



Te Awa Kairangi/Hutt River Environmental Strategy:
Action Plan

August 2018



greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

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GLOSSARY

CPTED	Crime prevention through environmental design
ESAP	Te Awa Kairangi/Hutt River Environmental Strategy: Action Plan (i.e. this document)
GWRC	Greater Wellington Regional Council
HCC	Hutt City Council
HRES	Hutt River Environmental Strategy, 2001
KNE	Key Native Ecosystem
MANA WHENUA VALUES (REFERENCED IN PNRP)	<ul style="list-style-type: none"> • Mahinga kai – food-gathering place • Tauranga waka – waka landing sites • Taunga ika – fishing area • Ara waka – waka portage
PNRP	Proposed Natural Resources Plan for the Wellington Region, 2015
RIVER CORRIDOR	River and river berms, generally within the stopbanks where they exist, over which the GWRC Flood Protection Department has jurisdiction. While GWRC owns and manages the river corridor, many of the parks in the river corridor are managed by HCC and UHCC
RIVER CROSS SECTIONS – REFERENCE POINTS	<p>The plans have been annotated with the Greater Wellington river cross-sections. These cross-sections locate regular survey points along the river and are used for flood management purposes.</p> <p>These cross-section locations have also been referenced in the text to accurately locate particular points of interest in the river corridor; they appear as bracketed four-digit numbers e.g. (0090), (1243)</p>
RIVER TRAIL	The generic term river trail is used to refer to both the Hutt River Trail and the Rimutaka Cycle Trail, as well as other pedestrian/cycle paths on the river berm that connect along the river corridor
TRUE RIGHT BANK AND TRUE LEFT BANK	The river corridor is described with reference to the true right bank and true left bank of the river. The right bank or side is always on the right side of the direction in which the water is flowing i.e. facing downstream, and the left bank is always on the left side facing downstream.
UHCC	Upper Hutt City Council

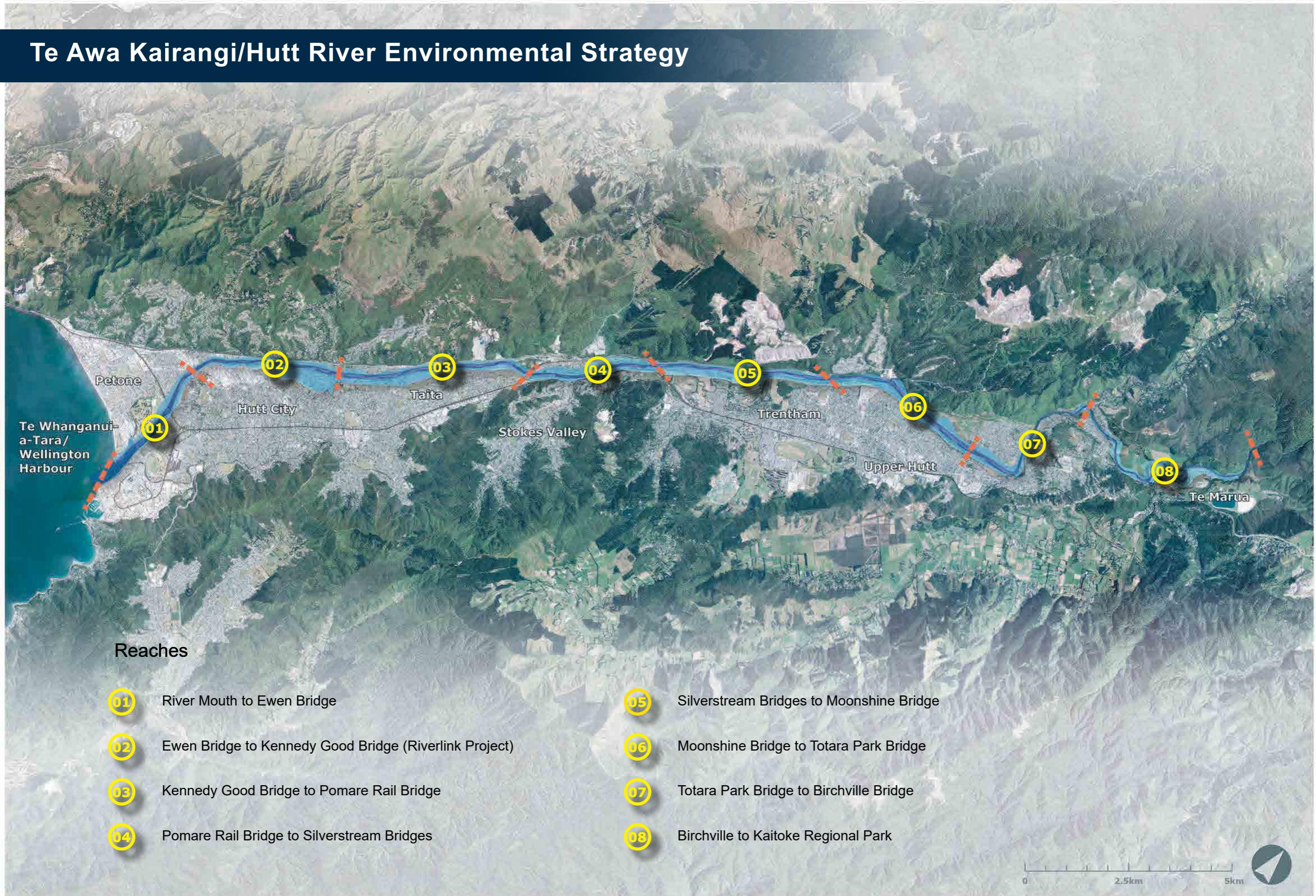
TE AWA KAIRANGI

**Kei runga i ngā kōtihi mounga
Ko ngā puna wai mātao
E rere kau ana mai
Ki te awa kai i te rangi
Ka maringi mai ngā mahara kei roto i aku kamo
Ngā puna wai wera e!**

“Atop the lofty mountains
The fresh, crisp, bubbling waters flow
To the river that feasts on the heavens
And as I reminisce my flowing tears remember!”

Pekaira Rei

Te Awa Kairangi/Hutt River Environmental Strategy



1. Background and Introduction

1.1 Background

Iwi have a special relationship with Te Awa Kairangi/Hutt River and its floodplain. Tangata whenua are the kaitiaki and have a traditional responsibility to look after the river for future generations. Te Awa Kairangi/Hutt River is recognised as a Statutory Area by Ngati Toa Rangatira and Taranaki Whanui ki te Upoko o te Ika. The Te Awa Kairangi/Hutt River Environmental Strategy: Action Plan (ESAP) recognises this special relationship and enables iwi to play a key role in the management of their taonga.

Te Awa Kairangi/Hutt River is recognised as a defining feature of the Wellington Region to be treasured and enhanced. Hutt Valley communities place high value on Te Awa Kairangi/Hutt River and its margins. It is a place accessible to a large urban population where people can walk, run and cycle along the river, picnic, swim, exercise their dogs and enjoy the advantages of having a large tract of easily accessible open space near to where they live.

The Hutt River is also a challenge to these communities given that it has a long history of flooding, and flood protection and management is critical to keeping the communities in the Hutt Valley safe to raise families and operate businesses as well as enjoy the many recreation opportunities the Hutt River has to offer.

The sports fields and golf courses along the river corridor are important elements of the Hutt Valley's open space network, but the focus of the ESAP is on providing informal and casual recreational opportunities and enhancing the natural attributes and character of the river rather than on providing more formal sports-related facilities. The Hutt River Trail and footpath/cycle networks are immensely popular. Improving and extending access to and along the river is a key component of the ESAP and any conflicts between users need to be handled fairly and reasonably. There are opportunities throughout the river corridor to provide information about existing cultural and historic sites and to relay many of the stories associated with the river and the floodplain.

Many agencies, community groups and landowners have an interest or a role to play in the Hutt River and its environment. Encouraging and facilitating new care groups and coordinating existing groups will help to ensure that the initiatives and actions outlined in the ESAP are realised and benefit the river environment and all users. The adoption of this 2017 ESAP is the first step in providing this coordination as it identifies the many enhancement opportunities available. The ESAP will provide a reference point for everyone with an interest in the river environment and also ensure that any actions undertaken are consistent with the long-term vision.

The ESAP is a key part of the Hutt River Floodplain Management Plan (HRFMP) and provides a vehicle to achieve many of the HRFMP's environmental and community outcomes. Although the ESAP is a non-statutory document, its adoption will help to integrate the delivery of the HRFMP. The ESAP is governed by the HRFMP's principles, and so it is important that any proposals or activities covered by the ESAP do not compromise the integrity of the flood defence system and flood risk management methods.

The area covered by the ESAP runs from Kaitoke Regional Park in the north to Seaview Marina. The majority of the land is in public ownership, whether administered by Greater Wellington Regional Council (GWRC), Upper Hutt City Council (UHCC) or Hutt City Council (HCC).

1.2 Purpose

This document replaces the 2001 Hutt River Environmental Strategy (HRES). The preparation of this document has involved a review of the 2001 HRES (refer section 1.4).

The ESAP frames the vision and sets out what is needed to achieve the aims and objectives identified by the community for the management and enhancement of the river corridor environment.

The provisions of the ESAP need to be consistent with the structural measures (i.e. river protection works such as stopbanks, rock groynes, willow and other planting) and non-structural measures (i.e. resource consent provisions, Code of Practice, etc.) that are required to manage the river floodplain. The focus of the ESAP is on the enhancement and management of the river environment and the way it encompasses natural, social and cultural aspects or uses of the river corridor, in the widest sense, while providing flood protection.

The ESAP incorporates the community's vision for the management and enhancement of the river corridor that has come out of the review process started in 2016. It focuses on the actions required to achieve the vision and objectives of this plan.

1.3 Scope Limitations of Review

GWRC is responsible for the development of the ESAP but with collaboration and input from UHCC, HCC, and other organisations and groups essential to achieve the vision and objectives. While the ESAP is aspirational and has a long term focus, it also deals with issues and actions that can be achieved relatively quickly providing the right governance and structures are in place, together with appropriate levels of funding. The Hutt River traverses both the Upper Hutt City and Hutt City districts and contributes to the identity and character of both cities. Also, given the way in which the river is managed and the opportunities it provides to residents, it is important that both Upper Hutt City and Hutt City are involved in the implementation of the ESAP.

The key to the implementation of the objectives and actions of the ESAP will be having suitable governance and management structures in place. These aspects are discussed in section 2.

1.4 Review Process

Various environmental improvements and recreational developments that were identified in the 2001 HRES have been achieved during the one and a half decades since the strategy was prepared. Today, the environmental context and community expectations are different from those in 2001, so it is timely that the strategy has been reviewed and refreshed.

The HRES review was undertaken in two phases. Phase one was carried out in 2016 and involved five tasks:

- Stocktake workshop
- User Intercept Survey
- Four stakeholder and community consultation workshops
- Interviews with staff from different GWRC divisions and with staff from UHCC and HCC
- Mana whenua input.

The outcomes from these activities have fed into developing this ESAP. The Stocktake workshop involving a range of key GWRC staff from various departments provided a useful starting point in reviewing the outcomes and actions of the 2001 HRES during the previous 15 years.

The User Intercept Survey, conducted during a six-week-long period of dry, sunny weather in March and early April 2016, provided very useful information and data from the 1000 people interviewed, of whom 85% live in the Hutt Valley. The four subsequent stakeholder and community consultation workshops not only reinforced and expanded many of the

aspects highlighted in the User Intercept Survey, but identified special places along the river and provided many ideas as to how the river corridor environment could be improved. Many of these ideas have been included in the list of actions for each of the river reaches.

There were several discussions with representatives from the Port Nicholson Block Settlement Trust and Ngati Toa to gain insights into their respective visions and to understand the way the river corridor could be managed to respect this taonga. There will be ongoing discussions and involvement with iwi to ensure that the implementation of the ESAP is appropriate and timely.

Interviews with key GWRC staff from Flood Protection, Parks, Science, Biodiversity and Active Transport, and subsequent meetings with staff from both UHCC and HCC provided a comprehensive overview and detailed understanding of the many natural, environmental, recreational and social facets of the river corridor that need to be embraced in the revised strategy. The ideas and initiatives from this series of meetings helped with the overall structure of the ESAP, how governance could be refined, and specific suggestions on how to maintain and improve the intrinsic values of the river corridor.

1.5 Relevant Greater Wellington Regional Council Documents

The vision and objectives of the ESAP support and are consistent with the current statutory documents. There is also material in other documents such as district plans, the Community Facilities Plan (HCC) and the Environmental Sustainability Strategy (HCC) that may have a bearing on the ESAP; the key documents are listed below:

The Proposed Natural Resources Plan for the Wellington Region (2015)

The Hutt River Floodplain Management Plan (2001)

The GWRC Rivers Code of Practice for River Management Activities (Draft 2016)

The GWRC Parks Network Plan (2011)

The Hutt River Trail Operations Manual (2014)

Future Hutt Valley and Wellington Harbour / Hutt Valley Whaitua (scheduled to get underway in 2018).

1.5.1 Code of Practice and Environmental Monitoring Plan for River Management Activities

The proposed adoption by GWRC of a Code of Practice for River Management Activities for the region's rivers is a significant development and the ESAP has been formulated to ensure that it is well aligned with the Code. The purpose of the Code of Practice is “*to guide all river management activities undertaken for the purposes of flood protection and erosion across the Wellington Region, irrespective of funding, location, or whether an activity requires resource consent.*” The Code applies to “*permitted activities as well as those activities for which resource consent is required under the regional plans*”.

The Code provides guidance for the planning of river management activities as part of the floodplain management planning process; it is a tool to assist GWRC staff involved in the planning and delivery of flood protection services to carry out this work in an environmentally and culturally sensitive manner, in accordance with the council's statutory responsibilities. It addresses river management practices in an integrated way, with the aim being to achieve:

- “*greater awareness of the effect of river management decisions and activities on river natural character and other significant river values;*
- *greater consistency of river management practice across the rivers that GWRC administers and manages; and*
- *good management of the environmental and cultural impact of river management activities”.*

The Code promotes the development of an Operational Plan for each river in the region managed for flood protection or erosion protection, and provides guidance on the most appropriate river management methods to be used. An annual work programme for each river sits under each of the Operational Plans.

The Code of Practice is a comprehensive document setting out monitoring triggers and management responses for matters including riparian vegetation, river birds, native fish, inanga spawning habitat, trout, riverbank undercutting, overhanging vegetation, sediment, riverbed levels and pool and riffle counts. A substantial part of the document sets out good-practice methods, divided into two sections – general and specific – covering a wide range of activities, from the maintenance and protection of ecological values, sediment control, construction material storage and stockpiling, formation of access from the banks to the riverbed and the management of noise, dust, odour and traffic to a consideration of opportunities for environmental enhancement.

A link to the Code of Practice can be found here, <http://www.GWRC.govt.nz/hutt-river/>

GWRC also proposes to prepare an Environmental Monitoring Plan, which will sit alongside the Code of Practice. It will provide a programme of environmental monitoring, involving the collection of a range of physical parameters that reflect aspects of the river's natural character and processes, and that can be used as indicators of the effects of river management activities on selected environmental values.

In February 2017 GWRC publicly notified resource consents for river management activities for flood protection, erosion control and public amenity purposes in the Hutt River, including the Akatarawa River, Stokes Valley Stream, Speedys Stream and Te Mome Stream corridors. A draft of the Code of Practice was included as part of the application and an explanation provided as to its relationship with activities sought in the application:

“the Code of Practice will provide specific detail and direction on the methodology to be adopted for individual activities. The resource consents will provide for a review process by which the Code of Practice may be updated on an agreed basis, based on the information supplied by on-going monitoring and engagement with iwi and key stakeholders. In that way, the Code of Practice will be a living document that drives good practice while also remaining flexible and responsive to the dynamic nature of the river environment”.

1.5.2 Wellington Harbour / Hutt Valley Whaitua

The Whaitua process is a community-led, collaborative planning process to address various land and water management issues. Whaitua Committees, consisting of community members, iwi representatives, partner representatives, and GWRC representatives, will make recommendations to the GWRC through a Whaitua Implementation Programme report. The report will contain strategies and actions that will form a programme of work for the management of land and water in each catchment.

Given its catchment-wide focus, the Wellington Harbour/Hutt Valley Whaitua Committee will address issues beyond the Te Awa Kairangi / Hutt River corridor, which is the focus of this ESAP. The Wellington Harbour / Hutt Valley Whaitua will get underway during 2018, with applications to join the committee opening in June. The committee will be appointed in August 2018.

2. Ingredients of a Successful Strategy and Action Plan

The ESAP is one means to deliver not only floodplain management outcomes for the Hutt River corridor but also wider GWRC natural environment, social and recreation outcomes. The ESAP has been set up to reflect these wider aims.

The ESAP has three interrelated parts – goals, objectives and actions. To achieve these, the ESAP requires a suitable governance structure and good coordination and collaboration between GWRC departments, iwi, HCC, UHCC and other agencies such as NZ Transport Agency, KiwiRail and Wellington Water. In developing the ESAP, consideration was given to the existing structure and organisation and to what is required to achieve successful delivery. An analysis was carried out of the issues that related to the successful delivery and of the ingredients needed in terms of functions required, from governance through to implementation. The issues and ingredients associated with the ESAP are discussed below.

2.1 Issues

The key issues identified in the Phase 1 review were:

- Having a suitable governance and management structure;
- Having clarity around objectives and actions;
- Having adequate resources and budgets; and
- Regular monitoring and reporting.

If the right structure, from governance to delivery, is not in place, it is going to be very difficult to achieve the goals and actions. Similarly, if the ESAP lacks clarity and specificity it will be vague and difficult to understand. It is also unlikely to be supported by the community. Without a clear and carefully articulated strategy and clearly stated objectives and actions, it will be difficult to assess and measure results and outcomes or to monitor progress.

Also, if the ESAP is unable to describe clearly what it is seeking to achieve, it will be difficult to attract funding for specific projects or actions. Timeliness of funding could also be affected if the objectives are unclear. If the ESAP is too ambitious and the actions so complex that they are considered unachievable, it is going to be difficult to secure long- and short-term funding to implement the actions.

Poor programming and a lack of coordination of the various parties involved in implementing the ESAP will also adversely affect success, as will not having the right mix of skills in-house that can be drawn on as and when required.

The right governance structure will provide a good framework for the other organisational and implementation aspects that follow. Annual monitoring and reporting on progress, and an organisational structure that can remedy aspects that are not working effectively, need to be embedded in the ESAP.

2.2 ESAP Ingredients

The objectives and actions in this ESAP set out how the management and development of the Hutt River corridor could be achieved to meet the natural, social and recreational goals. It also spatially identifies and defines where actions should occur in the corridor. The latter have been developed with input from the public workshops and interviews carried out in Phase 1.

