



Waimatā-Pakarae Catchment Plan

Section 32 analysis – Freshwater Management Units

1. Scope of report

This report provides the rationale for identifying Freshwater Management Units (FMUs) for the Waimatā-Pakarae Catchment Plan.

The report considers the legislative requirements, the catchment context, the options and Council's evaluation of those options.

The purpose of this evaluation is to provide a sound basis for confirming FMUs for the Waimatā-Pakarae Catchment Plan. Confirmation of FMUs will allow conversations around plan development to be progressed through the catchment advisory group.

Definition

All regional councils need to identify FMUs for their regions as a requirement of the National Policy Statement for Freshwater Management 2020 (NPS-FM).

FMUs are the way in which Council organises a catchment area spatially to best manage freshwater and achieve freshwater outcomes found there.

The NPS-FM defines an FMU as:

"all or any part of a water body or water bodies, and their related catchments, that a regional council determines is an appropriate unit for freshwater management and accounting purposes."

Function

FMUs recognise the different freshwater values, pressures and issues across the catchment and the need to manage them differently. They will establish different environmental outcomes, limits, target attribute states and actions in order to reflect those differences and provide an appropriate management response to those pressures.

We need to identify what issues and values are being managed and what the best scale is to manage them. Factors such as hydrology, geography and social context are important in helping us understand the best approach.

The NPS-FM requires all waterbodies to be within at least one FMU, and councils must identify representative monitoring sites within each FMU.

2. Catchment context

The Waimatā-Pakarae Catchment area represents several freshwater catchments that flow to the eastern coastline from Gisborne city at its southern extent to Waihou Bay south of Ūawa / Tolaga Bay (Attachment 1).

Two catchments represent three quarters of the overall catchment area:

- the Waimatā River (226km²), located directly north of Gisborne City,
- the Pakarae River (242km²), located south of Tolaga Bay.

The balance is comprised of several smaller catchment areas:

- the Waiomoko River (72km²),
- the Pouawa River (42km²),
- Hamanatua Stream (3km²)
- Wainui Stream (6km²),
- Kopuawhakatapa Stream (2km²).
- Several small catchments situated along the eastern coastal boundary, comprising approximately 22km² of the catchment area.

The eastern coastal foredunes and lowland hills grade quickly to rolling hill country and is used mainly for pastoral farming. Plantation forestry can be found on the steeper terrain to the west of the catchment area.

Residential and peri-urban development extends into the southern portion of the catchment area and along the lower coastal fringe as far as Makorori. The rural settlement of Whāngārā is located some 30km north of Gisborne city.

State Highway 35 hugs the coastline up to Pouawa before proceeding inland. The local road network provides good vehicle access all along the coastal margin, including to beaches, coastal settlements and farming communities.

Geology and erosion

Soil erosion is a significant feature of this catchment area.

The geology of the Waimatā-Pakarae catchment area is predominantly mudstone, much of which is inherently unstable.

Past clearance of indigenous forest for pastoral landuse exposed this vulnerability and has led to widespread erosion issues. Plantation forestry was later introduced for soil conservation purposes however recent harvest of first rotation forests have also generated erosion issues. Recent storm events have also generated a new problem associated with slash migration for cutover areas. Migration of slash has damaged downstream farm property, waterways and public infrastructure such as bridges and roads.

Tangata whenua

Several iwi and hapu rohe intersect and overlap in the Waimatā area, including Ngāti Porou, Ngāti Oneone, Rongowhakaata, Ngai Tāwhiri, Te Aitanga-ā-Māhaki and Te Aitanga-ā-Hauiti. These tribes often used the Taruheru, Tūranganui and Waimatā Rivers as boundaries.

The Waimatā River also served as an inland highway linking Tūranga to the East Coast, especially Whāngārā and Uawa. Those who lived on the North, West and East Waimatā blocks had close relationships with Ngāti Konohi at Whāngārā and Te Aitanga-ā Hauiti at Uawa. It was also used as an escape route during the inter-iwi wars from 1700-1800, and the upper reaches of the river served as a refuge. Ngati Oneone report the significance of the Kopuawhakapata and Wainui Streams for travel.

