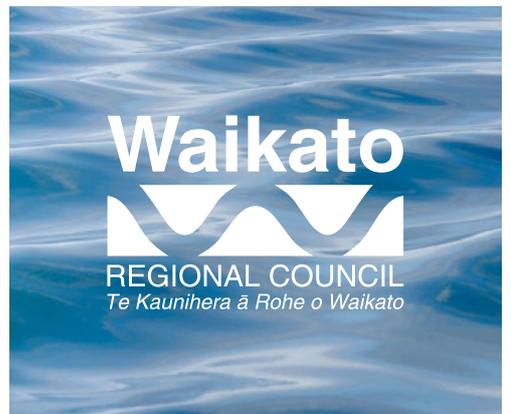


CENTRAL WAIKATO ZONE PLAN

TE MAHERE O WAIKATO
WAENGAPŪ

“COLLABORATIVELY
ENHANCING THE HEALTH
AND WELLBEING OF
RIVERS AND CATCHMENTS
WITHIN THE ZONE.”



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Science and Strategy Directorate (Water, Coastal, Land and Soils, and the Integrations and Infrastructure teams)

Community and Services Directorate (Communications Team)

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Disclaimer

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EXECUTIVE SUMMARY

HE KŌRERO WHAKARĀPOPOTO

“COLLABORATIVELY ENHANCING THE HEALTH AND WELLBEING OF RIVERS AND CATCHMENTS WITHIN THE ZONE.”

- CENTRAL WAIKATO ZONE VISION

The Central Waikato Zone Plan (“the zone plan”) provides the broad direction for the implementation of Waikato Regional Council’s (“the council”) Integrated Catchment Management Directorate (ICM) activities within the Central Waikato zone (“the zone”).

The council undertakes a range of activities to protect the region’s water, soil, air, geothermal areas and coasts, and its mission is to work with others to build a Waikato region that has a healthy environment, strong economy and vibrant communities.

The council’s work, functions and priorities are guided by statutory and non-statutory requirements and decisions made by councillor representatives. These decisions are then implemented through five directorates; Community and Services, Finance, Integrated Catchment Management (ICM), Resource Use, and Science and Strategy.

The Central Waikato Zone Plan provides the broad direction for the implementation of activities undertaken by ICM within the Central Waikato zone. The ICM directorate is primarily focused on delivery of river and catchment management, and flood management activities. These activities are undertaken alongside supporting activities which are delivered regionally and include hazard management and community safety activities, biodiversity and natural heritage operations, biosecurity operations and land management advisory services.

The zone plan is guided by Te Ture Whaimana o te Awa o Waikato (Vision and Strategy for the Waikato River) (Waikato River Authority, 2011) and Waikato Regional Council’s Strategic Direction 2016-19 (WRC, 2017). It also assists the implementation of operational programmes identified in the council’s key statutory documents including the Operative Waikato Regional Policy Statement (WRC, 2012) and the Waikato Regional Plan (WRC, 2007).

The zone plan includes the following interrelated 30 year goals to guide the implementation of ICM activities within the zone:

- 1.** *Contribute to improving water quality within priority catchments in the zone.*
- 2.** *Maintain and enhance indigenous biodiversity associated with the Waikato River, its tributaries, wetlands and lakes across the zone.*
- 3.** *Manage the instream impacts of urban development and land use intensification in association with territorial authorities and other partners.*
- 4.** *Work collaboratively with iwi, territorial authorities and communities to align and integrate projects and priorities within the zone.*

The 30 year goals have been developed in response to the following key matters identified for the zone as part of the development of this plan:

- declining water quality
- declining indigenous biodiversity
- adverse impacts of urban development and land use intensification on waterways
- need for integration and relationship building.

The zone plan includes a high level programme of implementation actions, grouped in focus areas that respond directly to the goals identified. These actions will inform the preparation of a more detailed annual works programme for the zone that is to be monitored through the Central Waikato Zone Catchment Committee. All actions included in this plan are either directly funded through the zone or funded as part of wider council activities. Many of the actions rely on the involvement (and funding) from other stakeholders.

The implementation of the zone plan and its effectiveness will be monitored and reported on an annual basis to the community through the Central Waikato Zone Catchment Committee. Further reviews will be considered on a three yearly basis to ensure that the plan is reviewed in conjunction with the long term plan process and that progress is being made towards the goals identified.





1 INTRODUCTION

HE KUPU WHAKATAKI

1.1 PURPOSE

The Central Waikato Zone Plan (“the zone plan”) provides the broad direction for the implementation of Waikato Regional Council’s (“the council”) Integrated Catchment Management Directorate (ICM) activities within the Central Waikato zone (“the zone”).

The zone plan includes:

- an overall vision for the zone
- 30-year goals for the zone
- implementation actions for the next 10-year period to meet the goals identified
- processes (and measures) for monitoring and reviewing the plan.

The implementation actions proposed within the plan give effect to aspects of the Waikato Regional Policy Statement (WRC, 2016) and the council’s Strategic Direction 2016-2019 (WRC, 2017) and also assists with the implementation of council’s non-regulatory responsibilities under a variety of other statutes.

The zone contains a range of distinctive environments with significant natural, economic, social and cultural value and forms part of a wider hydrological system. Being in the middle of the wider catchment, catchment management activities undertaken in other zones may have a flow on effect for waterways within the zone. Likewise, activities in the zone will impact on the lower Waikato zone and the coastal marine area. An ongoing annual programme challenge for the council over the life of the plan is therefore to prioritise and target limited resources into areas of greatest priority, whilst being mindful of flow on effects for other zones.

Making progress towards the zone goals will rely on an ongoing annual programme and successful collaboration with a range of stakeholders and this is a key focus area for implementation. Greater integration with, and effective advocacy across a range of council business areas, will also be important in delivering the actions within the plan.

“COLLABORATIVELY ENHANCING THE HEALTH AND WELLBEING OF RIVERS AND CATCHMENTS WITHIN THE ZONE.”

- CENTRAL WAIKATO ZONE VISION

1.2 STRATEGIC FIT

The zone plan supports the wider council mandate of protecting the region's water, soil, air, geothermal areas and coasts. The ICM Directorate is one of five directorates that work together to achieve a range of outcomes for communities within the zone as follows:

- 1.** Community and Services – leads, enables and helps deliver community partnerships, customer services, education programmes, organisational excellence and internal support functions.
- 2.** Finance – council's financial management, regional public transport responsibilities, and our corporate buildings, facilities and property and corporate planning (including the annual and long term plans).
- 3.** Integrated Catchment Management – focuses on catchment management (including land management, biosecurity and biodiversity), river and flood management and natural hazard management.
- 4.** Resource Use – consenting and compliance responsibilities and navigation safety functions.
- 5.** Science and Strategy – gathers, analyses, interprets and translates information on Waikato's natural resources, community and economy in order to achieve positive regional outcomes. Also includes consistent delivery of high quality policy advice.

The ICM directorate is focused on delivery of a range of activities in the areas of catchment management, flood control and protection, biodiversity, biosecurity, sustainable land management and hazard/emergency management. ICM's functions provide services that achieve multiple and significant benefits for the regional community. ICM manages the provision of its services on a regional basis and through geographic areas known as catchment zones. There are eight zones in the region, each with its own zone manager responsible for oversight of operational budgets, relationships, planning and priorities to deliver on agreed community level of services.

1.3 SCOPE

The Central Waikato Zone Plan is one of eight zone plans that are part of the strategic framework for the delivery of ICM activities within the zone.

Figure 1 illustrates the overall scope of the activities undertaken within the zone. The activities that are the primary focus of the zone plan are shown in blue, alongside the supporting activities which are delivered regionally (green). The Central Waikato Zone Catchment Committee holds budgetary power or considerable influence in determining the work programme for primary focus areas of the zone plan. Regarding supporting activities, the role of the catchment committee is to provide local feedback to inform the regional programme with the intention of raising the effectiveness of the programme.

The implementation of the zone plan will be monitored by the Central Waikato Zone Catchment Committee, and therefore the primary focus of the plan is on activities that are funded directly through the Central Waikato zone. In addition to physical works, this may include environmental monitoring in order to assess the outcomes achieved and monitoring the compliance of resource consents held within the zone.

The council is one of many organisations working to improve catchment health within the zone. The council's river and

catchment works typically include land retirement including stream or wetland fencing, planting projects and slip or bank erosion management undertaken in partnership with landowners. Iwi, territorial authorities, government departments, industry, community groups and individual landowners are also active in implementing initiatives to improve catchment health. The intention of the zone plan is to complement and support the work of these other agencies and individuals, and align programmes where opportunities arise. In the zone a majority of these works to date have occurred in the Karāpiro and Mangaonua catchments to target sediment loss.

Other works the council is carrying out, that are out of scope for this zone plan, include:

- monitoring council's rules under the current Waikato Regional Plan (except where specific resources consents apply)
- monitoring the general state of the environment
- developing and implementing new resource management policies and rules to address environmental issues.



FIGURE 1 - Central Waikato Zone Plan - Scope of Activities



CENTRAL WAIKATO ZONE DESCRIPTION

NGĀ KŌRERO MŌ TE ROHE O WAIKATO WAENGAPŪ

2.1 ZONE OVERVIEW

The Central Waikato zone consists of the Waikato River catchment extending from the Karāpiro Dam to Ngāruawāhia. Covering an area of 64,000ha, the zone contains two dominant features: the Waikato River main channel and the urban area that makes up the city of Hamilton. The zone encompasses three territorial authorities; Waipā District, Waikato District and Hamilton City councils, and includes a number of smaller towns and communities which service the agriculture industry, primarily Cambridge, Ngāruawāhia and Ōhaupo (refer Figure 2).

Situated in the centre of the region, the zone is landlocked and comprises 78 per cent pasture, 15 per cent urban, 1 per cent production forestry and 4 per cent native vegetation, with the remaining 2 per cent mainly consisting of open water and exotic scrub. Agriculture (dairy and drystock farming) is the dominant economic activity within the zone, however there are also significant industrial activities associated with the urban centres in the zone.

