STORMWATER MANAGEMENT PLAN

Thames-Coromandel Urban Areas

July 2025

Stormwater Management Plan, TCDC Urban Areas: ECM Docset number:

Revision Number	Prepared By	Accepted By:	Description	Handover Date
1	K Gamble - TCDC		Final Draft for submission to WRC	29 September 2020
2	Saki Gounder – Te Miro		Final Draft for submission to WRC	10 November 2021
3	K Selby Smith Waters Services Engineer TCDC	Brett Houston Water Services Manager TCDC	Review	15 July 2025
4	K Selby Smith Waters Services Engineer TCDC	Brett Houston Water Services Manager TCDC	Issue	30 July 2025

Table of Contents

1.0 INTRODUCTION

1.1 Context

Thames-Coromandel District Council (TCDC) owns and maintains stormwater networks within urban areas in the district. The Council networks consist of approximately 183km of stormwater pipes, approximately 4,080 manholes, 5 pump stations, stormwater inlet and outlet structures, and assorted minor drainage structures such as soakage pits, detention ponds, and treatment devices.

Stormwater management is multi-agency, multi layered complex activity and there are limitations to the extent to which TCDC can manage stormwater in the townships.

Stormwater assets are managed between three departments within TCDC (Water Services, Roading, and Parks & Reserves). The effective management of stormwater relies on proactive collaboration with other governing bodies.

TCDC has some legislative and planning mechanisms available to influence and regulate land-use activities that may have adverse effects on networks and their receiving environments.

The Stormwater Management Plan (SMP) provides compliance to the Comprehensive Stormwater Discharge Condition, Schedule A, Condition 30 and applies to each urban area. The conditions are lettered A-R and are summarised in Table 1 below, with the relevant section in the report listed.

The SMP aims to:

- Inform the user of TCDC urban areas, typical stormwater contaminants and receiving environments.
- Outline how the stormwater network is operated, maintained, and enhanced to deliver on the stormwater levels of service.
- Outline best practice options/ easy win solutions to avoid, remedy or mitigate adverse environmental effects resulting from stormwater discharge.
- Outline the roles and responsibilities for control and mitigation measures.
- Act as a resource document to help inform the Annual Report that TCDC is required to submit to WRC each year.

Table 1. Consent condition and location within the SMP

Consent Condition	Description	Location in SMP
a	Plans	Appendix 1
b	Integration with key planning instruments and regulatory/non-regulatory processes	Section 2
c	Urban Descriptions	Section 3
d	Stormwater receiving water bodies	Section 3
e	Key stakeholders	Section 1.3
f	Stormwater network operation and maintenance procedures	Section 5.1, 5.2 and 5.3
g	Asset management initiatives	Section 5.8
h	Initiatives and implementation methods to manage adverse effects.	Section 5.7 & 6.1
i	Fish Passage	Section 5.4
j	Stream Channel Works	Section 5.5
k	Potential sources of stormwater contaminants	Section 4.0
l	Non-routine contaminant discharge events	Section 5.6
m	Stormwater Quality Improvement Programme	Section 6.1
n	Reference document discontinued	
o	Low impact urban design	Section 5.9.2
p	Stormwater management devices register	Section 5.3
q	Prioritised works schedule	Section 6.5.1
r	Performance measures	Section 6.2 & 6.3

1.2 Comprehensive Stormwater Discharge Consent

The Waikato Regional Council has issued eight Comprehensive Stormwater Discharge Consents (CSDC) for urban areas in the Thames-Coromandel District. These were granted on 29 August 2011 and expire on 31 August 2031.

The consent numbers for the CSDCs for each urban area has been summarised in Table 2 and the urban areas are shown in Figure 2.

Table 2. Urban Areas and CSDC Consent Number

Consent Number	Urban Area	Approximate Stormwater Catchment Area (ha)	Estimated Resident Population**
AUTH122521.01.01	Thames	1,052	7,212
AUTH105661.01.01	Pāuanui	552	1,068
AUTH105663.01.01	Coromandel	532	1,782
AUTH105664.01.01	Tairua	435	1,653
AUTH105665.01.01	Whitianga	1,086	6,054
AUTH105666.01.01	Onemana	42	192
AUTH105667.01.01	Whangamatā	833	4,269
AUTH105668.01.01	Thames Coast*	298	1,458

* Combined populations from Ngarimu Bay, Te Puru, Waiomu and Tapu,

**Estimated resident population 2023 Census (Stats.govt.nz)

The resource consent provides the following benefits to the Thames-Coromandel community:

- Consent to divert and discharge stormwater from existing urban environments, including the transport network.
- Establish the agreed controls to manage and mitigate adverse environmental effects of those discharges including flooding, erosion and routine contaminants.
- Provides mechanisms under which new urban development can be consented.

The following activities are not authorised by the consent:

- Non-routine contaminants entering the stormwater network (spills).
- Discharge of stormwater directly to the receiving environment by individuals, corporate or government bodies (other than TCDC).
- Construction of new structures on the beds of surface water bodies.

The consent conditions are aimed to ensure there are no adverse effects on the receiving environment and the network, ensuring the network is well designed, well operated and maintained to manage the effects of contamination and increased flows resulting from development.

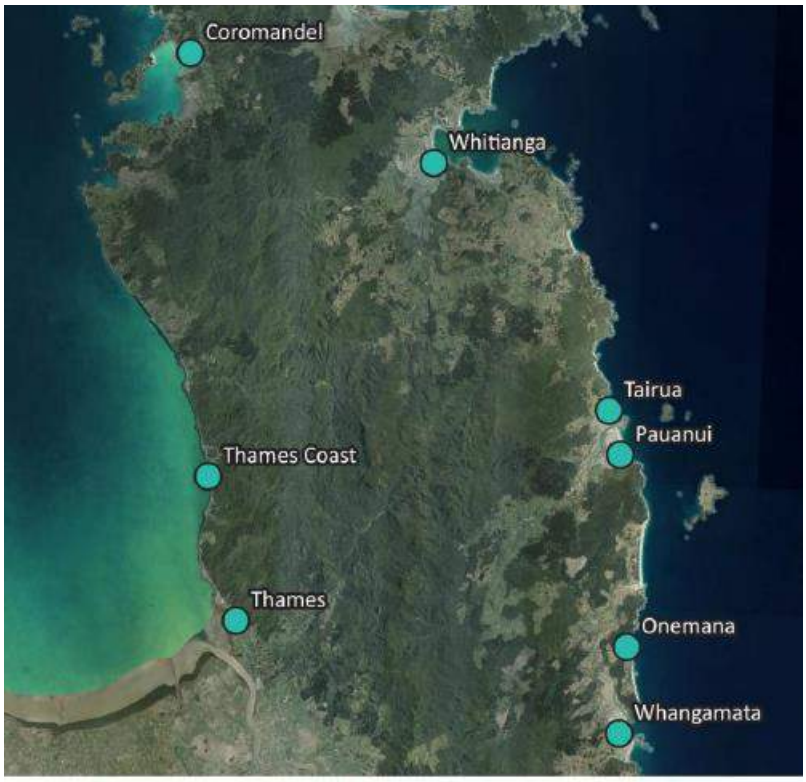


Figure 1. Map of Urban Areas in the CSDC

1.3 Key Stakeholders

Thames-Coromandel District Council believe key stakeholders generally share the view that the stormwater networks within the District shall be designed and implemented to protect the relevant communities from flooding and also avoid, as far as practicable, the adverse effects on receiving waters and habitats. Key stakeholders include:

1.3.1 Community

Community includes citizens, ratepayers, and iwi. There are a number of ways Council engages with the community to solicit views on stormwater (amongst other topics) including:

- **Long Term Plan** consultation process including advertisement of process, public meetings, social media polls, and formal submissions / hearing process.
- **Request for Service system**. The community may raise a request for service regarding stormwater at any time via the Thames-Coromandel District Council website or via phoning customer services.
- **Resource Consent** applications including consultation with relevant stakeholders (including Fish & Game; Forest & Bird; and DOC), community (via Community Boards and notification) and relevant iwi.
- **Stakeholder Engagement Groups** The stakeholders include community board members, Councillors, key TCDC staff, consultants, WRC specialist and interested community members/groups for example Ratepayers Associations.

As outlined in Council's Stormwater Asset Management Plan community views on stormwater include:

- **Ratepayers**: interested in safe and sustainable stormwater services while being conscious of rates impact. This group is further subdivided into two groups:
    - **Resident Ratepayers**: These customers make up about half of ratepayers and are focussed on retaining current levels of service and, where possible, to make savings to minimise rating impacts.
    - **Non-Resident Ratepayers**: These customers are mainly holiday makers and have a focus on receiving services that are provided over the peak summer period.
- **Visitors to the District**: These customers expect prompt and reliable stormwater services.
- **Industry and Commercial**: The District has a number of small industrial zones that support the local economy. They expect reliable services to continue their business operation uninterrupted, as well as the least cost.
- **Iwi:** requires Council to consult on resource consent applications and capital works projects due to the cultural effects of discharging stormwater to the natural environment.
  The Council acknowledges the following iwi as tangata whenua within the District.
    - Ngāi Tai ki Tāmaki
    - Ngāti Hako
    - Ngāti Hei
    - Ngāti Maru
    - Ngāti Pāoa
    - Ngāti Porou ki Harataunga ki Mataora
    - Ngāti Pūkenga ki Waiau
    - Ngāti Tamaterā
    - Ngāti Tara Tokanui

- Ngāti Whanaunga
- Te Patukirikiri

Iwi consultation is undertaken for abstraction/discharge consents and significant projects. Specific consultation with hapu will be included in all significant project plans.

1.3.2 Internal Stakeholders

- **Mayor and Councillors**: Concerned with strategic outcomes and rates impact which also impact on customer satisfaction.
- **Community Boards**: Interested in specific projects in their area, levels of service and rates impact, and working with community groups.
- **Asset Planning and Development Planning Manager**: Provides a centralised guidance and direction role across all of Council's assets.
- **Infrastructure Group – Roading, Solid Waste and Development Engineering**: Interested in the co-ordination of capital programmes in the road corridor.

1.3.3 Waikato Regional Council

Waikato Regional Council states in its Principles of Stormwater Management: Waikato Stormwater Management Guideline "Adequate stormwater management for urban and rural areas is necessary to preserve and promote the general health, welfare, enhancement of ecological values and economic wellbeing of the Waikato Region."

1.3.4 Ministry for the Environment

Stormwater management is recognised by the Ministry for the Environment as a local government service that is potentially at risk from climate change and may need adaptation.