2.2.1 Governance

The governance and management structure should aim to:

- Provide clarity on the relationships between Flood Protection and other GWRC departments
- Develop and coordinate the relationships between GWRC and UHCC and HCC
- Enable input and contribution from community groups and other stakeholders to the implementation and monitoring of the ESAP
- Enable greater momentum to achieving the vision set out in the ESAP
- Enable greater potential for pooling funds to achieve outcomes that benefit all
- Create a wider range of practical expertise to draw upon
- Achieve greater visibility and profile and encourage more 'buy-in' and participation from the community.

While many facets of implementation have been and are currently carried out directly or indirectly by the Flood Protection Department, the ESAP provides an opportunity to expand how implementation occurs and to coordinate and harness a greater range of inputs and contributions.

Some of the environmental and recreational actions included in the 2001 HRES have been achieved through the implementation of annual flood protection works. GWRC Flood Protection has managed to integrate various HRES-related actions directly or indirectly as part of the works carried out for bank protection and strengthening, for improving the Hutt River Trail and as environmental enhancement measures, such as planting and signage.

Various works carried out within the river corridor by UHCC and HCC have also contributed to environmental and recreational improvements, as have initiatives and actions undertaken by groups such as Rotary Club of Hutt City, and by environmental and residents' groups and schools.

There are several interrelated factors that will drive and determine the success of the ESAP. While many of these are currently in place, some refinements and additions would be beneficial. Key ingredients in the successful implementation of the ESAP are:

- Good organisation and coordination
- Collaboration between many different parties and the development of solid working relationships
- Realistic budgeting and programming
- Having the right mix of skills available for the many facets and activities involved
- Monitoring and measurement of results and outcomes.

The Hutt Valley Floodplain Management Sub-Committee has the overall responsibility for the ESAP, but there are functions relating to the implementation of the ESAP that are needed. One of these is having someone in Flood Protection to take day-to-day ownership of the ESAP and to have a coordination role to provide a direct link between the sub-committee and those involved with implementation.

Implementation will involve someone being responsible for:

- Championing project funding, preparing budgets and monitoring expenditure
- The visibility of and input to the Annual Plan and Long Term Plan processes
- Coordinating of inputs between GWRC departments
- Regular liaison and involvement with Ngati Toa and the Port Nicholson Block Settlement Trust
- Regular liaison with UHCC, HCC, NZ Transport Agency, Wellington Water, KiwiRail and other agencies and utilities, and coordination of their inputs to projects and activities
- Ensuring that all those organisations and groups with an interest in the river corridor are made aware of flood protection works in advance
- Liaison and coordination with environmental and residents' groups
- Monitoring of ESAP projects and activities and reporting annually to the sub-committee on progress and any changes needed
- Education on and awareness of the Hutt River corridor.

2.2.2 ESAP Coordinator

Having someone responsible for the overall coordination and implementation of the ESAP would provide clarity for all those who have a role or interest in the management of the river. An **ESAP Coordinator** role would logically be someone from Flood Protection.

Ensuring that there is a clearly defined group representing the wide range of interests in the river corridor, and that it has the mandate, funding and responsibility to carry out the implementation of the ESAP, is also an important ingredient. Having a clear terms of reference for this group is essential.

The current Hutt River Trail Operations Committee, while relatively limited in its focus, is a good model. This committee has operated effectively for 20 years and comprises representatives from GWRC Flood Protection and Parks, UHCC Parks, HCC Parks and the Rotary Club of Hutt City. Chaired and coordinated by GWRC, the committee meets quarterly and has been well supported by the organisations involved. It has coordinated and managed projects carried out by GWRC as well as those undertaken by others.

A group established to implement the actions as set out in this ESAP would, however, need to comprise representatives from a wider range of organisations. It would need a more formalised structure and reporting than the current Hutt River Trail team and also need guaranteed annual funding. The **ESAP Coordinator** would have a key role and relationship with the **Implementation Group**.

In reviewing the comments from the public workshops and the interviews with representatives from GWRC departments, UHCC and HCC, it became clear in developing the ESAP that a more formalised arrangement between GWRC, HCC and UHCC is required in terms of project development and implementation. Also identified was a need for additional resourcing for some functions that are currently not adequately achieved; these are briefly described below. The rationale behind recommending additional inputs to resourcing is that it would contribute significantly to the delivery of the ESAP.

2.2.3 Additional River Ranger Resource

The appointment of a River Ranger embedded in the Flood Protection Department was a key initiative of the 2001 HRES. This role has added significantly to the environmental and recreational improvements along the river in the past 17 years. While the value and effectiveness of having a permanent and full-time River Ranger are well recognised, the workload has increased significantly, which provides a strong case for investigating how an additional River Ranger resource can be achieved. Given the steady increase in visitors using the river corridor for a wide range of activities and events, the increase in workload is not unexpected.

The delivery of an additional resource could be achieved by the appointment of a second River Ranger position in Flood Protection, but it could also be achieved through a service-level arrangement with GWRC Parks, as has been done elsewhere in the council.

The additional River Ranger resource would be complementary to the existing full-time position, but it could focus on different aspects (e.g. education, interpretation, coordination of events) or the river corridor could be split into two 'territories' with one River Ranger focusing on the northern section of the river and the other on the southern section.

The River Rangers would work closely with the ESAP Coordinator and would be key members of the Implementation Group.

Further to having an additional River Ranger resource, there would be benefits in having additional on-the-ground resources to help implement the various actions identified in this ESAP. In the Flood Protection team operating on the Kapiti Coast, an Environmental Riverhand has been appointed as a link between Flood Protection and the community groups involved in planting and other environmental enhancement work. The appointment of an Environmental Riverhand for the Hutt River team would strengthen the team, particularly if there were also an additional River Ranger resource.

2.2.4 Ecologist

Currently, ecological input into river management is provided from within GWRC by the Science and Biodiversity teams. Given the ecological significance of the region's rivers and the value of timely ecological input to river planning, management and operations, there would be value in having a dedicated ecological resource in the Flood Protection Department.

In terms of the ESAP, this would ensure both a consistent and timely ecological input to both flood protection works and into the various environmental actions identified. In addition, with the adoption of the Code of Practice for River Management Activities, the appointment of an ecologist as part of Flood Protection would ensure that the ecological input set out in the Code could be provided as and when required.

3. Vision, Goals and Objectives

3.1 Document Structure

This ESAP embraces a long-term vision as its core. To achieve this vision there are three interrelated goals that focus on three aspects – the Natural Environment, the Community, and Recreation activities. Under each of these goals there are several Objectives followed by a series of Generic Actions (i.e. applicable to all reaches of the Hutt River corridor).

The Generic Actions are further amplified in relation to Reach Actions specific to each of the eight reaches identified along the 32km of river covered by the ESAP. The reaches are defined by the road and rail bridges that span the river. Using the bridges as geographic markers for the reaches, means they are readily identifiable and closely relate to how the river is experienced travelling along its length.

Both the Generic Actions and the Reach Actions are set out in tabular form for easy reference. The Generic Actions are listed, together with explanations, whereas the Reach Actions are recorded on a series of annotated maps with an explanation for each action, together with a level of priority and assigned responsibility. Where relevant, the actions are supported by diagrams and cross-sections.

3.2 Flood Protection and River Management

The HRFMP is a 40-year blueprint for managing and implementing programmes that will gradually reduce the effects of flooding from the Hutt River. While flood risk management and protection in the Hutt Valley is the paramount consideration of the HRFMP, it does embrace several other objectives. Having an environmental strategy sitting under the HRFMP enables environmental, community and recreation objectives to be achieved.

The HRFMP outlines a holistic approach to flood risk management, combining physical protection (such as stopbanks and river realignment) with non-structural measures (such as appropriate land zoning and preparing communities for flooding). The plan is non-statutory, which means it contains no regulations such as the rules found in district and regional planning documents. It also considers environmental opportunities and ways to enhance the river environment. RiverLink is a good example of a project that will deliver not only better flood protection but also improved transport links, and lifestyle and amenity opportunities for the people of central Lower Hutt. RiverLink is a partnership between GWRC, HCC and NZ Transport Agency that focuses on the Hutt River and its city interfaces between the Ewen and Kennedy-Good Bridges.

The RiverLink project was a catalyst to the review of the HRES. During the investigations of and public consultation on RiverLink, many issues were raised concerning the river corridor wider than the 3km section covered by RiverLink.

The 2001 HRES has been in place for 17 years, and during this period there has been a steady increase in the number of people using the river corridor for an ever-broadening range of recreation activities. This was another factor that has contributed to the HRES being reviewed.

The Government's Nga Haerenga, the New Zealand Cycle Trail initiative is also relevant to the review. The Rimutaka Cycle Trail, one of 22 New Zealand Great Rides, travels through the Hutt Valley and the Wairarapa, and the Hutt River Trail forms part of this 110km-long Great Ride. The Rimutaka Cycle Trail is aimed at the regional and domestic markets and is the only Great Ride to start near a major city. The relationship between the Hutt River Trail and the Rimutaka Cycle Trail will undoubtedly lead to greater use of and interest in the Hutt River corridor.

3.3 Vision

Since the adoption of the 2001 HRES, the popularity of the Hutt River corridor has increased, as evidenced by the one-million-plus annual visits and the range of activities that occur in the corridor. This significant increase in public use and expectation has brought with it new and/or increased desirable and undesirable activities. For example, the promotion of commuter cycling and funding from the NZ Transport Agency for upgrading sections of the Hutt River Trail to accommodate fast-moving cyclists, the use of the river corridor for holding events, and the advent of the RiverLink project, have ensured a new and/or greater use and diversity of activities in the corridor. Undesirable activities, such as increased rubbish dumping and unauthorised motorised vehicles in the corridor or in the river itself, also influenced the review of the vision.

The 2001 HRES vision focused on accentuating the natural character of the river environment and the "tranquil environment" and its contribution as a refuge from the "hustle and bustle of urban life". The changes that have already occurred, together with those that are planned such as the RiverLink project, will result in an increase in the intensity and types of use along some parts of the corridor. For example, the RiverLink project will see a section of the river corridor between the Ewen and Kennedy-Good Bridges developed with a strong urban focus. The types and levels of activity in this stretch of river will be very different from, say, those at the estuary/river mouth or in the northern sections of the river at Taita Gorge, Silverstream or Moonshine Park. The character of the river corridor varies along its length, and the ESAP has sought to acknowledge this and identify actions that strengthen the differences in river character, or improve or develop a new character in some places.

The vision statement in the 2001 HRES does not include a specific reference to flood protection, although flood protection is acknowledged and addressed in the actual document. The proposed adoption by GWRC of a Code of Practice for River Management Activities influenced the revision of the vision statement, as did the fact that the ESAP sits under the HRFMP. The comments and feedback from the public consultation raised matters that also fed into the development of the vision.

The proposed new vision recognises the changed circumstances and situation from those that prevailed in 2001 when the HRES was developed.

3.4 Water Abstraction

The vast bulk of water abstracted from the Hutt River catchment is for drinking and household supply to Wellington, Hutt and Porirua cities. Water is abstracted directly from the river at Kaitoke and groundwater is drawn from the Waiwhetu aquifer beneath Lower Hutt and Petone. The Waiwhetu aquifer is connected to the Hutt River downstream of Taita Gorge, so the abstraction of groundwater results in some further flow loss from the river in its lower reaches.

The total amount of water that is allowed to be drawn (under resource consent) either directly or indirectly from the Hutt River is about 2.5 cubic metres per second. However, consents have conditions that require abstractions to reduce or cease taking water as river levels or aquifer pressures drop. These are in place to protect the ecological health of the river and prevent saltwater intrusion to the aquifer from Wellington Harbour. Flow rates used to control abstractions from the river are measured at Kaitoke and Birchville.

The Hutt River is considered fully allocated. Further technical evidence is required to determine whether any over-allocation exists, and it is expected that the Wellington Harbour/Hutt Valley Whaitu Committee will further explore this question.

Vision

River management that meets community aspirations of enhancing the natural environment and recreational activities of the Hutt River, its margins and the wider river corridor, whilst enabling flood protection objectives and operations to be achieved.

3.5 Goals and Objectives

The goals and objectives set out below acknowledge and support flood risk management activities but enable natural environment, community and recreational goals to be achieved.

Goal 1. Natural Environment	Goal 2. Community	Goal 3. Recreation
PROTECT AND ENHANCE THE BIODIVERSITY AND HABITAT OF THE RIVER CORRIDOR (I.E. THE RIVER AND ITS MARGINS AND TRIBUTARIES).	ENCOURAGE AND ENABLE IMPROVED CONNECTIONS BETWEEN THE RIVER CORRIDOR AND ADJOINING COMMUNITIES TO ENRICH COMMUNITY ENGAGEMENT AND UNDERSTANDING OF THE RIVER, ITS OPEN-SPACE VALUE AND ITS MANAGEMENT.	PROVIDE A VARIETY OF DESTINATIONS, SPACES AND FACILITIES TO SUPPORT AN APPROPRIATE RANGE OF RECREATIONAL OPPORTUNITIES THROUGHOUT THE RIVER CORRIDOR.
OBJECTIVE 1 Restore, protect and maintain the river's mauri (life force).	OBJECTIVE 4 Recognise and provide for kaitiakitanga and mana whenua values (see the glossary)	OBJECTIVE 10 Provide for the expression of mana whenua values throughout the corridor.
OBJECTIVE 2 Protect and enhance the water quality and aquatic ecological values.	OBJECTIVE 5 Provide a governance and management structure for the river corridor that provides for regional and local council, iwi, community, and other stakeholder involvement and participation.	OBJECTIVE 11 Manage and develop the open space/ green spine of the river environment, to enhance its informal recreational and open-space values.
OBJECTIVE 3 Manage and enhance the biodiversity of the river margins and berms.	OBJECTIVE 6 Ensure public safety for river corridor users.	OBJECTIVE 12 Provide a diverse range of recreational opportunities, spaces and destinations throughout the river corridor.
	OBJECTIVE 7 Encourage and enable communities to participate in the development and management of the river corridor.	OBJECTIVE 13 Manage activities that conflict with recreational uses and the conflicts between users.
	OBJECTIVE 8 Identify educational and interpretation opportunities to enhance wider/greater understanding of the river corridor.	OBJECTIVE 14 Identify and develop enhancement opportunities for recreation through the RiverLink project.
	OBJECTIVE 9 Ensure that works within the river corridor are designed and undertaken in a such a way that protects existing infrastructure.	

Goal 1: Natural Environment		Protect and enhance the biodiversity and habitat of the river corridor (i.e. the river and its margins and tributaries).
OBJECTIVE	BACKGROUND / ISSUES	
1 Restore, protect and maintain the river's mauri (life force)	<p>Te Awa Kairangi / Hutt River is culturally and spiritually significant to mana whenua.</p> <p>Greater access to the river in order to perform customary practices including food gathering, fishing, and collecting resources.</p> <p>The focus here should be on a holistic approach to the health of the river. Healthy river – healthy mauri – healthy connections and relationships.</p>	
2 Protect and enhance the water quality and aquatic ecological values	<p>Concerns were raised about reduced water quality and low summer flows degrading aquatic biodiversity and habitat.</p> <p>Need to ensure that there is no further degradation of water quality or a reduction in summer flows. Aim should be to improve water quality and ensure that the quantity and flow of water are not reduced so as to adversely affect habitat and ecological values.</p> <p>Concerns relating to water quality, such as algal blooms, low summer flows and rubbish in the water were the most common (i.e. 'worst' issue raised in the 2016 Hutt River Corridor User Survey). Similarly, the highest priority for improvement concerned water quality, to be achieved by better control of algae, bacteria and other pollutants, and rubbish/litter.</p> <p>Recognise limit of what can be achieved within the river corridor with respect to catchment-scale issues.</p> <p>Groundwater with high nitrate levels enters the river between the Whakatikei River and Taita Gorge.</p> <p>Poor recreational water quality (bacteriological) from Melling Bridge to Wellington Harbour. This relates to health risk from faecal contamination of water from disease-causing organisms caused by runoff from farmland, stormwater discharges and large waterfowl populations.</p> <p>The reaches from Melling Bridge to the harbour and the estuary have tidal and saline influences and these should be recognised in biodiversity enhancement opportunities.</p> <p>Toxic algae (cyanobacteria) impact on recreational use of the river in summer and can exceed national guideline levels during summer months. They are most problematic between Barton's Bush and Melling Bridge.</p> <p>Lower parts of the stream tributaries where they enter the river corridor could be improved to enhance aquatic habitat and enable or improve fish passage (e.g. Silver Stream, Black Creek, Te Mome Stream). Many of the stream tributaries, upstream of the river corridor are being enhanced and cared for by community groups such as Forest & Bird.</p> <p>Fish passage and spawning areas – identify existing areas and potential locations, along with opportunities to enhance these.</p> <p>The channelised river conditions favour trout. Native fish species require a greater range of pools, riffles and shade.</p> <p>Numerous stormwater outlets discharge directly to the river without any treatment. There are opportunities to improve the water quality of the stormwater before it reaches the river through the construction of detention ponds/wetlands where space allows on the river berms.</p>	
3 Manage and enhance the biodiversity of the river margin and berms	<p>Willow planting for flood protection and management dominates the river-edge vegetation. Willows as a monoculture do not provide species diversity like mixed-species planting does. A wider range of species will improve biodiversity, and habitat creation on the river margin contributes to better water quality and a more diverse fauna; insects and birds require a diverse mix of food sources and habitat.</p> <p>There are opportunities along the river corridor for more mixed indigenous planting within the context of flood protection and management. More indigenous planting of the river edge will enhance indigenous fish habitat. Ideally this would occur along the length of the river corridor, but this needs to recognise the functional attributes provided by the willow plantings as a flood protection measure.</p> <p>Weed and pest management are important aspects to consider in terms of managing and enhancing biodiversity on the river margins and berms, acknowledging that not all weed species are 'bad' and should necessarily be targeted for removal.</p> <p>Recognise the river as a regional wildlife corridor both along the river and across the valley. Opportunities to enhance ecological connections both within and beyond the valley floor.</p> <p>The river is likely to provide bird breeding habitat for pied stilts – identify breeding locations and protect them from vehicles.</p> <p>The lower reaches of the river require more habitat diversity in terms of aquatic habitats and substrate types to support better biodiversity of fish and invertebrates.</p>	