Figure 3 provides a more detailed overview of the catchments which make up the zone, including the priority catchments of Karāpiro and Mangaonua. These catchments have been identified as a priority as a result of inherent erosion risk and water quality assessments, level of investments made to date in protection measures and willingness of landowners to participate in non-regulatory programmes. More recently, these catchments have also been identified as a priority in the Waikato and Waipā River Restoration Strategy (WRRS) (Neilson *et al.*, 2017). The other area where much of the work is undertaken is within the Hamilton City Council boundary through the work programmes delivered by Hamilton City on behalf of the council under a Project Watershed-related service level agreement.



FIGURE 2 – Central Waikato zone relative to other zones in the Waikato region



FIGURE 3 – Map of the Central Waikato zone

2.2 KEY FEATURES

The zone contains a range of natural habitats, landscapes, ecosystems, social, cultural and economic values. A summary of these key features is provided below and provides context for the key matters identified in Section 4 of this plan. It is noted that the summary below is not exhaustive, rather it provides a “snapshot” of the complex operating environment of the complex operating environment of the zone.

GEOLOGY

Geologically, the zone is diverse consisting of volcanic materials including alluvial and unconsolidated sediments, tephra, peat, sandstone/mudstone, greywacke or argillite. Due to the unconsolidated nature of the zone’s soils, erosion is common within riverbeds, banks and terraces of the Waikato River. Peat drainage has resulted in continued subsidence which will affect the productivity of the zone. Through this section of the catchment, the Waikato River becomes channelised as it progressively cuts through these sediments. This continuing incision, particularly through Hamilton, contributes to bank instability and erosion and creates challenges for the maintenance and longevity of assets along these waterways.

RIVERS AND STREAM CATCHMENTS

The Waikato River receives inflows from all the rivers and stream catchments in the zone. The major waterways include the Karāpiro Stream, Mangaonua Stream, Mangawhero Stream, Mangaone Stream, Mangakotukutuku Stream, Mystery Creek and Te Awa o Katapaki Stream. Erosion prone soils and areas of instability within the Mangaonua and Karāpiro catchments deliver high loads of sediment to the Waikato River.

URBAN CATCHMENTS

The zone is unique in containing the fourth largest city in New Zealand – Hamilton – alongside smaller towns and communities including Cambridge, Ngāruawāhia and Ōhaupo. As Hamilton expands industrially and with further subdivision on land that was previously used for agriculture, the management and treatment of stormwater and its impact on receiving waterbodies is receiving more focus. In addition to higher density urban growth, the zone also has a large proportion of lifestyle blocks compared with other zones. This is largely due to the availability of rural hinterland concentrated around main employment hubs.

The National Policy Statement for Urban Development Capacity (Ministry for the Environment, 2016) requires territorial authorities to provide land capacity for intensification and new development of housing and businesses. This development is to be supported by

appropriate infrastructure, and the management of the effects of urban intensification and growth will need to be managed collaboratively between regional and territorial authorities.

PEAT LAKES

The zone contains two very high priority peat lakes, Maratoto and Rotomānuka (Dean-Speirs *et al.*, 2014). Lake Maratoto, about 13km south of Hamilton on the outer fringe of the Rukuhia Peat Bog, is strongly acidic and peat stained. Despite being in the Waipā District jurisdiction, this lake is located in the zone and is the only Waipā peat lake with a pH lower than 7. It supports several threatened species and is considered to have the most intact peat bog vegetation of all the Waipā peat lakes (Land Air Water, n.d.).

Lake Rotomānuka is located approximately 12km north of Te Awamutu and is made up of two open water areas – Rotomānuka North and Rotomānuka South, which are remnants of a once larger single lake. Lake Rotomānuka (North) has a surface area of 12.3ha and is the oldest and deepest of the Waipā peat lakes (up to 8.7m). The council has undertaken water quality monitoring at this lake since 1995 and results show that Lake Rotomānuka (North) has relatively good water quality in comparison to other peat lakes within the catchment, and water quality has been stable over the last five years. In contrast, the monitoring of Lake Rotomānuka (South) has shown it to be extremely nutrient enriched (hypertrophic).

Modelling of the Rotomānuka lakes undertaken in 2017, has identified that Lake Rotomānuka (North) is vulnerable to increases in external inputs of phosphorus and therefore restoration efforts to improve water quality should focus on reducing external nutrient loads (Lehmann, *et al.*, 2017).

Other lakes in the zone have lower biodiversity values but very high recreational and cultural values, for example, Lake Rotoroa (Hamilton Lake) – a small peat lake located in the centre of Hamilton that has a catchment dominated by parkland and residential housing. This lake retains good water quality compared to other shallow Waikato lakes, and has been identified as a priority for restoration in the WWRRS (Neilson *et al.*, 2017).

Lake Rotopiko (Serpentine), despite lying just outside the south-western boundary of the zone (in the Waipā zone), is also an important peat lake as it drains through the zone into the Waikato River. The southern section of the lake and its associated wetland margins, kahikatea forest and grassland are enclosed by a predator-proof fence.

GULLY SYSTEMS

Gully systems are prevalent throughout the zone, many containing high biodiversity and ecological values. Hamilton has an extensive system of gullies that carve their way through the suburbs as they make their way to the Waikato River.

There are four major gully systems (Kirikiriroa, Mangakotukutuku, Mangaonua and Waitawhiriwhiri) as well as numerous minor systems occupying a total of 750ha or eight per cent of the city area (Hamilton City Council, n.d.). The gullies add another dimension to the cityscape, providing green space for recreation, visual relief from the urban environment, and habitats for a wide range of wildlife. Improvements in the gully habitat through restoration plantings, weed control and animal pest control helps to promote the indigenous biodiversity of Hamilton including iconic species such as bats (pekapeka), tūī, bellbirds (korimako), kererū, as well as aquatic stream life. This wildlife can then spread throughout the city via these natural gully networks to other natural areas and beyond the city limits (Hamilton City Council, n.d.).

KARĀPIRO HYDRO DAM

The flow of the Waikato River is highly regulated with eight hydroelectric dams in the upper reach of the river. The Karāpiro dam, situated in the zone, creates the third largest hydro lake on the river in terms of operational storage. Commissioned in 1947, it was the second of the current dams in operation on the Waikato River to be built. The effects of the dam are well known, but the major impact is on the regulated flow of the Waikato River downstream as the dam operator Mercury releases the required minimum flow while meeting daily changes in energy demands.

CULTURAL HERITAGE

The zone lies primarily in the rohe of Waikato-Tainui and has a rich cultural heritage which includes the home of the kīngitanga movement, Turangawaewae. Other key iwi, hapū and organisations within the zone are Raukawa, Ngāti Koroki Kahukura, Te Haa o te Whenua o Kirikiriroa (THAWK), Ngāti Wairere, Ngāti Mahanga, Ngāti Hauā, Ngāti Hikairo and Ngāti Tamainupo. Each has rohe within the zone and significant ongoing annual programme interests in maintaining and restoring the health of the Waikato River.

INDIGENOUS BIODIVERSITY

A range of native species, including a number that are threatened, rely on significant natural areas and other fragmented areas remaining in the zone. Native fish, such as inanga, mudfish and tuna (eel), frequent natural streams, particularly where barriers are in place to prevent pest fish entering these streams. Long-tailed bats also frequent many of the forested areas throughout Hamilton and beyond. There are a number of active indigenous biodiversity projects in the zone. Examples of some of these projects are outlined below.



Karāpiro Stream Habitat Enhancement Project

This project aims to enhance water quality and indigenous biodiversity in the Karāpiro stream, near the confluence with the Waikato River in Cambridge. It is a multi-agency initiative between the Waikato Regional Council, Waipā District Council, Ngāti Hauā Mahi Trust and the Waikato River Authority to remove willows, stabilise stream banks and revegetate stream banks with native plants (WRC, n.d.).



Hamilton Halo

The Hamilton Halo project began in 2007 and has successfully focused on increasing the number of tūi visiting the city. Around 25 times more tūi now visit the city than before the project began. This has been achieved by controlling possums and ship rats immediately before bird breeding season in the bush blocks that form a 'halo' within 20km of the city boundaries. In recent years there have been reports of tūi breeding in Hamilton itself and the focus is shifting to improving breeding success and habitat quality within the city. Consideration is also being given to how to raise the success of bellbird (korimako) and kererū (native wood pigeon) breeding out in the halo bush blocks.



Project Echo

Project Echo (WRC, n.d) aims to gather information on bat distribution throughout Hamilton – one of a very few cities in New Zealand to still support a resident population of long-tailed bats (pekapeka).

The long-tailed bat is unique to New Zealand and is one of our only two remaining species of native terrestrial mammals. These bats can be found throughout New Zealand in varying habitats, but numbers are declining due to the removal of trees (where bats roost), predation by pest mammals, and increasing competition for roost sites from rats and possums. This project could lead to ongoing annual programme work to protect bat roosting trees and provide predator control.



Mangakotukutuku Stream Care Group

The Mangakotukutuku Stream Care Group is a passionate community group dedicated to improving the health of the Mangakotukutuku Stream ecosystem. The streams which drain the Mangakotukutuku catchment traverse the highly modified urban area of Hamilton, yet the system has remained relatively unimpacted and contains high biodiversity values, which is rare for an urban setting. Some species found in the Mangakotukutuku Stream, such as the longfin eel and giant kōkopu are considered nationally threatened by the Department of Conservation. As such this stream system has great significance for local indigenous biodiversity (Mangakotukutuku Stream Care Group, n.d). A key focus of the group is to raise awareness of the ecological values of this stream and the restoration activities which can support the enhancement of these values (Mangakotukutuku Stream Care Group, n.d).



Waiwhakareke Natural Heritage Park (WHNP)

This site is managed by Hamilton City Council's Parks and Open Spaces Unit and is the result of a strong partnership between the University of Waikato, Wintec, Tui 2000 and Hamilton City Council. Located on the outskirts of Hamilton adjacent to Hamilton Zoo, this 60ha park is an award-winning, inter-generational ecological restoration project. Established in 2004, the long term aim of Waiwhakareke is to reconstruct the natural forest, wetland and lake ecosystems present in pre-European times. Intensive predator control will allow vulnerable species to flourish in an urban environment and spill over to other parts of the city. The project is a recipient of a substantial Natural Heritage Fund grant from the council

WHNP will serve as a focus for Hamilton's wider biodiversity restoration, including lakes and lakeshores, the Waikato River, its banks and unique gullies, and other parks with current or potential natural values (estimated to be 750ha). It will bring natural and cultural heritage to within easy reach of New Zealand's largest inland city, and reconnect current and future generations with their environment through enhanced education, outreach and engagement opportunities.