In regions where the frequency and intensity of extreme rainfalls are projected to increase, the possible impacts of climate change include:

- Increased surface and stream erosion followed by deposition of sediments in receiving environments
- Flooding at site, local and regional scales
- Failure of stormwater treatment devices during high flow events leading to by-pass and / or flushing of contaminated water
- High wet-weather hydraulic loads and bottle-necks in stormwater and sanitary sewer networks due to inflow and sewer infiltration - these can lead to local inundation and overflows of untreated wastewater

Summer warming and drying can also pose problems such as increased temperature and reduced flows in streams and estuaries.

To aid local government MfE have published the following;

- ***Coastal hazards and climate change guidance*** (July 2024) document helps ensure coastal hazards and climate change are being factored into planning in coastal areas.

1.3.5 Department of Conservation

The Department of Conservation's view on managing stormwater diversion and discharge is outlined in their NZ Coastal Policy Statement 2010.

1.3.6 Taumata Arowai

Taumata Arowai is the water services regulator for Aotearoa, with the role of ensuring all communities have access to safe and reliable drinking water every day. They have the oversight role in relation to the environmental performance of public drinking water, wastewater, and stormwater networks.

Currently, there are no mandatory requirements to report on the performance of stormwater networks.

1.4 Stormwater Management Principles

The following principles will guide stormwater management:

1. TCDC will monitor the effects of land use activities that relate to stormwater and respond when monitoring plan triggers are exceeded and when adverse environmental effects such as significant erosion and fish passage constraints are identified.
2. TCDC will proactively look for network improvements and utilise the Long-Term Plan to carry out prioritised improvements.
3. TCDC will provide educational material to assist public awareness of stormwater issues and guide behaviour and best management practice.
4. TCDC will guide developers and land use change to avoid adverse environmental effects through application of the District Plan, and the Codes of Practice.
5. TCDC will carry out management reviews and update procedures and planning documents with best management practice when required.
6. TCDC will assess performance measures and look for opportunities to upgrade the network to meet better standards or improve procedures.
7. TCDC will carry out maintenance activities on the network in accordance with annual programs.

2.0 INTEGRATION BETWEEN SMP AND OTHER DOCUMENTS

The following sections describes the relationship and integration between the SMP and other key planning instruments and regulatory / non-regulatory processes, including all those utilised in the management of the stormwater network.

2.1 National Legislation

TCDC is legally required to maintain current stormwater schemes in certain areas identified by the Ministry of Health (except that it may, under some circumstances, close or transfer the service where less than 200 people are served). Council's mandate for the provision of public stormwater services and for monitoring and enforcement of appropriate stormwater control measures on and from private properties is prescribed through a range of national legislation, the principal Acts being:

I. **The Health Act 1956**

The Health Act 1956 requires local authorities to provide sanitary works, including drainage, (Section 25). There are however no associated provisions in the Act defining what sort of drainage system should be provided, and what capacity it should have.

II. **The Local Government Act 2002**

The Local Government Act 2002, with regards to stormwater, requires local authorities to:

- As part of its long-term plan, prepare and adopt an infrastructure strategy for a period of at least 30 consecutive financial years;
- Assess the health risks to communities from absence of or deficiency in stormwater services; the quality of services currently available; the current and estimated future demands for stormwater services; and actual or potential consequences of stormwater discharges;
- Report on defined levels of service, measures, and targets;
- Continue the operation of any community water service (including the provision of stormwater drainage).
- Include strategic assets in Significance and Engagement Policy

III. **The Building Act 2004**

The Building Act 2004 enforces the provisions of the Building Code in relation to safe and adequate stormwater provision and flood protection.

IV. **The Resource Management Act 1991 (RMA)**

The RMA is an effects-based legislation that has the overarching purpose of promoting the sustainable management of resources. The RMA is relevant to the stormwater activity as the receiving land and watercourses that TCDC disposes stormwater to are valuable resources.

V. The Civil Defence Emergency Management Act 2002

The purpose of this Act is to ensure essential lifelines, including stormwater collection, are able to function effectively both during and after Civil Defence emergencies.

VI. Hazardous Substances and New Organisms Act 1996 (HSNO)

The purpose of this Act is to ensure the health and safety of people and communities by preventing or managing the adverse effects of hazardous substances and new organisms.

VII. Climate Change Response (Zero Carbon) Amendment Act 2019

This Act requires Territorial Authorities to comply with the New Zealand Emissions Trading scheme in the delivery of its three water services.

VIII. Health and Safety at Work Act 2015

The Health and Safety at Work Act 2015 ensures that everyone has a role to play in health and safety and makes everyone's responsibilities clear.

IX. Heritage New Zealand Pouhere Taonga Act 2014

This act requires Territorial Authorities to consider historical and cultural heritage when working on infrastructure.

X. Land Drainage Act 1908

This act outlines the powers of local authorities with regards to clearing of watercourses / drains and the obligations to maintain and repair existing drainage systems

XI. Local Government (Rating) Act 2002

This act provides Territorial Authorities with flexible powers to set, assess, and collect rates.

XII. The Hauraki Gulf Marine Park Act 2000

The purpose of this Act is to integrate the management of the natural, historic, and physical resources of the Hauraki Gulf, its islands and catchments, as well as to establish the Hauraki Gulf Marine Park and the Hauraki Gulf Forum. A number of Thames-Coromandel District Council's western seaboard stormwater catchments drain to the Hauraki Gulf.

XIII. Utilities Access Act 2010

This act requires TCDC to work with other utility operators and corridor managers to install, maintain, and upgrade infrastructure within transport corridors.

XIV. Local Government (Water Services Preliminary Arrangements) Act 2024

This act establishes the Local Water Done Well framework and the preliminary arrangements for the new water services system. TCDC has recently announced that it will set up a water entity with Western Bay of Plenty and Tauranga City Council.

2.2 National Policy Statements

National policy statements provide a means for central government to prescribe objectives and policies on resource management matters of national importance. The following National policies are relevant to the Stormwater Activity:

I. National Policy Statement for Freshwater Management 2020

The National Policy Statement for Freshwater Management came into effect on 3 September 2020. It includes provisions required to be included in regional policy statements and regional and district plans. It requires an integrated management approach. The objective of the National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises: (a) first, the health and well-being of water bodies and freshwater ecosystems (b) second, the health needs of people (such as drinking water) (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

II. National Policy Statement on Urban Development 2020

Thames-Coromandel District Council is not listed as a tier 1 or 2 local authority under this policy statement, so it is therefore assumed to be a tier 3 local authority. As such, Thames-Coromandel District Council is strongly encouraged to do the things that tier 1 or 2 local authorities are obliged to due under Parts 2 (Objectives and Policies), and 3 (Implementation) of this National Policy Statement. This policy statement outlines requirements for development infrastructure (including stormwater) and additional infrastructure required to support or service development capacity.

III. New Zealand Coastal Policy Statement (NZCPS) 2010

The purpose of the NZCPS is to state policies to achieve the purpose of the RMA to promote the sustainable management of natural and physical resources in relation to the coastal environment of New Zealand. Policy 23 (4), outlined below, specifically relates to stormwater discharges. In managing discharges of stormwater take steps to avoid adverse effects of stormwater discharge to water in the coastal environment, on a catchment by catchment basis, by: (d) avoiding where practicable and otherwise remedying cross contamination of sewage and stormwater systems; (e) reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities; (f) promoting integrated management of catchments and stormwater networks; and (g) promoting design options that reduce flows to stormwater reticulation systems at source.

2.3 Regional Policies and Plans

The following Regional Policies and Plans are relevant to Stormwater Activities:

I. **Waikato Regional Policy Statement: Te Tauākī Kaupapahere Te-Rohe O Waikato**
The Waikato Regional Policy Statement, published by Waikato Regional Council, became operative on 20 May 2016. It provides an overview of resource management issues in the Waikato Region. It provides policies and a range of methods to achieve integrated management of natural and physical resources across resources, jurisdiction boundaries and agency functions, and guides the development of sub-ordinate plans (Regional as well as District) and the consideration of resource consents.

II. **Waikato Regional Coastal Plan**
The Waikato Regional Coastal Plan, published by Waikato Regional Council, became operative in 2005. The purpose of this plan is to enable Waikato Regional Council, in conjunction with the Minister of Conservation, to promote sustainable management and achieve integrated management of the Coastal Marine Area (CMA). It outlines permitted, controlled, and prohibited activities and associated rules e.g. stormwater discharges (Sections 16.3.5 and 16.3.6) and stormwater structures (16.4.10).

III. **Waikato Regional Plan**
The Waikato Regional Plan sets out the objectives, policies and rules to give effect to the Waikato Regional Policy Statement. Method 3.5.11 outlines implementation methods for stormwater discharges including the requirement for Waikato Regional Council to work with both Territorial Authorities and resource users to effectively manage stormwater within the region.

2.4 Guideline Documents

I. **NZS 4404:2010 Land development and subdivision infrastructure**
This is a New Zealand standard that provides local authorities, developers, and their professional advisors with criteria for design and construction of land development and subdivision infrastructure. The Standard incorporates up-to-date design principles such as low impact design (LID) solutions to stormwater management, and urban design principles that encourage more sustainable places, spaces, and networks in towns and cities.

II. **MBIE Acceptable Solutions and Verification Methods E1 Surface Water**
Building Code Clause E1 Surface water requires buildings and site work to be constructed to protect people and other property from the adverse effects of surface water. The clause ensures that buildings and hard surfaces within the curtilage of a building are designed and constructed with a surface water drainage system that will ensure the disposal of surface water without threatening the building and the health and safety of the people in or around the building.

III. **Preparing for Future Flooding**

This guide for local government in New Zealand was published by the Ministry for the Environment in May 2010. It is made up of four parts:

- Parts 1 and 2 are a summary of the guidance manual Tools for Estimating the Effects of Climate Change on Flood Flow (outlined above).
- Part 3 provides a method of considering the consequences of future flood risk within a risk management framework.
- Part 4 highlights principles and options for managing future flood risk.

IV. Coastal hazards and climate change guidance

This guidance document, released in July 2024, helps ensure coastal hazards and climate change are being factored into planning in coastal areas.

The Coastal hazards and climate change guidance is a tool to help decision makers consider the potential effects of climate change, now and in the future, based on the latest scientific information. This includes a 10-step process to assess the risks and determine what actions to take.

V. Climate Change Projections for New Zealand

This report, prepared for the Ministry for the Environment, was published in September 2018. It addresses expected changes in New Zealand's climate (temperature and many other climate variables) out to 2120, including regional variations.

2.5 Thames-Coromandel District Council Documents

Our Council exists to ensure our communities have a good quality of life, both now and in the future. That means that we, as a local authority, not only have to identify what our Council needs, we also must demonstrate how we'll fulfil those needs. Our vision, strategies, plans and policies are all designed to support this goal. Thames-Coromandel District Council currently does not have a Stormwater Bylaw, and this does create some difficulties enforcing compliance..