Goal 2: Community		Encourage and enable improved connections between the river corridor and adjoining communities to enrich community engagement and understanding of the river, its open-space value and its management.
OBJECTIVE	BACKGROUND / ISSUES	
4 Recognise and provide for kaitiakitanga and mana whenua values	Representation at a governance level would ensure that mana whenua are actively involved in the overall direction of the ESAP and its implementation. Providing iwi with the opportunity to be involved in the practical activities of kaitiakitanga.	A governance structure that ensures the community aspirations are understood and achieved and that provides the connections to other organisations that have an interest in the river corridor with a view to harnessing the value that this will provide.
5 Provide a governance and management structure for the river corridor that provides for regional and local council, iwi, community, and other stakeholder involvement and participation.	The community highly values the river corridor and it is well used as a 'linear regional park'. With increasing use come growing demands for facilities and management, as provided in other regional and local parks. These recreation-related demands are beyond the scope and funding of GWRC Flood Protection.	A community-based group to coordinate and facilitate the implementation of the actions in the ESAP would achieve direct community involvement. The composition, role and mandate of this group will require careful consideration.
	GWRC Flood Protection would benefit from having someone specifically responsible for coordinating implementation of the ESAP actions.	Given the significant increase in the level of public use of the river corridor, the role and workload of the sole River Ranger have increased markedly since 2001. The River Ranger's workload has increasingly focused on dealing with issues such as rubbish dumping, graffiti, motorised vehicles and other unwanted activities. How additional River Ranger resources could be provided within GWRC needs to be addressed, including consideration of both existing and new structures within GWRC.
6 Ensure public safety for river corridor users	Increased River Ranger and Riverhand resources could focus more on community education and awareness, and coordinating and overseeing community input.	Antisocial behaviours are an issue at places along the river corridor; the aim should be to 'design-out' these where possible. The 2016 Hutt River Corridor User Survey identified CBD, Taita, Avalon and estuary as the worst areas for antisocial behaviour.
7 Encourage and enable communities to participate in the development and management of the river corridor	Water quality threats such as algal blooms are potential threats to people and their pets.	Vehicles illegally accessing the corridor, including motorbikes, are an issue in places.
	There is potential to strengthen/increase the level of engagement between communities that adjoin the river and the management of the river corridor. Ideas and initiatives to achieve this need to be explored; potentially a key role for the River Ranger.	An annual community river walkover (one in the north and one in the south), similar to what is done on the Waikanae and Otaki Rivers, would provide an opportunity for those interested in having involvement.
8 Identify educational and interpretation opportunities to enhance wider/greater understanding of the river corridor	Better communication about GWRC operational work in the river corridor has been identified as needing to be improved.	Potential for involvement of community arts and other groups, and children's groups, to contribute to (or possibly even lead) project implementation. Community groups could be encouraged and assisted to adopt sections of river.
9 Ensure that works within the river corridor are designed and undertaken in a way that protects existing infrastructure.	Potential to work with Department of Corrections to organise people on community probation to become more involved with on-the-ground enhancement work. Currently on the Hutt River, GWRC uses probationers to pick up rubbish and spread mulch, but involvement of people on probation on Waikanae River enhancement and maintenance is working well. Providing an appropriate level of supervision is key.	There are many interesting and educational themes that offer the opportunity to tell the stories of the river corridor (e.g. historic and cultural values, freshwater systems, water quality river and river margin ecology, and the aims and intentions of flood protection and management operations).
	Potential to develop tourism opportunities for the river corridor as a destination in the region-wide tourism network (e.g. as part of the Rimutaka Cycle Trail).	A range of infrastructure is present within the river corridor (bridges, substations, pipes both above and below ground, etc) and it is important that service providers have ongoing ability to access, maintain and upgrade existing infrastructure.

Goal 3: Recreation		Provide a variety of destinations, spaces and facilities to support an appropriate range of recreational opportunities throughout the river corridor.
OBJECTIVE	BACKGROUND /ISSUES	
10 Provide for the expression of mana whenua values throughout the corridor	<p>Recognition and acknowledgement of the connection of mana whenua to the river and its surrounding area. Opportunity to provide cultural narratives along the river.</p> <p>Mana whenua values are important and it is essential that there are opportunities for mana whenua to interact with the(ir) river. This could include expression of cultural practices (i.e. to swim, to paddle waka, to recite incantations, to perform rites and rituals, to express kaitiakitanga through mahinga kai or food-gathering practices).</p> <p>Develop a series of 'cultural river trails' along sections of the river that recognise and enhance mana whenua values and sites.</p>	
11 Manage and develop the open space/ green spine of the river environment, to enhance its informal recreational values and open-space values	<p>The river corridor is highly valued open space used primarily by the local community but also by others from throughout the Wellington Region. The Hutt River is regarded as the defining element of the Hutt Valley and its popularity and use have increased steadily; it now has over one million visits a year.</p> <p>Natural character values are regarded as very important by users. The 32km linear tract of open space offers an opportunity to escape the more urban environments (i.e. for people to enjoy tranquillity and naturalness).</p> <p>There has been criticism that long stretches of even-aged willow plantings mask the intrinsic character of the river and its margins.</p> <p>Low flows of the river during the summer reduce the size and depth of the swimming holes.</p> <p>Rotary Club of Hutt City, which has had a long association with development of the Hutt River Trail, has re-focused its aspirations on the whole river corridor and it becoming a green spine through the valley, enhancing ecology and recreational values.</p>	
12 Provide a diverse range of recreational opportunities, spaces and destinations throughout the river corridor	<p>Recognise that different parts of the river corridor offer particular opportunities and experiences. Swimming spots are particularly popular destinations in the summer and would benefit from the introduction of some limited facilities such as toilets, shade trees, seats and parking. However, it is important that the facilities introduced reflect the context and character of the particular location.</p> <p>Development funding should focus initially on providing facilities and opportunities at the most popular destinations.</p> <p>Physical access points as well as visual access to the river are important recreation features of the river corridor, so provision of open views to the river from the adjoining roads, bridges and trails needs to be carefully considered when willow or other dense planting is being proposed.</p> <p>Recognise that the Hutt River Trail is part of the 110km-long Rimutaka Cycle Trail, which is one of 22 New Zealand Great Rides.</p> <p>Recognise the need to retain informal spaces and 'wild' areas in addition to more highly managed spaces so as to provide a wide range of recreational opportunities.</p> <p>Need to encourage both passive and active recreational activities along the corridor.</p> <p>Five most popular activities: walking, dog-related exercise, cycling, running and swimming; collectively these activities account for 89% of respondents in the 2016 Hutt River Corridor User Survey.</p> <p>The user survey found that the level of perceived conflict between users is low overall, with a very low 4% of respondents experiencing a negative interactions.</p> <p>In places, stopbanks create a visual and physical barrier between residential areas and the community and the river corridor. Access across the stopbanks could be improved in some locations.</p> <p>Loop tracks that connect along and across the river are important pedestrian and cycle facilities. Opportunities still exist to complete and add to loop systems.</p>	
13 Manage activities that conflict with recreational uses and the conflicts between users	<p>Multiple recreational activities have the potential to result in conflicts (e.g. motorised vehicles, rubbish/litter).</p> <p>Vehicles being driven along the river berms and riverbed are an increasing problem. This is a regular occurrence, with vehicles also driving along the beaches and into the water. About six times a year vehicles get stuck in the river and have to be towed out.</p> <p>Some stretches of the river attract antisocial behaviours such as vandalism, rubbish dumping and graffiti. Enhancement of these areas to make them appear more 'cared for' and introducing different management regimes may assist in deterring and hopefully changing these behaviours.</p> <p>The level of perceived conflict between users is low overall. Respondents in the 2016 Hutt River Corridor User Survey identified negative experiences as dog poo, dogs off lead, personal safety, track quality and antisocial behaviour.</p>	
14 Identify and develop enhancement opportunities for recreation through the RiverLink project	<p>Section 3.3 outlines the RiverLink project, which is still being designed and developed. RiverLink incorporates significant open-space, recreational and ecological elements as integral parts of this comprehensive project.</p> <p>RiverLink has an urban focus and will have a distinctive character and elements that neither currently exist in other parts of the river corridor, nor are likely to ever be developed. However, some of the elements proposed as part of RiverLink, which have not been used elsewhere in the Hutt River corridor, could be incorporated in other reaches (e.g. wetlands created on parts of the river berms to treat stormwater from adjoining residential areas before it discharges into the river).</p>	

4. Actions – Generic River Corridor

4.1 Natural Environment

OBJECTIVE 1: RESTORE, PROTECT AND MAINTAIN THE RIVER'S MAURI (LIFE FORCE)

ACTION	EXPLANATION
Tangata whenua as kaitiaki of the river articulate and describe approaches to mauri.	Tangata whenua as kaitiaki of the river have an active role in the specific management of the river as well as with general river management. The role of kaitiaki also demands having a broad view of the environment and how it is managed. Part of this kaitiaki role is to ensure that the mauri of the river is appropriately considered.

OBJECTIVE 2: PROTECT AND ENHANCE THE WATER QUALITY AND AQUATIC ECOLOGICAL VALUES

ACTION	EXPLANATION
Create wetlands/stormwater treatment basins in river berms to treat stormwater discharges.	Numerous stormwater outlets throughout the corridor discharge into the river, degrading river water quality. Where practicable, wetlands, detention basins and swales that can detain and treat stormwater, should be developed in the river corridor if space allows in the berm. Wetlands developed around stormwater outlets are a feature of the RiverLink project and the design and implementation of these will provide examples and guidance for their adoption elsewhere in the river corridor.
Protect and enhance existing areas with high biodiversity or ecological values.	Areas with high ecological value should be the focus of a higher level of management than other areas to ensure they are protected and improved through enrichment or enlargement.
Enhance those areas that already have potential to improve biodiversity and habitat values.	Some locations along the river have potential for their ecological values to be improved, often with only a limited level of effort required. These are 'easy wins'.
Identify riparian areas to be planted to enhance water quality.	GWRC carried out an existing planting inventory and analysis of the river corridor, which provides a good baseline to monitor future planting, and also areas of existing planting that are removed. This will also assist in targeting areas where planting can be carried out to improve water quality.
Monitor algal blooms during summer minimum flows.	Algal blooms are linked to sediment deposits, which is a catchment-wide issue. While algal blooms can be monitored and warnings issued of their presence, to remedy or remove them is a significant undertaking and is a matter that lies outside the ESAP. The Wellington Harbour/Hutt Valley Whaitua will be the best structure to address this issue.
Remove barriers to native fish passage.	For long term ecological health and benefits, a systematic programme to remove barriers to fish passage in both the river and tributaries will be adopted.
Recognise the significant ecological value of the Hutt River estuary.	The ecological richness of the Hutt River estuary could be improved with targeted edge planting and other measures to improve saline aquatic habitat.
The goals, objectives and actions of the ESAP need to be recognised in the Wellington Harbour/Hutt Valley Whaitua.	Wellington Harbour/Hutt Valley Whaitua Committee, to be set up in 2018, essentially to deliver National Policy Statement for Freshwater Management 2014 focus on water quality, allocation and aquatic habitat. A Whaitua is typically a citizen / community-based group.

OBJECTIVE 3: MANAGE AND ENHANCE THE BIODIVERSITY OF THE RIVER MARGINS AND BERMS

ACTION	EXPLANATION
Enhance the role of the Hutt River as an ecological corridor within the Hutt Valley and beyond.	The river corridor already provides a 'green spine' through the valley and there is potential to enhance the links along and across the valley through an ongoing programme of targeted planting and control of unwanted vegetation in reserves and forest areas outside the corridor.
Further develop alignment and positive working relationships with service organisations and volunteer groups to increase the extent of ecological-related planting within the river corridor.	Rotary Club of Hutt City has had a 25-year association with the development of the Hutt River Trail. However, its focus is shifting and it is now proposing a Hutt Rotary Trust Fund to support planting along the river corridor, through the provision of funding, labour and expertise.
Work with existing community volunteer environmental groups and established restoration projects.	There are several well established restoration projects (e.g. Forest & Bird Silverstream Care Group). With adoption of the proposed governance and delivery structure, the annual achievements of these groups could be extended. Ensure all restoration areas are assessed for flood protection conflicts prior to site preparation.
Work with Flood Protection team to develop a whole-of-river plan that identifies locations for indigenous planting and ecological enhancement.	Flood Protection is responsible directly or indirectly for most of the environmental improvement along the Hutt River. A lot of this work is carried out as part of new capital works or river operations and maintenance. Planting and ecological enhancement work is also carried out by various community organisations and groups and is coordinated and monitored by the River Ranger. With the adoption of the revised ESAP there is potential that the amount of ecological planting and enhancement will increase with a greater range of organisations and groups participating, which is likely to require more planning and coordination.
Coordinate ESAP actions with Key Native Ecosystems (KNEs).	There are eight KNEs along the river corridor (Belmont, Dry Creek; Belmont, Korokoro; Belmont, Speedys; Haywards Scenic Reserve; Keith George Memorial Park; Kelson Bush; Trentham Memorial Park; Wi Tako Ngatata), and each has its own management plan. There is an annual lump sum of GWRC funding for management of all the Council's KNEs. The management and funding of the KNEs situated in the Hutt River corridor should be incorporated into the Generic part of the ESAP and the actions therein.
Protect and enhance existing areas with high biodiversity or ecological values. Identify areas with highest biodiversity values for priority management.	Areas with high ecological value should be the focus of a higher level of management than other areas to ensure they are at least protected, or improved through enrichment or enlargement.
Enhance areas that already have a high level of potential to improve biodiversity and habitat.	Some locations along the river have potential for their ecological value to be improved, requiring only a small level of effort. These are 'easy wins'.
Identify locations to focus biodiversity enhancement.	Develop concept of biodiversity 'hot spots' or 'destinations' along the river corridor.
Establish more trees on river berms.	There are stretches along the river corridor where there are no trees, or limited amounts of tree planting. These areas tend to have low biodiversity values, be exposed and have little or no shade. These areas should be targeted for tree planting, which would have multiple benefits.
Encourage golf course operators to plant more trees to improve biodiversity, particularly to help create wildlife corridors.	More and regular contact with the golf courses located in the river corridor, especially in relation to their tree planting programmes, would help ensure a more coordinated river-wide approach. Could be part of the role of the proposed additional River Ranger resource.
Maintain suitable levels of plant and animal pest management within the river corridor.	Regular monitoring of pest plants and animals will enable suitably targeted control and eradication programmes and increase the success of plant survival and planting programmes.
Develop annual monitoring programmes for a range of factors.	Regular monitoring and review of environments and habitats will provide both base information, and an indication as to where the focus and deployment of resources are needed (e.g. the presence and distribution of desirable species, threats, pressure points, where management regimes need to be amended).

4.2 Community

OBJECTIVE 4: RECOGNISE AND PROVIDE FOR KAITIAKITANGA AND MANA WHENUA VALUES

ACTION	EXPLANATION
Include mana whenua representatives in the Implementation Group.	Representation on the proposed community and council Implementation Group would ensure that mana whenua are actively involved in the management and enhancement of the river corridor.
Work with tangata whenua to describe and outline kaitiakitanga and mana whenua values.	Work together to articulate and understand mana whenua values and how these should be appropriately applied within the work on the Te Awa Kairangi/Hutt River.

OBJECTIVE 5: ESTABLISH A GOVERNANCE AND MANAGEMENT STRUCTURE FOR THE RIVER CORRIDOR THAT PROVIDES FOR REGIONAL AND LOCAL COUNCIL, IWI, COMMUNITY AND OTHER STAKEHOLDER INVOLVEMENT AND PARTICIPATION

ACTION	EXPLANATION
Establish the governance group/ committee.	Refer section 2.2
Establish an ESAP Coordinator position.	Refer section 2.2
Establish Hutt River Implementation Group.	Refer section 2.2
Additional River Ranger resource.	Refer section 2.2
Establish permanent freshwater ecologist in Flood Protection Department to cover region's rivers.	Refer section 2.2
Establish Riverhand position.	Refer section 2.2

OBJECTIVE 6: ENSURE PUBLIC SAFETY FOR RIVER CORRIDOR USERS

ACTION	EXPLANATION
Establish and communicate a speed restriction for electric bikes in the river corridor.	Both on- and off-road electric bikes are becoming more popular and travel at faster speeds than conventional bikes. They have a potential conflict with walkers and runners and other non-motorised users. Given the anticipated increased use of electric bikes, monitoring their use in the river corridor is probably a sensible first step in limiting their presence. GWRC has adopted the NZ Transport Agency guidelines for electric bikes (i.e. a cycle with an auxiliary electric motor with a maximum power less than 300W is acceptable; anything greater than 300W is considered to be a vehicle). Refer: https://www.nztransportagency.govt.nz/vehicles/vehicle-types/low-powered-vehicles/
Publicise GWRC policy on the use of unmanned aerial vehicles (i.e. UAVs or drones).	GWRC Parks has guidelines for use in parks and reserves that embrace the New Zealand Civil Aviation Authority (CAA) rules introduced on 1 August 2015. Based on these guidelines there are places in the river corridor where flying UAVs should be avoided and others where special care needs to be taken and the guidelines adhered to. Refer: http://www.gw.govt.nz/assets/Parks-and-Recreation/WGNDODCS-1519009-v1-UAV/dronesguidelineforwebsite26thAugust2015.pdf
Develop protocols for notifying the public about algal blooms.	Need to ensure that when toxic algal blooms are detected in a particular part of the river, signs are erected warning the public of the potentially toxic blooms, and notification is posted on the GWRC website.

OBJECTIVE 7: ENCOURAGE AND ENABLE COMMUNITIES TO PARTICIPATE IN THE DEVELOPMENT AND MANAGEMENT OF THE RIVER CORRIDOR

ACTION	EXPLANATION
Work with existing stakeholder groups and develop links with new stakeholders.	Many service clubs, organisations, schools, and residential and environmental groups have associations with the Hutt River and their ongoing involvement needs to be nurtured and supported (e.g. Rotary Club of Hutt City, Friends of the Hutt River, Forest & Bird). In addition, there are opportunities to encourage and support new groups to get involved, including businesses.
Establish a community-based advisory group to coordinate the implementation of the actions (see section 2.2.1).	The proposed governance structure proposes an arrangement that will allow coordination of the input of stakeholder groups. It should enable greater clarity and responsibility around the roles and involvement of these groups. The Implementation Group will provide a recognised vehicle for the involvement of key stakeholder groups, and the ESAP Coordinator role will enable timely and structured input of all stakeholder groups, including annual monitoring of the work carried out.
Develop a calendar of regular events in the river corridor.	Events held in the river corridor are an ideal way to raise awareness of the river corridor as an area of community open-space. They also provide an opportunity to educate the community about river issues and Operational Plans, and a means to get people involved.
Provide additional River Ranger resource to cope with the increasing workload and to enhance ability to achieve community engagement roles of advocacy, education, interpretation, and compliance.	The combination of the significant increase in public use of the river corridor, and the successful contribution made by the dedicated River Ranger role since 2001, is an opportunity to consider what additional River Ranger services could be provided to the community and in the implementation of the ESAP.

