed to high tides, storm damage and king tides which are eroding the spit and breaching the fish dams. Enhancement options for this are currently under investigation.

4 GAP ANALYSIS

Overall, a high level of ecological intervention focussed on weed control, animal predator control, and restoration planting is occurring in the OLB area with some 67 initiatives currently underway.

Following the collation of information on existing environmental initiatives across the OLB area, several gaps have become visible relating to the type of land that is covered, as well as the types of initiatives currently included.

It is however noted that due to project limitations the gap analysis completed is based largely on the information compiled through the development of this Plan and the authors understanding of the catchment. Ground-truthing of existing environments to determine opportunities or constraints for enhancement activities has not been undertaken.

4.1 Geographical gaps

Most initiatives that have been assessed here are also taking place exclusively or predominantly on public land, with most of them focused on reserve areas. Initiatives on private land appear to be currently underrepresented.

The data collection was predominantly based on information existing within Auckland Council, and may therefore have missed community-led activities, especially those on private land.

4.2 Types of initiatives

Types of initiatives that have been formally assessed include weed control, predator control, restoration planting, monitoring and environmental education. The least represented type of initiative was environmental education, which was formally included in only two of the 67 initiatives (Table 1). Investment in initiatives that involve environmental education for the wider community would be a great pathway to foster environmental awareness and grow community-led activities within the OLB area, therefore supporting the expansion of ecological restoration and enhancement work.

Based on this high-level gap analysis, the following sections provides a brief outline of recommendations for priority areas that could achieve more comprehensive environmental enhancement and biodiversity outcomes across the OLB area.

4.3 Community participation

There are currently at least 20 community groups operating in the OLB area.

We note that in addition, at least eight different schools are currently involved in initiatives that include planting, pest control, weed control and water quality monitoring. An important component of this is the Enviro School programme. This sustainability programme supports schools and children to plan, design and implement sustainability actions. A main objective of the programme is to create 'resilient, connected communities in which people care for each other and the environment'⁶. In the OLB areas, Enviro Schools activities include riparian plantings, weed control, predator control, water quality monitoring and stream restoration.

Through involving schools, initiatives can benefit from wide-spread outreach into the community, and activities on the ground often take place regularly with an ongoing commitment. It is also a great way to reconnect young people with nature and create curiosity for urban ecosystems.

4.4 Watercourse and riparian restoration

Currently, excluding the Wai Care programme sites, there are ten initiatives occurring on watercourses in the OLB area.

⁶ <http://www.enviroschools.org.nz/about-enviroschools>

The Auckland Council, Healthy Waters Department as part of its Watercourse Assessment Report (WAR) programme is currently developing WARs for the Central Eastern Bays and central Glendowie areas which cover a large proportion of the OLB area as shown by the following figures (the project is currently still in progress).

WARs (previously called Watercourse Management Plans – WMPs) provide baseline information on the existing condition of waterways. A WAR is a core resource in managing waterways to multiple objectives within realistic environmental, economic and social constraints.

WARs aim to provide information which can be used to maintain high value streams, enhance degraded streams and remedy specific stormwater issues while recognising the future growth pressures facing the Auckland region and the essential function of urban streams in conveying stormwater.

A key output of the WARs is the identification of Enhancement Opportunities (EOs). EOs are areas for enhancement where multiple benefits can be achieved for ecological, amenity, and conveyance values. These are also used to highlight significant issues for public safety or areas identified for community engagement. EOs are based on a significant base of information, including ‘stream walks’, and as such are generally considered to be those areas of the highest priority and where the greatest opportunity exists to achieve meaningful ecological outcomes.