The coastal margin was well settled and provided access to forest and freshwater resources as well as kaimoana. The higher slopes of the rugged hills provided forest resources of timber, fruits, kiekie (*Freycinetia banksii*) for weaving and birds and invertebrates for food. The waterways provided eeling grounds and, where slightly swampier ground existed, sources of flax/harakeke (*Phormium tenax* and *Phormium cookianum*) and raupō (*Typha orientalis*) used for making fishing nets, baskets and many other necessary items.

Tangata whenua will provide more detail on their freshwater values in this catchment.

Three notable landscapes

There are three landscape types within the Waimatā-Pakarae Catchment area:

- **Gisborne city and connected peri-urban communities.** A large part of Gisborne's built environment sits within the Waimatā-Pakarae Catchment area. A large portion of this is residential development. Kaiti (inner and outer), Tamarau and Sponge Bay are reticulated suburbs. Wheatstone Road, Wainui, Okitu and Makorori are unreticulated semi-rural communities that maintain a strong relationship to the city through close proximity, schooling and work. High landscape amenity and access to the coastal environment make these locations highly desirable places to live for Gisborne city residents and represent some of the highest property values in Gisborne.
- **Rural landscape.** Rural landuses comprise the vast majority of the Waimatā-Pakarae Catchment area. Extensive sheep and beef farming occupies most of the rolling hill country while blocks of plantation forestry are situated on steeper terrain, particularly within the Waimatā and the Pakarae catchments. Smaller lifestyle blocks are found in the lower to mid reaches of the Waimatā catchment, where proximity to the city affords a rural outlook and lifestyle alternative with flexible arrangements for employment.
- **Coastal margin.** The coastal margin is a unique component of this Catchment area. It represents the fine line where freshwater interfaces with the coastal marine area but also includes the wider beach and foredune setting.

This margin includes Kaiti Beach just south of Gisborne Port, Wainui Beach, Okitu, Makorori Beach, Tatapouri, Turihaua, Pouawa, Whāngārā, and Waihou Bay (Loisels) just south of Ūawa.

The freshwater – coastal interface has always been treasured by mana whenua as a highly productive space for mahinga kai and other resources. Many known marae and archaeological sites are found along the coastal marine area.

In a more contemporary context, road access has made many beaches and bays accessible to urban residents and visitors to the region who use them for swimming fishing, surfing walking and summer camping. As mentioned, residential development has occurred along beaches within easy driving distance of the city.

While coastal and freshwater domains are managed separately in legislation and

planning, our community sees this interface as a single contiguous landscape.

Together they create spaces that are valued and enjoyed across the year.

Freshwater is an indivisible component of these spaces and the values found here are recognised as important to both freshwater and coastal domains.

3. Catchment Advisory Group

Establishment of Catchment Advisory Group

Council established an advisory group in 2023 to help inform the development of the Waimatā-Pakarae catchment plan.

The group first met in February 2024 and have been working systematically through the National Objectives Framework, starting with a broad conversation around freshwater values and challenges.

This first three meetings covered off scope of work, process, then moved to identify freshwater issues and values, environmental outcomes and FMUs.

Key issues identified

- Sediment and woody debris generated from forestry harvest and related activities. This impacts on the ecosystem health of waterways, damages private property and public infrastructure. Sediment and woody debris also migrate into the coastal area and impact on values there.
- Cattle and sheep can contribute sediment and pathogens (*E. coli*) to waterways where there is access to them.
- The effects of sediment, woody debris and pathogens on in-stream values in general, including tidal and lagoon areas.
- Flooding risk to the urban downstream reach of the Waimatā River. To a lesser extent risks of flooding in the Wainui Stream and Kopuawhakapata Stream, and within developed areas.
- The impact of sediment, woody debris, and pathogens on swimming, fishing and waka ama in the urban environment.
- The built environment creates a unique set of challenges for the receiving environment:
 - Stormwater runoff carrying contaminants from roofs and roads.
 - The ongoing discharge of wastewater into the Waimatā River during intense rain events, and the less frequent discharge of wastewater into the Wainui Stream and Owen Stream.
 - The modification of urban tributaries, including dumping of construction waste and rubbish, loss of riparian margins and floodplains, and proliferation of weeds.
 - The potential cumulative impacts of residential septic systems on ground and surface water.

