

Kokohuia Reserve | Heads Road Industrial Area

Master Plan and Development Recommendations

June 2020

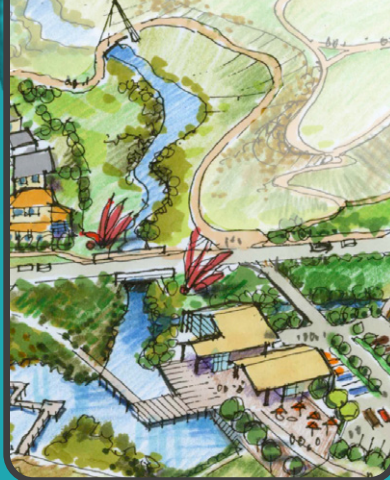
Stormwater



Community



Education



Ecology



Economics



Revision History

This document was originally prepared by Craig Pocock at Pocock Design Environment dated 19/08/2013 and has been updated by Craig Pocock at Beca Ltd dated 02/06/2020.

Revision	Prepared By	Description	Date
A	Craig Pocock	Supporting Information for Workshop	08/06/2020

Document Acceptance

Action	Name	Signed	Date
Prepared by	Craig Pocock		08/06/2020
Reviewed by	Craig Pocock		08/06/2020
Approved by	Craig Pocock		08/06/2020

on behalf of Beca Ltd.

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Site Location and context

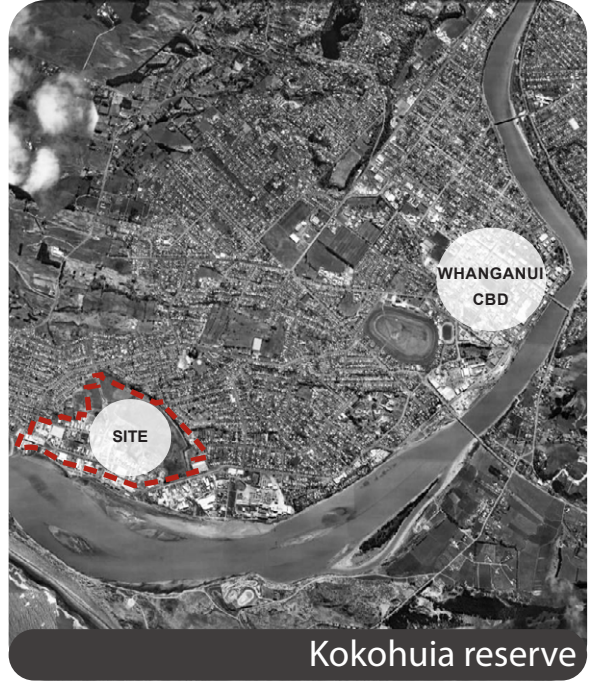


Whanganui

Located between Puriri Street and the Whanganui River, the Kokohuia | Heads Road Industrial Area Master Plan arose from concerns about periodic flooding issues within the Industrial Area. The site boundary incorporates the Reserve, Balgownie Wetland and the Heads Road Industrial Area with a total area of approximately 114 ha.

Historically the Industrial Area and Reserve were a wetland on the edge of the Whanganui River, which made it a key location for land reclamation along the river's edge during the initial development of the city. The Industrial Area was built on reclaimed land and the Reserve developed over a landfill that filled in the wetland. The Whanganui District Council, the Heads Road Industrial Group and local Iwi have been reviewing options for the area, with a view to solve stormwater issues while improving community, economic, environment and ecological amenity. This integrated approach creates a number of benefits which include:

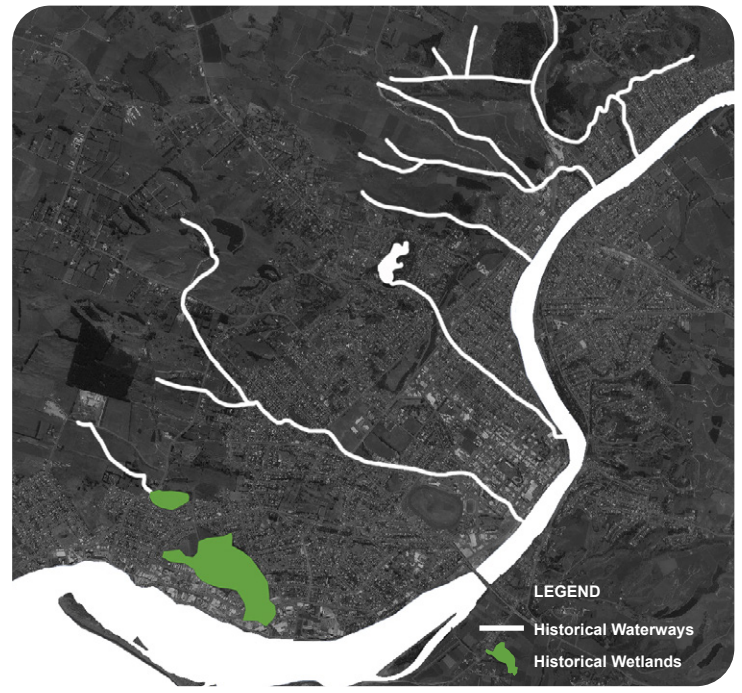
- Stormwater solutions that provide water quality improvements.
- A recreational open space and connections to the Whanganui River for the local residents.
- A landscape with an educational component for local schools, while providing branding/ beautification for the Heads Road Industrial Area
- The provision of additional land for development that provides passive surveillance and easy access to public open space.
- Improving the overall ecology of the region through the enhancement of water ways and the potential reconnection of the Whanganui River to Westmere Lake.