I. Our Vision

We will provide quality services and facilities, which are affordable, and delivered with a high standard of customer service. We will be a good community citizen through our support of community organisations, economic development, and the protection of the environment. The Coromandel Peninsula is a desirable place to live, work and visit.

II. 30 Year Infrastructure Strategy

The 30-year strategy provides an overview of:

- Issues identified as likely to have a significant impact on infrastructure over the next 30 years
- Options identified for managing these issues and the implications of these options
- Significant capital projects that are expected to be undertaken over the next 30 years.

District Plan

Thames-Coromandel District Council is currently operating under two District Plans. The Operative District Plan became fully operative in 2010, with the Operative in part District Plan 2024 also in affect.

Both plans set out several objectives, policies, rules, and development standards in relation to stormwater.

The Plans guide how new land use and subdivision developments should occur to promote the effective and efficient management of the stormwater network into the future. The District Plan refers to the TCDC Code of Practice for Subdivision and Development.

Specifically, Section 4 of Part 1 of the Operative District Plan, titled Information Requirements for Resource Consents, Section 4, Subdivision Application Requirements, Section 4(k) requires applicants to advise “How stormwater will be managed having regard to a total catchment management approach achieving no increase in the peak stormwater flow from the site and using low impact urban design and development methods”

Code of Practice for Subdivision and Development

The Code of Practice provides a guide to subdivision and development within the Thames-Coromandel District. defines the performance standards that infrastructure for subdivisions and development with the Thames-Coromandel district must comply with.

For stormwater, these standards include the design life, hydraulic capacity and quality / treatment requirements. For matters not covered by the Code of Practice, TCDC may refer to NZS 4404, Building Code E1 Surface Water and the Regional Infrastructure Technical Standards (RITS), as appropriate.

It is noted that TCDC plans to replace the Code of Practice with the National Engineer Design Standards (NEDS) once this document is available. However, until the final entity structure under the ‘Local Water Done Well’ legislation, the development and introduction of NEDS has been delayed as the final entity structure is finalised.

Long Term Plan

Our main strategic plan is a 10-year business plan called the Long-Term Plan. This is a statutory requirement under the Local Government Act 2002. This plan brings together community outcomes, plans, policies, strategies, and levels of service to ensure we will deliver the services required of us by our communities.

The stormwater activity includes managing stormwater as well as land drainage. Stormwater systems collect and dispose of stormwater to limit the effects of surface ponding. We have stormwater systems throughout our district to manage runoff and reduce surface water ponding. This reduces risks to public health and safety, damage to property, and avoids dangerous road conditions. Service Levels

and Performance Measures for Stormwater, as mandated by the Department of Internal Affairs, are as follows:

- The Council's stormwater services protect habitable areas from flooding (measured by flooding events and number of habitable floors affected).
- The Council provides a responsive stormwater request service (measured by number of complaints and response time to complaints).
- The Council minimises the environment impact of protecting habitable areas from flooding (measured by number of operational resource consent conditions not complied with, number of abatement notices, number of infringement notices, number of enforcement orders, and number of successful prosecutions).
- Stormwater and land drainage activities meets the needs of our community (customer satisfaction as measured by an annual customer satisfaction survey) – commenced 2024.

The current Long-Term Plan 2024-2034 proposes the following;

- Over the next ten years;
    - Renewing our stormwater systems ($21.9 million).
    - Reduce stormwater flooding for properties in Thames, Cooks Beach, Whitianga, Pāuanui, Whangamatā and Matarangi ($34.5 million in total).
    - Infrastructure upgrade in Pollen Street ($4.4 million)
    - In the 20 years after that;
        - Replace aged stormwater networks (approx. $56.44 million)
        - Upgrades to cope with increased rain amounts and intensities (approx. $122.7 million)

Annual Plan

The Local Government Act 2002 also requires Council to prepare an Annual Plan. The annual plan sets out Council priorities and budgets for services and infrastructure provision and supports the aims of the Long-Term Plan. The Annual Plan focuses on the next three years and is more specific about what needs to be done right now.

Public consultation occurs on both the Annual Plan and Long Term Plan and these public processes provide the community with the opportunity to have input into Council's provision of stormwater services, funding, and priorities.

Asset Management Policy (ECM Doc Set # 6380476)

The Thames-Coromandel District Council's Asset Management Policy was first adopted by Council in June 2017 and adopted in June 2020. The policy incorporates all areas of asset management including stormwater. It enshrines Council's commitment to asset management including the following points:

- Council is committed to implementing a systematic asset management methodology to apply appropriate asset management practices across all public asset areas. This includes ensuring that assets are planned, created, operated, maintained, renewed and disposed of in accordance with Council's priorities for service delivery.
- Council is committed to meeting core asset management status for all activities

3 Waters Asset Management Plan

The 3-Waters Asset Management Plan is a tactical, infrastructural plan that gives effect to a range of other strategic and tactical planning documents including Council's strategic direction, Long Term Plan and 30 Year Infrastructure Strategy.

The Asset Management Plan demonstrates how Council's goals and strategic targets will be achieved through effective sustainable management of stormwater infrastructure assets. It is a central document that is linked to the other strategic documents both internally at Council and externally with its key stakeholders.

3.0 DESCRIPTION OF TOWNSHIP AND RECEIVING ENVIRONMENT

This section details the eight urban areas that TCDC currently holds Comprehensive Stormwater Discharge Consents. This provides information of the following elements and addresses the following elements for the

1. Land use
2. Receiving environment
3. Network extent
4. Stormwater Assets

Refer to Appendix A for the associated urban area plans.

3.1 Coromandel

3.1.1 Land Use

Coromandel Township is situated on the inner Coromandel Harbour and to the west of Ruffin's Peninsula.

The urban area of Coromandel is made up of a series of relatively small catchments which can be simply divided into four main catchments as follows:

- Central Coromandel
- Wyuna Bay
- Long Bay
- Oamaru Bay

3.1.2 Receiving Environment

The receiving environments of the stormwater discharges within Coromandel urban area can be generally described as:

- Coromandel Harbour: estuarine sand flats and mudflats with some vegetation, including mangrove communities.
- Streams: a mixture of boulder and pebble stream beds, some of which are tidal and contain relatively high levels of deposited sediment.
- Land: pastoral farmland and grassed drains.

Stormwater is discharged into the Whangarahi Stream, Karaka Stream, Whakanekeneke Stream, and the Coromandel Harbour.

There are approximately 55 outlets throughout the Coromandel stormwater system discharging to the Coromandel Harbour (14 outlets), Oamaru Bay (2 outlets), Driving Creek (2 outlets), Whangarahi Stream (9 outlets), Karaka Stream (6 outlets), Taumatawhahine Stream (4 outlets) and Whakanekeneke Stream (5 outlets). There are also approximately 13 discharges onto land.

The surrounding coastline is influenced by tidal fluctuations which, at low tide, expose large areas of mud flats that support a diverse tidal marine ecology. In areas where human development has not occurred the coastline is dominated by large stands of mangroves and extensive mudflats. These habitats provide feeding, roosting and nesting sites for many bird species including rare and threatened wading and coastal bird species. As a result, the inner Coromandel Harbour is recognised in the Waikato Coastal Plan as an Area of Significant Conservation Value (ASCV).

3.1.3 Network Extent

A comprehensive stormwater collection system exists for Coromandel township comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Detention pond
- Gravel Filled Stormwater Attenuation Basin
- Hynds First Defense High Capacity

The existing piped stormwater reticulation that serves roadways was constructed in the early 1960's, with existing private properties (pre 2015) disposing of their stormwater via overflows to road or open drains. New private properties are disposing of their stormwater to on lot soakage or detention devices to achieve hydraulic neutrality for the site. These devices are privately owned and maintained.

3.1.4 Stormwater Assets

Stormwater assets within the CSDC for Coromandel are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to 'Major Stormwater Management Devices Register' ECM Doc Set #7207187.

Table 3. Coromandel urban stormwater assets

Device	Location	Catchment	Ha
Hynds First Defense High Capacity	In road berm outside 165 Wharf Road GIS ID: 550556	Central Coromandel	3.73

3.2 Whitianga

3.2.1 Land Use

Whitianga Township is located within Mercury Bay on the eastern coast of the Coromandel Peninsula. To the south the Township is bound by the Whitianga Estuary. The eastern edge is bordered by Buffalo Beach, a white sandy beach backed by low sand dunes which is gradually being modified by erosion protection structures (seawalls). The Township is built on ancient low-lying dunes, so is low lying, relatively flat land with sandy free draining soils.

The urban area of Whitianga is made up of series of relatively small catchments. For the purposes of stormwater planning, the urban area can be divided into seven areas:

- Centennial Heights: relatively steep residentially zoned area at the northern end of the Whitianga Township.
- Buffalo Beach Foreshore: sandy coast with low dunes, intercepted by Taputapuatea Stream.
- Whitianga Inland Residential area: flat, low-lying area with mix of rural and relatively new residential development.
- Central Whitianga: commercial, industrial and moderate to high density residential land use, adjacent to the shore of the Whitianga estuary.
- Moewai Road: industrial area at the western outskirts of the Whitianga urban area.
- Whitianga Waterways: a series of artificial canals providing boat access to residential development.
- Wharekaho: A subdivision located on the northern side of the Centennial Heights ridge incorporating some of Centennial Heights.

3.2.2 Receiving Environment

The receiving environments for stormwater discharges in Whitianga can be described as:

- Whitianga Estuary: intertidal sandflats and mudflats, some areas vegetated with eel grass, mangroves or salt marsh species.
- Streams: sandy or muddy bed.
- Pastoral / rural type grassed drains.
- Channelised drains.

Stormwater discharges to the coastal receiving environments in Whitianga are likely to be relatively rapidly dispersed by the tidal flushing effects in Whitianga Estuary and natural flushing in Taputapuatea Stream. These flushing effects are increased during high rainfall events, at the same time that stormwater discharges (and associated potential contamination) increase. There is, however, potential for localised build-up of contaminated sediment in sheltered estuarine areas characterised by fine sediments.

Within the estuary, the shoreline is influenced by tidal fluctuations which, at low tide, expose large areas of mud flats that support a diverse tidal marine ecology. The Whitianga Harbour is recognised in the Waikato Regional Coastal Plan as an Area of Significant Conservation Value (ASCV) for a range of reasons, including (but not limited to) the significance of the estuary to Hauraki iwi, the provision of habitat for rare and threatened wading, coastal and freshwater birds, intertidal vegetation and habitat (including extensive eel grass and mangrove communities), resident dolphins, geo preservation, archaeological sites, and adjoining forest scenic reserves.

Most of Whitianga Township is low lying and flat and is therefore vulnerable to flooding. The risk of flooding is further exacerbated by the tidal nature of the receiving environment, meaning if heavy rainfall occurs at high stages of the tide, the risk of flooding is further increased.