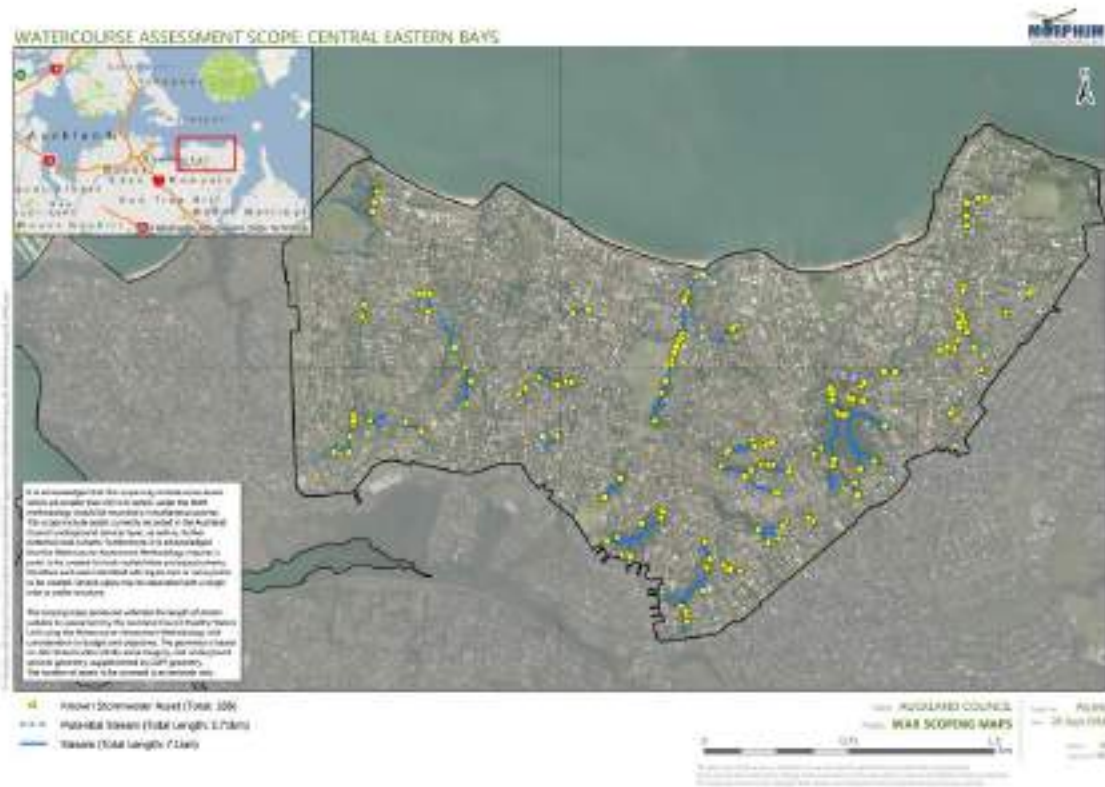


Figure 6: WAR Central Eastern Bays Scope / Area

5 RECOMMENDATIONS FOR FUTURE INVESTMENT AND PRIORITY AREAS

Based on the assessment of existing environmental initiatives across the OLB area, and the gap analysis outlined in Section 6), we propose several recommendations to prioritise initiatives and funding towards them with the objective of fostering biodiversity outcomes and environmental enhancement in this area.

5.1 Ecological corridors

A priority should be the focus on ecological corridors including on private land, ensuring that individual environmental initiatives are spatially connected, as well as fostering connection across community groups.

Ecosystems across the OLB area, in particular in coastal areas, provide critical habitat for many indigenous (including some threatened) species, and enhancement of these areas could strengthen linkages to systems such as the predator-free islands in the adjacent Hauraki Gulf.

The 'Build Ecological Corridors' work programme is currently being implemented as part of the Natural Environment Targeted Rate (NETR) 'Expanding Community Action' workstream, with both a regional and local focus.

5.2 Environmental education

Environmental education is currently underrepresented in the types of initiatives. Educating community members on biodiversity values is a critical component to foster 'on the ground' activities and engagement. A focus here could be education around the role of insects in our native ecosystems, involving tools to encourage helpful insect species into backyards and public spaces.

5.3 Focus on private land

Most initiatives currently take place on public land. To extend biodiversity enhancement to private areas, restoration plans that could include planting list and tips on pest control could be provided to encourage restoration activities on private property. The establishment of a 'trap library' allowing community members to borrow pest animal traps could be a key component to enhancing biodiversity on private land. Traps can be cost-prohibitive and difficult to use, so a central library could offer both tools and knowledge to encourage wide-spread pest animal control.

5.4 Implement WAR enhancement opportunity recommendations

It is recommended that the EO's identified in the Central Eastern Bays and central Glendowie WARs be implemented as a priority area. It is understood that the WAR EO recommendation are subject to non-ORB / separate funding and as such opportunities for joint-funding between the ORB and Auckland Council's Healthy Water Department may exist.

5.5 Summary

The scope of this report was to offer a snapshot in time outlining existing environmental initiatives that are working towards ecological enhancement across the board area. The work is an initial stocktake and collation of information, delivered in the form of a spreadsheet containing detailed information (reproduced in Appendix A), and a Geospatial Information database, both supplied electronically.

Many environmental initiatives spanning across weed control, animal pest control, restoration planting, ecosystem monitoring and environmental education are taking a place across the local board area, involving public reserves, schools and private backyards in an engaged community.

Based on the assessment of existing environmental initiatives across the OLB area, and the gap analysis outlined in Section 6), we propose several recommendations to prioritise initiatives and funding towards them with the objective of fostering biodiversity outcomes and environmental enhancement in this area.

In summary, our recommendations include the following suggestions:

- Focus on the creation and enhancement of ecological corridors, which can initially be based on the existing areas identified as SEAs. The 'Build Ecological Corridors' workstream can inform this work.

- Establishment of an OLB-wide forum for all community groups to get together and share knowledge on a regular basis;
- A focus on insect species in future biodiversity planning for both public and private land, including environmental education;
- Preparation of a 'backyard restoration plan' suitable for the OLB area to encourage initiatives on private land;
- Encouragement of the planting of indigenous plant species for both public and private land, with a particular focus on food species;
- The establishment of a 'trap library' for community members to borrow predator control tools and to learn how to be utilise them;
- Funding towards school programmes as a key component of environmental education;
- Funding towards public signage in restoration areas to foster environmental education; and
- Implementation of WAR EOs potentially through joint-funding opportunities with Healthy Waters.

6 REFERENCES

- Auckland Council 2012. Auckland Council's Indigenous Biodiversity Strategy. Environmental Strategy and Policy. July 2012.
- Auckland Council. 2019. Auckland Unitary Plan Operative in part (updated 21 June 2019). <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/read-the-plan/Pages/auckland-unitary-plan-operative-in-part.aspx>
- Lindsay, H., Wild, C. and Byers, S. 2009. Auckland Protection Strategy. A report to the Nature Heritage Fund Committee. Report published by the Natura Heritage Fund.
- McEwen, M.W 1987. Ecological regions and districts of New Zealand. Third revised edition in four. New Zealand biological resources centre. Publication No.5 Part 2. Department of Conservation, June 1987.
- Ōrākei Local Board 2004. Ōrākei Local Board Plan 2014. <https://www.aucklandcouncil.govt.nz/about-auckland-council/how-auckland-council-works/local-boards/all-local-boards/orakei-local-board/Documents/orakei-local-board-plan.pdf>
- Thomas, C.D. 1991. Ecological corridors: an assessment. Report prepared for Department of Conservation. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/sr34.pdf>
- Walker, S., Cieraad., Barringer., 2015. The Threatened Environment Classification for New Zealand 2012: a guide for users. Landcare Research.
- Wildlands 2019. Orakei Local Board Ecological Restoration Projects 2019. Proposal No. P5903, prepared for Auckland Council.