Kokohuia reserve



Source: <http://www.completestamp.co.nz/>



LEGEND
 — Historical Waterways
 ■ Historical Wetlands



LEGEND
 — Present Day Waterways
 ■ Westmere Lake



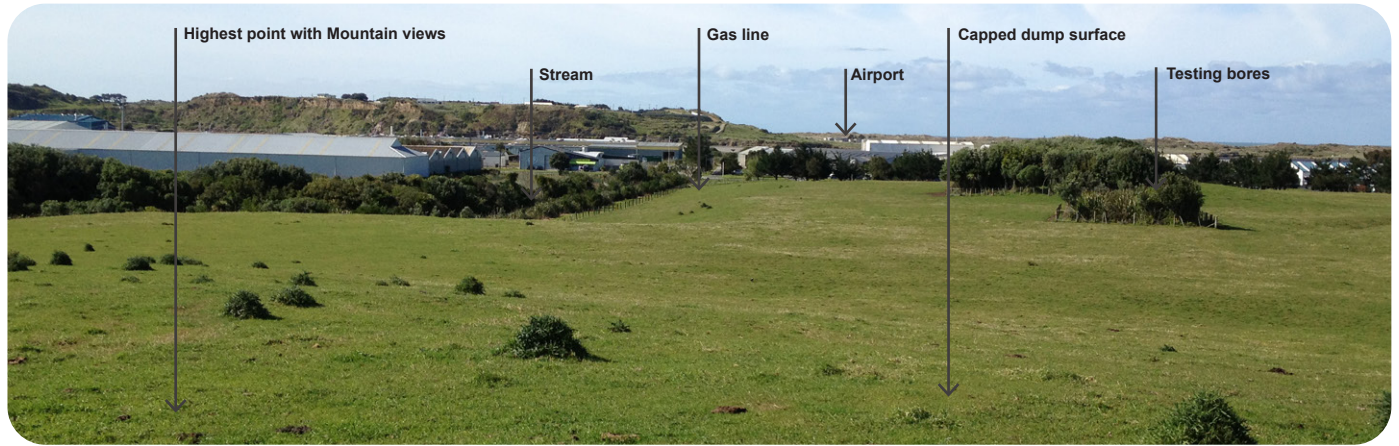
Reserve Attractions

The Reserve as viewed today is significantly altered from its original landscape, but despite this it still provides one of the largest green spaces in the city. With the exception of the local school, the community and Industrial Area turn their back on the space. This is probably due to the historical nature of the Reserve and its use as a land fill. This creates poor access into the Reserve and very little passive surveillance, as well as a low recreational amenity. However, the current Reserve does have a range of significant values that with minor editing could create a great place for the local community to use. The current values include, informal paths that provide an enjoyable stroll through the site, the Balgownie wetland, that with some enhancement could provide an excellent ecological and educational component. There are also extensive views of the Whanganui River, Mt Ruapehu, Mt Taranaki and the surrounding landscape. These values make this a key site for regeneration that could deliver a range of benefits for all users, as well as solving the most immediate problem, the alleviation of flooding within the Heads Road Industrial Area.





Back edge of Balgownie Wetland



Connection to Whanganui River

The original wetlands were known to be a highly productive eel breeding ground and an important local food source. In addition to this rich ecological environment, the wetland was also thought to be the place where the ancient navigator Kupe discovered Whanganui. Over time the landscape has been transformed and now only a small remnant of the original landscape remains and all the water and associated ecological connections to the upper catchment have been cut off. The development of this site can provide an important role in reducing flooding within the Heads Road Industrial Area and assist any future development north of the site. In addition to this, it can also create a key route in reconnecting the region's waterways and associated ecology. The site design could provide an environment that will encourage the eel population back into the area, while telling the stories of the local people and the land, such as that of Kupe and the early communities who lived here, and how the land has changed over time.

The unique opportunity that this site presents may be a first for New Zealand in developing an integrated wetland and open space that delivers, social, economic, ecological and environmental outcomes and could become a show case for many future projects.