Hamilton Local Indigenous Biodiversity Strategy (LIBS)

The LIBS project (WRC, n.d) is a jointly funded pilot project between Waikato Regional Council and Hamilton City Council and is expected to be completed in December 2017. It aims to find ways to support grassroots action on indigenous biodiversity, in co-operation with local councils, iwi, government agencies and non-government organisations. It gives effect to the Vision and Strategy for the Waikato River (Waikato River Authority, 2011) and the Waikato Regional Policy Statement (WRC, 2016) by providing coordination and technical support to individuals, groups and organisations who:

- are already undertaking biodiversity work; or
- have the potential to increase biodiversity in the city as a part of other initiatives.

The LIBS project strives to improve biodiversity while also achieving economic, recreational, cultural and social goals. The LIBS approach is to work at the community and council levels to understand local needs, aspirations and opportunities. The findings of the LIBS project will be incorporated into numerous workstreams being undertaken throughout the zone.



LEGISLATION AND POLICY FRAMEWORK

TE TURE ME TE KAUPAPAHERE



This section outlines the legislative and policy (both statutory and non-statutory) framework that has informed the goals, focus areas and implementation actions set out in this zone plan for the zone.

Figure 4 provides an overall summary of the key legislative and policy framework for the zone plan, along with the key areas where the zone plan has influence over council plans and policies.

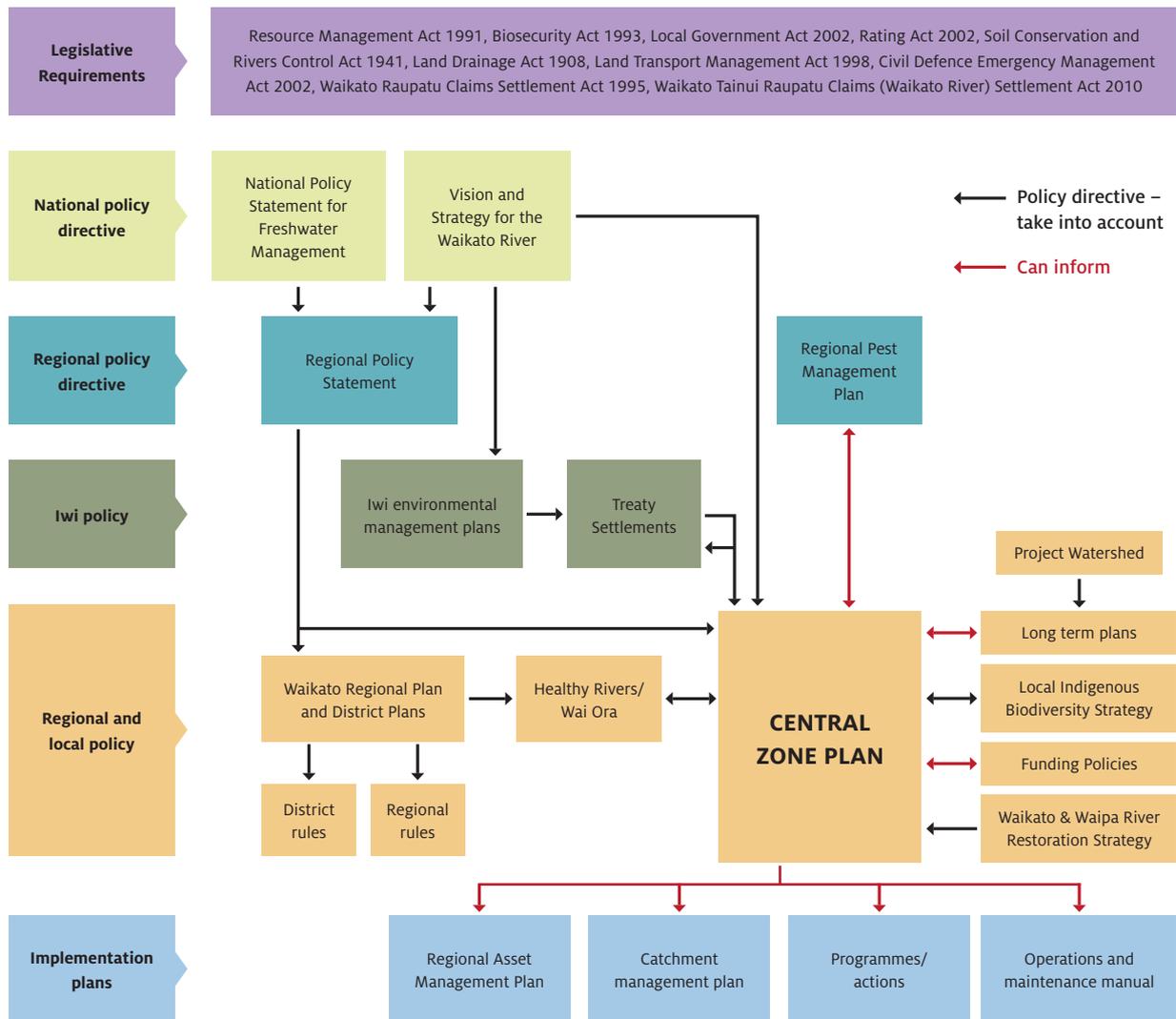


FIGURE 4 - Key linkages between the zone plan and other key legislative and policy requirements.

3.1 LEGISLATION AND STATUTORY PLANS

The key statutory documents of most relevance to the activities set out within this zone plan are summarised below. It is noted that this plan also assists the implementation of a number of Waikato Regional Council's non-regulatory responsibilities under the Resource Management Act (1991), Soil Conservation and River Controls Act (1941), Local Government Act 2002 and other Acts.

WAIKATO REGIONAL POLICY STATEMENT

The Regional Policy Statement (WRC, 2016) has objectives for managing fresh water (3.14), riparian areas and wetlands (3.16), ecological integrity and indigenous biodiversity (3.19), natural hazards (3.24), and values of soils (3.25). It also has new policies regarding managing freshwater bodies (Chapter 8), indigenous biodiversity (Chapter 11), natural hazards (Chapter 13) and soils (Chapter 14). These objectives and policies are relevant to the implementation actions set out within this plan.

VISION AND STRATEGY FOR THE WAIKATO RIVER

The primary direction-setting document for the protection of the Waikato River and its catchments is the Vision and Strategy for the Waikato River (Waikato River Authority, 2011).

Developed by the Guardian Establishment Committee (predecessor to the Waikato River Authority) in consultation with the Waikato community, as part of the wider Waikato River Treaty settlement co-management negotiations, the Vision and Strategy for the Waikato River is administered by the Waikato River Authority. It was initially given statutory recognition via the Waikato River Acts in 2010 and 2012.

The Vision and Strategy for the Waikato River is included in its entirety into the operative Regional Policy Statement (WRC, 2016), and regional and district plans must give effect to it. Essentially it is now the community's vision for the Waikato River. If there are any inconsistencies between the Vision and Strategy and any Resource Management Act (1991) planning document, including any national policy statement, the Vision and Strategy prevails.

Fundamental to the Vision and Strategy are the following key principles:

- Commitment to the restoration and protection of the river in its widest sense (including iwi and community relationships).
- Adoption of a precautionary approach.
- Increased recognition given to cumulative effects.

- Application of a holistic, integrated approach to the management of resources.
- Recognition and application of two worlds of knowledge – mātauranga Māori and western science.

WAIKATO REGIONAL PLAN AND REGIONAL COASTAL PLAN

The Waikato Regional Plan (WRP) (WRC, 2007) applies across the whole of the Waikato region (except for the coastal marine area) and provides the regulatory framework for resource management. The WRP implements the RPS, relevant National Direction, and Treaty Settlement legislation. The Waikato Regional Coastal Plan (WRCP) (WRC, 2014) contains policies and methods to manage the allocation and use of coastal resources in the coastal marine area (the sea area below mean high water spring tide out to the 12 mile regional limit). The WRCP implements the RPS and the New Zealand Coastal Policy Statement and other relevant legislation (for example, parts of the Marine and Coastal Area Act).

A full review of the WRCP and WRP is currently being planned by council. Ultimately the two plans will be combined and replaced by one "Waikato Resource Management Plan". Notification of the first phase of the plan review (most of the current coastal plan and priority topics for the regional plan) is expected in 2019/20, with adoption of the revised plan programmed for 2025.

Healthy Rivers/Wai Ora: Proposed Waikato Regional Plan Change 1 (Waikato and Waipā River Catchments)

The council has notified and is in the process of implementing Healthy Rivers/Wai Ora: Proposed Plan Change 1 – Waikato and Waipā River Catchments (WRC, n.d). Plan Change 1 seeks to achieve reduction, over time, of sediment, microbial pathogens and nitrogen and phosphorus entering water bodies (including groundwater) in the Waikato and Waipā River catchments.

REGIONAL PEST MANAGEMENT PLAN

The Waikato Regional Pest Management Plan (RPMP) (WRC, 2014) sets out the strategic and statutory framework for managing plant and animal pests in the Waikato region. Objectives and the management approach for specific plant and animal pests present within the zone are contained in the plan. It is noted that the RPMP review is planned to commence in late 2017 starting with the release of a discussion document in early 2018. The actions in the zone plan can inform this process.

NATIONAL DIRECTION

Central government, through the Ministry for the Environment, has a programme of work that seeks to provide national direction and consistency around management of natural resources. This involves either development, or review, of National Environment Standards, National Policy Statements, and national regulation.

Key national directions that will affect catchment management in this zone (and all zones) include the National Policy Statement for Freshwater Management (Ministry for the Environment, 2011), national regulation around stock access to water and swimmability standards, and the Proposed National Environmental Standard for Plantation Forestry (Resource Management Regulations, 2017). This zone plan would need to be amended to give effect to any national direction which requires implementation through catchment management.