Appendix A:

Overview maps of environmental initiatives across the OLB area



- Key - Initiative Name**
- 01 - Andersons Beach Reserve - Phase Two
 - 02 - Eastern Bays Songbird Initiative
 - 03 - Ecological restoration along coastal cliffs
 - 04 - Ecological restoration along Stonefields Heritage Trail
 - 05 - Grampian Road Retention Dam - Phase Two
 - 06 - Hobson Bay Catchment Care project (Waiata Reserve)
 - 07 - Hobson Bay Walkway 1 - Phase Two
 - 08 - Hobson Bay Walkway 2, Thomas Bloodworth and Shore Road Reserve - Phase Two
 - 09 - Madills Farm Stream restoration project
 - 10 - Martyn Wilson Field and Lingarth Reserve - Phase Two
 - 11 - Ngapipi Reserve and Ngapipi Cliff Reserve - Phase Two
 - 12 - Pamela Place Reserve - Phase Two
 - 13 - Streamside Assistance - Remuera Stream stage two
 - 14 - Lawry Reserve
 - 15 - Martyn Wilson Fields, Sonia Reserve and Lingarth Reserve
 - 16 - Waiatarua Reserve
 - 17 - Wharua and Waitaramoa Reserves
 - 18 - Neighbourhood Liaison - Dingle Dell
 - 19 - Remuera Golf Course Biodiversity Enhancement and Monitoring Plan
 - 20-26 - APC volunteers / Conservation Volunteers NZ (CVNZ)
 - 27 - Friends of Churchill Park
 - 28 - Friends of Kepa Bush
 - 29 - Friends of Madills Farm Inc
 - 30 - Hapua Thrive
 - 31 - Hobson Bay Catchment Care Project
 - 32 - Past Free Karaka Bay
 - 33 - Portland - Victoria SEA community group
 - 34 - Pourewa Restoration Group
 - 35 - Stonefields Residents Association
 - 36 - Tahuna Torea Rangers and Residents Group
 - 37 - Waiatarua Reserve Protection Society
 - 38-56 - Wai Care
 - 57 - Ngāti Whātua Ōrākei Trust
 - 58 - Ōrākei Basin Management Plan
 - 59 - Urban Ngāhere Strategy
 - 60 - Tāmaki Estuary Environmental Forum
 - 61 - The Men's Shed
 - 62 - Meadowbank and St Johns Residents Association
 - 63 - Ellerslie Residents Association
 - 64 - Ellerslie Songbird Project
 - 65 - Stonefields Residents Association
 - 66 - Friends of Pourewa Valley
 - 67 - Tūpuna Maunga o Tāmaki Makaurau

Type of Initiative	Type of Ecosystem
Environmental education	Coastal
Monitoring	Coastal, Terrestrial
Predator control	Freshwater
Restoration planting	Freshwater, Terrestrial
Weed control	Terrestrial
Eastern Bays Songbird Initiative	Significant Ecological Areas
Hapua Thrive	

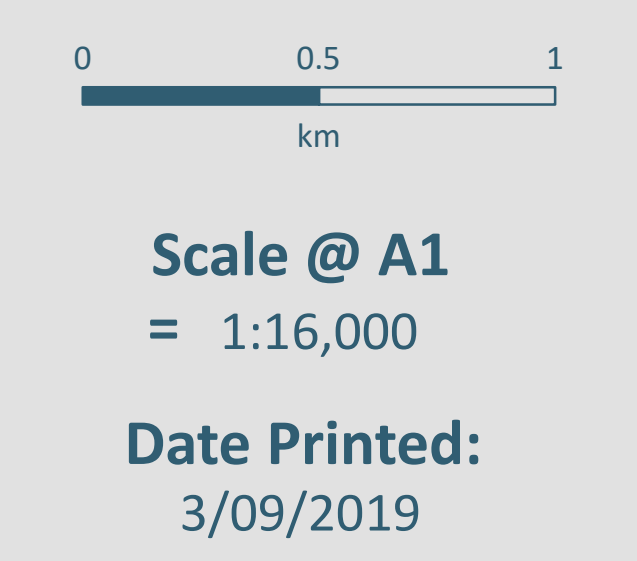
Original map created by **4SIGHT CONSULTING**
 for Auckland Council as part of the Ōrākei Local Board Natural Environment Enhancement Plan 2019

DISCLAIMER:
 This map/plan is illustrative only and all information should be independently verified on site before taking any action. Copyright Auckland Council. Land Parcel Boundary information from LINZ (Crown Copyright Reserved). Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and plan completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information. Height datum: Auckland 1946.