3.2.3 Network Extent

Whitianga has a reticulated stormwater collection and disposal system designed to cater for stormwater runoff from urban areas and to discharge this runoff into the Taputapuatea Stream, Whitianga Estuary, and into a range of grassed farm drains and channelised creeks and drains throughout the town.

The stormwater collection system for the township comprises the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Stormwater Pump Stations (Jackman Avenue and Cook Drive)
- Wetlands
- Soakage Cells
- Rain Gardens
- Detention Ponds

The piped stormwater reticulation serves only roadways, with private properties disposing of their stormwater by way of available hydraulic neutrality being in-ground soakage and / or on-site detention. TCDC has a wastewater treatment and disposal system servicing the Whitianga Township. This does not discharge into the stormwater network and has its own discharge consent requirements. Significant features of the Whitianga Urban Catchment are:

- Jackman Ave stormwater Pumpstation
- Cook Drive stormwater Pumpstation
- Whitianga Waterways (Private WRC stormwater discharge consent)
- Whitianga Wharf

- Whitianga Marina
- Moewai Road commercial and industrial site

There are four main drains which take stormwater from urban Whitianga to the estuary, and these are known as the Racecourse Road drain, Kareena Creek, Tennis Court Creek, and White Street drain.

3.2.4 Stormwater Assets

Stormwater assets within the CSDC for Whitianga are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to 'Major Stormwater Management Devices Register' ECM Doc Set #7207187.

Table 4. Whitianga urban stormwater assets

Device	Location	Catchment	Ha
Wetland	297 Cook Drive GIS ID: 303448	Buffalo Beach Foreshore	2.47
Soakage Cells	Austin Drive Road berm	Austin Drive	0.8
Detention Basin	Powhiri Place GIS ID: 20180731093418	Wharekaho	11.8

3.3 Whangamatā

3.3.1 Land Use

Whangamatā Township is situated on the foreshore of the Whangamatā Estuary, the Otahu Estuary and the Pacific Ocean.

Whangamatā is dominated by residential land use (>90% by area), with a small area of commercial development in the centre of town and a small amount of industrial zoned land south of the Moana Anu Anu River and causeway.

The beaches and estuaries in the Whangamatā area are highly valued by the local community and visitors for a wide range of contact and non-contact recreational activities, as well as for shellfish gathering, including popular shellfish beds in close proximity to the Wharf and Marina. The area also has considerable cultural, landscape and natural character values.

The Whangamatā urban area is made up of a series of relatively small catchments which can be broadly separated into five areas:

- North of Moana Anu Anu River: residential area with gently rolling contour.
- Whangamatā North: Industrial Area and CBD (and residential).

- Whangamatā Central: residential area.
- Whangamatā South: residential area.
- Beverly Hills: range of hills that look out over the central Whangamatā area
- Te Tutu subdivision: south of town opposite the refuse transfer station

3.3.2 Receiving Environment

The receiving environments of the stormwater discharges within the Whangamatā urban area can be generally described as:

- Whangamatā and Otahu Estuaries: Mudflats, sandy silty sediments, with or without vegetation.
- Streams: a mixture of boulder and pebble streambeds.
- Land: Pastoral farmland and grassed drains.
- Sandy Beaches.

It is likely that any discharges to the coastal environment will be relatively rapidly dispersed and flushed due to the extensive tidal and river flushing and sediment movement in the Whangamatā and Otahu Estuaries and the ocean beach.

Increased stormwater runoff during high rainfall events often coincides with wave action, storm surges and increased river flows, further increasing the flushing capacity of the receiving environment. Therefore, any visible environmental effect of discharges within the receiving waters in the estuary and on the beach is likely to be mitigated naturally within a short period of time. Accumulation of contaminants is possible in areas where the receiving environment has very fine sediments in streams or coastal environments sheltered from waves and currents.

The Pacific Ocean coast is characterised by white sandy beaches and vegetated sand dunes. The estuary shorelines are more influenced by tidal fluctuations which, at low tide, expose large areas of mud flats that support diverse tidal marine ecology. Large areas of the upper portion of the intertidal flats are vegetated with mangroves and. in some areas, salt marsh communities. Both the upper Whangamatā Estuary and the Otahu Estuary are recognised in the Regional Coastal Plan as Areas of Significant Conservation Value (ASCVs) for a range of reasons, including (but not limited to) their significance to Hauraki iwi, the provision of habitat for rare and threatened wading and coastal birds, intertidal vegetation and habitat (salt marsh, mangroves, eel grass and shellfish beds) and native fisheries habitat.

3.3.3 Network Extent

A comprehensive stormwater collection system exists for the township comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Detention Ponds
- Soakage Cells / Soakpits
- Gross Pollutant Traps
- Pump Stations (Tangaroa Road and Otahu Road)

Large areas of the town are built on flat, free draining soils and in these areas, stormwater is disposed of on-site by way of soakage. The council stormwater network is therefore designed predominantly to cater for stormwater generated within roadways. Roadways are often overland flow paths with grass swales and no reticulation. The grass swales provide significant soakage capacity within these sandy free draining soils.

The Whangamatā sand bar area (as defined in the TCDC Subdivision and Development Code of Practice 2013 Appendix I6C) has free draining sand suitable for on-site soakage. All other parts of Whangamatā have differing soakage rate from rapid to zero, therefore hydraulic neutrality (on site soakage and / or detention) are to be installed for all impervious areas at the time of building consent.

The Whangamatā stormwater system includes approximately 88 outlets discharging to the Whangamatā Harbour (20 outlets), the Pacific Ocean (7 outlets), Moana Anu Anu River (15 outlets), Moana Anu Anu Estuary (3 outlets), Te Weiti Stream and tributaries (4 outlets), Waikiekie Stream (3 outlets) and Otahu Estuary / River (3 outlets). There are also approximately 32 discharges onto or into land.

TCDC has a wastewater treatment and disposal system servicing the Whangamatā Township. This does not discharge into the stormwater network and has its own discharge consent requirements.

3.3.4 Stormwater Assets

Stormwater assets within the CSDC for Whangamatā are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to ‘Major Stormwater Management Devices Register’ ECM Doc Set #7207187.

*Table 5. **Whangamatā urban stormwater assets***

Device	Location	Catchment	Ha
Detention Pond	322 The Drive, Whangamata	Beverley Hills	1.69
Detention Pond	2752 SH25 - WAIHI-WHANGAMATA,	Rangituia / Te Tutu Subdivision	6.87

Device	Location	Catchment	Ha
	End of Rangituia Street		
Dry Detention Basin	Williamson Park (418 Ocean Road)	Whangamata Central	9.93
Detention Pond	4 Governors Heights	Moana Anu Anu River North	0.17
Detention Pond	105B Te Pamahue Drive	Moana Anu Anu River North	1.14
Dry Detention Basin	Island View Reserve	Whangamata South	1.69
Aquacell Soakage Pit	Otahu Road intersection with Moa Street GIS ID: 302007	Whangamata Central	0.35
Soakage Cells	Esplanade Drive End of the road off the side in the reserve GIS ID: 303359	Whangamata Central	0.14
Soakage Cells	Port Road. In berm at intersection with Tuck Road. GIS ID: 301649	Whangamata North, Industrial Area & CBD	0.95
Soakage Cells	Ranfurly Road End of the road off the side in the reserve GIS ID: 553143	Whangamata North, Industrial Area & CBD	0.93
Atlantis Drainage Cell	Tuck Road Close to Rutherford Road intersection, next to two scruffy domes GIS ID: 553144	Whangamata North, Industrial Area & CBD	0.28
Aqua Cells Soakage Cells	In roam berm outside 102 Winifred Ave, 149 Barbara Avenue and 103 Hunt Road. GIS ID: 553111	Whangamata North, Industrial Area & CBD	0.33
Soakage Cells	Service Lane behind 644a-650 Port Road (carpark). GIS ID 303357	Whangamata North, Industrial Area & CBD	0.29

3.4 Thames (Urban Area)

3.4.1 Land Use

Thames Township is the oldest township within the Coromandel Peninsula (founded 1867). It is situated at the south-western end of the Peninsula in the southern Firth of Thames. The township is adjacent to the eastern side of the mouth of the Waihou River and is built around the mouth of Kauaeranga River.

Thames can be generally divided into two topographical areas. The first is a steep area of mostly regenerating bush / scrub and scattered residential development to the east of the township. The other area, the western side of the township, is generally flat to medium contour on the edge of the Firth of Thames. This more gently sloping contour contains most of the urban development within the town, which contains predominantly low to medium density residential land use activities.

The Thames urban area is made up of many small catchments but for the purposes of stormwater management can be divided into six general areas:

- Totara West: south of Thames town centre, on the western side of SH25.
- Totara East: south of Thames town centre, on the eastern side of SH25.
- Thames South: residential and industrial land use adjacent to the Kauaeranga River.
- Thames Central: main shopping centre with a mix of residential and commercial land use.
- Thames North: residential and some industrial land use.
- Tararu: residential land use

3.4.2 Receiving Environment

In terms of stormwater, the Thames urban area is made up of a series of relatively small parallel stormwater catchments flowing east to west, eventually through outlets into stream, rivers and the Coastal Marine Area of the Firth of Thames.

Most of the Thames Township is characterised by clay soils and a high-water table. Soakage is therefore not usually a practical option for stormwater disposal.

The inner Firth of Thames is recognised in the Waikato Regional Coastal Plan as an Area of Significant Conservation Value (ASCV). ASCV sites cover the southern Firth of Thames and the Miranda / Kaiaua coastlines further west, and from the Waihou River as far north as Tararu.

The Regional Coastal Plan states that important conservation values include the cultural significance of the area to Hauraki iwi, nationally significant mangrove and mudflat communities, shellfish beds and habitat for threatened birds. The area is also listed as a wetland of international importance under the RAMSAR Convention on Wetlands of International Importance. The coastal area in Thames is

highly valued by the local community and visitors for a wide range of contact and non-contact recreational activities, including swimming, kayaking, fishing, bird watching and shellfish gathering.

The receiving environments of the stormwater discharges within the Thames urban area can be generally described as:

- Kauaeranga River
- Various streams: A mixture of boulder and pebble stream beds. Some of these are tidal.
- Firth of Thames: Sandy and muddy sediments with vegetation in some areas (dominated by mangroves) and diverse marine ecology in some areas.
- Pastoral farmland and grassed drains.

Any discharges to the coastal environment are likely to be subject to relatively rapid dispersion and flushing, due to extensive flushing from tidal action, and inflow from the Waihou and Kauaeranga Rivers. This flushing effect is increased during storm events (i.e. at the same time as stormwater runoff is at its greatest).