WAIKATO AND WAIPĀ RIVER TREATY SETTLEMENTS

Treaty settlements relating to the Central Waikato zone include the Waikato Raupatu Claims Settlement Act (1995) and Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act (2010). The 2010 Treaty settlement has resulted in land ownership changes. Areas of soil conservation and river control (SCRC) land which have been classified as sites of significance are vested in the Waikato Raupatu River Trust, illustrating the importance of co-management throughout the zone. SCRC land that was once vested in the Ministry for the Environment has been gifted to Waikato-Tainui.

Other relevant treaty settlement related legislation includes:

- Ngā Wai o Maniapoto (Waipā River) Act (2012)
- Ngāti Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act (2010)
- Raukawa Claims Settlement Act (2014)
- Ngāti Koroki Kahukura Claims Settlement Act (2014)
- Ngāti Hauā Claims Settlement Act (2014).

Treaty settlements have resulted in a range of agreements between the council and River Iwi. These agreements set out a co-management framework for managed properties, sites of significance (reserve sites for the purposes of section 70 of the Waikato River Settlement Act 2010) and Waikato River related lands where applicable and include:

- Waikato Raupatu River Trust and Waikato Regional Council Co-Management Agreement for Waikato River Related Lands
- Waikato Raupatu River Trust and Waikato Regional Council Joint Management Agreement.



3.2 KEY NON-STATUTORY POLICIES AND PLANS

WAIKATO REGIONAL COUNCIL STRATEGIC DIRECTION 2016-2019

Waikato Regional Council's strategic direction (WRC, 2017) guides work and sets priorities up to 2019. It also reflects community desires and needs, and identifies key factors that will determine whether the council is successful in achieving its strategic direction.

Priorities under the council's strategic direction are:

- Support **communities** to take action on agreed outcomes.
- Forge and strengthen **partnerships** to achieve positive outcomes for the region.
- Positively influence future **land use** choices to ensure long term sustainability.
- Manage **fresh water** more effectively to maximise regional benefit.
- Increase communities' understanding of **risks and resilience** to change.
- Enhance the value of the region's **coasts and marine** area.
- Shape the **development** of the region so it supports our quality of life.

The zone plan will assist the council in delivering its strategic direction. The key connections from the zone plan to the strategic direction are summarised in Table 1 below.

		REGIONAL PRIORITIES							
		Communities	Partnerships	Land	Fresh water	Risks and resilience	Coastal and marine	Regional development	
ZONE PLAN GOALS	1	Contribute to improving water quality within priority catchments in the zone	√	√	√	√	√	n/a	√
	2	Maintain and enhance the indigenous biodiversity associated with the Waikato River, its tributaries and wetlands and lakes across the zone	√	√	√	√	√	n/a	√
	3	Manage the instream impacts of urban development and land use intensification in association with territorial authorities and other partners	√	√	√	√	√	n/a	√
	4	Work collaboratively with iwi, territorial authorities and communities to align and integrate projects and priorities within the zone	√	√	√	√	√	n/a	√

TABLE 1 – Central Waikato Zone Plan connections with the strategic direction

THE WAIKATO RIVER AND WAIPĀ RIVER RESTORATION STRATEGY (WRRS)

The Waikato River Restoration Forum was established in 2014 with the purpose of maximising opportunities to realise the Vision & Strategy for the Waikato River catchment. The forum is made up of representatives from the five River Iwi, the Waikato River Authority, Waikato Regional Council, DairyNZ, Fonterra, territorial authorities, Mercury, Genesis Energy and the Department of Conservation. One of the objectives of the forum is to support the development of a medium-term strategic plan for river restoration initiatives that will encourage a more integrated and coordinated approach to funding and non-regulatory catchment and river management. This 5-20 year strategic action plan is known as the Waikato River and Waipā River Restoration Strategy (WRRS) (Neilson *et al.*, 2017) and has been developed with wide stakeholder input.

The purpose of the WRRS (Neilson *et al.*, 2017) is to guide future 'on the ground' activities for all organisations that fund or undertake restoration through the identification of specific, technically achievable and prioritised actions. Key objectives of the strategy are to:

- inform decision making of River Restoration Forum members engaged in restoration activities
- act as a guide for all groups engaged in delivering restoration initiatives
- encompass an approach that allows groups much longer planning periods to prepare for funding applications and project implementation
- further build on the work carried out in 2010 developing the Waikato River Independent Scoping Study (NIWA, 2010) by focusing on non-regulatory actions and considering the likely available funding
- identify projects that are likely to make the greatest difference in improving the health and wellbeing of the Waikato and Waipā Rivers, and reflect the values and goals of the iwi and communities within the catchment.

The WRRS is non-binding and does not in any way restrict the ability of any funding or management organisation to fund or undertake any project that meets their criteria.

However, it provides direction for funders who are seeking good projects to fund, and to organisations, iwi, communities and individuals who are keen to undertake work and want to deliver high impact results.

The WRRS covers a wide range of restoration and protection activities in the catchment and focuses on six core workstreams: erosion and sedimentation, water quality, biodiversity, fish, access and recreation and iwi cultural priorities.

The entire area of the zone is in geographical scope for the WRRS and for the purpose of that document restoration priorities have been developed in conjunction with those for the Lower Waikato zone.

Several priority catchments, streams and sites within the zone have been identified in the WRRS. The existing work programmes are generally aligned with the priorities identified within the WRRS while noting the specific criteria applicable to the WRRS. For the full list of WRRS priorities see Appendix 1.

HAMILTON CITY RIVER PLAN

The River Plan (Hamilton City Council, 2014) is part of Hamilton City Council's strategic framework for the Waikato River and for Hamilton. It is guided by the operative RPS and the Vision and Strategy for the Waikato River. It is a 30-year strategy that will guide planning and use of the 16km stretch of the Waikato River within Hamilton. Key themes are:

- Improving access to and along the river.
- Promoting enjoyment of the river.
- Promoting development that embraces the river.
- Protecting and enhancing the natural environment along the river.
- Celebrating arts and culture along the river.
- Promoting and developing tourism along the river.
- It identifies proposed projects. Priority projects include:
 - Ferrybank and Roose Commerce Park Development Master Plan
 - Wellington Street Beach development
 - Hamilton Gardens: five new gardens and a jetty
 - creating a garden on Pukete pedestrian bridge.

WAIKATO FRESHWATER STRATEGY (WRC, 2017)

This strategy identifies a programme of actions to achieve the best use of fresh water through time via better allocation systems using new methods based on better information. It recognises that freshwater management is a complex problem that has not been addressed in an integrated manner. The current state of the region's fresh water is the result of ad hoc management in response to disparate directions from central government and a preference for economic development that competes with an incomplete understanding of site specific environmental limits.

Addressing New Zealand's biodiversity challenge (Willis, 2017)

This report ('Willis Report') is a think piece on the future of biodiversity management in New Zealand. It was commissioned by regional council CEOs around New Zealand

and has a particular focus on the role and work of regional councils in relation to biodiversity. It establishes that biodiversity maintenance is a core regional council function, but acknowledges that biodiversity nevertheless continues to decline. The recommendations to come out of this report for halting the continued decline in biodiversity are:

- the need for strong leadership and clarity of roles and responsibilities
- the need for positive action, building on our existing active plant and animal pest management
- the need for agreement on where we should focus our efforts at national, regional and local level
- the need to understand what success looks like, and how to measure it
- the importance of a plan and delivering joined-up action across all players
- the need for modern, fit-for-purpose frameworks, including legislation, to help to achieve our goals.

3.3 IWI MANAGEMENT PLANS

WAIKATO TAINUI ENVIRONMENTAL PLAN

Waikato-Tainui's iwi management plan (Waikato Tainui Environment Plan, Tai Tamu, Tai Pari, Tai Ao (Waikato-Tainui Te Kauhanganui Incorporated., 2013)), sets out aspirations for environmental, economic, social and cultural enhancements. In particular, the Waikato Tainui Environmental Plan contains objectives to grow their tribal estate and manage our natural resources, whilst providing guidance to external agencies regarding Waikato Tainui values, principles, knowledge and perspectives on, relationship with, and objectives for natural resources and the environment.

OTHER IWI MANAGEMENT PLANS

The following iwi and hapū planning documents (WRC, n.d) are also relevant to catchment management activities within the zone:

- Te Rautaki Taiao A Raukawa – Raukawa Environmental Management Plan 2015
- Maniapoto Ko Tā Maniapoto Mahere Taiao: Environmental Management Plan
- Maniapoto – Priorities for the Restoration of the Waipā River Catchment
- Ngāti Hikairo Iwi Management Plan – Freshwater
- Te Tahuanui: Ngāti Hikairo Heritage Management Plan 2010.

The following hapū and organisations also play an important role within Hamilton, and their goals and aspirations are taken into consideration when managing the zone:

- Te Hā o te Whenua o Kirikiriroa (THAWK)
- Ngāti Wairere
- Ngāti Mahanga
- Ngāti Hauā
- Ngāti Tamainupo.

It is noted that working relationships with iwi and hapū groups are not confined to just those groups named here.

On 22 December 2016, the Crown and the iwi of Hauraki initialled a Collective Redress deed. It is anticipated that Treaty settlement negotiations will be completed in the next 3-5 years. Those settlements that will cross into the zone are likely to include:

- Ngāti Hinerangi
- Ngāti Maniapoto Comprehensive.



KEY MATTERS FOR THE ZONE

NGĀ KAUPAPA MATUA I TE ROHE

The following sections set out the key matters for the zone that have informed the development of the goals and implementation actions within the plan. Key matters have been identified through the process of developing this zone plan and take account of the policy context outlined in Section 3 alongside wider social, economic, environmental and cultural considerations within the zone.

4.1 DECLINING WATER QUALITY

Water quality in the rivers, tributaries and lakes within the zone is declining. The council commenced monitoring in 1980 and it has found that the nitrogen and turbidity levels, in particular, have been increasing in the Waikato River (WRC, n.d.)¹

As urban centres within the zone intensify and expand, increased stormwater run off has the potential to result in increased flooding, higher contaminant loading, erosion and sedimentation of waterways. The impacts of the increased flows need to be planned for and measures taken to minimise adverse impacts. Mitigation measures are best installed at the time of development in order to maximise effectiveness and reduce future costs. Mitigation measures may involve soft interventions in the form of vegetative controls or hard engineering, such as channelization and bed stabilisation structures. Higher volumes of run off, coupled with increased nutrient loading from rural land practices, are resulting in a loss in natural values, biodiversity and a decline in water quality.