Ōrākei Local Board Natural Environment Enhancement Plan

Environmental Initiatives

September 2019



Appendix B:

Environmental Initiatives – Reproduction of Master Spreadsheet

#	Location	Initiative name	Type of initiative					Brief description	Key objectives (benefits / outcomes)	Start date	Land type (public/private)	Ecosystem type			Key contact	Notes
			Weed control	Predator control	Restoration planting	Monitoring	Environmental education					Coastal	Terrestrial	Freshwater		
1	Andersons Beach Reserve	Andersons Beach Reserve - Phase Two (Ecological Restoration and pest Management)	Y	Y	Y			This is a very weedy coastal cliff reserve, particularly towards the northern end. Phase two will deliver a continuation of initial and follow up weed control. This control is focussed on high priority vines including Japanese Honeysuckle and Blue Morning Glory and ground covers including Tradescantia. Planting restoration and maintenance will be carried out on the 2017/2018 planting. The completion of the project will reduce the amount of time for future control of invasive plants within the reserve.	<ul style="list-style-type: none"> Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. Increase in native biodiversity and improved ecosystem. Improved social value of the reserve as a space for public recreation and enjoyment. 	17/18	Public	Y			Infrastructure and Environmental Services. Contractor: Te Ngahere	OLB funded
2		Eastern Bays Songbird Initiative		Y	Y	Y		Facilitation and resource support to Eastern Bays Songbird Initiative for ecological restoration and pest management. This initiative includes landscape scale pest control (public and private land) and community led ecological monitoring and conservation activity. In 18 months, over 900 community-made rat traps have been given away at various local events. The Men's Shed has been working with the initiative to produce the rat traps and are now providing weta hotels to support outcome monitoring.	<ul style="list-style-type: none"> Enhanced habitat for indigenous species Predator control benefits native animal and plant species. 		Public and private		Y		http://www.southernbird.org.nz/	OLB funded
3	St Heliers to Andersons Beach	Ecological restoration along coastal cliffs	Y					Enhancement of the ecological restoration work delivered from St Heliers and through to Anderson's Beach Reserve along the council-owned coastal cliff area.	<ul style="list-style-type: none"> Reduced invasive plant species present in the reserves limiting further spread both within the reserve and in other areas. Increase in native biodiversity and improved ecosystem. 	18/19	Public	Y			Infrastructure and Environmental Services. Contractor: Wildlands	OLB funded

4	Stonefields Heritage Trail	Ecological restoration along Stonefields Heritage Trail	Y		Y			Ecological restoration and pest management on the Stonefields Heritage Trail.	<ul style="list-style-type: none"> • Reduced invasive plant species present along the trail and limiting the further spread within the trail area and surrounding open spaces. • Increase in native biodiversity and improved ecosystem. 	18/19	Public		Y		Infrastructure and Environmental Services. Contractor: Te Ngahere	OLB funded
5	Grampian Road	Grampian Road Retention Dam - Phase Two (Ecological Restoration and pest Management)	Y	Y	Y			Small reserve with some areas of native canopy and a weedy understory. The south eastern corner is dominated by Chinese privet and cotoneaster canopy. Phase two will continue initial control with a focus on Tradescantia and other priority environmental weeds present. Plant maintenance carried out on the 2017/2018 planting. A planting area two which comprises a drainage swale, will deliver planting of 500 wetland species (sedges) to suppress pest plant establishment. The completion of this project will reduce the amount of time required for future control of invasive plants within the reserve. Control targeting rodents and possums will also be undertaken.	<ul style="list-style-type: none"> • Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. • Reduction in invasive mammal numbers in the reserve. • Increase in native biodiversity and improved ecosystem health and functioning. • Improved social value of the reserve as a space for public recreation and enjoyment. 	17/19	Public		Y		Infrastructure and Environmental Services. Contractor: Te Ngahere	OLB funded
6	Waiata Reserve	Hobson Bay Catchment Care project (Waiata Reserve)	Y		Y			This project mainly comprises site preparation, plant supply, planting and maintenance; weed control covering all priority areas (1,2 and 3); and assistance at a volunteer planting days in accordance with the Waiata Reserve Planting Plan (Morphum, Feb 2016 – Remuera Stream Restoration Works). It is noted that this report does not cover planting in 2019, however advice from the contractors has suggested that the reserve could use an additional 1000 trees to replace fatalities and cover barren areas where weeds are likely to establish.	<ul style="list-style-type: none"> • Restoring and improving local waterways. • Empowering local communities to connect and advocate for their local natural environment. • Increasing both terrestrial and aquatic biodiversity by creating ecological corridors and riparian margins. 		Public		Y	Y	Infrastructure and Environmental Services	

7	Hobson Bay Walkway	Hobson Bay Walkway 1 - Phase Two	Y		Y			<p>Narrow coastal strip with predominant pohutukawa canopy and limited understory. Phase two will deliver follow up control which will be focussed on most weeds present including brush wattles, small tree privets, Tradescantia and pampas. Planting preparation and planting of 200 plants will be carried out in the canopy gaps created by the removal of canopy pest plants. The aim is achieve indigenous canopy cover in 3-5 years on the exposed coastal margin and reduce future establishment of pest plants. This project will build upon the work delivered in 2017/2018.</p>	<ul style="list-style-type: none"> • Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. • Increase in native biodiversity and improved ecosystem health and functioning. • Improved social value of the reserve as a space for public recreation and enjoyment. 	17/18	Public	Y			Infrastructure and Environmental Services. Contractor: Te Ngahere	OLB funded
---	--------------------	----------------------------------	---	--	---	--	--	---	---	-------	--------	---	--	--	--	------------