Freshwater values

- Ecosystem health, mahinga kai, threatened species and human contact. The former

three compulsory values were considered to be relevant across the whole catchment area, while human contact is more confined, particularly in terms of significant primary contact sites.

- Fishing, particularly in the city and along the coastal margin where rivers meet the sea.
- Water sports in the Waimatā. A hugely popular activity in the lower reaches. Waka ama, rowing and kayaking both recreational and competitive training, the Waimatā is extensively used throughout the year. Engagement with waka ama groups indicate that water quality and contact with sediment can make people sick or develop sores. Water users are also very concerned about the presence of submerged woody debris and the potential for watercraft to be damaged.
- Inanga spawning. Inanga spawn along several of the waterways within the catchment area.
- Important infrastructure. Bridges and roads offer critical lifelines to both urban and rural communities. Flooding from aggrading riverbeds and damage from forestry slash can threaten this infrastructure and neighbouring property.
- Mitigation of flood risk. Recognition that deposition of sediment into waterways from erosion contributes to buildup of riverbeds. This is particularly important in the Waimatā river where downstream urban development may be affected by future flooding risk.
- Coastal recreation. Freshwater-induced effects on tidal areas and lagoons.

4. Identification of Freshwater Management Units

The Waimatā–Pakarāe Catchment advisory group considered FMUs in its third hui. In order to progress the development of FMU-specific values and environmental outcomes, we need to confirm FMUs for this catchment area.

Considerations

The NPS-FM has numerous requirements for FMUs, and the addition or removal of an FMU has a consequential effect on plan development and content.

Each FMU will have its own section, where freshwater values are identified, and different environmental outcomes and targets are set. Policies, rules and resource limits will also be different for each FMU identified.

It is important that we get the FMUs right. Identifying more FMUs than needed will lead to repetition and redundancy in policy. This will create a bigger, less efficient plan that will be harder to use by consent applicants.

In contrast, having too few FMUs may result in a more generalised management approach that doesn't deal with some pressures and challenges adequately.

Having too fine or too coarse an approach may also be opposed through the submissions process if there isn't enough evidence to justify the proposed number of FMUs.

Similarly, the number of FMUs has significant implications for implementation (e.g., monitoring and reporting on all relevant attributes for each FMU; a key requirement is to monitor progress against objectives set for each FMU).

Outcome for FMUs

FMUs identified accurately reflect the variations in freshwater values and pressures across the catchment area, providing a management framework that enables environmental outcomes and the Long-Term Vision to be achieved.

Criteria for determining FMUs

In evaluating the options we must consider the costs, benefits, and risks of each. The option should be effective in achieving anticipated outcomes while doing so efficiently. Criteria for evaluating options include:

- Does the option reflect unique issues and drivers of degradation?
 - Do the FMUs enable a specific management response to the freshwater issues identified?
 - Are the freshwater issues the same across the proposed FMUs?
 - Will its policies, limits and rules differ from the rest of the catchment area?
- Is environmental monitoring undertaken within the proposed FMUs that enables the freshwater pressures to be understood and limits and targets to be formed?
 - Does the option allow Council to adequately monitor changes over time?

Options

Three FMU options were considered, based on feedback from the advisory group. Maps for each option are shown in attachments 2-4.