Healthy Rivers/Wai Ora: Proposed Plan Change 1 is in progress and sets out an 80-year timeframe for the Waikato and Waipā rivers and their tributaries to be swimmable and safe for food collection along their entire lengths. The primary goal is achieving the requirements of the Vision

and Strategy, the primary direction setting document for the rivers. In achieving this outcome, it sets a higher bar than the National Policy Statement for Freshwater Management 2014 (which was recently amended) that requires fresh water bodies to be suitable for primary contact, including swimming.

It should be noted that the brown-stained water often observed within the rivers, streams and lakes in the western side of the zone can in part be attributed to the peat soils present within these catchments. It is important to note that despite initiatives to improve water quality, water clarity will always be diminished due to this natural phenomenon. It is important that the public and stakeholders are educated on the effects of peat soil on water clarity so realistic and achievable expectations can be set. However, extensive land drainage, including removal of wetlands, has been undertaken within the zone and this too has contributed to the increased rate and amount of stained water leaving peat soil areas.

Waikato Regional Council has already made substantial investment in catchment works to improve water quality through initiatives funded by Project Watershed (WRC, 2002). Project Watershed is the funding policy applied to all river and catchment works undertaken by the council in the zone.

¹ Further detail and the results of the 2016 Waikato River annual water quality monitoring programme (Waikato Regional Council, 2017) can be found here: <https://www.waikatoregion.govt.nz/services/publications/technical-reports/2017/tr201714/>

Healthy Rivers/Wai Ora has assigned key sub-catchments within the zone a priority three ranking meaning that improvement works identified in the plan change must be completed by 2026. An opportunity exists to demonstrate leadership by example in the priority catchments of Karāpiro, where work with landowners is already underway by continuing to promote non-regulatory catchment management measures in line with the WWRRS. This ensures that existing momentum and progress made with these landowners can be accelerated and funded through partnerships.

Hamilton City Council and Waikato Regional Council are required to give effect to Section 10 of the Local Government Act (2002), namely cost-effective methods for delivering on its primary functions. The two councils have common objectives in respect of the management of river and stream related infrastructure, flood risk and stormwater.

Waikato Regional Council has supported Hamilton City Council's role in delivering these objectives by providing direct funding support for an agreed work programme.

To ensure that annual funding is fully allocated and efficient and effective delivery of the programme, a service level agreement was signed with Hamilton City Council in 2016. This agreement sets out expectations as to the relationship and responsibility between the two councils on these matters. It has also ensured increased collaboration to deliver on the catchment and river management priorities.

This agreement ensures the best use of resources for efficient delivery of these requirements and contributes towards water quality improvements within the Hamilton boundary.

4.2 DECLINING INDIGENOUS BIODIVERSITY

The zone has largely been converted to agriculture. This, coupled with urban expansion, has led to a decline in indigenous biodiversity. In the past, catchment management works carried out by councils were typically undertaken to improve water quality and soil conservation. They would sometimes have beneficial effects on indigenous biodiversity despite this not being the primary focus. Now the maintenance of indigenous biodiversity has been recognised as a core function of regional councils and a direct focus is being placed on managing biodiversity and on providing for it when other works are carried out.

The RPS has signalled a move towards a strategic, proactive and coordinated indigenous biodiversity management approach with landowners, mana whenua and other agencies. In addition, the Waikato Regional Council has embarked on a comprehensive information gathering project to complete a biodiversity inventory and to improve internal coordination of the biodiversity programme across the council (WRC, 2016). This approach is consistent with the recommended shifts in the Willis Report (Willis, 2017).

In addition to the above, there is a programme to identify areas of significant indigenous vegetation and significant habitats of indigenous fauna. Waikato Regional Council administers several funds, such as the Environmental Initiatives Fund, and the daily work of biosecurity officers helps landowners with pest control. The council also undertakes indigenous biodiversity restoration and offers funding incentives to fence priority sites, among other projects (WRC, 2016).

To go some way in addressing the decline in indigenous biodiversity, the Local Indigenous Biodiversity Strategy (LIBS) – a collaborative pilot undertaken by Waikato Regional Council and Hamilton City Council – is being trialled. This project aims to identify and improve the percentage coverage of indigenous biodiversity within Hamilton from 1.5 per cent to 10 per cent to maintain indigenous biodiversity and ecosystem functionality. It also ensures that agencies undertaking work are aligned and working collaboratively on projects with community buy-in and where the most gains for biodiversity will be achieved.

The WWRRS identifies several locations in the zone for protection and enhancement of biodiversity related to aquatic habitats including the Moanatuatua wetland and gullies associated with the Mangaonua, Mangaone, Mangaomapu and Kukutaaruhe Streams. In particular the enhancement of the 10ha Kukutaaruhe stream and gully complex in Fairfield is one of the largest sites of restored biodiversity within Hamilton. The WWRRS also identifies three shallow lakes within the zone for further enhancement to improve biodiversity and water quality. These are Lake Rotoroa, Lake Rotomanuka and Lake Rotopiko (Lake Serpentine).

As summarised in Section 2.2, there are already several community and council led initiatives underway in the zone, particularly in Hamilton. By providing leadership, coordination and funding, the council can assist parties in delivering enhanced outcomes for biodiversity throughout the zone.

4.3 ADVERSE IMPACT OF URBAN DEVELOPMENT AND LAND INTENSIFICATION ON WATERWAYS

Hamilton is one New Zealand's fastest growing cities, and with this comes requirements to manage the effects of urban development and land intensification on the waterways within the zone.

Urbanisation leads to increased stormwater volumes and peak flows as vegetation is removed and soils are compacted or covered by impervious surfaces such as roofing, asphalt and concrete, which do not absorb water (NIWA, n.d.). In the urban environments of the zone, this water is conveyed efficiently via underground pipe networks to streams and the Waikato River.

As areas become more urbanised human activities, particularly industry and traffic, lead to the build-up of sediments and contaminants which are eventually washed off during rains, and conveyed via stormwater networks to receiving environments. These contaminants have the potential to have a major effect on the ecological health of the zone's urban streams and rivers as well as on the economic, social and cultural value of these environments.

Impacts of urbanisation include:

- increased run off volumes leading to:
 - increased stream bank and bed erosion
 - increased deposition of sediments
 - increased local flood risk for urban flood plains
- increased wastewater discharges
- contamination of receiving environments, either acute (following storm events), chronic (due to accumulation over time), or both
- loss of fertile land and a potential reduction in biodiversity as urban areas expand
- increased pressure on infrastructural assets including land drainage networks in lower reaches of catchments.

4.4 NEED FOR INTEGRATION AND RELATIONSHIP BUILDING

Continuing to strengthen community/stakeholder partnerships and supporting iwi co-management practices are key opportunities to deliver more effective catchment management outcomes for the zone. An example of the relationships established through iwi co-management include those formed as part of the joint management agreements held with the council. Joint management agreements relevant to the zone include:

- Waikato Raupatu River Trust
- Te Poari Matua O Raukawa (Raukawa Settlement Trust)
- Maniapoto Māori Trust Board.

Communities are reliant on the healthy functioning of the natural and physical resources of the zone for their social, economic, cultural and environmental wellbeing. To achieve desired community outcomes, the council works with territorial authorities, community groups, business, individual landowners, central government, iwi/hapū and non-government organisations. The council also partners (and co-funds) with various groups to undertake community projects. Examples of these partnerships include Waikato RiverCare, the Waikato River Authority, the Department of Conservation, and community groups working under the umbrella of the Waikato Biodiversity Forum.

Building and maintaining relationships with iwi, territorial authorities and community groups, and establishing new relationships with other groups and organisations who have an interest in works undertaken within the zone, will help in defining projects and aligning catchment works (particularly in relation to long term plan priorities) to achieve value for money.

Both Waikato Regional Council and Hamilton City Council are committed to continued delivery of the service level agreement to deliver Project Watershed outcomes within Hamilton. Over time priorities within the city change and the annual and 10 yearly programme reviews within the agreement allow for some flexibility to direct the funding to the areas of most need. An effective relationship and understanding of each organisation's work and priorities is key to ensuring delivery of this programme. This relationship is also key to working on strategies to manage the rapid urban growth occurring in Hamilton and ensuring appropriate infrastructure and funding is in place to mitigate its effects. There is also opportunity for greater collaboration with Hamilton City Council on stormwater management to benefit biodiversity and water quality outcomes within the zone.

The zone has many assets which enhance the interaction of communities with the environment and the river. There is an opportunity to promote the area by linking and leveraging off indigenous biodiversity enhancement and water quality improvement benefits that have been achieved through Project Watershed and other council led initiatives.

While these visitor assets are not the council's core business, there is opportunity for council staff to work alongside territorial authorities, iwi and community groups to support, for example, river improvement and planting projects. Council support helps to build the case for adequate amenities and continued public access to valued sites. The zone population is growing and visitor numbers increasing so, where appropriate, the council will use its existing funding and relationships to support initiatives to improve the visitor experience.

Initiatives underway include the River Plan (Hamilton City Council, 2014), Hamilton City Council Reserve Management Plans (Hamilton City Council, n.d.), Victoria on the River (Hamilton City Council, n.d.), and the Central Waikato River Stability Management Strategy (WRC, n.d.). The WWRRS contains significant projects identified by Waikato-Tainui hapū and marae for identifying, restoring and protecting wāhi tapu and sites of significance from Lake Karāpiro to Ngāruawāhia. These include the physical protection of sites, along with the development and installation of cultural symbolism such as carved pou that represent the history and stories of these places. These initiatives and opportunities are key examples of where partnerships can be developed and specific projects can be delivered to reconnect people with the waterways of the zone and other key sites. The council's expertise in defining, scoping, gaining funding and delivering projects is useful for encouraging collaboration, building iwi capacity, and coordinating efforts and expenditure to ensure the best possible outcomes are achieved for these and other strategies throughout the zone.