8	Hobson Bay Walkway	Hobson Bay Walkway 2, Thomas Bloodworth and Shore Road Reserve - Phase Two	Y		Y			<p>This reserve consists of a narrow coastal edge strip, occasional bush pockets and a larger bush area at the western end of the reserve. Tree privet and other mature exotic canopy is present in some areas, and a large area of bamboo is present in the western inlet. Phase two will deliver initial and follow up control will be focussed on pampas and brush wattles along the coastal edge, and priority species including moth plant, woolly nightshade, and Tradescantia through bush areas. Planting preparation and planting of 250 plants will be carried out on the exposed coastal areas adjacent to tidal mangroves selected to fill gaps where pampas are removed. The completion of this project will reduce the amount of time required for future control of invasive plants within the reserve. This project will build upon the work delivered in 2017/2018.</p>	<ul style="list-style-type: none"> • Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. • Increase in native biodiversity and improved ecosystem health and functioning. • Improved social value of the reserve as a space for public recreation and enjoyment. 	17/18		Y			Infrastructure and Environmental Services. Contractor: Te Ngahere	OLB funded; proposed predator control
---	--------------------	--	---	--	---	--	--	--	---	-------	--	---	--	--	---	---------------------------------------

9	Madills Farm Recreation Reserve	Madills Farm Stream restoration project	Y		Y		Y	<p>Implementation of the Madills Farm Reserve Stream Restoration Plan June 2015. This project aims to support stream improvement, water quality and biodiversity outcomes in the local board area.</p> <ul style="list-style-type: none"> • Contractor weed control / site preparation (as per Madills Stream Restoration Plan). • Plant ordering and delivery (use of Ngāti Whatua nursery requested by the board). • Community Planting Day community planting day. • Stream care and restoration education at community planting events. • Communications via social and print media to promote the project and stream care messages to the wider community. • Encouraging ongoing stream care through existing programmes (eg Wai care and LSP parks volunteer programmes). • Project management and reporting. 	<ul style="list-style-type: none"> • Enhanced biodiversity and stream habitat in Madills Reserve. • Engage neighbours and local community stakeholders (schools, community groups) in project opportunities. • Community awareness of the benefits of stream enhancement. • Encourage neighbours to manage weeds on private property to prevent weed incursion onto the reserve to connect and advocate for their local natural environment. 		Public		Y	Y	Infrastructure and Environmental Services
---	---------------------------------	---	---	--	---	--	---	--	--	--	--------	--	---	---	---

10	Martyn Wilson Field and Lingarth Reserve	Martyn Wilson Field and Lingarth Reserve - Phase Two (Ecological Restoration and pest Management)	Y					<p>While undertaking pest plant control in each reserve, boundary pest plant issues will be identified and the following actions undertaken: Phase two for this activity includes:</p> <ol style="list-style-type: none"> 1. Letter drop to selected properties located on weed infested boundaries. 2. Follow-up door knock for properties who have not responded. 3. One hour site visit/consultation with the property owner. This will usually entail a walk through of the property with the owner, identifying pest plant issues and discussing control methods. 4. Follow up with a short written report. 5. Offer selected landowners assistance with their pest plant control if they are deemed to be unable to do it themselves. 6. Provide landowners with a free bottle of weed stump gel (Metgel or Vigilant as most appropriate, along with guidance for safe use and one free weed bag to assist with ongoing control by landowner (to be confirmed and supplied by Council). 7. Maintain accurate records showing what support has been provided to each property and all communication. <p>This project will build upon work delivered in this area in 2017/2019.</p>	<ul style="list-style-type: none"> • Enhanced biodiversity and stream habitat across high value reserves. • Engagement of neighbours to raise awareness of the benefits of stream enhancement and will encourage neighbours to manage weeds on private property to connect to their local environment. 	Public and private		Y	Y	Infrastructure and Environmental Services	
----	--	---	---	--	--	--	--	--	--	--------------------	--	---	---	---	--

11	Ngapipi Reserve and Ngapipi Cliff Reserve	Ngapipi Reserve and Ngapipi Cliff Reserve - Phase Two (Ecological Restoration and pest Management)	Y	Y	Y			<p>Very weedy sites, with tree privet forming a significant portion of the canopy, and numerous environmental weeds throughout the understory. Some native regeneration is occurring naturally and some understory planting has been carried out in an area of Ngapipi Reserve. Phase two will deliver follow up control which will focus on environmental weed species present in Ngapipi Reserve including Japanese honeysuckle, blue morning glory, Madeira vine, ginger, climbing asparagus and woolly nightshade. Planting preparation and planting of 250 plants will also be carried out in a section of understory in Ngapipi Reserve. If time allows, initial control work will be started in Ngapipi Cliff Reserve. The completion of this project will reduce the amount of time required for future control of invasive plants within the reserve. This project will build on work delivered in this area in 2017/2018.</p>	<ul style="list-style-type: none"> • Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. • Reduction in invasive mammal numbers in the reserve. • Increase in native biodiversity and improved ecosystem health and functioning. • Improved social value of the reserve as a space for public recreation and enjoyment. 	17/18	Public		Y		Infrastructure and Environmental Services. Contractor: Wildlands
----	---	--	---	---	---	--	--	---	---	-------	--------	--	---	--	--

12	Pamela Place Reserve	Pamela Place Reserve - Phase Two (Ecological Restoration and pest Management)	Y	Y	Y			<p>Reserve abuts privately owned bush remnant. Canopy is predominantly native, although some exotics are present, and the understory has a diverse selection of weeds. Phase two will deliver follow up control which will be focussed on jasmine in the south western corner and other target weeds throughout the reserve. This will exclude an area of agapanthus present in the north of the reserve for aesthetic reasons, and to maintain bank stability. Planting preparation and enrichment planting of 500 plants will also be carried out within the gaps following pest plant control. The completion of this project will reduce the amount of time required for future control of invasive plants within the reserve.</p> <p>This project will build on work delivered in this area in 2017/2018.</p>	<ul style="list-style-type: none"> • Reduction of the current invasive plant species present in the reserve, limiting further spread both within the reserve and to other areas. • Reduction in invasive mammal numbers in the reserve. • Increase in native biodiversity and improved ecosystem health and functioning. • Improved social value of the reserve as a space for public recreation and enjoyment. 	17/18	Public and private		Y		Infrastructure and Environmental Services. Contractor: Te Ngahere; Frances Bethesby
----	----------------------	---	---	---	---	--	--	--	---	-------	--------------------	--	---	--	---