OBJECTIVE 8: IDENTIFY EDUCATIONAL AND INTERPRETATION OPPORTUNITIES TO ENHANCE WIDER/GREATER UNDERSTANDING OF THE RIVER CORRIDOR

ACTION	EXPLANATION
Recognise sites of significance to mana whenua.	The Proposed Natural Resources Plan identifies sites of significance to Taranaki Whanui ki te Upoko o te ika a Maui. Mana whenua will need to inform how and if these or other sites should be recognised.
Establish processes and ways for the community to be kept informed about flood management operations and also about adverse river conditions (e.g. cyanobacteria hazard, work by other agencies such as NZ Transport Agency on bridges and highways, and Wellington Water on water supply infrastructure).	Community and recreational users are often surprised or frustrated by some of the actions and work carried out on the river and in the corridor by GWRC Flood Protection and by other agencies. There are opportunities to inform the public (i.e. 'tell stories') about the role and value of flood protection and why the various operations need to be carried out. This will help foster a greater understanding of river management and flood protection.
Develop a comprehensive information and education interpretation strategy and plan, and a means to keep it updated and the public regularly informed.	Biophysical history, cultural history, way-finding beyond the corridor, climate change effects, and catchment-wide issues are some of the matters that could be addressed and communicated to the Hutt Valley community and wider public.
Develop tourism opportunities for the Hutt River corridor as a destination in the region-wide tourism network.	The Rimutaka Cycle Trail, one of 22 New Zealand Great Rides, offers tourism opportunities to people visiting the river corridor from other parts of New Zealand and the world.
	QR codes, webcams and other digital devices provide modern, interactive methods to assist communication and ways to provide information and to tell stories.

OBJECTIVE 9: ENSURE THAT WORKS WITHIN THE RIVER CORRIDOR ARE DESIGNED AND UNDERTAKEN IN A SUCH A WAY THAT PROTECTS EXISTING INFRASTRUCTURE.

ACTION	EXPLANATION
Spatially identify the location of all infrastructure elements, especially underground pipes and services, and clearly provide for and physically mark the locations of these services to avoid damage and unnecessary disturbance.	The maps in Section 5: Actions - River Reaches mark the positions of the stormwater pipe outlets that discharge into the river. The locations of these outlets have been collated from GWRC, HCC and UHCC datasets, although there may be others. Other infrastructure elements such as bridges and substations are also marked on the maps.
Any future development proposals need to identify and accommodate this infrastructure and ensure that suitable access is provided to allow maintenance and for this infrastructure to be upgraded if appropriate.	

4.3 Recreation

OBJECTIVE 10: PROVIDE FOR THE EXPRESSION OF MANA WHENUA VALUES THROUGHOUT THE CORRIDOR

ACTION	EXPLANATION
Work with tangata whenua to express mana whenua values in planning and management along the river corridor.	Work together to understand how best to provide for the expression of mana whenua values in recreation spaces along the river corridor.

OBJECTIVE 11: MANAGE AND DEVELOP THE OPEN SPACE/ GREEN SPINE OF THE RIVER ENVIRONMENT, TO ENHANCE ITS INFORMAL RECREATIONAL VALUES AND OPEN-SPACE VALUES

ACTION	EXPLANATION
Identify and develop linkages with open spaces beyond the river corridor.	The river corridor is a central spine of open space that can be linked to open-space areas outside the corridor. Identifying these linkages will enable priorities to be established as to how these can be developed. There is a Wellington Region Open Space Strategy & Action Plan which was prepared in 2009 as part of the Wellington Regional Strategy. (http://www.GWRC.govt.nz/assets/council-reports/Report_PDFs/2009_545_2_Attachment.pdf). and UHCC is currently developing a district-wide open space strategy. The value of the Hutt River corridor as an important open-space element is recognised in these strategies. There needs to be collaboration between GWRC, UHCC and HCC to improve and develop open-space linkages.
Retain visual connections to the river and across the river.	Opportunities to retain and develop strong visual and physical connections with the river are important. However, they need to be balanced with the flood protection and biodiversity functions that involve planting the river berms.
Carry out regular user surveys to monitor activities and use, and to identify potential conflicts between different groups of users.	The trail counters along the corridor provide a good understanding of the number of users, but the 2016 Hutt River User Intercept Survey provided valuable insights into why people visit the Hutt River and what they like and dislike about it. It provided an important benchmark, and having both the trail counters and the findings from user intercept surveys provides a comprehensive overview of the number of people and types of activity using the river corridor. Planning and funding should ensure that User Intercept Surveys are repeated at regular intervals (say every five years).

OBJECTIVE 12: PROVIDE A DIVERSE RANGE OF RECREATIONAL OPPORTUNITIES, SPACES AND DESTINATIONS THROUGHOUT THE RIVER CORRIDOR

ACTION	EXPLANATION
Develop more opportunities for walking and cycling loop routes throughout the river corridor.	There are several loop walks along the Hutt River and these are very popular. Adjoining loop walks provide visitors with many opportunities to select routes of varying lengths. Providing comfortable and safe pedestrian access across all of the bridges along the corridor would expand opportunities for loop routes. These loops should be suitably signed and promoted.
Provide suitable types and levels of facilities at identified activity destinations with a focus on the most popular and well used destinations.	There are many locations along the river that are well used due to their easy vehicle access or attractions such as swimming holes. Some of these locations lack infrastructure to support the existing or potential level of use (toilets, seating, carparks, signage, ease of access, shade).
Develop a priority list for the development of destinations.	
Rationalise vehicle access in the river corridor.	Ensure that there is adequate vehicle access to the river corridor and carparking to support recreational use while minimising through traffic and fast traffic. Some people choose to run their dogs beside slow-moving vehicles, which was identified in the 2016 Hutt River Corridor User Survey as a popular activity. Consider if provision needs to be made in selected areas for this activity (e.g. restricted to the western side of the river).
Upgrade existing toilet facilities.	Provide toilets within the river corridor at selected locations and also direct users to toilets in adjoining areas outside the corridor on both sides of the river. [See section 5]
Provide water fountains for people and their dogs at regular intervals along the river corridor.	Currently there are no facilities or locations in the corridor where users can obtain potable water. A combination of the provision of drinking fountains and signposting to potable water sources in adjoining areas is probably the most effective arrangement.
Encourage esplanade reserves/strips on tributaries that feed into the Hutt River during future subdivision. This would help with water quality initiatives and public access.	

OBJECTIVE 13: MANAGE ACTIVITIES THAT CONFLICT WITH RECREATIONAL USES AND THE CONFLICTS BETWEEN USERS

ACTION	EXPLANATION
Prohibit motorised vehicle access to the riverbed and beaches. Provide a limited number of vehicle access points to the river edge and environs together with clearly defined areas for carparking at frequent intervals.	4WDs use the river bed and channels and at times of high use this can conflict with pedestrians and swimmers. Vehicles can also disturb nesting birds. Linear roads along stretches of the river berm that are freely accessible to the public often result in conflict with other users (eg the speed of vehicles, creating dust, etc)
Develop a strategy to trial deterrent measures in locations where dumping of rubbish is most prevalent.	Noise of vehicles and motorbikes detracts from the quiet amenity of the river. Dumping of rubbish is an ongoing problem, particularly where vehicle access is available. Areas that are not well maintained and appear uncared-for tend to attract fly dumping. Increased passive and active surveillance would also deter this behaviour.
Prohibit the use of motorbikes on the river trail and along riverbanks and berms.	Motorbikes have been an ongoing issue along the river corridor and various measures have been introduced to prevent or discourage this activity. With electric bike use likely to increase there will undoubtedly be pressure from some users that motorbikes and scooters should also be able to use the river trail.
Electric bikes (see Objective 6) Drones (see Objective 6)	While education is the key, suitable signage and barriers will need to be erected to prevent or deter motorbike users, together with enforcing compliance by GWRC staff.

OBJECTIVE 14: IDENTIFY AND DEVELOP ENHANCEMENT OPPORTUNITIES FOR RECREATION THROUGH THE RIVERLINK PROJECT

ACTION	EXPLANATION
Ensure the increased development and provision of facilities at destinations along the corridor has sufficient capacity to handle higher visitor numbers and greater use.	There are several popular and also lesser-known recreation destinations along the river. Some of these destinations are more environmentally sensitive than others, so a combination of site-sensitive design and regular monitoring of levels and types of use will enable the carrying capacity to be determined. The site-specific (Reach) Actions section describes and illustrates how particular destinations could be developed.

5. Actions – River Reaches

River Sections (defined by bridges)

BRIDGE TO BRIDGE

River Mouth–Ewen Bridge

Ewen Bridge–Kennedy-Good Bridge

Kennedy-Good Bridge–Pomare Rail Bridge

Pomare Rail Bridge–Silverstream Bridges

Silverstream Bridges–Moonshine Bridge

Moonshine Bridge–Totara Park Bridge

Totara Park Bridge–Birchville Bridge

Birchville Bridge–Kaitoke Regional Park

Suggested Priority Timeframes

Against each Reach Action a priority has been assigned; these are defined as follows:

SHORT TERM	1-5 YEARS	
MEDIUM TERM	5-10 YEARS	
LONG TERM	10+ YEARS	Plan ahead and include in Long Term Plan as appropriate
ASPIRATIONAL		Good idea to be documented for the future or as funding available
ONGOING	ONGOING	Consideration to be given to these aspects on an ongoing basis; applies to all development works

River Mouth to Ewen Bridge

This reach extends 3.4km from Seaview Marina to Ewen Bridge. Ava Rail Bridge crosses this reach and provides a cross-river pedestrian connection.

The tidal and saltwater influences of the harbour are a key feature of this reach, extending up the river to Ewen Bridge. Fishing from the bridge and estuary shore, white baiting and flounder netting are popular recreational activities in this reach. There is little or no swimming here due to poor water quality.

The river mouth has significant mana whenua and ecological values identified in the PNRP.

- Schedule C4 identifies the Te Awa Kairangi/Hutt River mouth (to Waione Street Bridge) and Waiwhetu Stream as mana whenua sites of significance to Taranaki Whānui ki te Upoko o te Ika a Maui. Values: mahinga kai, pā, tauranga waka, taunga ika, ara waka.
- Schedule F1b Known rivers and parts of the coastal marine area with inanga spawning habitat – inanga spawning habitat extends just upstream of Ava Rail Bridge.
- Schedule F2a Habitats for indigenous birds in rivers – significant indigenous bird habitat – extends to the Coastal Marine Area boundary (0150). Five threatened or at-risk species are resident or regular visitors to this site – black shag, little black shag, royal spoonbill, variable oystercatcher and red-billed gull.

True Right Bank

The Alicetown and Ava communities adjoin the true right bank of the river. Seaward of Waione Street (Estuary) Bridge the river corridor is dominated by industrial activities, with GBC Winstone's sand extraction plant, boatsheds, the St James Sea Scouts base and other commercial uses on the immediate estuary edge. Inland of the bridge, the stopbank is set back from the river edge and provides grassed open space, including Shandon Golf Club and Sladden Park. Sladden Park, managed by HCC, incorporates one playing field and dense riverside planting. Riverside planting north of Ava Rail Bridge has struggled in the harsh conditions. The boat ramp at Sladden Park is the only formal boat ramp on the river and is used by recreational boaters and for waka launching.

Te Mome Stream enters the river into a small estuary, via a culvert under Waione Street.

True Left Bank

The Hutt City suburbs of Gracefield, Seaview, Moera, and Woburn adjoin this side of the river, and Waiwhetu Stream runs into the river mouth downstream of Waione Street Bridge. The estuary shore seaward of Waione Street Bridge, along Port Road, is dominated by the Seaview industrial area and the rough hard-fill armouring on the shore. The shore armouring has been undercut by recent floods and storms, to the extent that some of the pohutukawa trees along the coastal edge are threatened by erosion. The path along the coastal edge is part of the Great Harbour Way, a shared path around Wellington Harbour. The HCC document, Vision Seaview Gracefield 2030: Transforming the Future, includes initiatives that aim to improve the recreational and environmental quality of this shoreline, recognising its potential to be an attractive recreational area.

Strand Park occupies the relatively wide berm between Ava and Ewen Bridges and is predominantly open grass with a riverside path and riverbank planting of indigenous species. Hutt Valley High School adjoins Strand Park, which offers the school additional open space.

Downstream of Ava Rail Bridge, the river berm is predominantly open grass with very few trees. The Opahu Stream margin is planted with indigenous vegetation to enhance inanga spawning habitat. The river berm becomes very narrow south of Opahu Stream, particularly at the location known as 'woollen mill corner'. The river is at its deepest at this point.

Issues and Opportunities

Waione Street Bridge is a very popular location for fishing; however, conflicts for space arise due to the inadequate width of the bridge footpath to accommodate pedestrians and cyclists, and people fishing. There are no safe parking or toilet facilities in what is a high-use recreational area around Waione Street Bridge.

Opportunities to enhance that habitat associated with the saltwater and tidal influences should be a key focus for this reach.

The reach is a well used corridor for both recreational users and commuters and would benefit from enhancements and facilities to improve the amenity and overall quality of the area.

Approximately 37 stormwater outfalls and one sewer outfall discharge into the river within this reach.



Pedestrian access over the river at Ava Rail Bridge



Pedestrian and cycle access under Ava Rail Bridge



Te Mome Stream

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/ RESPONSIBILITY	SUPPORT
		Focus: Enhance ecological habitat with focus on saline/tidal influence. Acknowledge and enhance mana whenua values. Improve recreational facilities at Waione Street Bridge.				
		Improve effectiveness and quality of armouring along the Seaview shore.				
		Identify opportunities to recognise and support the identified mana whenua values of this reach as targeted projects or integrated with other development works.	Cultural values: mahinga kai, pā, tauranga waka, taunga ika, ara waka.	Ongoing	GWRC	Iwi
		Planting in this reach should be indigenous species to support the current character and enhance the ecological values, particularly close to the river.	Most of the river-edge planting in this reach is native vegetation. The focus of any development in this reach should aim to support the ecological and cultural values.	Ongoing	GWRC	
		Prioritise river riparian planting to enhance inanga spawning habitat where appropriate.	Opahu Stream is planted to provide inanga spawning habitat. Consider other locations such as the boat ramp inlet to further enhance saline aquatic habitat.	Medium	GWRC	
1		Improve fish passage into Te Mome Stream.	The long culvert that joins the stream to the harbour is detrimental to fish entering/leaving the stream. Identify opportunities to improve fish passage as and when other works occur in this area.	Long	GWRC	
2	0110	Te Mome Stream – channel enhancement.	Plant edges as appropriate. Provide support to community planting initiatives.	Aspirational	GWRC, HCC	
3	000-090	Protect Seaview/Port Road coastal edge from erosion.	Requires urgent attention. GWRC and HCC have plans to place a new rock line over hard fill along the Seaview industrial area frontage and plant more pohutukawa trees along the edge.	Short	GWRC, HCC	
3	000-090	The hard-fill armour between the Waione Street Bridge and Seaview Marina has an unattractive and brutal appearance. Opportunity to enhance recreational benefits when this is upgraded.	There is potential to improve the ecology, landscape and recreation potential of this area. Incorporate groynes in the rock line for better access to the estuary edge for people fishing. HCC has identified the Port Road coastal margin as a location to be developed into a recreational destination, improving its environmental and recreational quality.	Medium	GWRC, HCC	
4		Assess options to widen pedestrian/cycle path on Waione Bridge (or alternative means to provide for multiple use).	Narrow footpath on estuary bridge has to accommodate walkers and cyclists and is also a popular fishing spot. Extra width would improve safety and enjoyment for users. Potential to develop 'clip-on' deck bays on bridge for people fishing.	Medium	GWRC, HCC	
4		Improve facilities at Waione Bridge for recreational users	Currently there are no public toilets in this high-use area.	Medium	HCC	GWRC, NZ Transport Agency
5		Formalise carparking on west end of Waione Street Bridge for fishers and cycleway users.	Informal parking occurs at west end of bridge. Pedestrians can cross under the bridge to get to the footpath on the south side of the bridge.	Medium	HCC	GWRC
6		Develop a more 'park land' character in Strand Park with a more structured tree framework to provide shelter and shade and add diversity to the space. Plant groups of indigenous trees in open parts of the park.	Strand Park is a high-use area and close to retirement villages on both sides of the river, and Hutt Valley High School is readily accessed. More trees provide a more human scale to this wide, open part of the corridor and they would also improve the attractiveness and appearance. New plantings should be indigenous species to enrich the existing indigenous planting along the river edge.	Medium	HCC, GWRC	
7		Provide facilities in Sladden and Strand Parks to support a high-use area for nearby residents and visitors, such as seats, picnic tables, and bins.	Area is well used by local residents; additional facilities would enable people to stay longer in the area.	Medium	GWRC, HCC	
8		Develop a new pedestrian link along the west edge of Te Mome Stream between Jackson and Waione Streets.	Identify opportunities when this land is redeveloped to provide streamside access and connection, which could be achieved via a consent condition.	Aspirational	GWRC, HCC	
9		Enhance aesthetics and walkway around Petone Sand Plant point.	Much has been done but there are still opportunities to do more. Sand extraction, old tip sites, pull rubble out and tidy.	Long	GWRC	HCC
10	0130	Channel realignment at woollen mill corner	Opportunity to plant above rock line when channel is realigned.	Long	GWRC	HCC
11		Upgrade links under and on to Ava Rail Bridge and Shandon Golf Club.	The link under Ava Rail Bridge at the north end of Sladden Park is unattractive and feels unsafe.	Medium	GWRC, HCC	

River Mouth to Ewen Bridge





Whitebaiters and fishers have their favourite spots along the true left bank of the Hutt River estuary.

The expanse of mown grass berm and stopbank at Strand Park

The stopbank provides physical and visual separation between the river and adjoining areas; however, in places there is access across the stopbank



Ewen Bridge to Kennedy-Good Bridge (RiverLink Project)

The reach extends 3.7km between the Ewen and Kennedy-Good Bridges and passes through the Hutt City CBD, and as such is the most urban and developed of the reaches. The whole reach is being considered as part of the RiverLink project, and as such the actions for this reach are encompassed in the implementation of the RiverLink development works.

RiverLink is a partnership project between the GWRC, HCC and NZ Transport Agency with the aim of delivering better flood protection, better lifestyles and improved transport links for the people of central Lower Hutt. Three work strands of the RiverLink project are:

- Realigning a section of the river channel as part of the HRFMP
- Urban renewal — improving the city's interface with the river to take advantage of this natural asset, developing the amenity and attraction of the city as a destination and place to invest;
- Improving the overall resilience, safety, reliability and efficiency of State Highway 2 (SH2) at its intersection with Melling Bridge/Link and Block Roads.

The RiverLink project and design process have been undertaken in consultation with the community and stakeholders. The design for the river berms area is summarised below.