Flushing and sediment dispersion also aided by wave action in coastal receiving environments. These factors are likely to naturally mitigate any visible environmental effects of discharge quite quickly. While most contaminant loadings within the stormwater are likely to be mobilised and quickly dispersed by these natural flushing effects, some accumulation of contaminants is possible in the receiving environments where fine silty sediments are present.

3.4.3 Network Assets

Thames has an aging comprehensive stormwater collection and disposal system for the township, which comprises the following stormwater elements:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Stormwater pump stations (Fergusson Drive and Richmond Street)

An abandoned mine structure ("The Saxon mine shaft") introduces a constant flow into the stormwater reticulation at the corner of Albert and Pollen Street. This discharge is approximately 17 l/s and it is estimated that this discharge has been occurring for at least 40 years. This flow could be significant in terms of the total annual volume but is not significant in respect of the peak flow rate predicted during design storm events (Thames-Coromandel District Council – Assessment of Environmental Effects 2001). Tararu Stream is occasionally discoloured due to release of iron from old mine shafts in the catchment.

3.4.4 Stormwater Assets

There are no major stormwater management devices in the Thames urban area catchment.

3.5 Thames Coast

3.5.1 Land Use

Thames Coast is made up of several small coastal communities along the western coast of the Coromandel Peninsula, between Thames and Coromandel. For the purposes of this stormwater management plan, these communities are:

- Ngarimu Bay
- Te Puru
- Waiomu
- Ruamahunga
- Tapu
- Te Mata

All these communities are small coastal settlements that are situated on the foreshore of the Firth of Thames at the base of the range of hills that stretch from Thames to Coromandel.

3.5.2 Receiving Environment

The receiving environments of the stormwater discharges within the Thames Coast urban areas can be generally described as:

- Firth of Thames: sandy silty sediments with vegetation in some areas such as mangrove communities.
- Streams: a mixture of mud, sand, boulder and pebble streambeds. Some of these are tidal and contain relatively high levels of deposited sediment.
- Sandy: silty beaches
- Land: Pastoral farmland and grassed drains.

The adjacent coastline is influenced by tidal fluctuations which, at low tide, expose large areas of mud flats that support a diverse tidal marine ecology and, in some places, estuarine vegetation. These habitats provide feeding, roosting and nesting sites for many bird species including rare and threatened wading and coastal bird species.

Stormwater discharges into the coastal receiving environments on the Thames Coast are likely to be rapidly dispersed due to tidal flushing and sediment transport in the Firth of Thames. During high rainfall events (when stormwater flows increase), river flows and mixing by waves in the coastal environment are also increased, further enhancing dispersion, and flushing. These effects are likely to reduce the likelihood of adverse effects in receiving environments. It is, however, possible that accumulation of contaminants could occur in sheltered receiving environments with fine sediments.

The inner Firth of Thames is recognised in the Waikato Coastal Plan as an Area of Significant Conservation Value (ASCV). The area is highly valued and is also listed as a wetland of international importance under the Ramsar Convention. ASCV sites cover the southern Firth of Thames and the Miranda / Kaiaua coastlines, and from the Waihou River as far north as Tararu. Stormwater discharge from the Thames Coast settlements does not therefore discharge directly to the conservation area, but major contamination of stormwater could impact on the Firth of Thames ASCV area.

The coastal environment along the Thames Coast is highly valued by the local community and visitors for a wide range of contact and non-contact recreational activities, including swimming, kayaking, fishing, bird watching, and shellfish gathering.

3.5.3 Network Extent

A comprehensive stormwater collection system exists for the townships comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales

The urban areas of Thames Coast include several small settlements. These settlements and the associated receiving environments for stormwater discharge are summarised in **Error! Reference s ource not found.**.

Table 6. Summary of outlets in Thames Coast stormwater catchments

Community	Receiving Environment (Outlet Count)
Ngarimu Bay	Otohi Stream (2) Pokopokokorua Stream (1) Firth of Thames (9)
Te Puru	Te Puru Stream (6) Firth of Thames (9)
Waiomu	Waiomu Stream (5) Pohue Stream (1) Firth of Thames (7)

Ruamahunga	Otuturu Creek (3) Firth of Thames (1)
Tapu	Tapu River (1) Firth of Thames (3) Ground (1)
Te Mata	Te Mata River (8)

3.5.4 Stormwater Assets

There are no stormwater management devices in the Thames Coast urban area.

3.6 Tairua

3.6.1 Land Use

Tairua Township is situated on the eastern coast of the Coromandel Peninsula.

In terms of topography, the urban area of Tairua can be divided into six areas:

- Paku Hill
- Tairua town centre (north of Pepe Stream bridge)
- Tairua Heights residential area (south of Pepe Stream)
- Grahams Stream residential area.
- Pepe Stream area.
- Azimuth

3.6.2 Receiving Environment

The receiving environments of the stormwater discharges within Tairua urban area can be generally described as:

- Estuarine mudflats and sandflats: adjacent to the urban area, mostly without vegetation
- Streams: a mixture of sandy, boulder and pebble streambeds. Some of these are tidal.
- Sandy estuarine beaches.
- Pastoral / rural type grassed drains.
- Steep coastal cliffs: discharging to boulder beaches.

It is likely that any discharges to the coastal environment will be relatively rapidly dispersed and flushed due to the extensive tidal flushing and sediment movement in the Tairua Estuary. Increased

stormwater runoff during high rainfall events often coincides with wave action and storm surge, further increasing the flushing capacity of the coastal environment.

Any visible environmental effect of discharges within the receiving waters in the estuary is likely to be mitigated naturally within a short period of time. Accumulation of contaminants is possible in areas where the receiving environment has very fine sediments in streams or coastal environments sheltered from waves and currents.

3.6.3 Network Extent

Stormwater in Tairua has historically been diverted to ground soakage, as the accumulated beach sands in the lower areas of the township have good soakage rates. Sediments in the more elevated areas are less suited to on-site soakage.

As Tairua has become more developed over the years, reticulated systems have been added. A comprehensive stormwater collection system exists for the township comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Detention Ponds
- Hynds First Defense High Capacity

The bulk of the existing piped stormwater reticulation that serves roadways was constructed in the early 1980's, with existing private properties (pre 2015) on the lower flat area disposing of their stormwater by way of in-ground soakage and steep areas by way of overflow to road or open drains.

New private properties are disposing of their stormwater to on lot soakage or detention devices to achieve hydraulic neutrality for the site. These devices are privately owned and maintained.

There are approximately 92 outlets throughout the Tairua stormwater system discharging to the Tairua Harbour (37 outlets), Oamaru Bay (2 outlets), the Pacific Ocean (1 outlet), Pepe Stream (13 outlets) and Graham's Creek (9 outlets). There are also approximately 32 discharges to land.

TCDC has a wastewater treatment and disposal system servicing the Tairua Township (Pāuanui system). This does not discharge into the stormwater network and has its own discharge consent requirements.

3.6.4 Stormwater Assets

Stormwater assets within the CSDC for Tairua are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to 'Major Stormwater Management Devices Register' ECM Doc Set #7207187.

Table 7. Tairua urban stormwater assets

Device	Location	Catchment	Ha
Detention Pond	Rewa Rewa Valley (west of 13 Rewa Rewa Valley). GIS ID: 450277	Tairua Heights Residential	0.95
Detention Pond	11 AZIMUTH ROAD GIS ID: 20190703170702	Azimuth	4.2
Hynds First Defense High Capacity	129 Paku Drive, Tairua Marina GIS ID: 20180419170628	Paku Hill	2.74

3.7 Pāuanui

3.7.1 Land Use

Pāuanui Township is situated on the eastern coast of the Coromandel Peninsula. Pāuanui is situated adjacent to the Pacific Ocean and is fronted by a long white sandy beach. The township lies at the mouth of the Tairua Estuary (on its south bank), directly opposite the township of Tairua. Pāuanui is predominantly a holiday township and population numbers increase dramatically during summer months.

The Pāuanui urban catchments are largely flat, with some development located on the base of steeper foothills. Land use is predominantly residential and there are few vacant lots remaining. In addition to the residential land use, there is an airport, and a small block of commercially zoned land in the town centre. Rainfall runs off the foothills in the upper catchments and out onto the flat urban area. Pāuanui generally experiences good on-site stormwater management due to highly permeable sandy sediments. This is less feasible in the hilly areas.

Urban Pāuanui can be divided into a series of small stormwater catchments, which either discharge into the Tairua Harbour or into the Pāuanui Beach area:

- Pāuanui Residential (North)
- Central Pāuanui
- Pāuanui Residential (South)

- Pāuanui Waterways

3.7.2 Receiving Environment

The receiving environments of the stormwater discharges within Pāuanui urban area can be generally described as:

- Tairua Estuary: sandflats and sandy sediments which are mostly without vegetation adjacent to the urban area.
- Sandy Beach.
- Pastoral / rural type grassed drains.

The Tairua Estuary and Pāuanui Ocean Beach are highly valued by residents and visitors for recreation, including paddling, swimming, surfing, shellfish gathering and fishing. The stream at the southern end of the beach is also very popular as a bathing area for children and adults.

The estuary coastline is influenced by tidal fluctuations which, at low tide, expose large areas of mud flats that support a diverse tidal marine ecology. The intertidal habitats provide feeding, roosting and nesting sites for many bird species including rare and threatened wading and coastal bird species. As a result, the upper Tairua Harbour is recognised in the Waikato Coastal Plan as an Area of Significant Conservation Value (ASCV). The extent of the ASCV defined in the Regional Coastal Plan does not extend to lie directly adjacent to the urban area in Pāuanui but could be influenced by water quality impacts.

Any discharges to the coastal environment will be rapidly dispersed and flushed due to the extensive tidal flushing and sediment movement in the Tairua Estuary. Increased stormwater runoff during high rainfall events often coincides with wave action and storm surge, further increasing the flushing capacity of the coastal environment.

Any visible environmental effect of discharges within the receiving waters is likely to be mitigated naturally within a short period of time. The accumulation of contaminants is possible in areas where the receiving environment has very fine sediments in a coastal environment sheltered from waves and currents.

3.7.3 Network Extent

A comprehensive stormwater collection system exists for the township comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales

- Detention Pond
- Hynds First Defense

The piped stormwater reticulation serves only roadways, with private properties disposing of their stormwater by way of hydraulic neutrality, mainly in-ground soakage. Stormwater from roads is typically channelled to a centre island and allowed to soak into the ground through swales with any excess overland flows being piped via the reticulated system.

There are approximately 58 discharge points throughout the Pāuanui stormwater system discharging to the Tairua Harbour (20 outlets), the Pacific Ocean (3 outlets), and Pāuanui Stream and unnamed tributaries at the south end of Pāuanui (14 outlets). There are also approximately 21 discharges onto land.