13	Remuera Stream	Streamside Assistance - Remuera Stream stage two					Y	<p>From the Deck, Newmarket Stream Community Restoration Project is a community led initiative. Facilitated by Gecko Trust, in partnership with Auckland Council. The Newmarket Streamside Assistance project is building on existing community members. Encouraging their enthusiasm and leadership, embracing a shared learnings approach. The second year of this project roll out will build on the outcomes of the first. For example resources and educational tools are developed as the community further defines its focus. This will benefit the community by giving them opportunities to connect with more neighbours and allow them to share lessons learnt and build resilience. Tasks and events:</p> <ul style="list-style-type: none"> • Coordination within the community. • Revisit priorities and revise plan as necessary. • Build on leadership and education. • Hold planned events. Including networking and practical training and working days. • Continue to develop strategic decision making documents. 	<p>The second year of this project roll out will build on the outcomes of the first. For example resources and educational tools are developed as the community further defines its focus. This will benefit the community by giving them opportunities to connect with more neighbours and allow them to share lessons learnt and build resilience, including:</p> <ul style="list-style-type: none"> • Restoring and improving local waterways. • Increasing both terrestrial and aquatic biodiversity by creating ecological corridors and restored riparian margins. • Empowering local communities to connect and advocate for their local natural environment and for positive freshwater outcomes. <p>- Wider community connection and appreciation - The community can realise that plans can be adapted take greater ownership of the direction to bring about positive change to their neighbourhood. - Resilience and pride is developed as emerging leaders and young educators are encouraged amongst the neighbourhood. - Community sees tangible results and action. This is visible in the neighbourhood through involvement in workshops around weeds, pests and bird monitoring. As well as door knocking to expand the community outreach.</p>		Public and private		Y	Y	Infrastructure and Environmental Services	
----	----------------	--	--	--	--	--	---	---	---	--	--------------------	--	---	---	---	--

14	Lawry Reserve	Lawry Reserve	Y	Y	Y			New planting, weed eradication and pest management. Local kindergarten undertakes restoration planting.		17/18	Public		Y		Infrastructure and Environmental Services. Contractor: Te Ngahere	Proposed restoration planting
15	Martyn Wilson Fields, Sonia Reserve and Lingarth Reserve	Martyn Wilson Fields, Sonia Reserve and Lingarth Reserve	Y					Weed control	Suppression of weed species, encouraging growth of native plants.	17/18	Public				Infrastructure and Environmental Services. Contractor: Wildlands	Proposed restoration planting
16	Waiatarua Reserve	Waiatarua Reserve	Y	Y				Planting native trees and shrubs to provide year round food for birds and insects; Carrying out a volunteer pest control program with Auckland City Council Parks to control rats and possums which decimate the birdlife and new tree growth. A wetland restoration and enhancement plan is currently being prepared by Auckland Council.	The enhancement plan will inform the local board of future work that could be sustainably done within the reserve to improve recreational and environmental opportunities.	17/18	Public		Y	Y	Infrastructure and Environmental Services. Contractor: Wildlands	
17	Wharua Reserve and Waitaramoa Reserve	Wharua and Waitaramoa Reserves	Y	Y				Weed control; Predator control	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species	17/18	Public	Y	Y		Infrastructure and Environmental Services. Contractor: Wildlands	
18	Dingle Dell Reserve	Neighbourhood Liaison - Dingle Dell	Y					Proposed to extend to Hapua Thrive community.	Suppression of weed species, encouraging growth of native plants.	17/18	Private		Y		Infrastructure and Environmental Services. Contractor: Wildlands	

19	Remuera Golf Course	Remuera Golf Course Biodiversity Enhancement and Monitoring Plan	Y	Y	Y			Pilot project with AC Environmental Services; 4Sight is developing a Biodiversity Enhancement and Monitoring Plan for Remuera Golf Course to consolidate pest animal and weed control, and develop a restoration planting plan.	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants	2019	Public		Y	Y	Infrastructure and Environmental Services; Remuera Golf Course; 4Sight	Proposed restoration planting, proposed environmental education, proposed weed control
20	Churchill Park	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
21	Kepa Bush Reserve	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
22	Madills Farm Recreation Reserve	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
23	Selwyn Bush	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public (Ministry of Education)		Y		Sarah Peters (Auckland Council)	
24	St Johns Bush	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	

25	Tahuna Torea Nature Reserve	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
26	Waiatarua Reserve	APC volunteers / Conservation Volunteers NZ (CVNZ)		Y				Predator control	Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
27	Churchill Park	Friends of Churchill Park	Y	Y	Y			Weed control; Predator control; Restoration planting	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants		Public		Y		Sarah Peters (Auckland Council)	
28	Kepa Bush Reserve	Friends of Kepa Bush	Y	Y				Weed control; Predator control	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
29	Madills Farm Recreation Reserve	Friends of Madills Farm Inc	Y	Y				Weed control; Predator control	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species		Public		Y		Sarah Peters (Auckland Council)	
30	Hapua Street	Hapua Thrive	Y	Y	Y			Weed control; Predator control; Restoration planting	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants				Y		Mary Stewart, Cynthia Karikala	
31	Waiata Reserve	Hobson Bay Catchment Care Project	Y		Y			Weed control; Restoration planting	Suppression of weed species, encouraging growth of native plants Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants				Y	Y	Theresa Pearse	