- **Option 1:** One FMU covering the whole Waimatā-Pakarae catchment plan area.
- **Option 2:** An Urban FMU and a Rural FMU
- **Option 3:** An Urban FMU, a Rural FMU and a Coastal Settlements FMU

		Criteria	
		Does the option reflect unique issues and drivers of degradation?	Is environmental monitoring undertaken within the proposed FMU/s that enables the freshwater pressures to be understood and limits and targets to be formed?
Options	Option 1: One FMU for the whole catchment area	No. The option does not differentiate FMUs based on rural and urban values that have been identified, nor does it differentiate based on drivers and issues Risks: Could end up overlooking variations in freshwater issues, which are not adequately addressed by one set of environmental outcomes, TAS and policies.	Yes. There is sufficient data available at this scale.
	Option 2: Two FMUs (Urban + Rural)	Yes. The option recognises differences and relationship between rural and urban freshwater issues and the need to have distinct outcomes and management response for each of these. There are different drivers of degradation in the urban and rural areas, for example livestock farming and forestry in rural areas compared to urban stormwater, wastewater and landfills in urban areas.	Yes. There is sufficient data available at this scale.
	Option 3: Three FMUs (Urban + Rural + Coastal Settlements)	Partly The option differentiates between rural and urban values, and recognises values associated with lagoons in coastal settlements. It also distinguishes between rural and urban management approaches, which are significantly different. It would specifically consider wastewater management issues associated with septic tanks, and the effects of debris in the Wainui Stream mouth. Risks: It is unclear what freshwater issues or drivers of degradation are present within the Coastal Settlements FMU that require a different management approach, except for the management of septic tanks. There is a risk that this FMU manages issues that are coastal-related, rather than freshwater. Freshwater is a small component of this landscape, and lagoon and river mouth issues are better tackled through setting of limits, management, and action plans relevant to urban and rural drivers of degradation or in region-wide provisions.	Partly State of environment monitoring and biomonitoring data collected within the Waimatā and Pakarae catchments and in the Gisborne urban area would be sufficient to serve as proxy data for rural and urban FMUs. Risks: SOE data captured for Wainui and Hamanatua streams may be harder to use as representative data for the whole Coastal Settlements FMU, given that there may be notable differences between the issues between the peri-urban and rural components of the FMU. It is not consistent with other coastal settlements in this catchment planning area, namely Whāngārā nor Makorori (neither of which have lagoons and river mouths affected as per Wainui and Okitu). It is also not consistent with the lagoon areas of Pouawa and Turihaua.