3.7.4 Stormwater Assets

Stormwater assets within the CSDC for Pāuanui are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to 'Major Stormwater Management Devices Register' ECM Doc Set #7207187.

*Table 8. **Pāuanui urban stormwater assets***

Device	Location	Catchment	Ha
Detention Pond	22 Holland Close. GIS ID: 552685	Pāuanui Residential (South)	1.33
Hynds First Defense High Capacity	In road carriageway outside 1 Ian Hopper Way – GIS ID: 20200114092836	Pāuanui Waterways	1.12

3.8 Onemana

3.8.1 Land Use

Onemana Township is predominantly a holiday destination situated on the eastern coast of the Coromandel Peninsula, less than 10 km north of Whangamatā. The town lies on topography of rolling to steep contour with several unnamed streams running through it. The settlement is fronted by an open coast sandy beach.

Onemana is a residential settlement with a small block of shops located near the beachfront. Onemana lies on quite steep land and three catchments flow into a single outlet near sea level.

The hilly catchments in Onemana mean that stormwater is readily able to flow away, and ponding and flooding are not widespread problems. For the same reason, silt and sand build up is only an issue at

the lower outlet channel at the beach. In terms of the Comprehensive Stormwater Discharge Consent, this catchment is not exposed to high concentrations of routine contaminants. In terms of non-routine discharges, there are no high-risk facilities in Onemana.

3.8.2 Receiving Environment

The receiving environments of the stormwater discharges within the Onemana urban area can be generally described as:

- Ocean Beach (Pacific Ocean): Open coast sandy beach.
- Streams: highly modified stream with sandy bed.

3.8.3 Network Extent

The Onemana stormwater system was installed in 1984 and services approximately 100 properties that discharge to streams, which in turn discharge to the Pacific Ocean.

Private properties on the Coromandel Peninsula are required to achieve hydraulic neutrality by way of on-site stormwater management by soakage to ground and / or detention tanks.

Due to the steep nature of the Onemana catchments, on-site stormwater management is not universally feasible, with runoff likely from both private properties and road reserve. Onemana has a piped stormwater system with kerb and channel stormwater management in place throughout the town.

The stormwater catchments are generally made up of two catchments (north and south) that flow to a single discharge location on Onemana Beach esplanade reserve. Stormwater from the southern catchment is discharged to a stream which flows in a northerly direction. Stormwater from the northern catchment flows into a two-stage stormwater detention pond to the east of Tuna Place.

Ultimately all stormwater is transported underneath the road through piped reticulation and discharged to the beach via one outlet. The stormwater typically soaks through into the beach dune system. A comprehensive stormwater collection system exists for the township comprising the following stormwater management devices:

- Catchpits
- Manhole inspection chambers
- Stormwater pipes (reticulation)
- Open drains and swales
- Detention Pond

There are approximately 20 stormwater discharge outlets throughout the Onemana stormwater system, with most discharging to unnamed streams that run through the Onemana community. There is a single beach outlet, which discharges stormwater from the Onemana urban area.

TCDC has a wastewater treatment and disposal system servicing the Onemana Township. This does not discharge into the stormwater network and has its own discharge consent requirements.

3.8.4 Stormwater Assets

Stormwater assets within the CSDC for Onemana are detailed in the table below. To find the latest information regarding stormwater assets in the urban area, refer to 'Major Stormwater Management Devices Register' ECM Doc Set #7207187.

*Table 9. **Pāuanui urban stormwater assets***

Device	Location	Catchment	Ha
Detention Pond	Tuna Place	Onemana	2.02

4.0 DISCHARGES TO THE STORMWATER NETWORK

4.1 Residential

Description	Impervious areas under residential zonings comprise roof and driveway areas from private properties. Residential zones vary in scale and density and some houses may discharge to private soakage systems on site.
Effects	The following stormwater impacts come about from a residential land use: • Increased volume and intensity of runoff • Suspended solids • Zinc and copper leaching from roof materials into stormwater runoff • Potential organics and bacteria from cross connections of wastewater lines with stormwater system • Overloading of wastewater system from existing stormwater connections to the wastewater system • Potential bacteria from roof runoff and hardstand surfaces • Contaminants leaching from paint or oil being 'put down the drain' • Potential property flooding due to building over secondary flow paths

4.2 Transport

Description	Roads, cycleways and pedestrian routes constitute large areas of impervious surfaces. Contaminants accumulate on impervious surfaces and transfer via sheet flow (direct runoff) or connections such as catchpits into the stormwater network during rainfall events.
Effects	The following contaminants, depending on concentration can influence the relevant receiving environments: • Heavy metals, sediments • Hydrocarbons from oils & lubricants. • Fuel combustion residues. • Tyre and brake wear. • Gross pollutants such as litter. • Increase runoff potential in rain events.

4.3 Reserves

Description	Reserves are often in or adjacent to waterways but can include parks, playing fields and other types of reserves. Reserves contribute to biodiversity and if a formalized stormwater management device is in place, enhances water quality.
Effects	Reserves are grassed areas and does not create as much runoff as hardstand/impervious areas. Volume and flow effects on stormwater are not anticipated from reserves. Gross pollutants may enter in waterways. Potential contaminants from the use of fertilizers, insecticides and fungicides.

4.4 Commercial and Industrial

Description	Commercial and industrial activities may include privately owned enterprises such as offices, retail stores, shopping centres, restaurants and grocery stores or those manufacturing goods. Often commercial or industrial facilities have large roof areas for storage of goods, materials, chemicals or tradewaste. These buildings are often accompanied by large areas of hardstand areas for parking or manoeuvring
Effects	Effects are dependent on the nature of the commercial/industrial activity. Contaminants may include: • Sediments, heavy metals, organic material, hydrocarbons or oil • Non routine spill incidents • Wash water from any vehicle washing activities • Contaminants such as paint or oil being ‘put down the drain’

4.5 Construction

Description	During construction the risk of contaminants entering the stormwater network is high, particularly with earthworks consents.
Effects	Sedimentation and gross pollutants discharging to public and private stormwater systems. Non routine contaminant spills such as oil, paint or hydrocarbons Risk of cross connections

5.0 MANAGING THE EXISTING STORMWATER NETWORK

5.1 Stormwater Operation and Maintenance Procedures

5.1.1 Asset Responsibility

Stormwater assets within the Thames-Coromandel District may be managed by one of several parts of TCDC, as shown in the Table 10 below

Table 10. Stormwater asset owners within Thames-Coromandel District

Responsible part of TCDC	General asset description
TCDC Water Services	• Manholes connecting to road sump leads, and their associated downstream stormwater network, including pipes, open drains, outlets • Open drains collecting runoff from properties • Scruffy domes and grated manholes • High-volume catchpits • Detention / retention ponds and lakes intended for stormwater management • Groundwater/subsoil drainage servicing properties
TCDC Roading	• Road sumps and connecting leads for road runoff collection. Open drains collecting road runoff. Culverts and bridges for road runoff.
TCDC Parks and Reserves	• Open drains, inlets, and pipes collecting runoff from park and reserve areas • Ponds and lakes not intended for stormwater management and located inside parks
Waikato Regional Council	• Major rivers and flood protection schemes
Private	• Pipes and open drains within private property boundaries, whose upstream catchment includes one private property only.

For reticulated Assets (pipes, manholes, and open drains), Water Services Assets can be identified using Figure 2 and Figure 3 below.

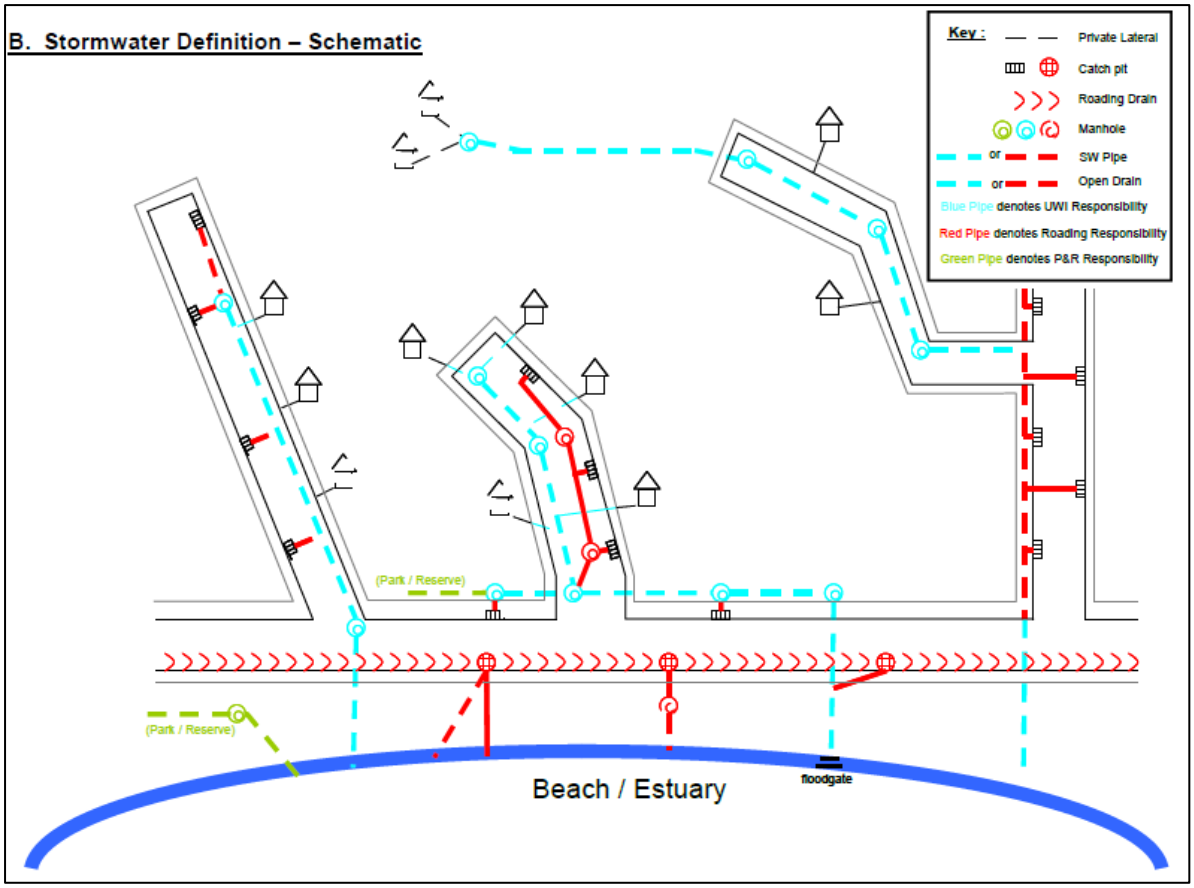


Figure 2. Water Services stormwater asset identification (Turquoise lines = Water Services UWI)