True Right Bank

The west side of the river will be widened to enable a broader river channel and berms. This will require the removal of properties along Pharazyn Street and part of Marsden Street. The RiverLink concept is for the re-purposing of residual land after construction is completed as residential development, which can take advantage of the outlook to the river and the redevelopment of the city centre. Melling Railway Station is proposed to be relocated to a location opposite the city centre and connected to it by a walking and cycle bridge over the river.

A sealed walking and cycle path will continue along the top of the realigned stopbank and along current and new connections to the local streets, as well as connecting at Railway Avenue to the new Hutt City to Ngauranga cycle path. Between Ewen and Melling Bridges, the berms on the west side will largely remain an open, grassed landscape to facilitate flood water movement. Upstream of Melling Bridge to Kennedy-Good Bridge, the landscape will support larger planted areas and a large wetland proximate to Belmont School. The berms incorporate an informal path along the river edge as well as a cycle/walking path of consolidated gravel aligned along the middle of the berm that is suitable for maintenance vehicles. In the future, the Melling SH2 intersection is to be upgraded with a grade-separated interchange. Melling Bridge will be replaced at this time.

True Left Bank

The east side of the river through this section has a closer relationship with the city – where people live and work. Between Ewen and Melling Bridges will be a 'city park' landscape. The stopbank interface with the city is designed as a promenade to receive new buildings directly along the edge to facilitate apartment developments and publicly accessible activities, such as cafes, opening on to the stopbank.

The city park will be a more urban response to the landscape than on the western side, incorporating undulating landforms, trees, paths and furniture that generate discrete places with different characteristics. Access points and places at the river edge are designed to enable comfortable places for sitting, small boat access, swimming and other recreation uses, such as events. The parking area used for the weekly market will be retained.

Stormwater management devices are proposed to intercept urban stormwater prior to discharge to the river. Upstream of Melling Bridge, the berms are wider and the landscape becomes more focused on the opportunities for added habitat value, with tree groupings and in-stream devices and rock groynes to manipulate water flows while enabling flood capacity as required. As with the west bank, the stopbanks on the eastern side continue to support sealed walking and cycle paths along the crest and paths along the berms that allow more meandering movement and access to the river edge.

Te Awa Kairanga/Hutt River – Maraenuku pā wāhi tapu (battle site), mahinga kai

Te Awa Kairanga/Hutt River – Motutawa pā wāhi tapu (battle site), mahinga kai

Opportunities: CBD interface, Transpower substation, Boulcott's Farm Heritage Golf Club

Approximately 40 stormwater outfalls discharge into the river within this reach.

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/ RESPONSIBILITY	SUPPORT
		The RiverLink project is a comprehensive, multi-agency development to improve flood protection, transport linkages, and the Lower Hutt CBD's relationship to the river and the potential recreation opportunities it provides and that could be further developed.	GWRC, HCC and NZ Transport Agency are collaborating to achieve several interrelated objectives and have brought together a range of disciplines to prepare long-term development plans for this very urbanised section of the river.		GWRC, HCC, NZ Transport Agency	
1	620-700 (Kennedy-Good Bridge)	Acknowledge Motutawa Pa site.	PNRP Schedule C4 Mana whenua sites of significance, Taranaki Whānui ki te Upoko te Ika a Maui: wāhi tapu (battle site), mahinga kai.		GWRC, HCC	
2	460-530 (Melling)	Acknowledge Maraenuku Pa site.	PNRP Schedule C4 Mana whenua sites of significance, Taranaki Whānui ki te Upoko te Ika a Maui: wāhi tapu (battle site), mahinga kai.		GWRC, HCC	
3	600-610 (Belmont)	Develop trial wetland to control and remediate stormwater flows.	As a precursor to a series of wetlands that could be developed at various locations along the river berm, a trial wetland is being developed adjacent to Belmont School. The aim is to demonstrate what could be achieved at other locations to ameliorate stormwater discharge into the river, improve water quality and to create a diversity of ecological and landscape improvement treatment.	Short	GWRC, Wellington Water	



Hutt City centre and riverbank carpark. Dense willow planting restricts views to river. The improvement of physical and visual connections between the city centre and the river is one of the objectives of the RiverLink project



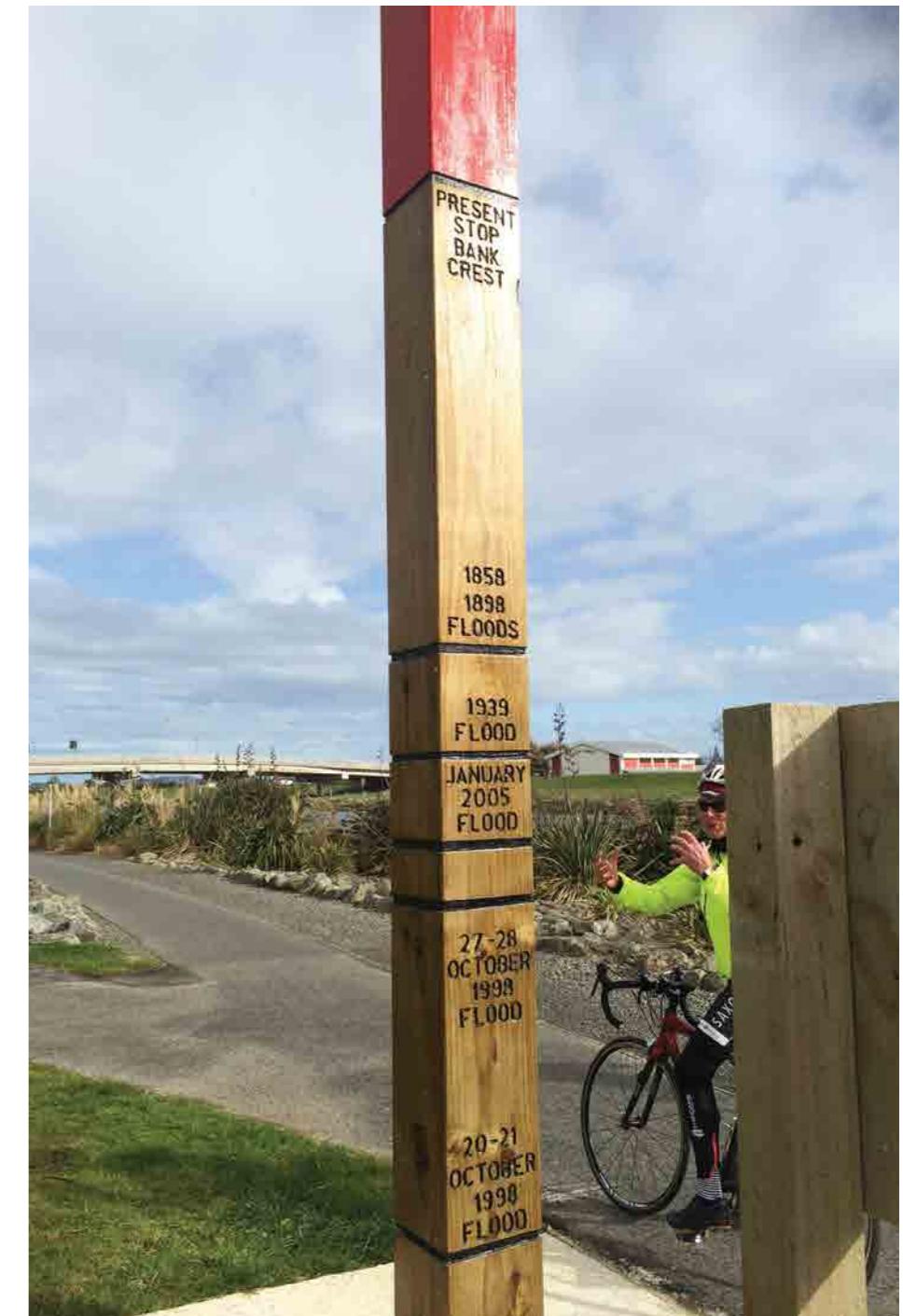
The river trail is occasionally used by horse riders



River trail under Melling Bridge

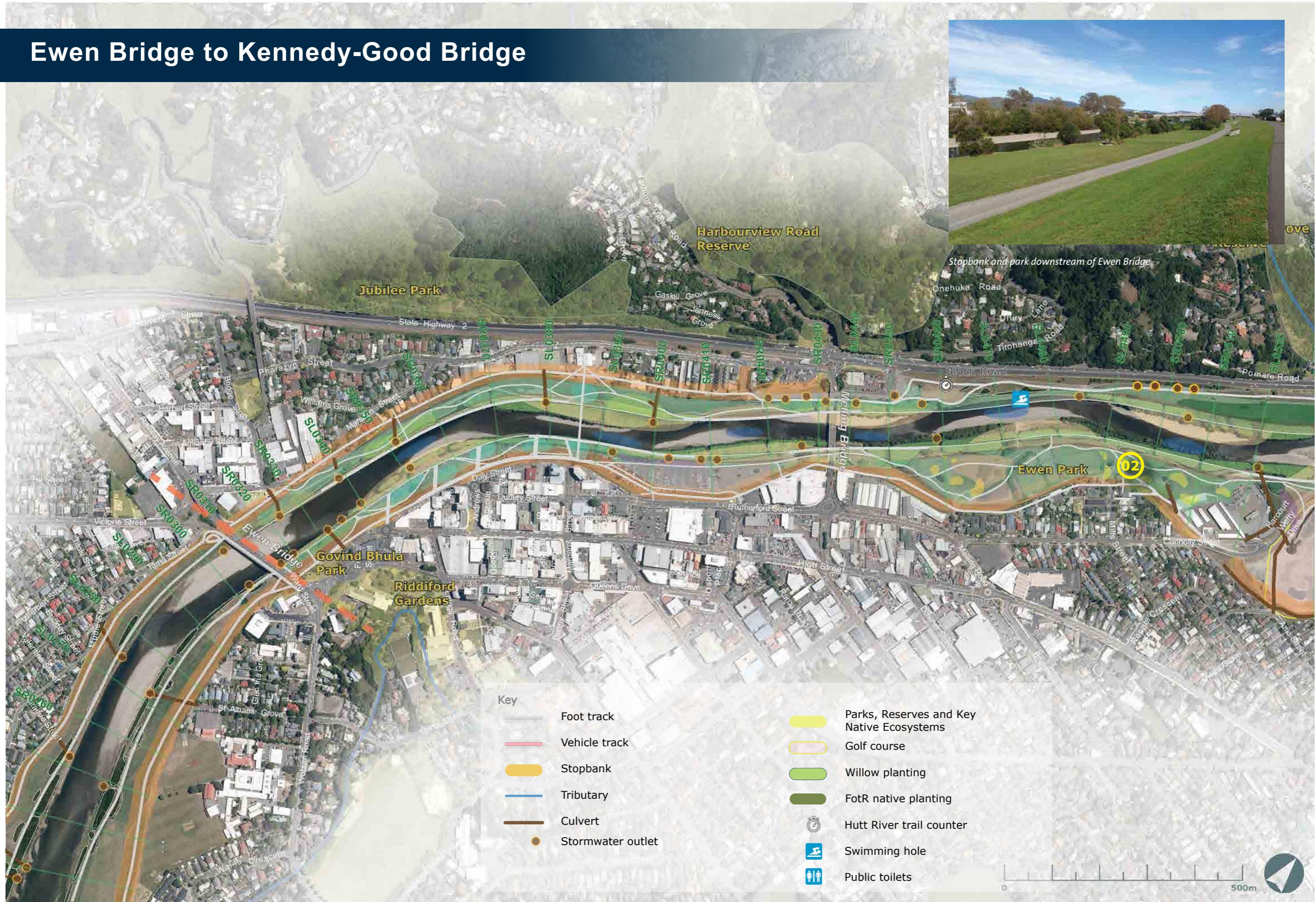


Upstream of Melling Bridge, an area of accessible park land – the river berm, stopbank and river trail



Flood marker adjacent to Ewen Bridge

Ewen Bridge to Kennedy-Good Bridge





Looking south towards Melling Bridge and Hutt City centre

Kennedy-Good Bridge to Pomare Rail Bridge

This reach extends 4.6km from Kennedy-Good Bridge to Pomare Rail Bridge.

The reach is well used for a variety of recreational activities, particularly swimming during summer months, being close to the residential areas of Hutt City. Parts of the reach also suffer antisocial issues such as fly tipping and unsafe vehicle use. It is a popular destination for swimming (e.g. Taita Rock).

True Right Bank

Space on the west side of the river is relatively narrow, being confined to the Wellington Fault escarpment. The escarpment presents a complex of dense vegetation interspersed with residential developments, roads and Belmont Quarry. SH2 at the foot of the escarpment is elevated above the river. Belmont Domain, managed by HCC, and the small residential area of Belmont are located on the river floodplain just north of Kennedy-Good Bridge. Dense willow planting lines the riverbank with the exception of two sections of riprap where views between SH2 and the river are opened up. Belmont Domain provides the biggest open space on the west side of the river. A gravel maintenance track accessed from either end is not available for public use.

Several stormwater culverts and outfalls cross the floodplain, presenting an opportunity to enhance the water quality of the discharge via detention areas that intercept and treat the stormwater before it enters the river.

True Left Bank

The east side of the river adjoins the suburbs of Avalon, Wingate, Taita and Pomare. The stopbank encloses a relatively wide floodplain area, occupied by playing fields and Fraser Park (both managed by HCC) at the southern end. Harcourt Werry Drive is a

busy road and bisects Fraser Park, creating a physical barrier between the river and playing fields. The floodplain becomes narrower between Taita Drive and the river, upstream of Fraser Park. The stopbank along Taita Drive creates a visual and physical barrier to the river corridor.

A dense band of willows planted as part of a flood protection initiative separates the river from the floodplain, and towards the southern end groves of mature native and exotic trees enclose sports fields. Two sections of the riverbank are not planted and provide open views to the river and the western banks. The reach is a popular summer destination for swimming, in particular at Taita Rock and environs. The carpark and open space area that serves Taita Rock swimming hole could be enhanced to create a more attractive destination and additional facilities. The GWRC flood protection stockpile near the Taita Rock carpark unfortunately adds an industrial element to this area.

Issues and Opportunities:

There are good opportunities to upgrade and enhance the berm area that adjoins the Taita community (between chainage 850 and Pomare Rail Bridge). Improving the quality and functionality of the area will create a more attractive destination, encourage more people to spend more time there and reduce the antisocial behaviours. The area could be identified and branded as a 'riverpark' and the process of its upgrade can be used as a vehicle to gain community ownership and knowledge of this reach of the river corridor.

Approximately 29 stormwater outfalls discharge into the river within this reach.

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/RESPONSIBILITY	SUPPORT
		Focus: Develop Taita Drive section area as a 'park' – an attractive recreational destination. Improve water quality of stormwater outfalls.	Upgrade the Taita Drive section of the reach to a quality open space and facilities, to create a park of similar quality to Moonshine Park. Rebrand the area and focus on development actions below.		GWRC, HCC	
	620-700 ((Kennedy-Good Bridge))	Acknowledge Motutawa Pa site	PNRP Schedule C4. Mana whenua sites of significance, Taranaki Whanui ki te Upoko te Ika a Maui: wāhi tapu (battle site), values; mahinga kai, pā.	Ongoing	GWRC, HCC	
TRUE LEFT BANK						
1	850-1080	Prepare a masterplan to create a 'park', incorporating the actions below.	In consultation with councils, iwi, relevant stakeholders.	Short	GWRC, HCC	
1	850-1080	Upgrade the area to create a 'park' with its own name and identity. Improve the quality of the area for informal recreational opportunities and visitor facilities.	Improve overall quality of area and brand it as a destination park. Upgrading the area and creating better cues to its care will encourage better behaviours and more passive surveillance by increasing the level of use. Taita Rock swimming spot is a popular destination but there are no picnic facilities or shade trees to encourage use in the wide space between the river and stopbank. Relocate the rock stockpile. The area currently attracts some antisocial behaviours, and largely appears vacant and uninviting as a destination.	Medium	GWRC, HCC	
2		Enhance north and south vehicle entrances to the area to make them more defined, attractive and safe.	Formalise the vehicle entrances through design, planting and signage. Reconsider the location and design of the northern vehicle entrance over the stopbank, (chainage 1030), which is currently dangerous.	Medium	GWRC, HCC	
1		Rationalise traffic flows and carparks to, seal vehicle access, restrict or stop through traffic, add carparking, and restrict vehicle access to the riverbed.	A wide gravel access road encourages fast vehicles and there is a need to restrict through traffic, and develop carpark areas. A sealed road would reduce unsafe driving (skids and manoeuvres). Cars and motorbikes in the river area cause safety and noise issues for other users.	Medium	GWRC, HCC	
1		Provide a separate cycleway/walkway to vehicle access.	Improve perceived and real safety for pedestrians and cyclists.	Medium	GWRC, HCC	
1		Provide and improve visitor facilities – toilets, picnic tables, shade trees, play equipment.	Quality facilities will attract more use of the area and encourage longer visits to the spaces other than the swimming holes.	Medium	GWRC, HCC	



Vehicle access to Taita Rock swimming hole, with bollards and wire rope barrier to prevent vehicles driving on the river berm



The stopbank along Harcourt Werry Drive visually and physically separates the river and adjoining Pomare residential area



Rock-armoured river edge enables open, unobstructed views to the river from the river trail

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/RESPONSIBILITY	SUPPORT
3		Identify opportunities / methods to improve connections over the stopbank to Taita Drive.	High stopbanks separate the community from the river. Access between the adjoining residential communities and the river could be improved by the provision of a footpath and signage. A better connection to the river corridor could also be made through measures such as roadside planting along Taita Drive.	Medium	GWRC, HCC	
4		Relocate stockpiles away from carpark area at Taita Rock.	GWRC stockpile items are regularly tagged and make the northern entrance appear as a service area rather than a park environment.	Medium	GWRC, HCC	
5		Physical barriers to stop vehicles entering river.	Cars and motorbikes in the river, safety and noise issues.	Medium	GWRC, HCC	
6		Enhance existing planting.	Good native revegetation among willows along the access road could be encouraged, with planting and weed control to enhance overall appearance and character.	Medium	GWRC, HCC	
7	790-860	Improve link from river trail to Avalon Park with better crossings and signage.	Link from river trail to Avalon Park could be improved. There are currently two road crossings and limited signage. Need to improve access across stopbank with provision of a path.	Medium	GWRC, HCC	
8	750-770, 940-970	Enhance visual and physical access to river groynes for fishing/swimming.	River groynes offer alternative access points to, and experience of the river (other than gravel beaches). A dense band of willow planting separates the path and the river, and while there is access through the willows at either end, additional access points (and viewshafts) would provide better access and improve safety.	Medium	GWRC, HCC	
9	690, 790, 850, 870, 930	Investigate/Construct detention basins/wetlands at stormwater outfall points.	Improve water quality of the river and create an opportunity to educate on how to treat stormwater by removing silt and pollutants. These locations offer adequate space for such structures.	Medium	GWRC	
TRUE RIGHT BANK						
10	680, 720, 780, 950, 980	Investigate/Construct stormwater detention basins/wetlands at outfall points.		Long	GWRC	

Kennedy-Good Bridge to Pomare Rail Bridge







The alignment of the river trail and the groups of tree and shrub plantings create an inviting landscape



The weir where the Wellington Water sewer main pipe crosses the river



The forested escarpment provides a strong backdrop in this narrow part of the river gorge

Pomare Rail Bridge to Silverstream Bridges

This reach extends 3km between Pomare Rail Bridge and the Silverstream rail and road bridges (Silverstream Bridges). This narrow section of the river corridor is known as the Taita Gorge, where the Belmont and Stokes Valley hills constrict the river floodplain and create a contrasting character to the wider river plains to the north and south.