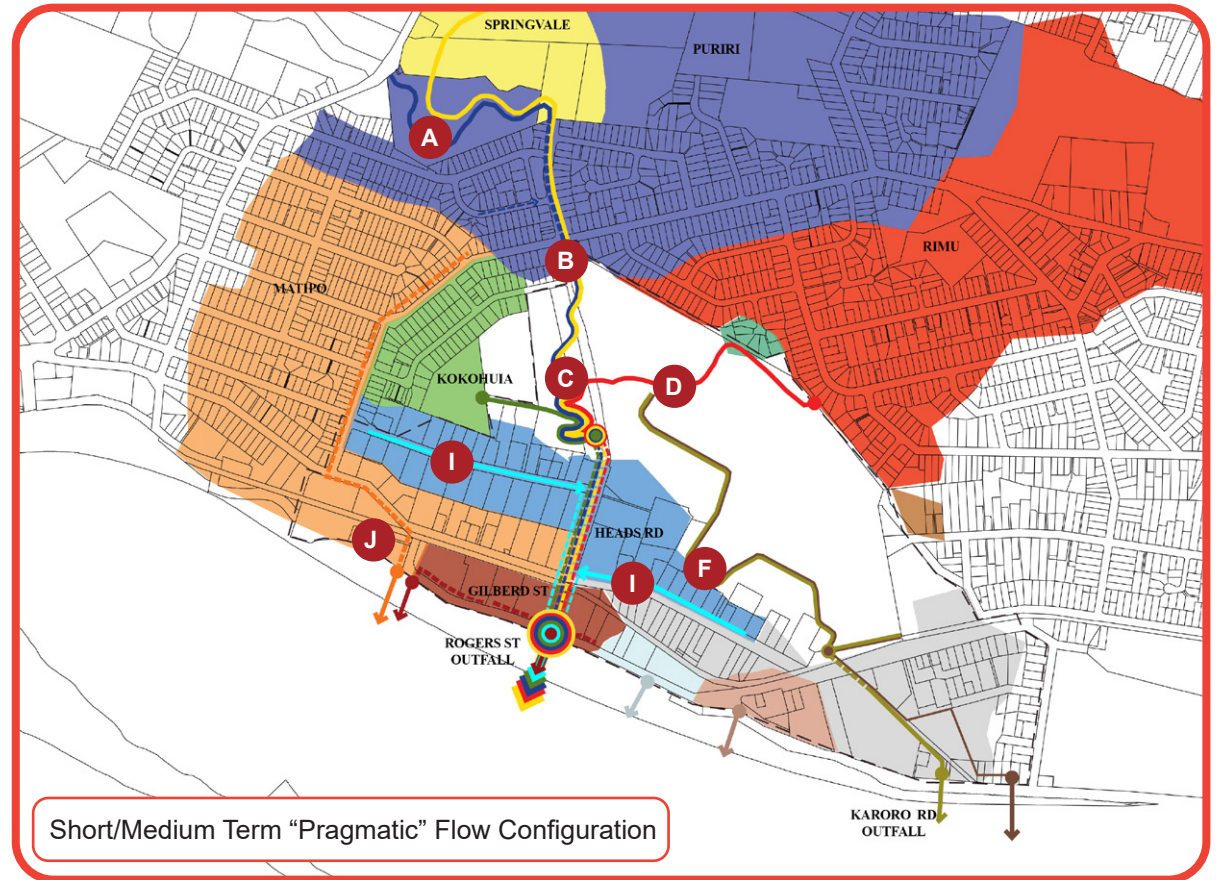
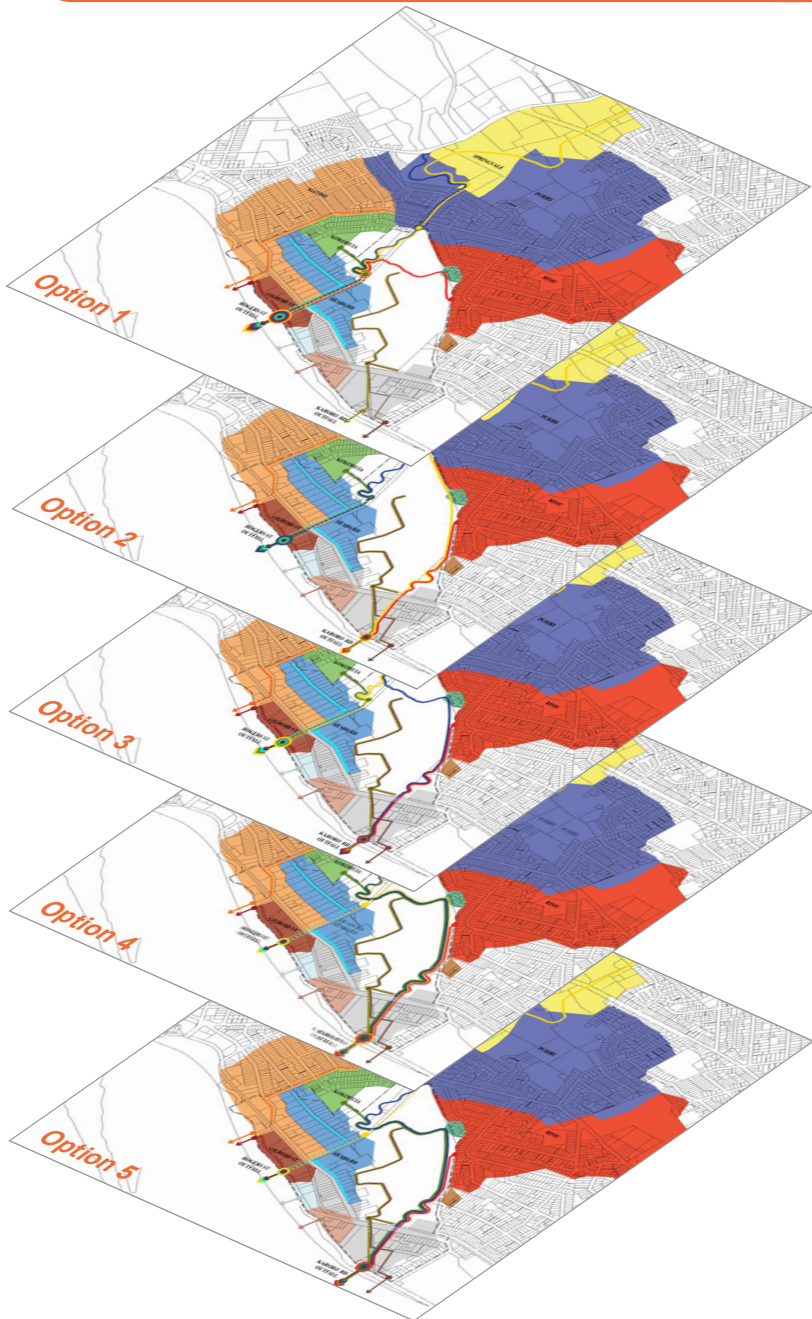
Stormwater runoff from Residential Area



Karoro Road Stream



Entrance to Wetlands



Design process and Development Ideas

The design wanted to provide multiple positive outcomes for a range of communities such as Head Road Industrial Area, the Castle Cliff community, local school and the greater Whanganui community. This required a design testing process that evaluated design on a range of performance issues that included deliverability, affordability, effectiveness, social and ecological values. The designers also considered how the development of the Balgownie area could benefit the long term development of the greater Whanganui by creating a large scale water detention and filtration zone that will aid stormwater issues in the upper catchment. There are two key potential benefits that could be gain by creating a strong water link and retention areas within the Balgownie wetland and Reserve.