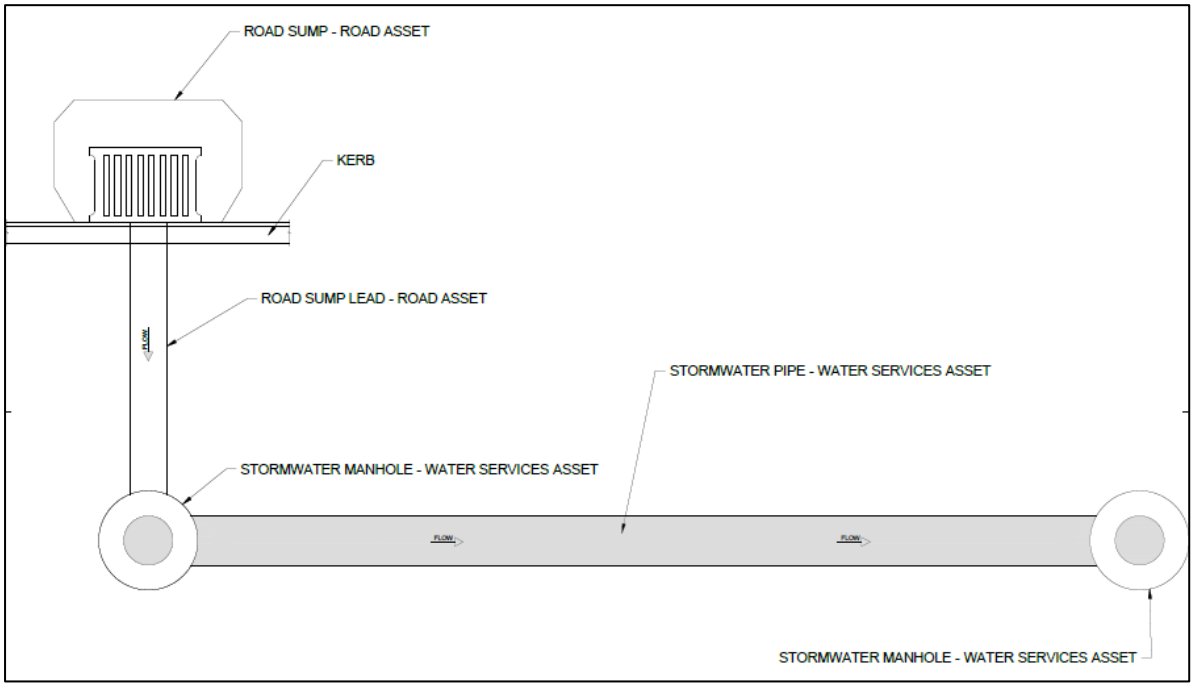


Figure 3. Example of Roading and Water Services stormwater assets

In Thames-Coromandel, maintenance involves the two following types of activities:

- **Proactive maintenance** – proactive/scheduled inspections and maintenance works planned to prevent asset failure.
- **Reactive maintenance** – reactive activities in response to unexpected asset malfunctions and failures, on an as-required basis (i.e. emergency repairs).

The optimal maintenance mix is a balance of planned and reactive maintenance activities. Maintenance also includes minor repairs that cannot be capitalised, consistent with Council's capitalisation policy. The maintenance of three waters above and below ground assets is undertaken by Council through:

- **Reactive Maintenance -** This is typically initiated by request for service
- **Cyclic Maintenance** – This is initiated through planned inspections. This is typically for assets that require servicing such as pumps
- **Routine Maintenance** - initiated through contractors' inspections or Council's audits. This typically assesses above and below ground assets for service level failure such as reservoirs, manholes.

The operation and maintenance activities of three waters infrastructure are categorised into the following:

- Reactive Response
    - Unplanned operations
    - Leak detection
    - Response to blockages and flooding
- Preventative Response
    - Planned operations (Day-to-day operations)
    - Peak period operations
    - Resource consents
    - Condition Surveys
    - Manhole audits
    - Pre-storm and seasonal readiness
    - Stormwater Pump Stations/Detention Ponds Audits
- Emergency Response

- Emergency Response Planning
- Business continuity

- Compliance
  - Monitoring and reporting
- Contract Management
- Compliance monitoring and reporting
- H&S processes, monitoring and reporting
- SOP establishment, training, monitoring and update

The operations and maintenance of the TCDC stormwater network is contracted to third parties as detailed in Table 11. Summary of stormwater management contractsTable 11 below. These contracts share responsibility for managing the stormwater network within the Thames-Coromandel District.

Table 11. Summary of stormwater management contracts

Business Unit	Contract Number	Contractor
Three Waters	C15/05	Veolia Water
Roading	C18/25	Ventia
Parks and Reserves	C19/61	Green by Nature

5.1.2 Water Services and Maintenance Contract (C15/05)

Council outsources the three waters operations and maintenance via a long-term performance-based contract. Currently, Council has a contract with Veolia Water. Citycare Water are the confirmed contractor from 1 April 2026 and the contract number is 26/01.

Council also has staff that oversee the operations and maintenance contract, provide field engineering support, monitor the contractor's work, audit and monitor performance and provide community liaison across the District.

The Contractor shall operate and maintain the stormwater networks to provide a continuous stormwater collection and disposal service to all residential, commercial, and industrial properties within the contract area, in line with the TCDC levels of service requirements.

In summary, the Contractor shall be responsible for:

- General 24/7 operational responsibility for all stormwater assets
  - Delivery of continuous stormwater operations compliant with all resource consents

- Response to, and investigation of, all requests for service relating to the stormwater network forwarded by TCDC or the Engineer.

- Maintenance works
  - Planning, delivery and optimisation of routine and planned maintenance
  - Delivery of reactive maintenance
  - Delivery of emergency works as directed by the Engineer
  - Procurement of all consumables for maintenance works, as agreed with TCDC
  - Surface reinstatement and traffic management as required
- Response to, investigation and remediation of the cause of all alarms from the SCADA and telemetry system
- Mowing, vegetation and weed control, track and general maintenance to ensure safe access to stormwater assets functionality.
- Reporting
  - Reporting to TCDC and the Engineer following requirements in the General Specification
  - Preparation of accurate reports to regulators required by resource consents (and submission if requested)
  - Provision of information to third parties regarding the on-site locations of all Principal-buried assets to prevent damage by third parties.
- Sampling, monitoring, analysis and reporting

5.1.3 Roading Operations and Maintenance Contract (C18/25)

This contract is between Thames-Coromandel District Council and Ventia (the contractor).

The contractor is responsible for managing roading owned stormwater assets (see Figure 2). Responsibilities include, but are not limited to, the following operations and maintenance procedures:

- Develop and implement an inspection and cleaning programme that minimises the likelihood of blockages and minimises the likelihood of faults forming.
- Inspect and, if required, clean all stormwater structures at least once every six months.
- The Kerb and channel is to be cleaned when the depth of ponded water in the channel exceeds 20mm and/or water is diverted to run across the sealed road surface. Therefore, sweeping programmes are done on a need basis not set programme.
- Street and Catchpit Cleaning are managed based on the requirement to address faults. The contractor is required to: “clear urban street areas by uplifting and completely removing litter and detritus from the surface of the carriageway, shoulder, drainage features, and including the removal of detritus from sump grates.”
  Catchpits are required to be cleaned out where, in the course of inspection, it is found that “detritus is within 200mm of the outlet pipe invert”

Catchpit grates are to be cleaned when detritus covers more than 10% of the top of a sump grate.

Routine inspections identify faults with the frequency of inspections dependent upon the classification of the road.

Classifications and frequencies are:

- CBD: every three to four days
- Primary / Secondary Collector Roads: Weekly
- Access / Low Volume Roads: Monthly

- Maintenance of rain garden drainage systems including:
    a) Uplifting and stockpiling of the existing rocks from the surface of the rain garden.
    b) Screening and washing the rock to remove sand, debris and plant matter.
    c) Excavate and remove the sand filter material down to and expose the underlying geotextile filter cloth. Cart the filter material to an approved disposal area.
    d) Supply and place a new sand filter layer. The filter material shall meet the requirements of NZTA F2.
    e) Replace the screened rock over the sand filter layer to the original shape and profile.

The Contractor employs cyclic crews that have the responsibility to implement these requirements throughout the district. The Roading Professional Services Contractor (WSP Limited) audits 10% of the roading network monthly (with 100% of the network being covered each year). Part of this audit is street and catchpit cleaning. Where a street or catchpit is found to not be compliant, Ventia has one month to rectify and this is rechecked by WSP Limited. If stormwater runoff derived receiving environment effects are not evident in the monitoring results then can be inferred the stormwater network operation and maintenance interventions (including street and catchpit cleaning) are at a satisfactory frequency.

5.1.4 Parks, Gardens, Cemeteries and Community Facilities Operations and Maintenance Contract (C12/21)

This contract is between Thames-Coromandel District Council and Green by Nature (the contractor). This contract commenced 1 July 2021 to 30 June 2026 for a first 5-year term. This was renewed in 2025 for an additional 12-month contract.

The contractor is responsible for managing parks and reserves owned stormwater assets. Responsibilities include, but are not limited to, vegetation control of all streams, waterways and open drains in parks/reserves and cemeteries. Treatment shall ensure the free flow of water by eliminating rank growth and aquatic growth in side streams and waterways. If any stream or waterway becomes subject to erosion, treatment shall be modified to minimise the instability of the drain.

Care is to be undertaken to ensure that re-vegetation projects are not impacted by herbicides. Treatment around streams and waterways must be consistent with Waikato Regional Council Policy and Rules.

5.2 Major Stormwater Management Device Operation and Maintenance Procedures

This document (ECM Doc Set # 8235093) describes the operations and maintenance procedures for all Thames-Coromandel District Council (TCDC) owned major stormwater management devices, including those operated under Waikato Regional Council (WRC) Comprehensive Stormwater Discharge Consents.

This document is to be utilised as a management tool to ensure that the stormwater quality devices are adequately maintained. Stormwater Management Devices are maintained by contractors to TCDC. Records of all maintenance actions undertaken must be held, together with a copy of this document and must be made available for inspection by WRC, TCDC officers, or their authorised agents.

This document is to be read in conjunction with the TCDC Stormwater Management Devices Register which outlines the locations of Stormwater Management Devices located with the areas covered by Waikato Regional Council Comprehensive Discharge Consents (ECM Doc Set # 7207187).

Direct monitoring of the performance of stormwater management/treatment devices is not proposed. Gathering a statistically reliable dataset to assess against relevant stormwater treatment guidelines or standards, for example, would have high cost and logistical requirements that are unlikely to be commensurate with the potential level of effect. Devices such as detention ponds generally operate by maintaining an operating volume that is discharged via specifically designed outlet structures where efficiency can be influenced by matters such as sediment accumulation and inlet/outlet blockage as well as contributing catchment assumptions. It may be anticipated that a stormwater management/treatment device is performing satisfactorily as long as an appropriate maintenance regime is maintained.