The Wellington Water sewer main pipe crosses the river just south of the Silverstream Bridges. As the river continues to degrade downstream of the sewer pipe crossing, which now forms a weir across the river, it brings with it the challenge of maintaining fish passage up the river.

The Silverstream Bridges' piers in the river channel offer popular and easily accessed swimming holes.

True Right Bank

The stopbank is set well back from the river channel and is occupied entirely by Manor Park Golf Sanctuary. The riverbank is densely planted with a mix of willow and native trees. The river trail path is planned to extend along the top of the stopbank, through the golf club carpark, to the Silverstream Bridges, thus completing the missing link along this side of the river.

True Left Bank

From Pomare Rail Bridge to Stokes Valley, the berm is a relatively narrow, predominantly open grassed area with willow planting on the river edge. A stand of mature poplar trees provides a change in character where the Stokes Valley Stream channel is cut into the river berm.

The true left bank is relatively narrow north of Stokes Valley Road, and in places the river channel cuts into the toe of the bank below Eastern Hutt Road, leaving very little room for the river trail. This restriction on space results in a more technically challenging section of the river trail, reducing it to a single track with steep grades and obstacles. This section of the river trail contrasts with the river trail reaches to the south in terms of width and terrain, and is a more enclosed and shady corridor. Vegetation is dominated by indigenous species through the gorge and northwards to the Silverstream Bridges.

Hulls Creek joins the river just south of the Silverstream Bridges. The riparian margins of Hulls Creek have been extensively planted over many years by the Forest & Bird Silverstream Care Group.

The sewer pumping station structures are located in the river corridor (Chainage 1350).

Opportunities

The narrow river corridor in the gorge area offers the opportunity to enhance the ecological corridor across the river between the indigenous forest located on both sides of the river. Additional planting of indigenous vegetation to further enclose the river corridor, particularly the open grassed area, will create a contrasting experience for river trail users, giving the reach a more 'wild' and 'bush' aesthetic (similar to the space that currently exists between 1260-1280 and 1330-1350)

Approximately 19 stormwater outfalls discharge into the river within this reach.



Channelised stream with mown grass banks at Stokes Valley Stream



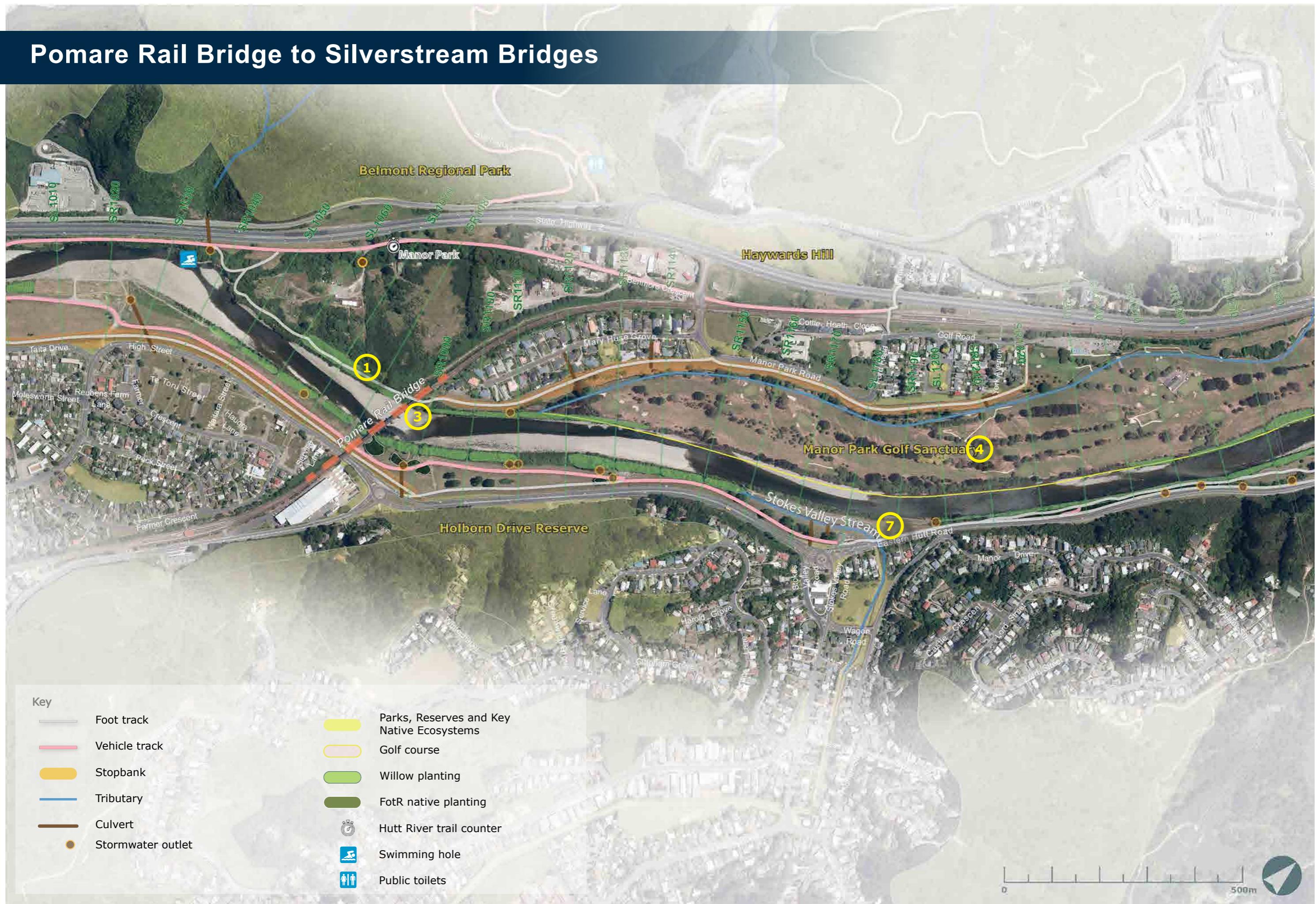
The stopbank with the river trail on the true right bank encloses Manor Park Golf Sanctuary



Mature, well established and widely spaced trees on the river berm provide a sense of scale as well as shade and amenity

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/ RESPONSIBILITY	SUPPORT
0		Focus: increase the area planted, with emphasis on indigenous species	Indigenous vegetation in the river corridor will enhance the cross-river ecological corridor. Increasing the area of indigenous planting, particularly in locations currently in grass, will add to the more enclosed and vegetated character of the reach, giving it a more distinct 'wild' nature and contrasting it with the more manicured, open landscape to the north and south. Planting design will need to consider crime prevention through environmental design (CPTED) requirements for the safety of users.	Ongoing	GWRC	
1	1040-1400	Cross-river ecological corridor enhancement: enhance the amenity and aesthetic to one of more 'wild, enclosed bushland'.	True right bank – Belmont Regional Park and Keith George Memorial Park/Silverstream Scenic Reserve extend into the river corridor. There are opportunities to use interpretative signage and other methods to highlight and promote connections to other recreation and open-space areas.	Ongoing	GWRC, HCC	
2		Maintain and enhance Silverstream Bridges area as a recreation destination.	The Silverstream Bridges are popular as a swimming destination and also as a start/end point along the river trail. The existing carpark and toilets are well used and could benefit from an upgrade.	Medium	GWRC, HCC	
3		Identify opportunity to provide pedestrian/cycle access across Pomare Rail Bridge.	Pomare Rail Bridge provides for trains only and does not provide a crossing point for pedestrians/cyclists. A crossing here would connect the Manor Park and Stokes Valley communities. A river crossing here, between the Kennedy-Good and Silverstream Bridges (which are 7.2km apart) would enhance the overall trail system and enable more recreational loops.	Long	GWRC, KiwiRail	
4		Manor Park Golf Sanctuary walkway extensions	River trail to be extended along stopbanks and under the Silverstream Bridges to complete the trail on the western side of the river. Work with Manor Park Golf Sanctuary.	Short	HCC, NZ Transport Agency	
5	1350	Construct a separate river trail bridge across Hulls Creek.	A short section of the river trail needs to use the narrow footpath to cross Hulls Creek. A separate bridge would reduce conflict on this narrow footpath.	Medium	GWRC, HCC, NZ Transport Agency	
6	1350	Sewer weir requires maintenance of fish passage structures.	Rock-lined on downstream side of pipe, spat ropes at riverbanks.	Short	GWRC, HCC	
7	1160-1190	Consider opportunities to improve the ecological function and values of the Stokes Valley Stream channel.	300m of channelised stream in the river berm has mown grass banks. Investigate ways that this can be improved aesthetically and ecologically. Enhance fish passage at stream outlet into the river.	Long	GWRC	
8	1350	Work with groups that are restoring the Hull Creek habitat.	The Forest & Bird Silverstream Care Group has a long commitment to the enhancement of the riparian margins, particularly upstream of the river berm.	Ongoing	GWRC	

Pomare Rail Bridge to Silverstream Bridges





Silverstream Bridges to Moonshine Bridge

This reach extends 4.2km between the Silverstream Bridges and the Moonshine Bridge, and is characterised by its close proximity to the densely vegetated and undeveloped Wellington Fault escarpment. The escarpment and adjoining hills support areas of high-value indigenous forest remnants (Silverstream Scenic Reserve and Trentham Scenic Reserve) and regenerating forest, as well as exotic pine plantations. These hills provide a dominant green and lush backdrop for river corridor users, devoid of buildings and roads.

A groundwater influx into the river between the Whakatikei River confluence and Taita Gorge results in a notable nitrogen gain in the river downstream of here. This increase in nitrogen is believed to be a key driver of toxic algal blooms. Toxic algae can be problematic in most reaches of the river in the summer, but they seem to be more problematic between Barton's Bush and Melling Bridge.

True Right Bank

The river berm is narrow along this reach, being restricted between the river and SH2/River Road. The road embankment forms the stopbank, with the road along its top. A gravel vehicle track runs the length of the reach and accesses SH2 in several locations. These access points to SH2/River Road appear dangerous due to the steepness of their approach up the embankment, the lack of a formal crossing road formation and a lack of signage. There is one formal entrance and carpark near the Riverstone Terraces turn-off (chainage 1690).

Willow plantings dominate the river edge, with the rest of the area open grass. Small areas of indigenous plantings enclose the carpark area, and groves of poplar have been established towards the northern end. The northern parts of the narrow berm become wet in the winter.

The access road adjacent to the river is regularly inundated, leaving debris on the road and incurring costs to clear the debris away. The community has expectations that debris will be cleared after each flood. Currently the section of the access road between 1520 and Silverstream Bridge is closed to the public.

Several culverts run under SH2 and under the berm to discharge stormwater into the river.

True Left Bank

The land on the east side of the river is relatively undeveloped, with the adjoining land including the Silverstream Golf Park, Royal Wellington Golf Club, Trentham Memorial Park (including Barton's Bush and Domain Bush), Moehau Park and Moonshine Park. UHCC manages Trentham Memorial Park, Moehau Park and Moonshine Park.

The southern end of the berm is relatively narrow, with an easement required for the river trail through the golf course land, which extends close to the river edge. North of the golf course, Trentham Memorial Park and Barton's Bush adjoin the river corridor. Barton's Bush and Domain Bush are the largest remaining areas of lowland mixed-podocarp/broadleaf forest in the Hutt Valley.

The Moehau wetland and stream adjacent to Barton's Bush, and Mawaihakona Stream (which passes through St Patrick's College) cross the river floodplain and are both being restored by community groups that have cleared willow and other weeds and aim to restore the stream margins to lowland podocarp forest.

North of Barton's Bush, Moonshine Park occupies the berm between the stopbank and the river. Moonshine Park is a popular and attractive open space. The open, grassed areas are studded throughout with semi-mature totara and other tall trees that provide shade, shelter and enclosure, offering a multitude of picnic and play locations. The park is well serviced with a toilet block, picnic tables and play equipment for children. The

park has a locked gate and the vehicle access road through the park is gently winding and undulating, with opportunities for vehicles to pull off and park under the trees. The river margins are densely planted, primarily with willows, but there are gaps in the planting enabling good views of the river.

Opportunities

The close proximity of indigenous vegetation growing along the western escarpment offers the opportunity to enhance the ecological corridor across the river and the valley between the Wellington Fault escarpment and Belmont Hills to Barton's Bush and beyond. Additional planting of indigenous vegetation will increase the biodiversity within this reach of the river corridor and continue the indigenous focus of the adjoining Pomare/Silverstream reach.

Parts of the western river berm are very damp, especially during winter. This is a potential location to establish wetland planting in place of mown grass, which in the long term could be developed into a lowland podocarp forest, a vegetation community that was once dominant in the river floodplain.

Opportunities within the river corridor to reduce the incidence of toxic algae are limited given that the most effective remedies relate to catchment-wide runoff and nutrient management, and summer water flows.

Six stormwater outfalls discharge into the river within this reach.

#	MMAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/RESPONSIBILITY	SUPPORT
		Focus: Enrich the ecological connections across the valley and along the river corridor.	The hills on the western side of the river support high-ecological-value indigenous forest.	Ongoing	GWRC	
		Toxic algae are most problematic between Barton's Bush and Melling.	Most problematic in the summer when the water is warm and river flows are reduced. GWRC's monitoring and website alert system provides up-to-date advice to the public.	Ongoing	GWRC	
1		Enhance cross river ecology through focusing on planting of indigenous species.	Focus on indigenous planting in berms on both sides of the river along the whole reach with a view to providing year-round bird habitat and food sources.	Ongoing	GWRC	
2		Establish new wetland areas in the damper location on the west berm.	Parts of the western river berm are very damp, especially during winter. This is a potential location to establish wetland planting in place of grass, which in the long term could develop into lowland podocarp forest, a vegetation community that was once dominant in the river floodplain.	Medium	GWRC	
		Where practicable, plant river edge with native species to enhance fish habitat.	Sections of the river margins, on the outside of river bends, are not planted and the river edge is retained with riprap. These sections allow open views to the river and the opposite bank. In some of these areas it may be possible to establish low-growing riparian vegetation that will shade the river edge and maintain the open views (e.g. toi toi, Carex spp. and sedges – not flax because of the issues it creates for flood management).	Medium	GWRC	
3		Improve vehicle control on true right bank.	Area becomes very wet in winter, attracting 4WD traffic along the berms. Rationalise vehicle use and consider need for carparks, through traffic, and access to/from SH2.	Medium	GWRC	
4		Retain unplanted river margins where they exist.	In places along the eastern river edge the river trail is close to the river and the riprap edge has not been planted. These locations enable close contact with the river and should be retained. If planting is being considered, it should be confined to low-growing species, such as toi toi and sedges.	Ongoing	GWRC	



Trees planted in the river berm need to be well protected during the establishment period to avoid damage from vandalism and also from mowers



Rock armouring along the river edge as opposed to dense stands of willows provides people using the river trail with open and unobstructed views of the river

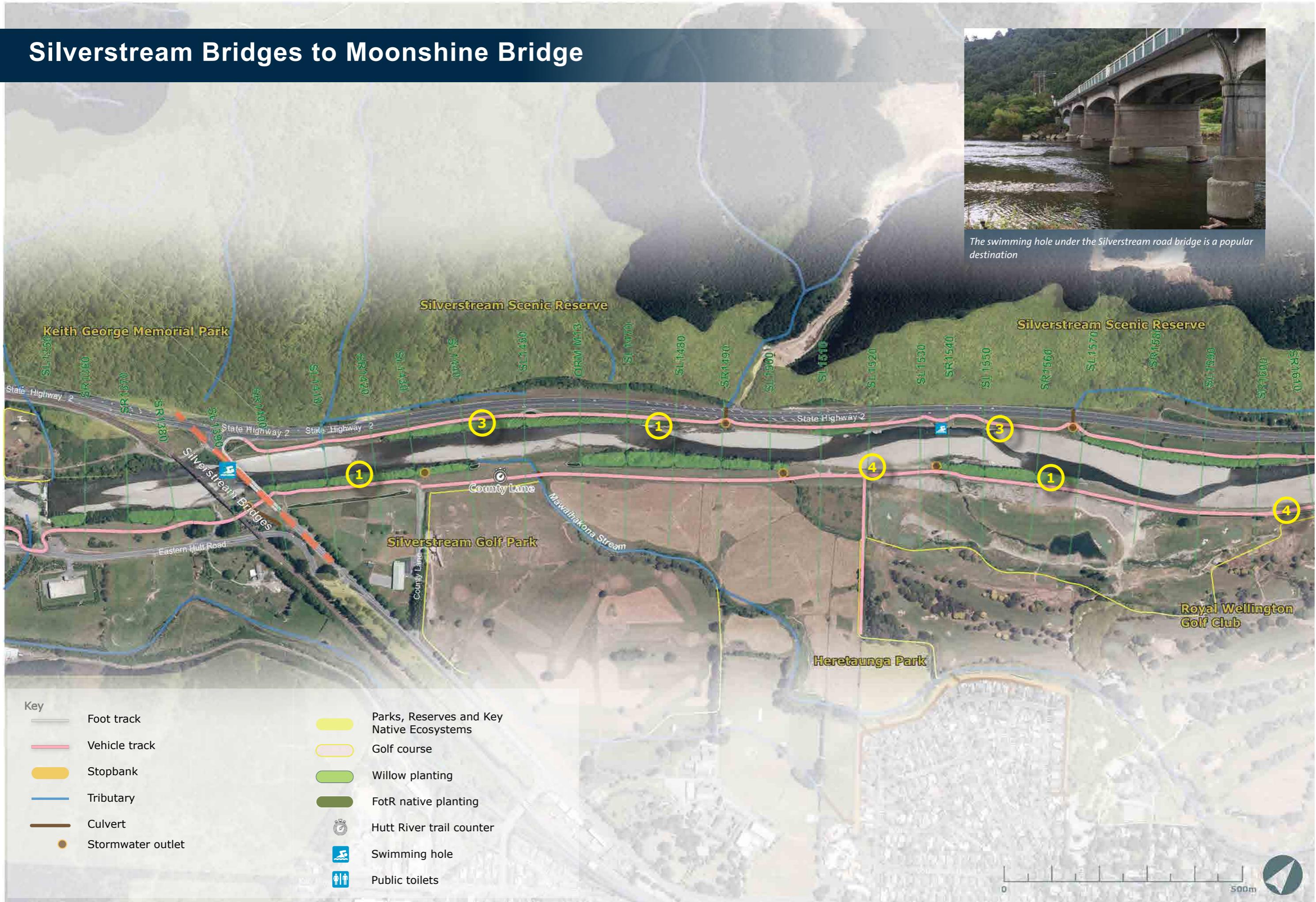


Mature eucalyptus in Moonshine Park provide dappled shade and an ideal environment for picnickers



Vehicle access up the road embankment to SH2 has poor visibility

Silverstream Bridges to Moonshine Bridge





Moonshine Bridge to Totara Park Bridge

This reach extends 4.1km between the Moonshine and Totara Park Bridges, and is a popular and well used open space being in close proximity to the population of Upper Hutt City. The Whakatikei River enters the Hutt River in this reach just north of the Riverstone Terraces residential area.