32	Karaka Bay	Pest Free Karaka Bay		Y				Predator control	Predator control benefits native animal and plant species		Public and private		Y			
33	Portland Road and Victoria Ave	Portland - Victoria SEA community group	Y	Y	Y			Portland Road and Victoria Ave, Remuera. Weed control; Predator control; Restoration planting	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants				Y			Michael Ngatai (Auckland Council)
34	Selwyn Bush	Pourewa Restoration Group	Y	Y	Y			Weed control; Predator control; Restoration planting	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants		Public (Ministry of Education)		Y			Sarah Peters (Auckland Council)
35	Stonefields Heritage Walkway	Stonefields Residents Association	Y	Y				Stonefields Heritage Walkway and Wetlands. Weed control; Predator control	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species		Public		Y			Sarah Peters, Mary Stewart, Brett Butland
36	Tahuna Torea Nature Reserve	Tahuna Torea Rangers and Residents Group	Y	Y	Y			Weed control; Predator control; Restoration planting	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants				Y			Michael Ngatai, Sarah Peters
37	Waiatarua Reserve	Waiatarua Reserve Protection Society	Y	Y	Y			Friends of Waiatarua Reserve. community group working towards making the Waiatarua Reserve a unique ecological jewel for residents and for future generations by; Planting native trees and shrubs to provide year round food for birds and insects Carrying out a volunteer pest control program with Auckland City Council Parks to control rats and possums which decimate the birdlife and new tree growth.	Suppression of weed species, encouraging growth of native plants; Predator control benefits native animal and plant species; Restoration planting enhances ecosystem functions and resilience, benefitting native animals and plants				Y	Y		http://waiatarua.com/index.htm Sarah Peters; (Auckland Council);

38	Waiata Reserve	Wai Care				Y		Waiata Reserve Stream, Footbridge. Group: Remuera Intermediate	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public		Y		Remuera Intermediate School
39	Orakei Basin Stream	Wai Care				Y		Orakei Basin Stream, bridge behind Meadowbank School. Group: Meadowbank School	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Meadowbank School
40	Orakei Basin Stream	Wai Care				Y		Orakei Basin Stream, amphitheatre at Meadowbank School. Group: Meadowbank School	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Meadowbank School
41	Portland Road Stream	Wai Care				Y		Portland Road Stream, downstream of culvert. Group: Mt Hobson Middle School	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Mt Hobson Middle School
42	St Johns Bush Stream	Wai Care				Y		St Johns Bush Stream, Worcester Street. Group: Friends of St John's Bush	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Friends of St John's Wood
43	Pourewa Reserve	Wai Care				Y		Pourewa Stream Tributary, behind ASB Stadium. Group: Remuera Intermediate	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Remuera Intermediate School
44	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, East Site 5 Lower. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei

45	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, East Site 5 Upper. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei	
46	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, Pony Club Site 4 Lower. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei	
47	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, West Kapa Road, below culvert. Group: St Joseph's School	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	St Joseph's School	
48	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, Pony Club Site 4 Upper. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei	
49	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, Kapa Rd West Site 2 Upper. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei	
50	Awarua Reserve	Wai Care				Y		Tawaipareira. Group: Waiheke Primary	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Waiheke Primary	
51	Pourewa Reserve	Wai Care				Y		Pourewa Reserve, Ngapipi Rd Site 1 Lower. Group: Ngāti Whatua Orakei	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Ngāti Whatua Orakei	

52	Madills Farm Recreation Reserve	Wai Care				Y		Madills Farm Stream, behind club rooms. Group: Kohimarama Primary	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Kohimarama Primary
53	Dingle Dell Reserve	Wai Care				Y		Dingle Dell Reserve Stream. Group: Anahita	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Anahita
54	Churchill Park	Wai Care				Y		Churchill Park Stream, bridge. Group: Churchill Park Primary	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Churchill Park Primary
55	Churchill Park	Wai Care				Y		Churchill Park Stream, 43 Athlone Rd 10m South of Tributary. Group: Friends of Churchill Park	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Public			Y	Friends of Churchill Park
56	10A Forfar Road	Wai Care				Y		Cisaria, 10A Forfar Road, end of garden. Group: Cisaria Family	Water quality monitoring can inform better management of waterways and help identify issues. The Wai Care programme is focussed on engaging communities with the natural environment in their backyards.		Private			Y	Cisaria Family
57	Ōkahu Bay	Ngāti Whātua Ōrākei Trust	Y	Y	Y	Y	Y	Various restoration activities are taking place in the area, including around Ōrākei Marae - including weed control, predator control, restoration planting and a native plant nursery. The Ōkahu Bay Ecological Restoration Plan (ŌCERP) has been developed in order to implement the Whenua Rangatira Reserves Management Plan and the Ngāti Whātua Ōrākei Heritage and Resource Management Kaupapa, Strategy and Policy 2010-2011.	One objective is for Ōkahu Bay to be safe for swimming and collecting Kai Moana. The ŌCERP looks to promote, develop and enhance Ōkahu Bay as the public face or gateway to the Whenua Rangatira while respecting its existing cultural and spiritual value to the Tangata Whenua and enhancing its relationship with the Waitemata.		Public and private	Y	Y		Ngāti Whātua Ōrākei Trust, http://Ngatiwhatuorakei.com/trust-board