5. Summary of evaluation

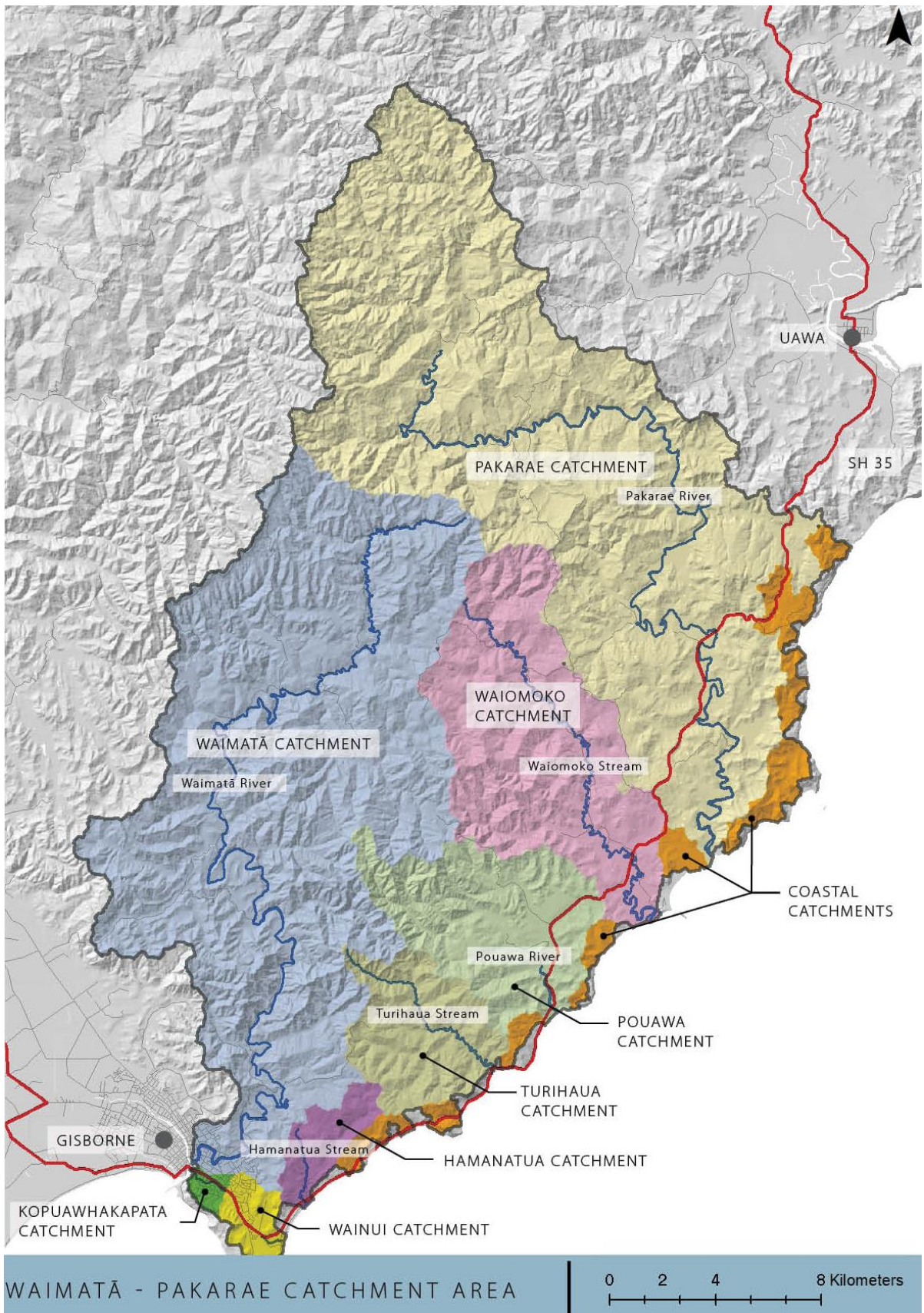
Based on the evaluation of options, we recommend Option 2 (one rural FMU, one urban FMU) as the most appropriate approach to managing freshwater within the Waimatā–Pakarae catchment area.