True Right Bank

The true right bank of the river is relatively unmodified. The steep river escarpment, below the Riverstone Terraces residential area, is densely vegetated with indigenous trees and shrubs and provides a strong green backdrop to the river from SH2. Rocky banks and outcrops at the toe of the escarpment below Riverstone Terraces provide several popular swimming holes. A walking track runs along this escarpment between Moonshine Bridge and the Whakatikei River. A bridge is proposed (UHCC) to cross the Whakatikei River to connect this path with the trail north of the Whakatikei River.

Upstream of the Whakatikei River the riverbank flattens out to a narrow floodplain that becomes wider towards Totara Park Bridge. Willow planting dominates the river edge. Beyond the willows the stream crosses the floodplain to the river. This area, known as the 'horse paddock', is currently grazed pasture, made possible by draining. The area has unique potential to be restored to wetlands and lowland podocarp forest.

True Left Bank

The river berm varies in width, and is constrained by SH2. At the southern end of the berm area, Poets Park, which is managed by UHCC, is wide with a substantial tree structure of individual and grouped totara, indigenous planting and toilets. Between the Poets Park and Whakatikei access points, the wide berm is mown grass devoid

of trees. Between Moonshine Bridge and the Whakatikei carpark the river edge vegetation, where it exists, is predominantly indigenous vegetation. A gravel vehicle track links the Poets Park and Whakatikei access points and carparks.

The swimming hole at the Whakatikei River confluence is a very popular destination. The berm on the inside of the river bend opposite the Whakatikei River provides a large grassed area with some mature trees that offer shade and shelter.

A stockpile area for flood protection materials is located at the Whakatikei entrance, and surrounding plantings generally hide it from view.

Upstream of the river bend the east berm narrows between SH2 and the river edge. Willow plantings dominate the river-edge planting along this section to Totara Park Bridge.

Opportunities

Safe access to the river corridor is important but is not well provided to/from the Upper Hutt CBD and along the stretch of SH2 between Moonshine Road and Totara Park. An overbridge at the river end of Gibbons Street or Masefield Street over SH2 would allow people from the city centre to have access to and from the river.

There is opportunity to improve and enhance the recreational amenity and facilities in this popular area, in particular, the berm between Poets Park and the Whakatikei carpark, and the large area inside the river bend.

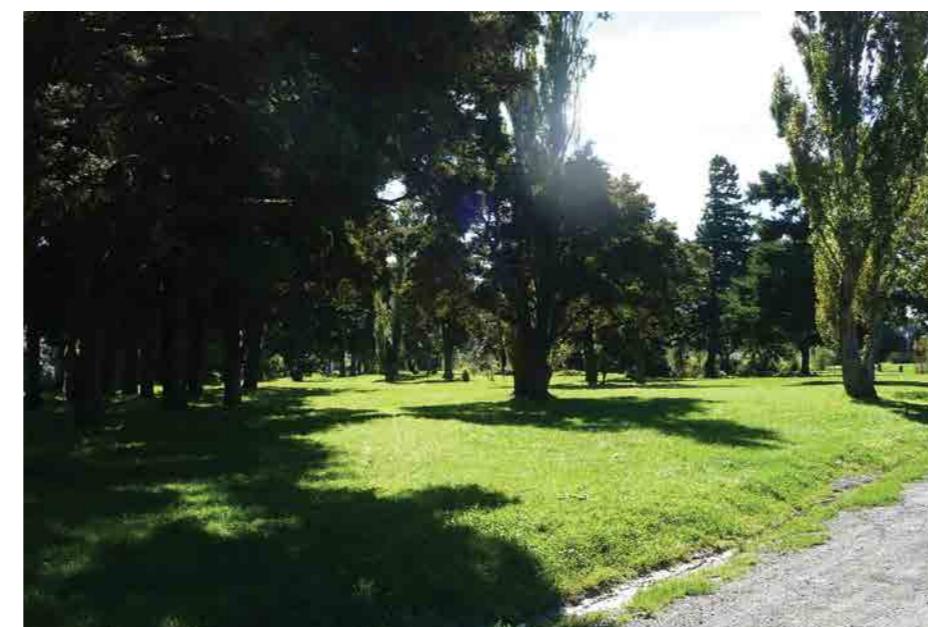
There is an opportunity to restore wetlands and lowland forest in the 'horse paddock' on the floodplain at the toe of the Akatarawa hills.

Eight stormwater outfalls discharge into the river within this reach.

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/ RESPONSIBILITY	SUPPORT
		Continue to develop and enhance facilities as recreation destinations.	Series of swimming holes.			
		Indigenous species should be the focus for planting in the river corridor.	Faster-growing exotic trees may be established to provide improved recreational amenity in the currently open, grassed areas. However, the long-term objective should be to enrich the indigenous biodiversity as well as create recreational benefits.	Ongoing	GWRC, UHCC	
1	1870-1900	Develop a safe crossing of SH2 between Upper Hutt CBD and the river.	A significant section of the Hutt River between Moonshine Bridge and Maoribank is currently isolated from the city by SH2. The only safe crossing point along this stretch through the heart of the city is at the northern end using the traffic signals at Totara Park. A safe crossing via an overbridge would significantly improve access to the Hutt River cycling and pedestrian network for residents and visitors. Investigations to construct a pedestrian overbridge spanning SH2 in close proximity to the city centre are included in the UHCC Proposed Long Term Plan 2018-2028. Initial scoping and investigation work for this project would commence in 2025, with the actual construction outside the term of this plan, after 2028.	Long	UHCC, NZ Transport Agency	
2	1830-1900, 1900-1970	Maintain and enhance Poets Park to Whakatikei carpark as a high-use recreation destination.	Seats and table damaged and not in keeping with cycle trail furniture. More picnic tables, shade trees, and shade over picnic tables are needed. Establish more trees to provide shade and attractive picnic locations in the open space between Poets Park and Whakatikei carparks, and at the Whakatikei River bend. Existing toilets at Poets Park are in poor condition – need upgrade or relocate to Whakatikei carpark.	Ongoing	GWRC, UHCC	
3	1920-1960	Plant upgraded section of the river trail north of Whakatikei carpark.	Opportunity to plant more trees.	Short	GWRC	
4	1980-2090	Develop new wetland/ lowland podocarp forest in 'horse paddock' on true right bank.	This section, being part of the Rimutaka Cycle Trail has been upgraded and there is now an opportunity to plant more trees to enhance this area. Develop a masterplan and development programme, with a view to reinstating the groundwater levels through minor earthworks, stopping drains, planting and maintenance.	Medium	GWRC	



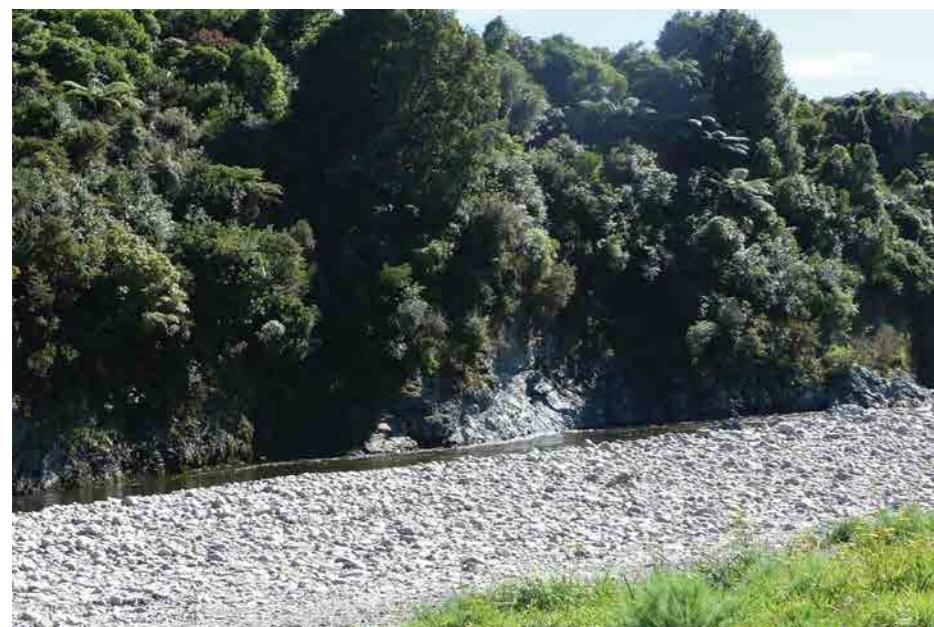
Young totara stand on the Moonshine Bridge embankment



Poets Park, which was created as part of the River Road development in the 1980s. The park comprises a mix of native and exotic tree groups and grass



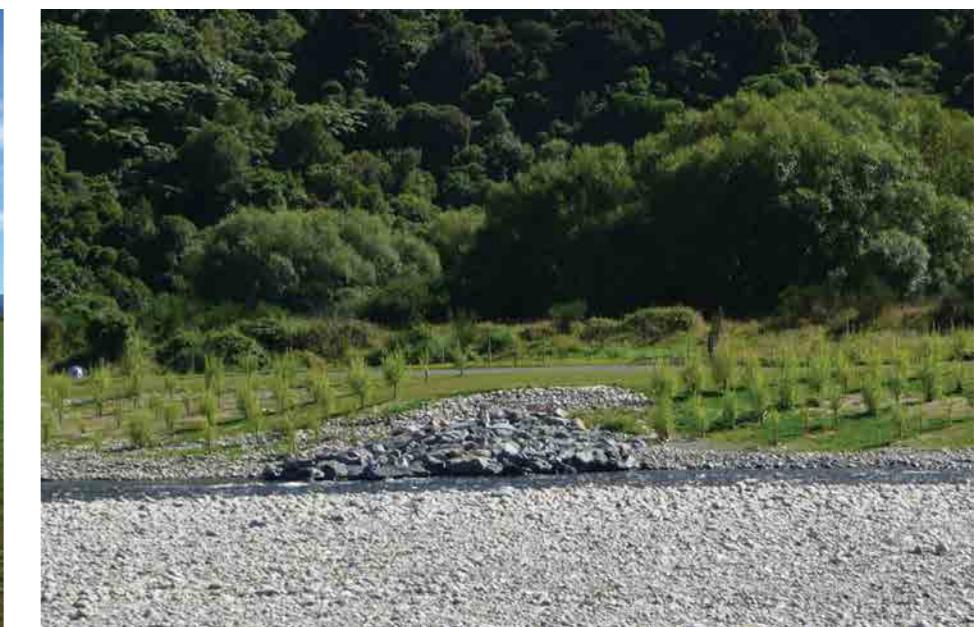
Various materials and techniques are used to prevent vehicle access on to the river berms



A well vegetated edge to the river creates a wonderful landscape setting for a popular swimming hole adjacent to Poets Park

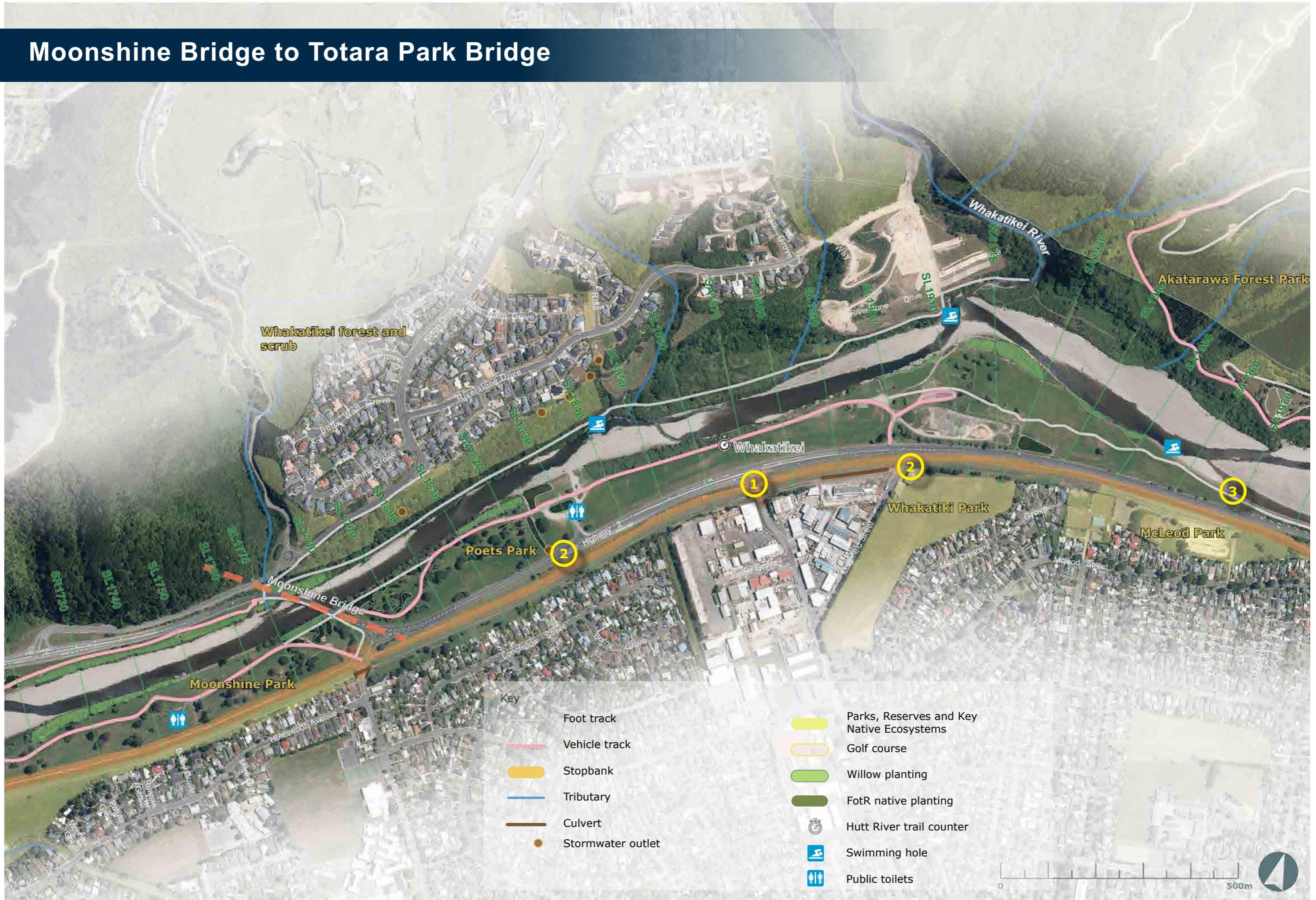


Vehicle barriers and lack of shade trees make this area uninventing for visitors



A mix of rock groynes and new willow planting. The regenerating native vegetation backdrop provides important east-west linkages for birds

Moonshine Bridge to Totara Park Bridge





Totara Park Bridge to Birchville Bridge

This reach extends 3.9km between the Totara Park and Birchville Bridges and is characterised by the distinctive 90-degree bend at Maoribank between Totara Park Bridge and Harcourt Park. Upstream of the river bend the river changes in nature from the wider gravel bed and floodplain system downstream to the coast. The river channel, between the Maoribank bend and Birchville Bridge, narrows and steepens as it cuts down into the bedrock and through the steep-sided gorge at the toe of the bush-clad hills.

A footbridge crosses the river at Harcourt Park and provides a well used connection between Totara Park and Birchville/ Brown Owl communities. This is the only footbridge that crosses the river.

The Akatarawa River, a major tributary of Awa Kairangi/Hutt River, joins the river just below Birchville Bridge.

True Right Bank

Totara Park residential area adjoins the river between the Totara Park and Harcourt Park Bridges.

The river berm upstream of the Totara Park Bridge is relatively wide, with the Awakairangi and Ngati Tama Parks occupying the floodplain within the stopbank. Both parks are grassed open spaces managed by UHCC for playing fields and other recreational uses (such as the Hüttcross cyclocross event). Willow plantings dominate the river-edge planting up to the Harcourt Park footbridge.

Upstream of the footbridge, the lower slopes and toe of the steep, densely vegetated Akatarawa Forest hills form the riverbank. The indigenous vegetation on the slopes is at various stages of regeneration, with pockets of forest remnants.

The 4WD vehicle track along this bank of the river between Norbert Street and Bridge Road has recently been upgraded and provides access to the Bridge Road community that was isolated when the bridge across the Akatarawa River was damaged in a flood.