Proposed Site Strategies

Connection to Westmere Lake

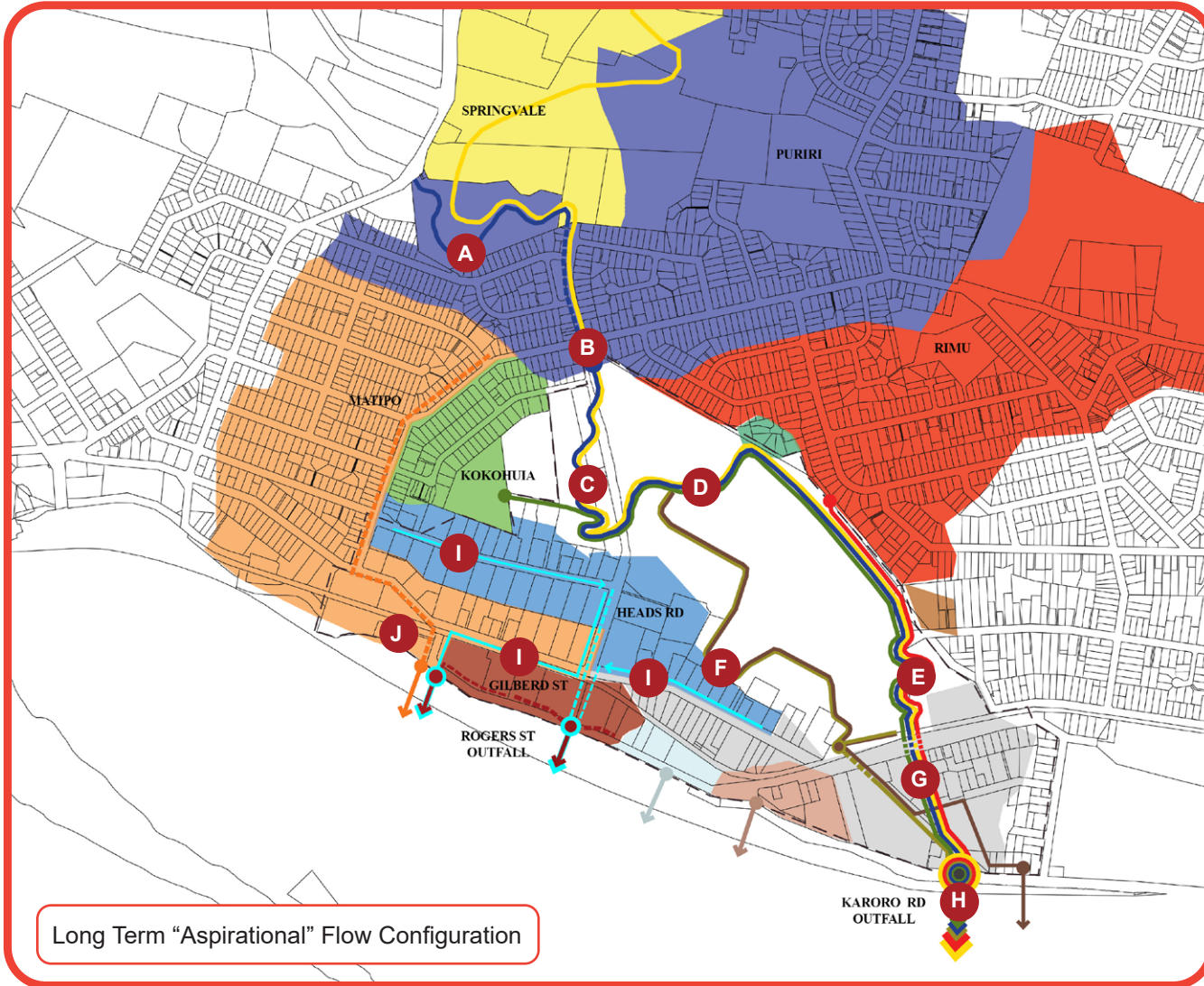
A. Titoki Wetland Upgrade

B. Ecological Corridor & Stream Enhancement

C. Wetland Expansion & Education Centre

D. Stormwater & Recreation Corridor

E. Additional Wetland Storage



Long Term "Aspirational" Flow Configuration

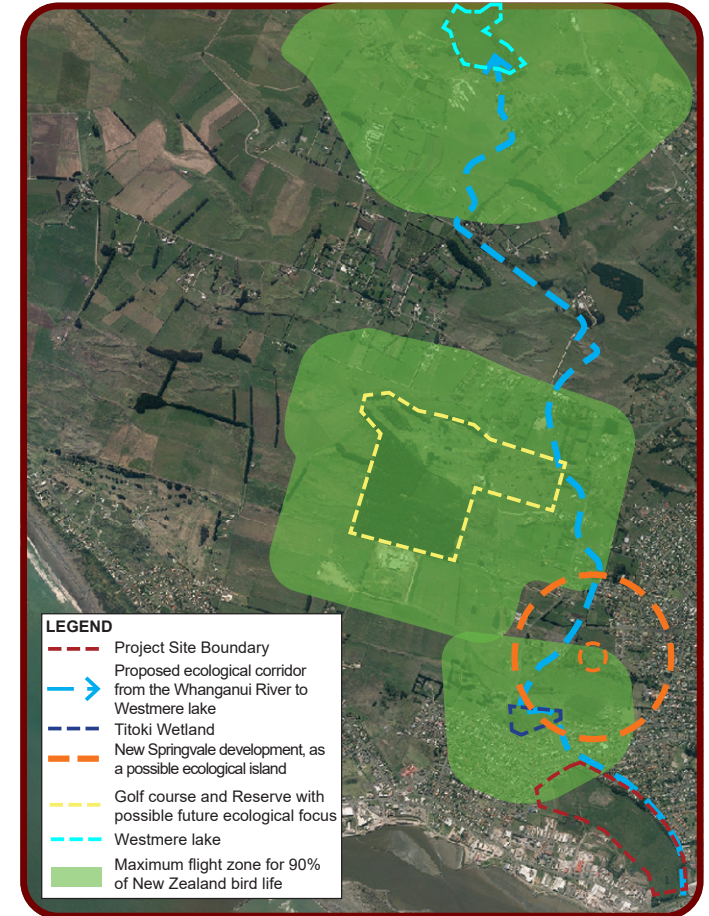
F. Overland Drain & Reserve Threshold Feature

G. Partial Daylighting of Stream

H. Karoro Road Stream Enhancement

I. Swale and Green Industry Branding

J. Dry Detention Basin



LEGEND	
	Project Site Boundary
	Proposed ecological corridor from the Whanganui River to Westmere lake
	Titoki Wetland
	New Springvale development, as a possible ecological island
	Golf course and Reserve with possible future ecological focus
	Westmere lake
	Maximum flight zone for 90% of New Zealand bird life

These include:

- The re-linking of the ecological sub region through the creation of a corridor that will connect the Whanganui River to Westmere Lake (shown above).
- Recognising that the waterway and retention areas within the Reserve could have a value beyond just stormwater treatment such as recreation, education, ecological and aesthetic embracing its future potential as a multi functional recreational space within the city.