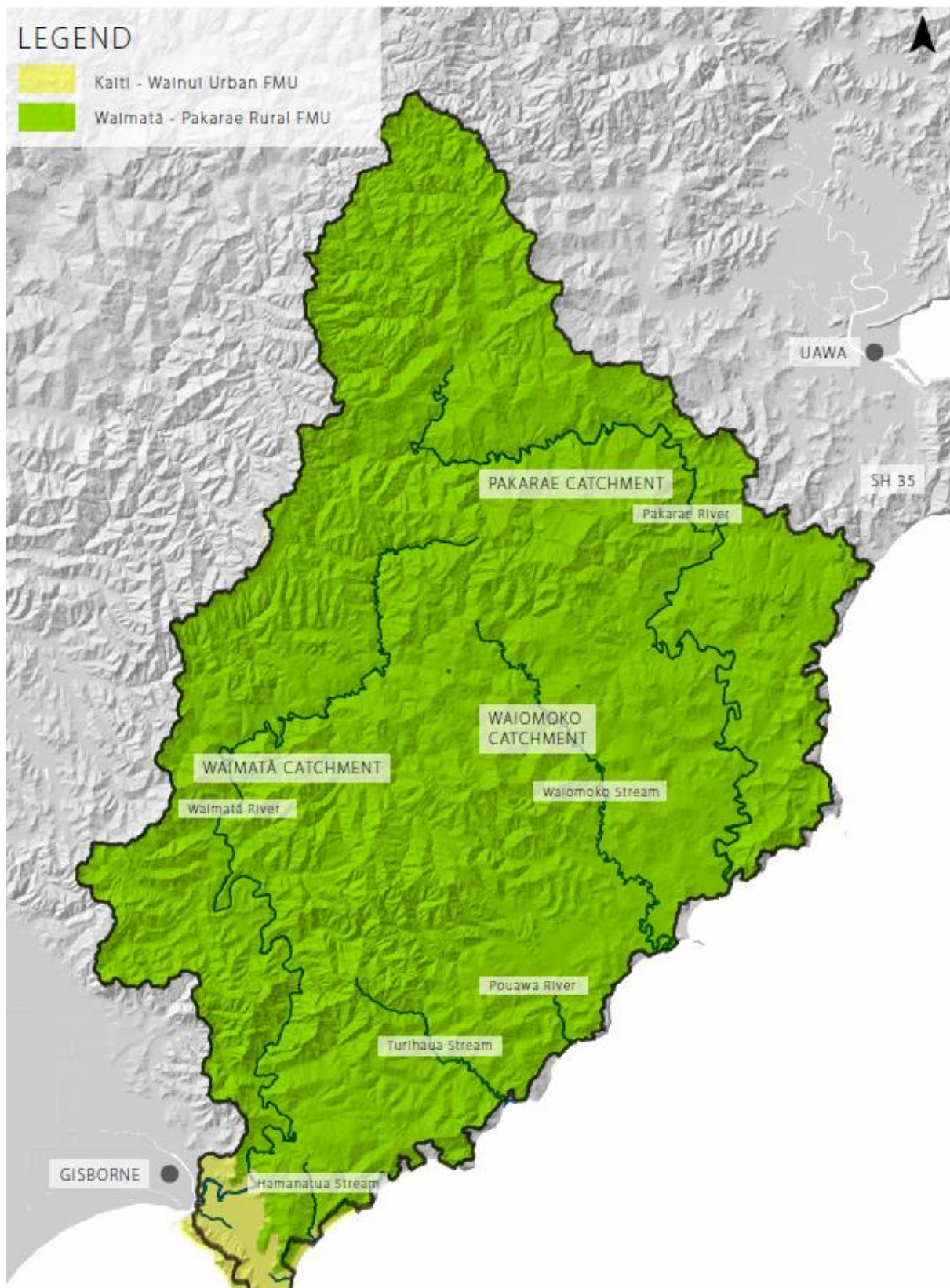
Two FMUs recognise the different drivers of freshwater issues between Gisborne's built environment and the rural hinterland. We consider these two distinctive landscapes require different management approaches to account for the differences in how freshwater is valued, the outcomes for those values, and the targets, limits, rules and actions required to address the different issues.

With regard to the coastal margin, we recognise there are distinctive values where freshwater intersects with the coastal marine area. However, the drivers of freshwater issues for the coastal settlements area are no different to those in the proposed rural and urban FMUs, with the exception of septic tank issues. The latter is addressed through relevant provisions in the TRMP, and this single issue does not warrant the creation of a separate FMU; the issue is the risk associated with pathogens and septic tanks is but one source of pathogens (with the Wainui Stream also affected by wastewater network overflows).