PLAN IMPLEMENTATION

TE WHAKATINANATANGA O TE MAHERE

5.1 ZONE GOALS

GOAL 1: CONTRIBUTE TO IMPROVING WATER QUALITY WITHIN PRIORITY CATCHMENTS IN THE ZONE.

Water quality is a pressing issue in the Central Waikato zone, with key legislation focusing on restoring the health of the Waikato River. Within the zone, intensification in rural and urban land use in catchments that feed into the Waikato River is resulting in increased erosion, nutrient loading and stormwater run off which is contributing to a decline in water quality. The challenge is to protect and enhance water quality within the zone.

Opportunities exist to show leadership and accelerate Karāpiro and Mangaonua catchment works to enhance water quality, and work with landowners, the community and government agencies to support the goals of the Vision and Strategy, Healthy Rivers/Wai Ora and the Waikato River and Waipā River Restoration Strategy.

GOAL 2: MAINTAIN AND ENHANCE THE INDIGENOUS BIODIVERSITY ASSOCIATED WITH THE WAIKATO RIVER, ITS TRIBUTARIES AND WETLANDS AND LAKES ACROSS THE ZONE.

Enhancing indigenous biodiversity needs to continue in the zone. Managing pest plants and animals, protecting threatened and special habitats, and other opportunities to enrich indigenous biodiversity will contribute to enhancing people's enjoyment of the Waikato River, its tributaries, wetlands and lakes.

A key challenge is to link and leverage from indigenous biodiversity enhancement projects, including those identified in the WWRRS as well as catchment management works to ensure the greatest outcomes and value for money.

GOAL 3: MANAGE THE INSTREAM IMPACTS OF URBAN DEVELOPMENT AND LAND USE INTENSIFICATION IN ASSOCIATION WITH TERRITORIAL AUTHORITIES AND OTHER PARTNERS.

Hamilton is the largest urban centre in the Waikato region and it is currently experiencing growth at its boundaries and also intensification within the city. The city is also encroaching onto land which was previously used for agriculture and this growth results in increased pressure on our waterways including the management of stormwater and contaminants.

There is an opportunity for the council to work closely with Hamilton City Council and other territorial authorities and agencies, for example the NZ Transport Agency, to provide support, advice and planning on these issues. This includes confirming and continuing to refine best practice and ensuring appropriate mitigation measures are applied and funding agreed.

GOAL 4: WORK COLLABORATIVELY WITH IWI, TERRITORIAL AUTHORITIES AND COMMUNITIES TO ALIGN AND INTEGRATE PROJECTS AND PRIORITIES WITHIN THE ZONE.

By working collaboratively with iwi partners, and both internal and external stakeholders, projects and priorities within the zone can be progressed in an efficient and cohesive manner resulting in more effective outcomes. To ensure relationships are built in the most effective manner it will also be important to engage internally with Waikato Regional Council staff and across directorates to determine whether external relationships with key stakeholders have already been established by others in the council.

Collaboration between the regional council and territorial authorities, mana whenua and other key community stakeholders is key to achieving the vision and goals of the zone. In particular, partnering with iwi to restore and protect sites of significance within the zone provides additional opportunities to enhance the knowledge and experiences of the whole of community to these places along the river.

5.2 FOCUS AREAS AND IMPLEMENTATION ACTIONS

This section describes how the council intends to achieve its goals for the zone at an operational level. The 12 focus areas identified provide a basis for monitoring this plan and the accompanying actions detail proposed implementation activities over a 10-year timeframe.

The focus areas and actions may respond to one or more of the zone plan goals and this reflects the interrelated nature of implementation activities undertaken by the council within the zone. For example, focus areas designed to address erosion will also assist the council in achieving the goals of maintaining and improving water quality and protecting biodiversity. The relationship between the key focus areas and zone goals is summarised in Table 2.

FOCUS AREA	GOAL 1 Water quality	GOAL 2 Biodiversity enhancement	GOAL 3 Urban development	GOAL 4 Relationships
1 Catchment new works in priority catchments	√	√	√	√
2 Catchment maintenance works	√	√	√	√
3 Preparing for change	√	√	√	√
4 River management	√	√	√	√
5 Landowner, stakeholder and community engagement	√	√	√	√
6 Collaborate with stakeholders to achieve the greatest value - communication and partnership			√	√
7 Working in partnership with Hamilton City Council	√	√	√	√
8 Iwi engagement	√	√	√	√
9 Community resilience to floods and high rainfall			√	√
10 Biosecurity operations		√		√
11 Biodiversity and natural heritage operations		√		√

TABLE 2 - Relationship between each focus area and the zone goals.

Some implementation actions are ongoing, whilst others will have more effort directed to them in either the short or long term. The implementation of some actions is dependent on funding from the zone and internal and/or external sources; and the timing of implementation is also subject to change.

It is noted that the implementation actions described in this plan that are directly funded through the Central Waikato zone are at current levels of funding and are subject to review.

FOCUS AREA 1 – CATCHMENT NEW WORKS IN PRIORITY CATCHMENTS

The focus of catchment new works will be on working with landowners in the priority catchments of Karāpiro and Mangaonua Stream and other key locations identified in the Waikato and Waipā River Restoration Strategy (see Appendix 1). The Karāpiro and Mangaonua catchments deliver high loads of sediment to the Waikato River due to the presence of erosion prone soils and the impacts of land use. These and other catchments also provide opportunity for works to protect wetlands and seeps, reduce nutrient loading to streams, improve fish passage and increase and enhance fish habitat. Prioritisation is necessary to target limited resources in areas of degraded water quality and where the greatest benefits can be achieved.

IMPLEMENTATION ACTIONS		WHO/TIMING
<p>Landowner assistance</p>	<p>Raise landowner awareness within priority catchments of the support available to undertake erosion control and soil conservation measures. Activities may include:</p> <ul style="list-style-type: none"> • property inspections and advice • preparation of Environmental Farm Plans, agreement as to a staged work programme • support to landowners in undertaking best practice management at farm and catchment scale • advice and assistance in preparing funding applications to complement new works projects • agreement as to funding arrangements utilising Waikato Regional Council and/or other funding sources/partners • agreement as to ongoing annual programme maintenance and management programme • legal security over works put in place within council policy. Where there are numerous landowners within a catchment that are wishing to undertake priority catchment works, the council may consider applying on behalf of this group for external funding (for example, to Freshwater Improvement Fund, Waikato River Authority, Afforestation Grant Scheme etc.) to support wider scale action, or providing co-funding support to an external group acting on behalf of landowners. <p>Outside of priority catchments respond to landowner, care groups or stakeholder requests for:</p> <ul style="list-style-type: none"> • information, and if appropriate, funding for new works • assistance with preparing applications for funding to complement new works projects. 	<p>Zone and Catchment Management team / Annual programme</p>
<p>Funding</p>	<p>Target funding of new works into priority areas so that:</p> <ul style="list-style-type: none"> • 80% of catchment funding is spent in priority areas by 2019. <p>Annually reassess the budget and resourcing needs in the zone to support an effective programme that captures the demand for new catchment works.</p>	
<p>Landowner agreement</p>	<p>Develop landowner agreements for instream and riparian management such as erosion control, vegetation management, fencing, planting, and other catchment opportunities.</p>	<p>Zone and Catchment Management team / June 2019</p>
<p>Ongoing annual programme development</p>	<ul style="list-style-type: none"> • Continuing refinement of recommended best practice. • Ongoing annual programme development of targeted environmental monitoring programmes. • Development of appropriate performance measures and reporting. 	

FOCUS AREA 2 – CATCHMENT MAINTENANCE WORKS

It is important to ensure that completed catchment works are maintained to ensure that they continue to deliver on investment.

IMPLEMENTATION ACTIONS		WHO/TIMING
Record keeping	Maintain accurate, up to date property files and asset records in the appropriate database.	Catchment Management team / Annual programme
Asset inspections	Inspect programme assets at least every 3 years, as appropriate. Confirm maintenance programmes in consultation with landowner.	
Landowner assistance	Ensure landowners are aware of and meet their obligations under existing agreements. Promote the implementation of best management practices – involving further development and review of current practices.	
Policy development	Support ICM's development of a maintenance policy including provisions for situations where the council has been the minor funder of initial works, but extensive externally funded works are included within the protected compartment. Work with territorial authorities to develop a tool or process of sharing catchment planning, data and methodologies that will allow collaboration, funding and multiple benefit prioritisation.	Catchment Management team / Completed by June 2018

FOCUS AREA 3 – PREPARING FOR CHANGE

Land use management within the zone will be affected by Proposed Waikato Regional Plan Change 1 (Healthy Rivers: Plan for Change/ Wai Ora: He Rautaki Whakapaipai).

IMPLEMENTATION ACTIONS		WHO/TIMING
Help landowners adapt to new expectations and rules of Plan Change 1	The Land Management Advisory Services (LMAS) team aims to achieve improvements in the environmental footprint of agriculture. LMAS is helping to design policy changes with a major focus on the Waikato and Waipā catchments, and at the same time working to prepare the agriculture industry to work within the new expectations and rules that the Healthy Rivers/Wai Ora plan change will introduce to the wider Waikato region. Actions will include: <ul style="list-style-type: none"> • developing and implementing a sustainable agriculture extension programme in collaboration with industry in the area • building capacity within the agriculture industry to support farmers in adapting to farming within limits • ensuring that Waikato Regional Council and agriculture industry and community initiatives that support sustainable agriculture are aligned, consistent and effective in bringing about on farm change. 	Land Management Advisory Service team. Catchment Management team to support as appropriate / Annual programme consistent with Healthy Rivers/Wai Ora timelines.

FOCUS AREA 4 – RIVER MANAGEMENT

It is important to implement best practice to manage bank erosion as this will have a positive effect on water quality within the zone.