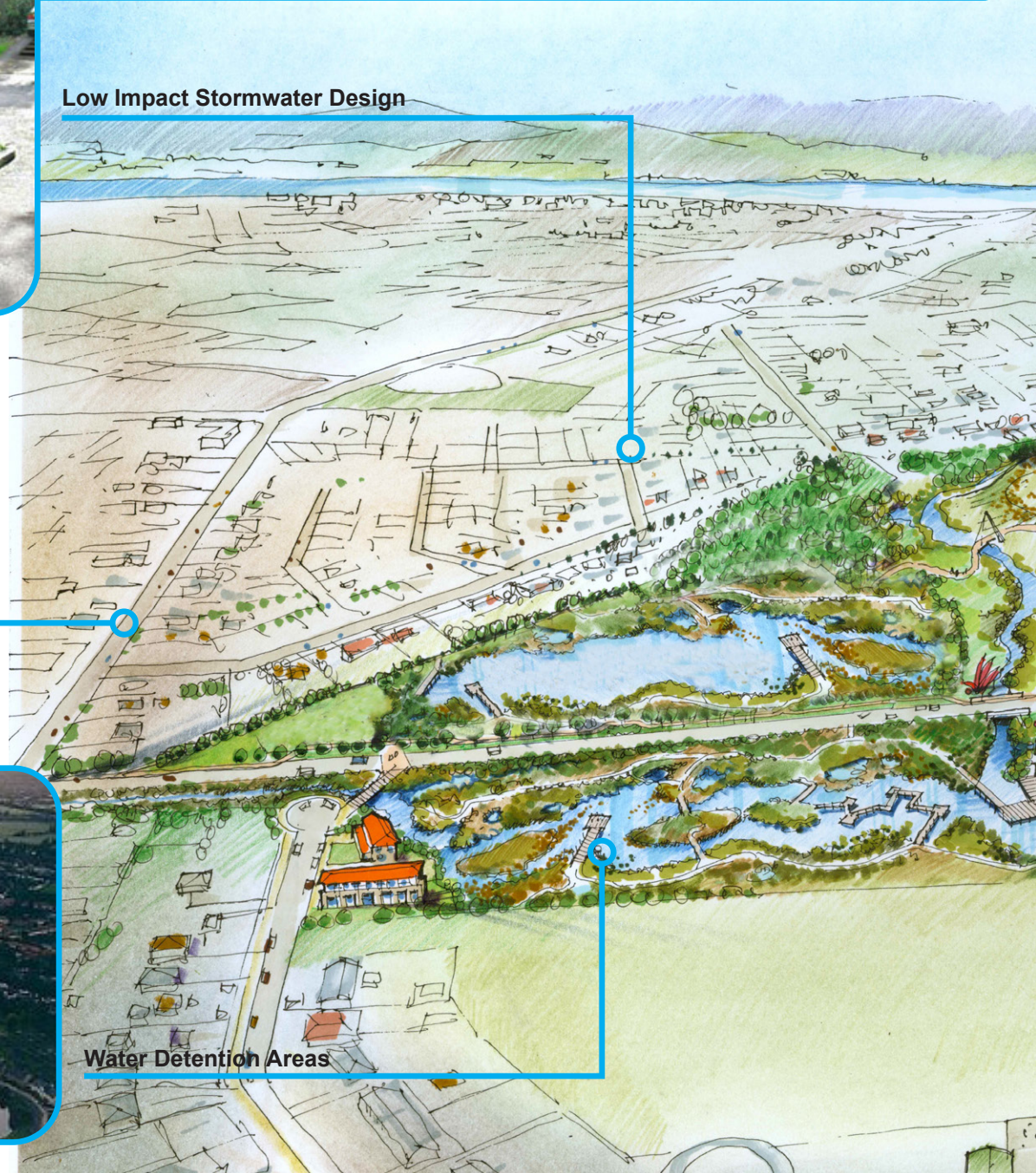
Low Impact Stormwater Design



Low Impact Stormwater Design



Water Detention Areas





Community Wetland Centre



Kokohuia School Connection



Wetland centre

Wetland Centres

- Travis Wetland, Christchurch, New Zealand
- Hunters Wetland Centre, Shortland, NSW
- Barnes Wetlands, London
- The Visitors Centre at Newport Wetlands Centre, Wales
- Arundel Wetland Centre, UK
- James Clarkson Environmental Discovery