True Left Bank

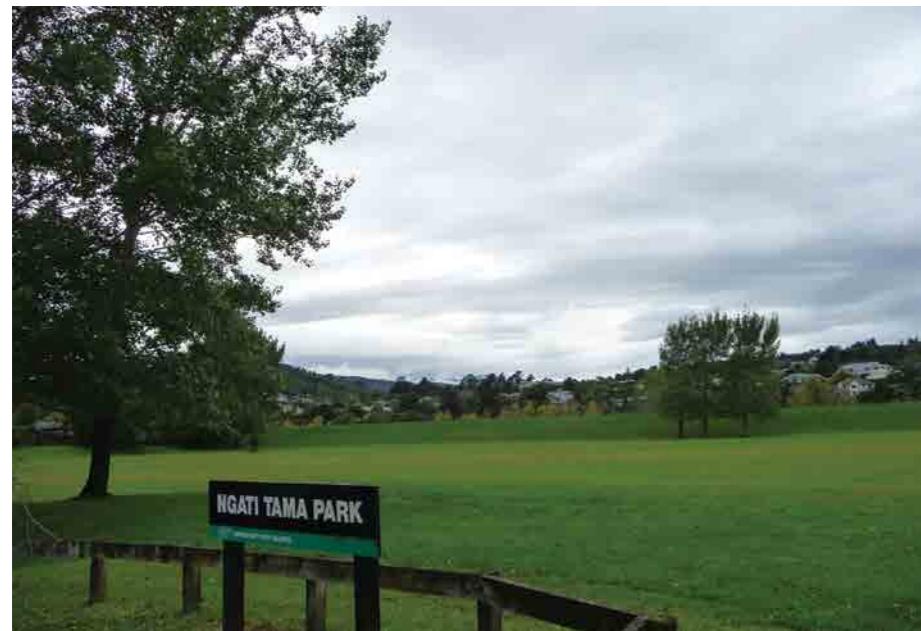
The river berm is narrow between Totara Park Bridge and the Maoribank bend, constrained between SH2 and the river channel as it flows hard against the bedrock on the outside of the bend. The Te Haukaretu Park and duck pond are elevated above the river channel and occupy an old river terrace and river channel just upstream of the bend. Harcourt Park is a popular and well known destination in the Wellington Region, offering numerous recreational amenities (playing fields, totara and beech forest, botanical woodlands, playground, picnic areas, outdoor stage, and campground).

The river trail path from Harcourt Park to Birchville Bridge is confined to a single gravel track that undulates between the top of the riverbank and tall residential boundary fences. This section of the river trail has a distinctly wild feel, accentuated by the sound of the river below and the dense vegetation, albeit a mix of exotic weeds, garden escapees and native trees and shrubs. Several steep tracks enable access down the bank to small gravel beaches in the riverbed. Hoggard Park is a small, grassed park that adjoins the river trail and riverbank.

From the end of Black Beech Street the river cuts hard against the bank and the river trail joins the footpath on Akatarawa Road to Birchville Bridge.

Approximately 16 stormwater outfalls discharge into the river within this reach.

#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/ RESPONSIBILITY	SUPPORT
1	2430-2480	Formalise recreational access on the temporary access road between the Akatarawa River and Totara Park to provide a loop track between Harcourt Park and Akatarawa Road Bridge.	Temporary road on true right bank between Totara Park and Birchville.	Short	GWRC, UHCC	
		Enhance links with Rimutaka Cycle Trail and other mountain-bike trails	Consider opportunities to link the river trail to UHCC mountain-bike trails.	Ongoing	GWRC, UHCC	



The parks along this reach of the river provide important open space for UHCC



Te Haukaretu Park



This section of river trail upstream of Harcourt Park is enclosed by a mix of native and exotic vegetation



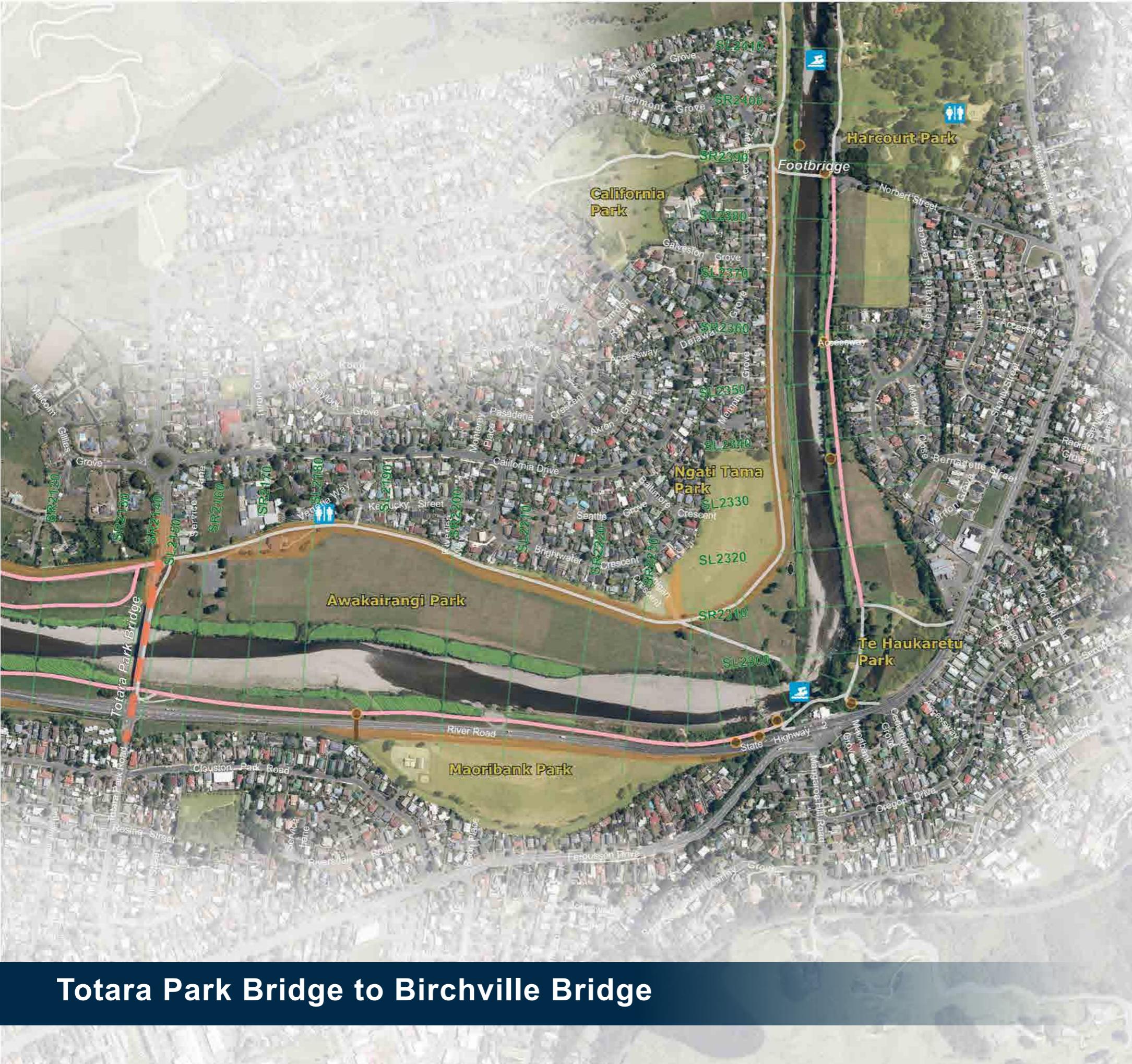
Walking and cycle access on the true right bank side of the river goes through young regenerating native vegetation



Dense willow planting along both sides of the river characterise sections of the river along this reach



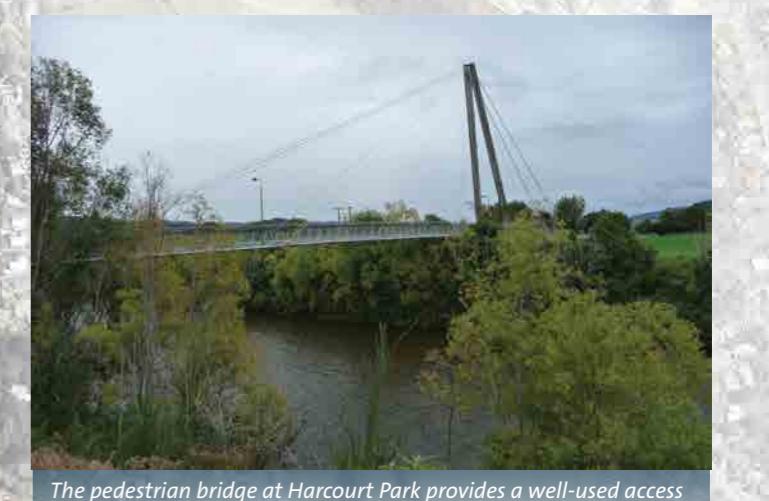
The river upstream of the pedestrian bridge cuts down into a narrow gorge, contrasting with the wide river downstream



Totara Park Bridge to Birchville Bridge



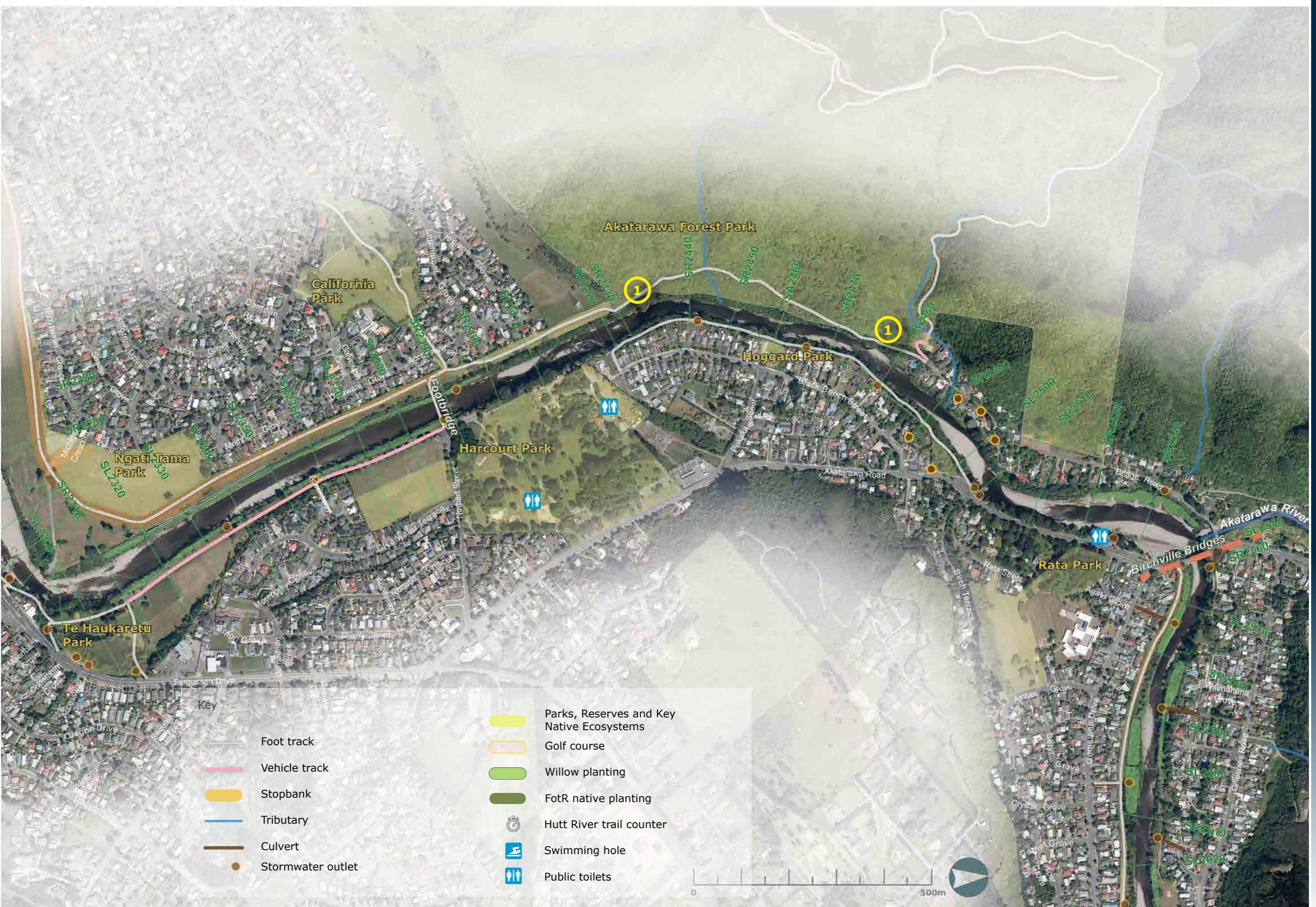
Looking downstream from Birchville Bridge



The pedestrian bridge at Harcourt Park provides a well-used access to the park from the Totara Park residential area



River trail upstream of Harcourt Park passing close to residential properties



Birchville Bridge to Kaitoke Regional Park

This reach extends 4.7km between Birchville Bridge and the Te Marua reservoirs where the river emerges from the Hutt Gorge at Kaitoke.

This reach of the river is the most natural, in terms of its geomorphology and minimal human interference /channelising. For the first part of the reach, upstream of Birchville Bridge, the river is cut down into the bedrock and confined to a narrow channel. Upstream, the river channel meanders across the full width of the valley floor. The river terraces within the river bends are occupied by farmland, Te Marua Golf Club, the stock car track and the Kaitoke reservoirs and recreational area. The meandering river channel provides several popular swimming holes along both sides of the reach.

Active erosion processes are evident in several places where floods have cut into the gravel river cliffs, notably opposite the Te Marua Golf Course and just downstream of the Mangaroa River confluence, where undercutting has threatened SH2 and the river trail. NZ Transport Agency has completed erosion protection work to reinforce the river edge, and this has included a 2.2m-wide sealed pathway.

The trail on the true left bank effectively finishes at Mangaroa Bridge due to the land ownership upstream and/or the erosion issues.

True Right Bank

The Gillespies Road residential area adjoins the river for about 1km upstream of the Birchville Bridge. The river trail follows the riverbank, via Edmund Lomas Park and terminates where the residential settlement ends. The riverbank is heavily vegetated with a mix of willow and exotic and indigenous trees and shrubs. The river terraces upstream are predominantly farmland, with mature exotic and indigenous tree plantings on the terraces and river edge. A section of the high gravel cliff on the outside of the bend between 2820 and 2840 has been seriously eroded in the past decade. The

farmed river terraces give way to bush-clad hills opposite the stock car track, where the regenerating indigenous forest extends all the way to the river edge. The Kaitoke Regional Park boundary is just upstream of the Te Marua Golf Club.

True Left Bank

The Emerald Hill residential area adjoins the river upstream of Birchville Bridge. The river trail here is located in a narrow berm between the top of the riverbank and residential boundary fences. Upstream of the residential area the old river terraces are occupied by small-scale farming activities. The river edge is densely vegetated with a mix of exotic and indigenous trees and shrubs.

The river berm narrows and is constricted between SH2 and the river for about 800m up to the Mangaroa River confluence and Te Marua Golf Club. The vegetation along this section is dominated by invasive weed species. This, combined with the restricted space adjacent to SH2, makes it an unattractive section of the river trail. Floods have eroded a section of the bank, potentially undermining SH2 and affecting the river trail just downstream of the Mangaroa River. NZ Transport Agency completed erosion protection works in 2017 and reinstated the river trail as part of these works.

The river trail crosses SH2 via an underpass and then crosses the Mangaroa River via an old road bridge to emerge back on the non-river side of SH2. This is a highly visible start/end point for the Hutt River Trail and provides an opportunity to recognise it as such.

The Rimutaka Cycle Trail continues on from this point up Plateau Road and into Pakuratahi Forest via the Maymorn entrance.

Seven stormwater outfalls discharge into the river within this reach.

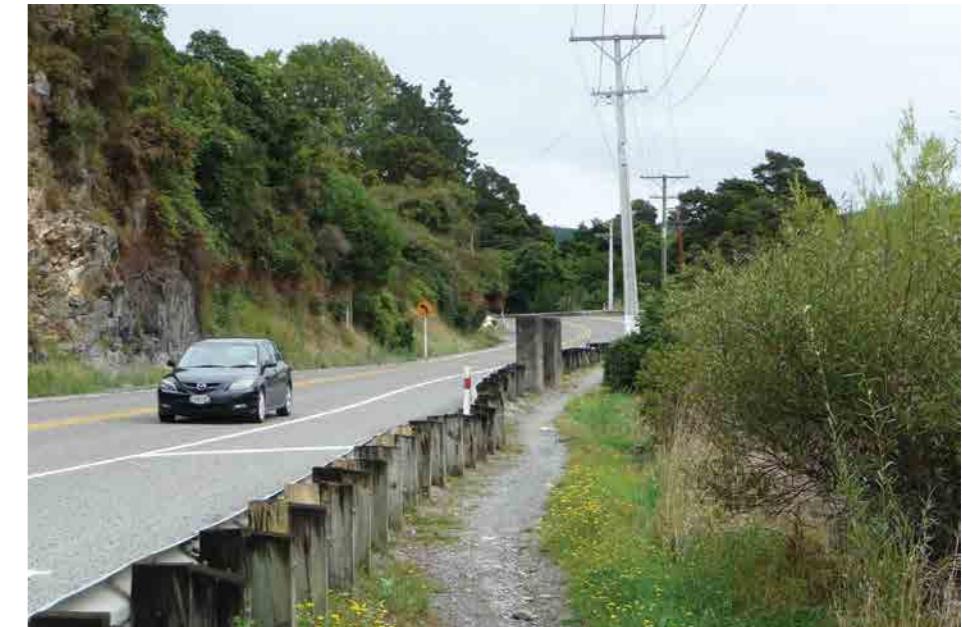
#	MAP X SECTION	ACTION	EXPLANATION	PRIORITY	FUNDING/RESPONSIBILITY	SUPPORT
1		Focus: Enhance Hutt River Trail link and realign it so it continues on the river side of SH2 between Mangaroa River and the Kaitoke Regional Park entrance.	The short stretch along SH2, across the Mangaroa River and past Te Marua Golf Club is the missing link on the river trail to enable safe passage between Birchville and Kaitoke Regional Park without having to cross SH2 twice. This would require bridging across the Mangaroa River.	Medium	GWRC, NZ Transport Agency, UHCC	
		Enhance links with Rimutaka Cycle Trail and GWRC mountain-bike trails in Pakuratahi Forest/ Tunnel Gully areas.	The river corridor and river trails are an important part of the UHCC open space and recreational networks. Links to adjoining cycle trails extend the network and opportunities.	Medium	GWRC, UHCC	
2	2730-2760	Enhance planting on narrow section of Hutt River Trail between river and SH2.	Replace the weedland environment (gorse and blackberry) with indigenous vegetation to enhance the experience along this section of the river trail.	Short	GWRC	
3		Develop suitable signage and elements to highlight start/end points to Hutt River Trail.	Currently no acknowledgement of river trail. An opportunity to provide maps and signs showing the extent and features of the river trail.	Short	GWRC	



The walking/cycle access under SH2 at Mangaroa River enables safe passage away from traffic, but long term this access needs to be upgraded.



The weedland environment between the river and SH2, could be improved



The Hutt River Trail is very narrow and jammed between SH2 and the riverbank



The river has eroded the bank adjacent to SH2, affecting the Hutt River Trail. Erosion protection work by NZ Transport Agency has been carried out to prevent further undermining.



Erosion protection works adjacent to SH2 to protect the road from being undermined by the river were carried out by NZ Transport Agency in 2017. This section of the Hutt River Trail was reinstated as part of these works.



A good example of well managed tree planting in Kaitoke Regional Park

Birchville Bridge to Kaitoke Regional Park