IMPLEMENTATION ACTIONS		WHO/TIMING
<p>Best practice</p> <p>Actions to implement best practice to manage bank erosion will include:</p> <ul style="list-style-type: none"> • responding to enquiries • annual inspections of the main Waikato River channel and priority streams • removal of blockages or obstructions on a prioritised basis where there is environmental impact • site specific erosion control measures, for example, rip rap, battering, gabion baskets • assisting with fencing of eroding portions of channels, at a distance that is in accordance with best practice • planting and maintaining vegetation to help prevent erosion • vegetation control (where appropriate) • retaining and developing fish habitats when clearing river blockages and fish passage barriers • minor erosion control work to maintain channels in their present locality and to reduce the sediment input caused by streambank erosion • assessing river stream confluences and managing erosion issues • supporting proactive erosion mitigation. 		<p>River Management team / Annual programme</p>
<p>Stream inspections</p> <p>River and stream inspections are undertaken on an ongoing annual programme basis, and follow-up is completed in response to reports of damage and customer enquiries.</p>		
<p>Collaboration</p> <p>Work with local iwi and hapū, Department of Conservation, other agencies and territorial authorities (where applicable) on:</p> <ul style="list-style-type: none"> • larger erosion control works, to mitigate the impacts of natural erosion • response and resolution from public enquiries • providing information and advice on river enquiries • existing collaborative projects with Ngāti Hauā within Manganua and Karāpiro Catchment providing advice and support to achieve project goals • work with territorial authorities to develop a tool or process of sharing river management, data and methodologies that will allow collaboration, funding and multiple benefit prioritisation • progressing the Central Waikato River Stability Management Strategy. 		
<p>Landowner agreements</p> <p>Develop landowner agreements for instream and riparian management such as erosion control, vegetation management, fencing, planting, and other environmental and indigenous biodiversity enhancement opportunities.</p>		
<p>Project maintenance</p> <p>Maintain past, current and future projects by way of spraying, form pruning, fence maintenance (where applicable), riparian plant maintenance, and ongoing annual programme monitoring of erosion and channel behaviour.</p>		
<p>Environmental enhancement</p> <p>Develop and implement initiatives for environmental enhancement such as the installation of native woody debris and indigenous fish habitat work where appropriate.</p>		

FOCUS AREA 5 – LANDOWNER, STAKEHOLDER AND COMMUNITY ENGAGEMENT

Working collaboratively with landowners, stakeholders, care groups and the wider community can contribute to the wellbeing and improvement of catchments, through education, knowledge sharing and partnerships. The following actions will enable collaborative opportunities.

IMPLEMENTATION ACTIONS		WHO/TIMING
Education	<p>Improve understanding and education of catchment management activities and the benefits of landowner partnerships.</p> <p>Support Waikato Regional Council's existing work with local schools to enhance indigenous biodiversity through plantings and other environmental enhancement initiatives.</p>	<p>Zone and Catchment Management team / Completed by June 2019</p>
Staffing	<p>Seek to ensure adequate staffing levels are available to allow a collaborative approach to increasing community engagement.</p>	<p>Zone and Catchment Management team / Completed by June 2018 as part of LTP adoption)</p>
Collaboration	<p>Develop strong landowner agreements for works such as fencing, planting and maintenance work.</p> <ul style="list-style-type: none"> • Where landowners are willing, facilitate opportunities to bring people together (for example, a farm field day) to: <ul style="list-style-type: none"> • build knowledge and capability • coordinate discussion groups on enhancing catchment health • encourage thinking beyond property boundaries. 	<p>Zone and Catchment Management team/ Annual programme</p>

FOCUS AREA 6 – COLLABORATE WITH STAKEHOLDERS TO ACHIEVE THE GREATEST VALUE - COMMUNICATION AND PARTNERSHIP

Working collaboratively with other directorates within Council and externally with territorial authorities, agencies and industry. Maximising these opportunities for relationship building ensures efficiency and can avoid duplication of effort and work.

IMPLEMENTATION ACTIONS		WHO/TIMING
Relationship development	<p>Develop relationships within Waikato Regional Council across directorates and with external authorities and agencies to identify opportunities to collaborate.</p> <p>Leverage existing relationships for mutual or wider community benefits (for example, the NZ Transport Agency).</p> <p>Build a stronger relationship with territorial authorities, especially in understanding the impacts of urban development.</p> <ul style="list-style-type: none"> • Support and fund where appropriate, development of Integrated Catchment Management Plans. • Provide early opportunities for engagement where an agency's priority may be impacted by the others activity. 	<p>Zone and Catchment Management team/ Ongoing</p>
Progressing the Central Waikato River Stability Management Strategy	<p>Continue to promote and progress the Central Waikato River Stability Management Strategy with the project partners (Hamilton City Council, Waikato District Council, Waipā District Council, Mercury, Waikato Tainui), in particular:</p> <ul style="list-style-type: none"> • the strategy to accelerate outcomes to be agreed. 	<p>Zone and Catchment Management team/ Completed by June 2018.</p>

FOCUS AREA 7 – WORKING IN PARTNERSHIP WITH HAMILTON CITY COUNCIL

Both Waikato Regional and Hamilton City Council have shared objectives towards the management of biodiversity, flood protection, river and catchment works and the management of stormwater. Working together will help to ensure that these objectives are delivered efficiently.

IMPLEMENTATION ACTIONS		WHO/TIMING
<p>Delivery of service level agreement (SLA)</p>	<p>Collaborate with Hamilton City Council (HCC) on the Project Watershed SLA, in particular working with HCC staff on:</p> <ul style="list-style-type: none"> • erosion control with a pre-emptive focus • completion and timely financial reporting of the annual work programme • reporting to the catchment committee as required • allocation and spend of annual budgets • annual and long term planning timeframes • working together to agree on potential changes to the programme in response to natural events, for example, erosion or slips • review and modification of the SLA as required to continue to deliver the most efficient outcomes for the community. 	<p>Zone Manager / Annual programme</p>
<p>Collaboration on additional initiatives</p>	<p>In addition to the above SLA, continue to work collaboratively on a range of initiatives including:</p> <ul style="list-style-type: none"> • future outcomes of the Local Indigenous Biodiversity Strategy (Pilot Project) • response and resolution of queries from the public • stormwater quality and quantity and urban development • maintenance of streams • erosion control • flood mitigation • biodiversity • cross boundary issues • consenting processes • shared methodologies • restoration projects supported by the Waikato River Authority and undertaken under the WWRRS (see Appendix 1). 	<p>Zone and Catchment Management team, Policy Implementation team / Annual Programme</p>

FOCUS AREA 8 – IWI ENGAGEMENT

Supporting iwi co-management practices and continuing to develop relationships with iwi is integral part of delivering more effective catchment management outcomes for the zone, achieving desired community outcomes, and helping to define priority projects and align catchment works to achieve value for money. Key actions to support mana whenua in the central zone will include:

IMPLEMENTATION ACTIONS		WHO/TIMING
<p>Relationships with iwi and integration across council</p>	<p>Build trust and credibility by strengthening relationships with mana whenua (at iwi and marae level).</p> <p>Actions to support mana whenua to be coordinated across Waikato Regional Council to ensure greater integration and efficiency.</p> <p>Increase staff training, resourcing and introductions to iwi collaboration in the zone.</p>	<p>Zone and Catchment Management team / Annual Programme</p>
<p>Support iwi involvement in projects</p>	<p>Understand mana whenua objectives and priorities, including those developed by Waikato-Tainui as part of the WWRRS and incorporate into catchment new works and other indigenous biodiversity projects.</p> <p>Collaborate with iwi when undertaking catchment scale works and projects to enhance amenity, public access to and experience of the Waikato River and its tributaries, cultural sites, wetlands and lakes. Recognise that iwi have significant knowledge to offer regarding pre- and post- European culture and the location of historic cultural sites, and that restoration options and works should be undertaken (where appropriate) in line with the River Settlement Deed.</p> <p>Supporting existing initiatives or projects including:</p> <ul style="list-style-type: none"> • Local Indigenous Biodiversity Strategy (LIBS) • programming priorities from the WWRRS into Central zone catchment and river works • WRA projects, for example Turangawaewae Marae Riverbank Restoration and Moanatuatua Wetland Restoration • projects that enhance the ability and capacity of iwi to act as kaitiaki for their awa. 	
<p>Treaty Settlements</p>	<p>Be responsive and adaptable to Treaty settlement outcomes.</p>	

FOCUS AREA 9 – COMMUNITY RESILIENCE TO FLOODS AND HIGH RAINFALL

A key priority under the Waikato Regional Council Strategic Direction 2016 – 2019 is to increase communities understanding of risks and resilience to change. Key actions to support this include:

IMPLEMENTATION ACTIONS		WHO/TIMING
<p>Management of flood risk</p>	<p>Work with relevant agencies and organisations to manage flood risk, including:</p> <ul style="list-style-type: none"> • production of appropriate local flood response manuals • defining areas of responsibility during flood response • effective communication to ensure resources are allocated appropriately during flood events. <p>Working in conjunction with the Waikato Central Drainage Committee to ensure coordination and collaboration on appropriate issues, including:</p> <ul style="list-style-type: none"> • reducing risks of localised flooding in dedicated drainage areas through the removal of vegetation congestion and blockages • annual performance and condition inspections are undertaken in dedicated drainage areas where community maintenance schemes are in place. 	<p>Zone and Catchment Management team / Completed by June 2018</p>
<p>Education</p>	<p>Education on likelihood and consequences of the impacts of a greater than design flood event. Engage the communities on these matters and provide advice for managing these risks (residual flood risks). This could be achieved through schools, newspapers, signboards and advertising.</p>	<p>Zone and Catchment Management team / Annual programme</p>
<p>Response to public queries</p>	<p>Direct appropriate (Catchment or River Management Officer) resources to respond to queries or assistance following high rainfall events.</p>	<p>Zone and Catchment Management team /As Required</p>
<p>Strategy development</p>	<p>Support the development of the Regional Asset Management Plan and Regional Infrastructure Strategy.</p>	<p>Zone and Catchment Management team / Completed by June 2018.</p>

FOCUS AREA 10 – BIOSECURITY OPERATIONS

Waikato Regional Council work with landowners and community groups under a regional programme to manage plant and animal pests that are a threat to indigenous species, habitats and economic productivity. The following activities are proposed for animal and plant pest control.