58	Ōrākei Basin	Ōrākei Basin Management Plan	Y			Y		Under the management plan for Ōrākei Basin, the local board is undertaking significant works to maintain and enhance the area's ecology. The local board has initiated water testing of the Basin, which is reported in the Monitoring and Implementation Action Plan. The plan provides a programme of regular monitoring, analysis and research into the environment at Ōrākei Basin and is a requirement of the Management Plan.	This sampling provides a benchmark for the Basin's water quality for ongoing monitoring and is also used to inform the Safeswim programme which measures suitability for swimming.	2010	Public		Y	Y	Infrastructure and Environmental Services	OLB funded
59	Auckland Wide – OLB area specific implementation	Urban Ngāhere Strategy	Y	Y	Y		Y	<p>The strategy recognises the social, environmental, economic, and cultural benefits of our urban ngāhere (forest), and sets out a strategic approach to knowing, growing, and protecting it.</p> <p>The local board is funding a Ngāhere Strategy over three years which will identify, increase and protect our local urban forest. The first year is the 'knowing' phase, which is mapping existing tree canopy cover on public and private land.</p>	<p>increased canopy cover to 30 per cent across Auckland's urban area, and at least 15 per cent in every local board area;</p> <p>enhanced the associated social, environmental, economic and cultural benefits;</p> <p>addressed the unequal distribution of canopy cover in urban Auckland;</p> <p>increased the network of green infrastructure on public land;</p> <p>improved links between green spaces by establishing ecological corridors;</p> <p>effectively engaged with landowners to support urban ngāhere on private land;</p> <p>planted diverse tree and plant species on public land;</p> <p>shared knowledge of our urban ngāhere;</p> <p>instilled a sense of pride in Aucklanders for their urban ngāhere.</p>	2019	Public and private		Y		https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/Documents/urban-ngāhere-forest-strategy.pdf	OLB funded

60	Tāmaki Estuary	Tāmaki Estuary Environmental Forum				Y	Y	OLB co-funds and participates in Tāmaki Estuary Environment Forum (TEEF). The forum operates as a collaboration between five local boards that border Te Wai o Taiki / The Tāmaki Estuary, as well as several community organisations to advocate for improvements to the Tāmaki catchment.	<p>Thriving & Diverse Native Life: That the Tamaki estuary and surrounds be home to thriving and diverse species and ecosystems</p> <p>Effect on Hauraki Gulf: That the Tamaki catchment has a positive ecological contribution to the health and diversity of the life of the Hauraki Gulf</p> <p>Valued Place: That Te Wai o Taiki be valued for its ecological, heritage, cultural, geological, recreational, amenity and spiritual values</p> <p>Improved Water Quality: That the water quality of the Tamaki Estuary and its catchments supports life and is safe for human contact and recreation</p> <p>Urban Context: That the effects of urbanisation, particularly pollutants, are reduced, controlled or removed</p>	1988	Public	Y			https://www.facebook.com/Tamakiforum/	OLB funded
61	98 Abbotts Way, Remuera	The Men's Shed		Y				Amongst other things, this workshop builds traps for pest control throughout the local board area. The group provides a place for men and women to meet, creating a new community hub where people can share skills and work on practical tasks individually and as a group, such as rat traps to reduce pests in our environment.	Building of traps to support the Eastern Bays Songbird Project				Y		http://menzshed.org.nz/aukland-east/	OLB funded
62	St Johns Road, Meadowbank	Meadowbank and St Johns Residents Association		Y				Rat trapping	Predator control benefits native animal and plant species		Private		Y		https://mbsira.co.nz/	OLB funded
63	Ellerslie	Ellerslie Residents Association		Y				Rat trapping	Predator control benefits native animal and plant species		Private		Y		http://ellerslieresidents.co.nz/	OLB funded
64	Ellerslie	Ellerslie Songbird Project		Y				Group of volunteers brought together in a project initiated by the Ellerslie Residents Association. Local residents volunteer to have rat traps on their properties.	Eradicate pests in the Ellerslie area to allow native birds to thrive. Predator control benefits native animal and plant species		Private		Y		https://ellersliesongbird.co.nz/	OLB funded
65	Stonefields	Stonefields Residents Association		Y				Rat trapping	Predator control benefits native animal and plant species		Private		Y		http://stonefields.org.nz/	OLB funded

66	Pourewa Reserve	Friends of Pourewa Valley	Y		Y			<p>Pourewa Valley is classified as an area of "ecological significance" by the Auckland City Council, and has significant historical value.</p> <p>The Friends of Pourewa Valley Group has been formed as an umbrella group to promote the valley and the groups involved in restoring the valley.</p>	<p>Vision of the Pourewa valley being an oasis of native bush in the heart of an ever expanding Auckland . Controlling weeds, planting native trees and encouraging birdlife back into the area.</p>		Public		Y	Y	https://www.pourewavalley.org/	OLB funded
67	Auckland Wide – OLB area specific implementation	Tūpuna Maunga o Tāmaki Makaurau			Y			<p>In its Integrated Management Plan for the Tūpuna Maunga, the Tūpuna Maunga Authority has articulated a set of values of the Tūpuna Maunga. From an ecological perspective, these values include: Mauri Pūnaha Hauropi/Ecology and Biodiversity</p>	<p>Strengthen ecological linkages between the Maunga - Maunga tū mauri ora, Maunga tū Makaurau ora /if the Maunga are well, Auckland is well - restore the biodiversity of the Tūpuna Maunga</p>		Public		Y			