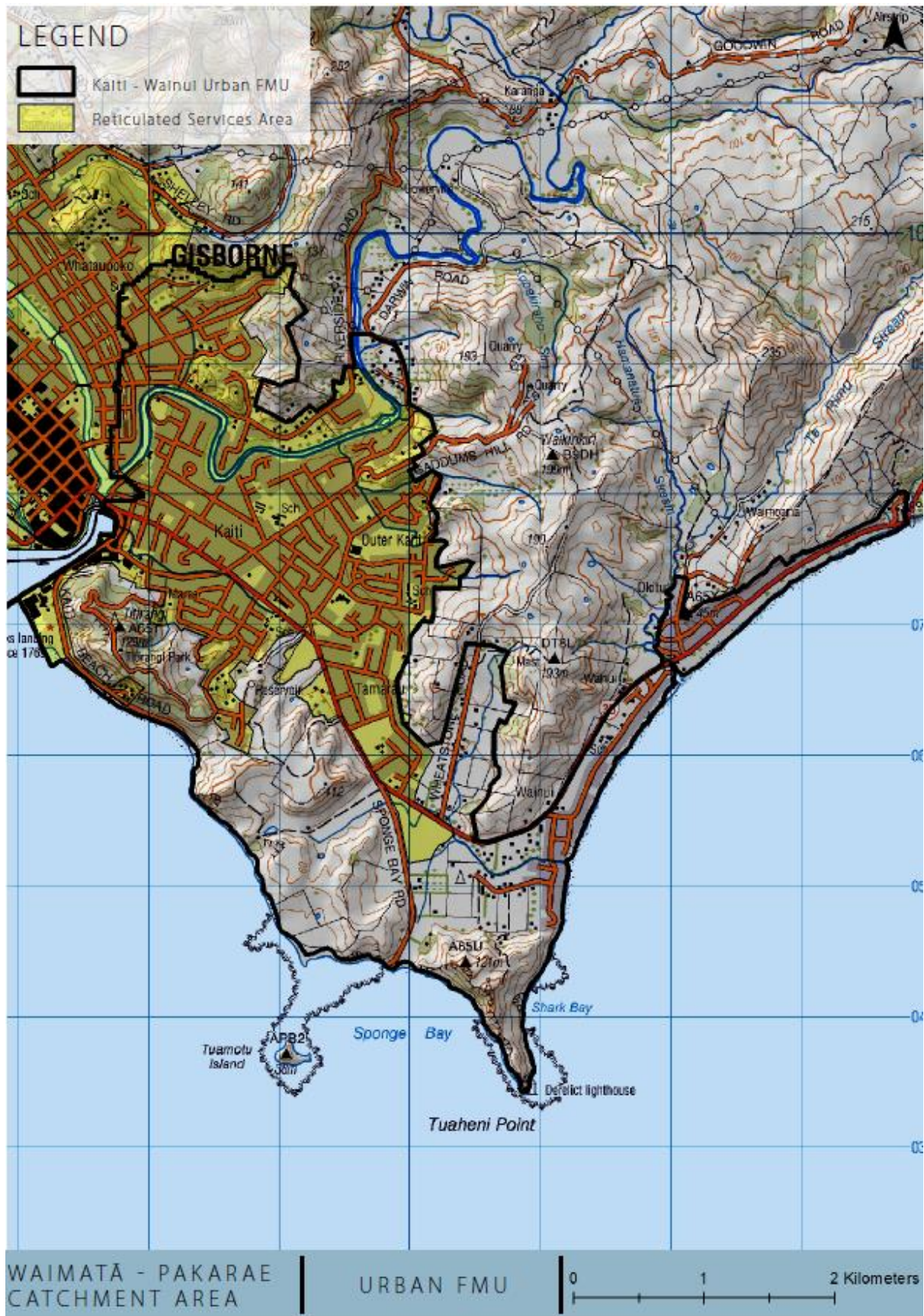
We recommend unique coastal values are recognised where they relate to corresponding urban and rural FMUs. In doing so they are able to inform the development of environmental outcomes and target attribute states for water quality that can drive improvements within those particular locations within broader FMUs. This will lead to more efficient policy and more effective approaches to achieving outcomes and ultimately the Long-Term Vision set for the catchment area.

Attachment 1: Waimatā-Pakarae Catchment Area





Attachment 3: Extent of Urban FMU - Wainui, Okitu, Makarori



Attachment 4: Urban, Rural and Coastal Settlements FMUs