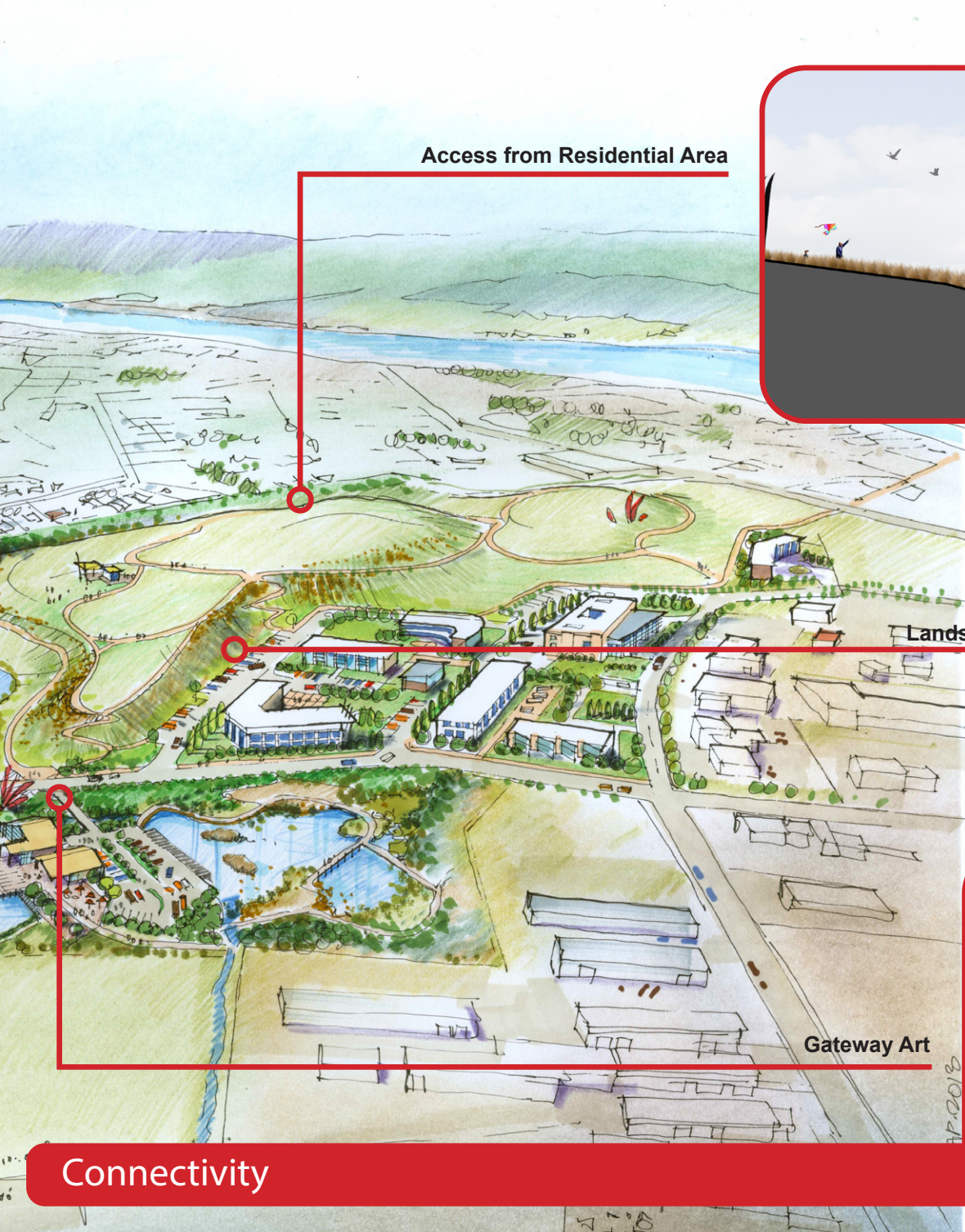
Living Centre for Learning



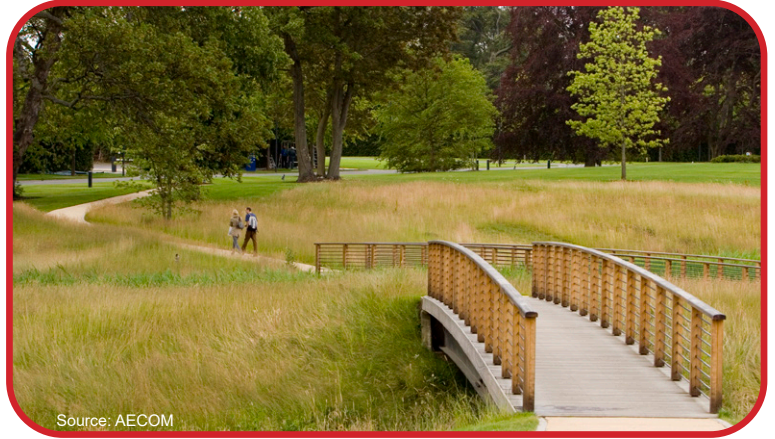
Source: http://gardener.ru/library/architectural_panorama/page388.php