IMPLEMENTATION ACTIONS		WHO/TIMING
Regional Pest Management Plan review	Support the review of the Regional Pest Management Plan.	Biosecurity team / Completed by June 2020
Animal pests	Support collaborative opportunities through Predator Free 2050.	Biosecurity team / Annual Programme
Plant pests	<p>Increase education of pest plants to Waikato Regional Council staff.</p> <p>Waikato Regional Council owned and managed land undertakes active pest plant control as per RPMP and is 100% compliant.</p> <p>Support collaborative opportunities to enable on farm biosecurity and biosecurity pathway management.</p>	

FOCUS AREA 11 – BIODIVERSITY AND NATURAL HERITAGE OPERATIONS

Waikato Regional Council will undertake the following actions to enhance indigenous biodiversity and support the maintenance of natural heritage.

IMPLEMENTATION ACTIONS		WHO/TIMING
Action planning	Develop a Willis Report implementation plan for the Central Waikato zone. Incorporating outcomes of the Local Indigenous Biodiversity Strategy (Pilot Project).	Natural Heritage team / Completed by June 2018
Education	Work with Enviroschools coordinators to promote biodiversity through Enviroschools throughout the zone.	Natural Heritage team / Annual programme
Review and monitoring	Review best management practices for restoration planting. Monitor success of current biodiversity projects and programmes and incorporate knowledge from commissioned reports to improve outcomes. This includes continued support of the following: Hamilton Halo – continued monitoring and support of Predator Free Hamilton activity and research in Hamilton Waiwhakareke Heritage Park – Waikato Regional Council provided a major grant towards this project in 2017 integration of the outcomes from the Local Indigenous Biodiversity Strategy urban biodiversity research project being undertaken by Landcare Research and Waikato University.	Natural Heritage team / Land and Soil team (SAS) / Annual programme
Priority areas	Develop and implement restoration/enhancement plans for priority areas or areas that leverage other values such as amenity and access, including those identified in the WRRRS. Undertake biodiversity maintenance works at priority biodiversity sites in collaboration with landowners, community groups and other organisations.	Natural Heritage team/ Annual programme
River management work programmes	Incorporate biodiversity objectives into river management work programmes. Works (where appropriate) that may lead to better biodiversity outcomes could include: <ul style="list-style-type: none"> restoration of streams best practice riparian management removal of barriers to native fish passage whilst maintaining the exclusion of pest fish. 	Natural Heritage team / Completed by August 2019





FUNDING, MONITORING AND REVIEW

TAHUA PŪTEA, AROTURUKI ME TE AROTAKENGA

6.1 FUNDING

The council collects rates (general and targeted) for flood protection, river management, soil conservation works, catchment management and new works, based on areas of benefit and activities that contribute to the programmes being managed. The actions identified in this zone plan and funded by the council will be implemented under the current levels of service agreed with the community. Work programmes and funding levels will be subject to review throughout the life of the plan.

The council will also actively explore opportunities for co-funding of projects with partner agencies. The zone has already been successful in some recent funding applications, and opportunities for further funding will be explored and actioned as appropriate.

6.2 MONITORING AND REVIEW

The plan will be reviewed, as required or as mandated, in order to implement any statutory obligations (for example, Treaty Settlement legislation, National Direction). A full review is required every six years and a limited review three years after each full review.

Monitoring of the goals will be ongoing annual programme and will focus ongoing annual programme and will focus on the following key aspects:

- environmental outcomes demonstrating the effectiveness or otherwise of this zone plan
- completion of actions to measure the degree of implementation of this zone plan
- the outcomes of the information gathered in respect of table 3.

The results of monitoring will be reported annually to the catchment committee and the Integrated Catchment Management Committee. A three-yearly summary will be used to inform the reviews of this zone plan. Minutes from these meetings are made available to the public.

		MEASURES
GOALS	GOAL 1 Contribute to improving water quality within priority catchments in the zone	<ul style="list-style-type: none"> • Annual work programmes achieved as proposed • Number of Farm Environment Plans implemented through Healthy Rivers/Wai Ora: Proposed Plan Change 1. • Implementation of an ongoing annual programme water quality monitoring programme.
	GOAL 2 To maintain and enhance indigenous biodiversity associated with the Waikato River, its tributaries and wetlands and lakes across the zone	<ul style="list-style-type: none"> • Annual Waikato Regional Council funding allocations within the zone for biodiversity projects. • Number and area of biodiversity management projects undertaken. • Number and area of restoration projects initiated and maintained.
	GOAL 3 Manage the instream impacts of urban development and land use intensification in association with territorial authorities and other partners	<ul style="list-style-type: none"> • Completion of mitigation measures as per annual programme. • Collaborative partnerships in place and functioning effectively.
	GOAL 4 To work collaboratively with iwi, territorial authorities and communities to align and integrate projects and priorities within the zone	<ul style="list-style-type: none"> • Evidence of collaborative arrangements in place. • Outcomes reported.

TABLE 3 - *Monitoring measures*

6.3 ONGOING ANNUAL PROGRAMME IMPROVEMENT AND DEVELOPMENT

There are a number of matters relating to the zone plan that have not been fully resolved at the time of completing the plan. These matters will be progressed prior to the next plan review, a number being associated with 2018-2028 Long Term Plan (LTP) development. These are set out in the following table.

ISSUE	DESCRIPTION	TIMING
Performance measures	In association with 2018-2028 LTP development, there is a need to confirm a set of zone specific performance measures based on the content of the plan and to incorporate these into a reporting template.	March 2018
Maintenance strategy	A regional review of catchment management maintenance strategies was being undertaken in October 2017. The findings will be applied to the central zone when available.	February 2018
Prioritisation and evaluation process	A range of interest groups have developed individual priorities relative to their respective goals and objectives. This includes WWRRS, LIBS, Waikato Regional Council and HCC. There is a need to incorporate this range of objectives into programmes to be promoted by Waikato Regional Council via Project Watershed funding, as appropriate.	June 2018
Catchment monitoring and reporting	There is a need to confirm that an environmental monitoring programme is in place that will inform the committee and council of the outcomes sought under this zone plan. Opportunity to collaborate with others (e.g. HCC).	June 2018
Database coordination and access	The catchment committee has identified the need to ensure effectiveness in the management and accessibility of data relative to management of the region. Waikato Regional Council's Science and Strategy team has a project in progress and will report back to the committee in 2018.	June 2018

TABLE 4 - *Matters requiring improvement or development*

GLOSSARY OF TERMS

TE KUPUTAKA

HCC	Hamilton City Council
ICM	Integrated Catchment Management
LIBS	Local Indigenous Biodiversity Strategy
LMAS	Land Management Advisory Services
LTP	Long Term Plan
PC1	Plan Change 1
RMA	Resource Management Act (1991)
RPMP	Regional Pest Management Plan
RPS	Regional Policy Statement
SLA	Service Level Agreement
WHNP	Waiwhakareke Natural Heritage Park
WRA	Waikato River Authority
WRC	Waikato Regional Council
WRP	Waikato Regional Plan
WWRRS	Waikato Waipā River Restoration Strategy

Biodiversity: In this document when referring to biodiversity, the reference should be read as indigenous biodiversity.

MEMBERSHIP OF THE CENTRAL ZONE CATCHMENT COMMITTEE:

- Regional councillor (3), (including Chair of Integrated Catchment Management Committee, and Chair or Deputy Chair of WRC)
- Hamilton City councillor (1), Hamilton City Council staff (1)
- Waikato District councillor (1)
- Waipa District councillor (1)
- Mercury (1)
- Department of Conservation (1)
- Waikato Tainui
 - Ngā Mana Toopu Kirikiriroa (1), Ngāti Hauā (1), Ngāti Koroki Kahukura (1)
- Local community representatives (4)

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* n.d. = no date specified.

APPENDIX ONE

KUPU ĀPITI TAHI

WAIKATO AND WAIPĀ RESTORATION STRATEGY PRIORITIES

Priority locations, issues and works in the central zone as identified in the Waikato River and Waipā River Restoration Strategy. (Priorities were developed together with the Lower Waikato Zone sites and therefore the priority ranking reflects the ranking amongst all sites for both zones.)

CATCHMENT/LOCATION	FOCUS ISSUES	PRIORITY WORK IDENTIFIED	PRIORITY RANKING
Mangaonua Stream catchment	Hill country erosion	<ul style="list-style-type: none"> • Pole planting • Re-vegetation with manuka or pine • Fencing existing indigenous vegetation 	Medium
	Wetlands, seeps, ephemeral streams	<ul style="list-style-type: none"> • Fencing wetlands and ephemeral streams 	Very high
	Fish habitat	<ul style="list-style-type: none"> • Riparian fencing • Riparian planting • Remediation of fish barriers 	Medium
Karāpiro Stream catchment	Hill country erosion	<ul style="list-style-type: none"> • Pole planting • Re-vegetation with manuka or pine • Fencing existing indigenous vegetation 	Medium
	Streambank erosion	<ul style="list-style-type: none"> • Riparian fencing • Riparian willow pole planting • Native riparian planting • Erosion protection structures 	Medium
Mangaone and Mangaomapu Streams	Fish habitat	<ul style="list-style-type: none"> • Riparian fencing • Riparian planting • Remediation of fish barriers 	Medium
Mangakotukutuku catchment	Wetlands and seeps	<ul style="list-style-type: none"> • Fencing wetlands and ephemeral streams 	Medium
Kukutaaruhe Stream	Biodiversity	<ul style="list-style-type: none"> • Weed control • Native re-vegetation • Remediation of fish barriers • Possum control 	Medium
Lake Rotoroa	Water quality	<ul style="list-style-type: none"> • Management of pest fish • Eradication of Egeria densa and re-establishment of native aquatic plants 	Very high
Lake Rotomānuka	Water quality	<ul style="list-style-type: none"> • Fencing • Native planting • Construction of treatment systems on drains • Annual fishing of Rotomanuka North • Submerged plant translocation 	Very high
Lake Rotopiko East	Biodiversity	<ul style="list-style-type: none"> • Pest fish eradication 	Medium
Whole of zone	Iwi cultural priorities	<ul style="list-style-type: none"> • Protection and restoration of puna • Wetland enhancement • Enhancement of mahinga kai sites 	High to Very High

HE TAI AO MAURIORA

HEALTHY ENVIRONMENT

HE ŌHANGA PAKARI

STRONG ECONOMY

HE HAPORI HIHIRI

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