

Draft Te Rapa integrated catchment management plan key points

As Hamilton continues to grow, we need to manage the impacts on stormwater systems.

What's an ICMP?

An integrated catchment management plan (ICMP) tells us how to best manage primarily stormwater, water supplies, and wastewater, in a particular area to allow Hamilton to grow while protecting the environment.

It helps us make better decisions about how land is used, how we look after the water resources we have, and what infrastructure we need to manage stormwater such as wetlands or raingardens.

An ICMP recommends improvements in areas that have already been built, and plans for areas where future developments will be built.

ICMPs are being developed for all 16 hydrological catchments in Hamilton, as required by the Comprehensive Stormwater Discharge Consent from Waikato Regional Council.

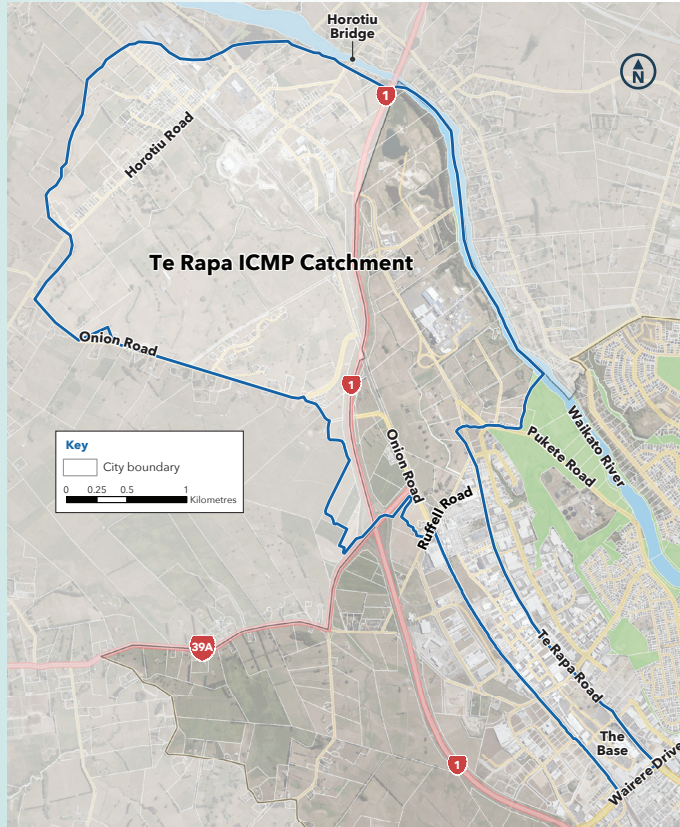
Each catchment has distinct characteristics, requiring investigation to understand stormwater flows and to identify key areas for protection, such as gullies, streams, and lakes.

Why do we have to treat and manage stormwater?

When stormwater comes into contact with other surfaces it can collect contaminants such as sediment, phosphorus, copper, and zinc. These contaminants flow into waterways (like streams and lakes) and can create poor water quality environments for our native fish, wildlife, and plant life.

When rain falls on hard surfaces such as paths, roads, and roofs, it can't sink into the ground. Instead, it flows quickly downstream into gutters, pipes, and streams. In some cases, where there is too much stormwater, this can cause flooding. Fast flowing water can also cause erosion.

Te Rapa catchment



The Te Rapa catchment is in Hamilton North and covers approximately 1140 hectares. Hamilton City Council and Waikato District Council manage different areas within the catchment.

The Te Rapa stream is the major stormwater feature in the catchment. It flows northwards where it joins the

Waikato River, about 400m downstream of the Horotiu Bridge.

The catchment is divided into three main sections:

- The upper catchment is almost fully developed into industrial or commercial land and extends from The Base to Ruffell Road.
- The mid-catchment runs through the Te Rapa North Industrial Zone and features a natural floodplain valley that was formed by the stream and is prone to flooding.
- The lower catchment forms a narrower, steep-sided gully system which includes significant man-made methods to reduce the peak flow rate.

Development planned for this catchment

Significant land use changes are planned for this catchment. The upper and mid-catchment areas are primarily zoned for industrial development. As a result, greenfield sites will be converted into industrial land, featuring many impermeable surfaces like buildings and roads that prevent water absorption.

In the lower catchment, which is managed by the Waikato District Council, about half of the area is zoned for rural land use and no significant changes are expected in this part of the catchment.

The Te Rapa catchment is expected to continue to see a lot of growth in the coming years. We need to plan for this now to make sure we get the infrastructure we need to support growth, while also restoring the environment and protecting the waterways.

Te Rapa ICMP proposed solutions

- Urban development could worsen stream erosion by increasing water runoff. Mitigation strategies include reducing runoff volumes and implementing in-stream resilience measures to protect waterway stability. The ICMP proposes a pipeline to divert higher flows directly to the Waikato River as the preferred catchment option. This was slightly favoured over significant stream armouring as it provides the clearest path to implement. Future consents will be required for either option.
- Industrial zones produce highly contaminated stormwater, which requires treatment before it's discharged into streams or rivers. In this instance, a best practice multi-barrier treatment is recommended, where stormwater is treated within the road corridor and at the end of the pipe before it is discharged into the river.
- The ICMP proposes creating a central green corridor along the Te Rapa stream for restoration, flood control, and potential walking and cycling paths.
- The ICMP supports restoring and naturalising the Te Rapa stream, focusing on riparian plants and fish habitats. It identifies potential natural wetlands and existing fish barriers that need restoration.
- Proposals in the ICMP support and give effect to the objectives of the vision and strategy for the Waikato River and iwi environmental plans which aspire to restore and protect the river and its surrounding waterways, including the Te Rapa stream.
- Urban development increases water runoff which can lead to flooding during large storms, affecting infrastructure and communities downstream. Part of the ICMP for the Te Rapa North Industrial Zone include research to assess flood risks and minimise potential damage, and manage the impacts of erosion and flooding on downstream areas.
- If new development or redevelopment happens, it can create more stormwater or make it dirtier. We're setting design criteria for developers and recommending ways to achieve it, to make sure we get the best outcomes in the area. This includes making sure new stormwater devices are in place.

Stormwater devices

(See section 7.10 and 7.11 of the ICMP for indicative locations)

Wetlands

In Hamilton, stormwater treatment wetlands are common as part of roading and housing developments. They treat the stormwater, trap sediment, and provide lots of ecological benefits like habitat. They also look great!



Rain gardens

Rain gardens are used as a stormwater treatment near busy roads and places where it's difficult to build a wetland. They're small and act as a natural filter for our stormwater.

Catchpit inserts

Catchpit inserts help keep stormwater clean by trapping garbage and sediment that wash off industrial roads. They act as a first line of defense in busy areas, preventing pollution from reaching downstream treatment systems like wetlands. This improves stormwater quality and protects the environment.

Soils and groundwater

We make sure water is getting back into the ground through soakage devices to keep the stream flowing in-between rainstorms. We also set limits on how close buildings can be to steep gully edges to make them safe from erosion.



For more information, visit hamilton.govt.nz/icmp.

Other methods

Gully and stream restoration

(See section 7.4.6 of the ICMP for restoration extents)

Part of our work in the overall catchment will be to restore our gullies and streams. This involves removing any rubbish and foreign plants like gorse, and replanting with native plants and trees that support better environmental outcomes and create habitat for native animals.



Maatauranga Maaori values

We continue to partner with iwi on all elements of development in the Te Rapa catchment. This includes recognising and commemorating the Maaori history of the land, protecting significant sites, and enhancing water quality and native flora and fauna in the area.