Outdoor Teaching Opportunities





Access from Residential Area



Source: AECOM

Landscape Threshold

Gateway Art



Connectivity



Outdoor Activities

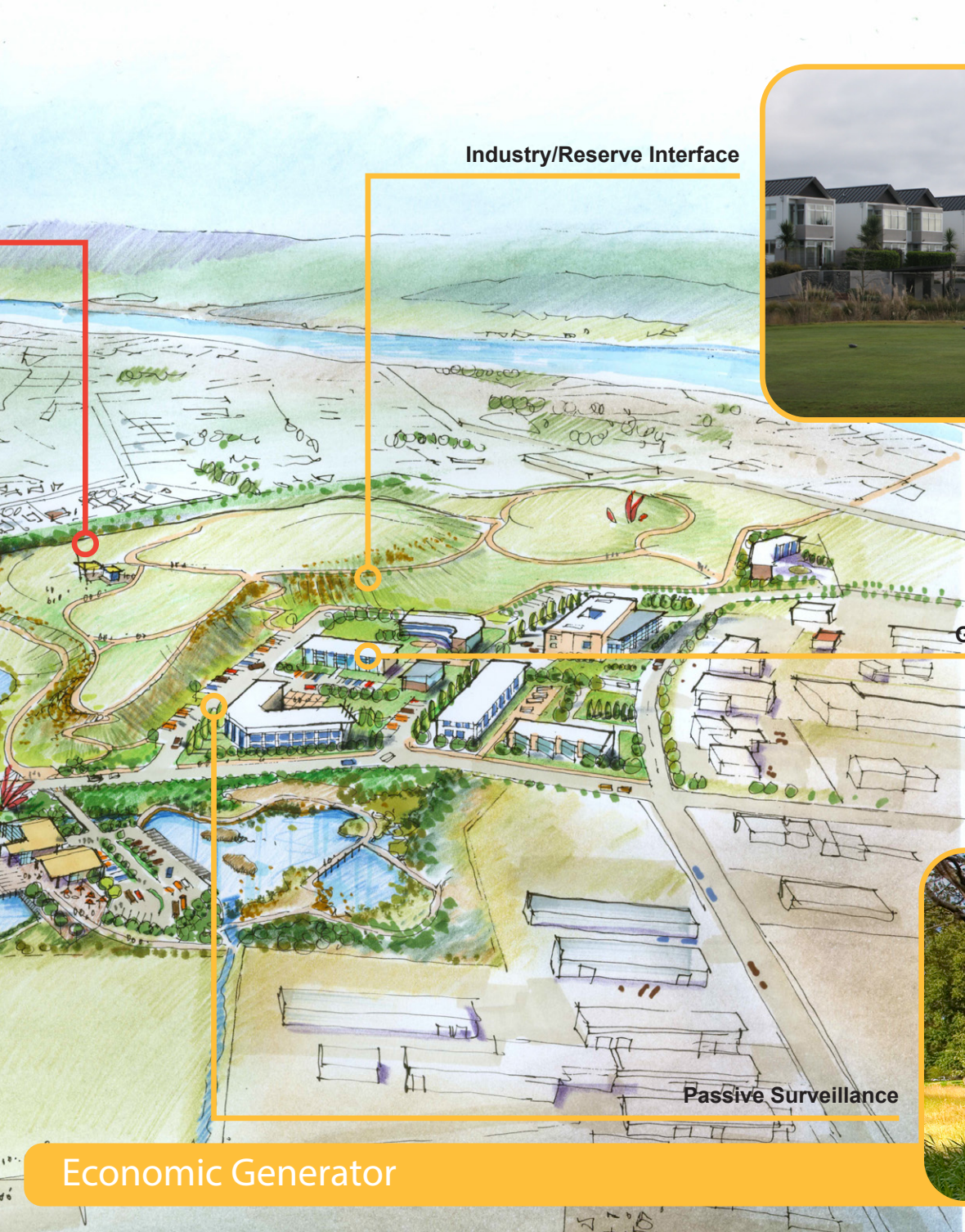


Interaction with Water



Public Art





Industry/Reserve Interface



Green Industry Approach



Passive Surveillance



Source: AECOM

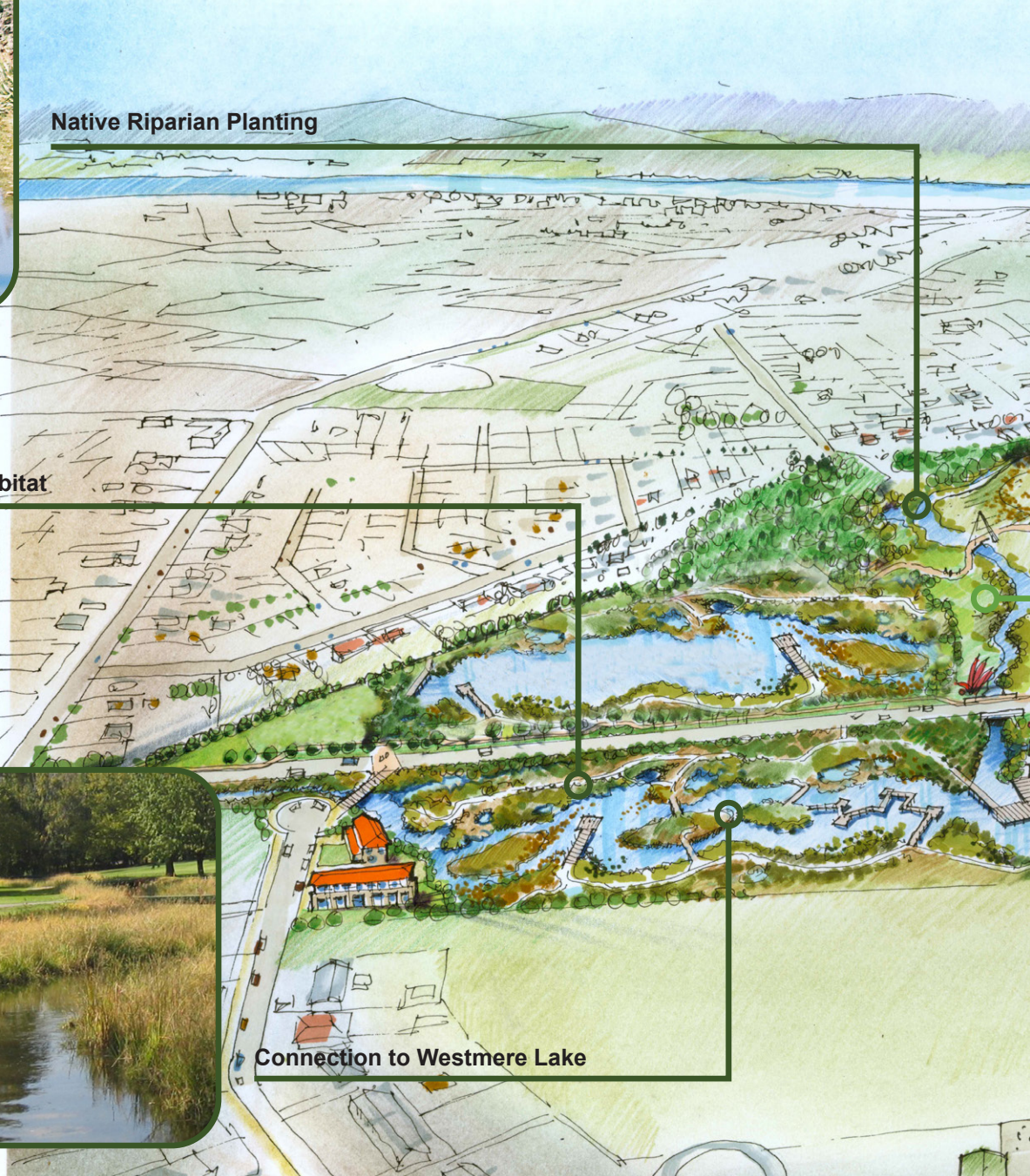
Economic Generator



Native Riparian Planting

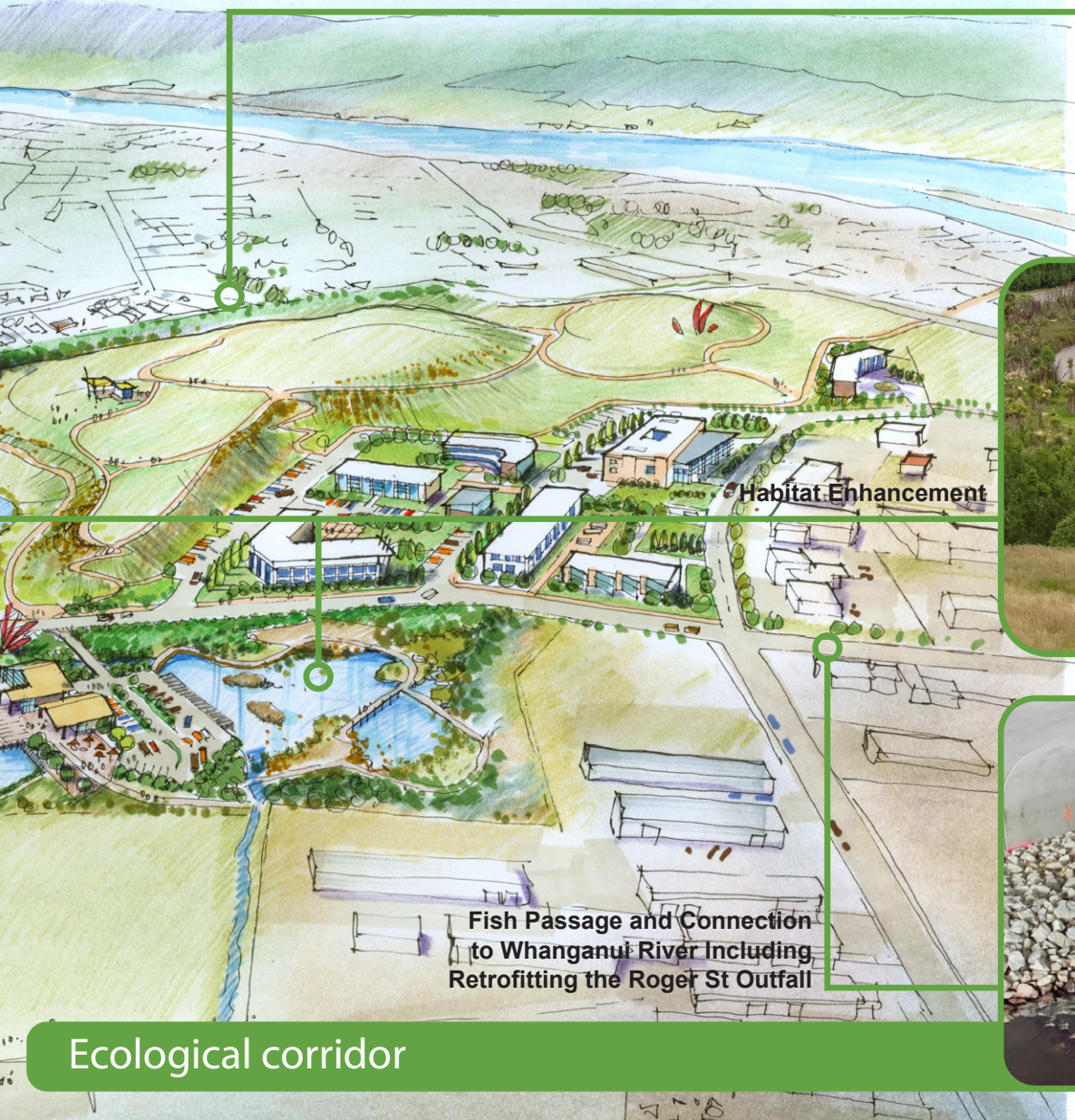


Unique Habitat



Connection to Westmere Lake

**Ecological and Recreational
Corridor Links to the Site**



Habitat Enhancement

**Fish Passage and Connection
to Whanganui River Including
Retrofitting the Roger St Outfall**



Ecological corridor



Swale and Green Industry Branding



Reserve Interface / Tussock Grasslands





Link to Karoro Stream Enhancement



Recognising the positive economic impact that this development can have on the Industrial Area, including branding and marketing for the Industrial Area to be developed as one of the only ecological and community sensitivity industrial developments in the country.



Industrial area Interface

Craig Pocock would like to thank the following for their involvement in the project:

Whanganui District Council

Te Runanga O Tupoho

Heads Road Industrial Working Group

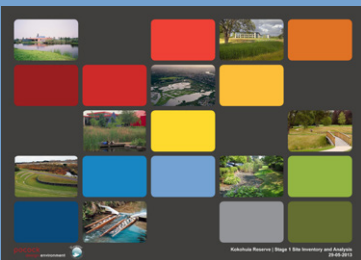
Horizons Regional Council

Department of Conservation (DOC)

This document is preceded by two previous reports written for Kokohuia by Pocock Design Environment, which include:



1. "Low Impact Development Guidelines, The Hinau and Gilbert Street separation funding identification project, August 2012", which looked at best international practice for low impact design strategies.



2. Kokohuia Reserve | Stage 1 Site Inventory and Analysis, April 2013, which provided a comprehensive inventory and analysis of the site and surrounding area.

Heads Road Stormwater



Kokohuia Reserve | Heads Road Industrial Master Plan