Further, by conducting appropriate monitoring in the receiving environment as required by Condition 4(a) of the CSDC, the performance of the stormwater management/treatment devices can be inferred. For example, if the receiving environment is not increasing in stormwater-derived contaminants, ecological communities are similar to areas that are not affected by stormwater, there is no substantial scouring near the discharge location, and no flooding is occurring, it can be inferred that the stormwater devices are performing satisfactorily.

5.3 Register of Stormwater Management Device

Council records all of its stormwater assets in a formal asset management system (AMS) linked to GIS. This includes stormwater management devices, which are attributed accordingly to allow them to be readily identified and reported.

All new transport assets are added to the national asset register RAMM and are automatically added to the maintenance contract.

Developers and council capital works teams must provide an asset management plan for any new assets, refer to Section 5.8 below for further details.

Specifically, in compliance with CSDC Condition 29, TCDC has a Major Stormwater Management Devices Register (ECM Doc Set # 7207187), which lists the major stormwater management device type, location and the size and name of the contributing catchment.

5.4 Fish Passage

Consistent with Condition 8 of the CSDC, a fish passage study has been carried out in two parts. The first being identification of structures within the CSDC area that intersect with upstream habitats and the second being assessment and prioritisation of fish barriers (where they exist) for remedial works.

1. Identification of structures that may impede fish passage

   This work was undertaken by 4Sight Consulting and reported in 'Comprehensive Stormwater Discharge Consent – Fish Passage Assessment and Prioritisation' dated 30 June 2023 including a Geodatabase (ECM Doc Set # 7770678).

2. Assessment and prioritisation of structures

   Refer to report 'Comprehensive Stormwater Discharge Consents –Fish Passage Assessment & Prioritisation' 2Awa Ecology dated 9 February 2025. This was provided to WRC on 1 March 2024 (ECM Doc Set # 7997931) for review and acceptance by WRC.

5.4.1 Current Monitoring

Fish Passage is assessed via Ecological Monitoring carried out as part of the Monitoring Programme required by Condition 4 of each consent at the following locations (as specified in Appendix A Table A1 of the 4Site Consulting '*Urban Area Stormwater Monitoring Programme'* February 2024 ECM Doc Set #7995479)

- Thames Marina
- Sealy Street, Thames
- Burke Street, Thames

- Whangarahi Stream, Coromandel
- Kotuku Street, Whangamatā
- Moana Anu Anu Estaury, Whangamatā
- Marquet Place, Tairua
- Sheppard Avenue, Pāuanui
- Marina Hardstand, Whitianga
- Moewai Road, Whitianga

Reporting to date concludes no stormwater management structures forming part of the TCDC stormwater network (with an upstream habitat) have currently been identified as a priority in terms of mitigating the effects of structures on fish movement.

5.4.2 Fish Passage Remediation

Once the Assessment Prioritisation of Structures, 2Awa Ecology report is accepted by WRC, TCDC will put a programme in place to address the remediation work that has been recommended or if the work is impractical to complete then information will be provided to why this cannot be completed.

5.4.3 New Assets

New assets and stormwater network and fish passage performance is reviewed as part of assessing new developments proposed to be adopted under the CSDCs as stipulated in Appendix B– *Administrative process for incorporating new municipal stormwater diversion and discharge activities into the CSDCs*.

5.5 Stream Channel Works

Refer to 'TCDC Guidelines for Stream Channel Works' ECM Doc Set #8594234 provides the guidelines for TCDC staff and contractors when carrying out works within stream channels for the purpose of maintaining stormwater flows in stormwater receiving water bodies.

5.6 Non-Routine Spills

A non-routine spill occurs infrequently and often as an accident. Non-routine spills result in high levels of contaminants not associated with stormwater runoff (such as oil, paint, lawn clippings, soil) entering TCDC's stormwater network.

Contaminants in the concentrations resulting from non-routine spills is toxic to the fauna in waterways and can be visible on the water's surface. Flammable compounds could also pose a health and safety risk.

Current standard operating procedures for non-routine spills are found in Appendix C.

5.7 Stormwater Flood Hazard

TCDC has recognised the increased risk of stormwater flooding due to the effects of climate change. The management initiative to avoid as far as practicable or to minimise the risk to residents, land, property and stormwater receiving water bodies is via the following;

- New developments and infrastructure to comply with the Code of Practice for Subdivision and Development and the District Plan Section 34 Natural Hazards. Flood risk assessments are required on properties subject to flooding.
- To minimise the risk of flooding, TCDC is undertaking a proactive approach to understand flood risks with stormwater flood modelling.

5.7.1 Stormwater Flood Models

The stormwater flood modelled scenarios have included the most recent climate change information and a variety of rainfall events including the 10% AEP to understand the reticulated network, 50% AEP for information on overland flow paths and 1% AEP rainfall events to provide flood risk information.

To provide consistency of the stormwater flood models and to allow these to be shared with Waikato Regional Council, TCDC has also developed the Stormwater Modelling Standards.

The end users of the flood models include;

- Adaptation planning / pathway assessment
- District Plan updates
- Inform planning / growth area constraints
- Emergency response planning
- Development engineering - assess development applications under the Building Act
- Flood hazard information for LIMs
- Public communications (update public natural hazard maps)
- Stormwater capital works planning
- Identify potential road maintenance issues (scour from flood flow) and validate complaints
- Identifying critical stormwater assets and overland flow paths for compliance with emerging Local Water Done Well regulation

Current stormwater flood modelling projects include;

- Thames (Fluvial Model which includes stormwater)
- Whangamata
- Matarangi
- Cooks Beach

The results of the flood models are published via the Smartmaps Hazard portal.

Flood hazard monitoring and response to flooding incidents is carried out by TCDC staff and contractors in accordance with TCDC Service Levels and Performance Measures for Stormwater which are:

- TCDCs stormwater services protect habitable areas from flooding (measured by flooding events and number of habitable floors affected)
- TCDC provides a responsive stormwater request service (measured by number of complaints and response time to complaints)
- TCDC minimises the environmental impact of protecting habitable areas from flooding (measured by number of operational resource consent conditions not complied with, number of abatement notices, number of infringement notices, number of enforcement orders, and number of successful prosecutions)

Contractors across all departments are responsible for attending requests for service. These are formally measured as part of TCDCs reporting with the following categories:

- Number of flooding events;
- For each flooding event the number of habitable floors affected (per 1,000 connected properties)
- The median response time to attend a flooding event, measured from the time TCDC receives notification to the time that service personnel reach the site; and
- Number of complaints received about the performance of the stormwater system (per 1,000 connected properties).

5.8 Asset Management

The 2024 3-Waters Asset Management Plan Addendum is the main source of asset related initiatives that assist Thames-Coromandel District Council with meeting the conditions of our Comprehensive Stormwater Discharge Consents.

Council adopted a revised Asset Management Policy in 2020. The Asset Management Policy provides the broad framework for undertaking asset management in a structured and consistent way across Council's infrastructural assets.

Planned improvements include:

- Resource consent review and improvement programme to ensure all consent conditions are met in the required timeframes.
- Stormwater scheme planning and upgrade in response to current and emerging issues particularly climate change impacts.

- Ensure compliance with comprehensive stormwater discharge consent.

Current Three Waters Level of Service and Performance Key Issues:

- **Habitable floor flooding:** There have been two flooding event recorded in the last five financial years. Mitigation options include: investigation of flooded locations and associated assets to determine system resilience and prioritising projects to improve system capacity in affected locations
    - **Customer satisfaction:** The number of complaints have been mostly within targets for the last five financial years
    - **Response times:** Response times to flooding events have been within target

5.8.1 Managing Demand (Mitigation Measures):

Meeting existing demands;

- Undertake stormwater hydraulic modelling to assist with growth and demand analysis and forecasting
- Network upgrades
- Risk and hazard management managed via Council's adaptive Shoreline Management Pathways Programme
- Effective demand forecasting to ensure that future demand for the service is understood
- Maximise asset utilising by 'supply-side' demand management
- Management of customer demand, to reduce demand for over-utilised assets, through pricing, regulation and education

Meeting future demands:

- Monitor, plan and implement appropriate responses to future climate change impacts
- Develop a District growth strategy
- Identify and prioritise growth projects based on planning discussions with the large developers (e.g., Matarangi, Whitianga Water Ways).
- Better growth forecasting by use of analysis of subdivision and building consent data and trends.
- Funding timing and allocations are based on the outcomes of negotiations with developers and budget estimates are used in the development contributions model
- Renewals projects with an element of upsizing due to growth capacity requirements have funding allocations split between renewals, level of service and growth

Asset Management initiatives focus on Stormwater CCTV and updating Stormwater Modelling over the next ten years with significant funds requested via the LTP Budget process. Where amendments to the stormwater network are made, treatment devices are included in project planning.

5.8.2 Renewals

Council's renewal strategy aims to maintain the levels of service by identifying the most cost-effective time to renew individual or groups of assets.

The '4 Quadrant' renewal strategy for the three waters is developing an improved proactive renewals strategy. The improved renewals strategy is evidence based and relies on asset condition investigation and assessment. It considers long term trending particularly of the critical stormwater assets. Key information considered in the renewal planning process is presented below:

- Asset Criticality
- Asset age
- Asset condition assessment and analysis
- Levels of service failure
- Risk based approach
- Asset data confidence ratings

The criteria for renewal planning are listed below:

- 2021 Renewals '4 Quadrant Renewals Planning Approach' approach implemented. This approach highlights that renewal planning should not utilise a 'one size fits all' approach and a focus on the 4 distinctly different outcomes provides a much better understanding of what is driving renewals. It also incorporates any specific focus on the justification for any specific works included in the renewal plan.
- For above ground assets a priority renewal list is developed using the Water Services Contactor candidate list.
- The Water Services Contactor also has a priority renewal list for known network issues - using the Water Services Contactor candidate list and Council's network knowledge and priorities, and updated every six months.
- Ground truthing of the priority renewals candidates with a focus on the older assets in the lower Thames area.
- An enhanced meter renewal strategy was developed as part of the draft Asset Management Strategy and Policy, with a focus on commercial and industrial water meters
- Development and implementation of a reticulation CCTV programme.
- Further assessment by Veolia of the above ground assets on a 3-4 year cycle.
- Ongoing asset data improvement from asset inspections and condition assessments

TCDC engages the services of a suitably qualified engineering firm to design the upgraded system to ensure the continued effective operation of the network in terms of stormwater quality and quantity. Stormwater quality is always considered when planning renewals and the feasibility of installing treatment devices is assessed as part of the renewal / upgrade.

The current Long-Term Plan 2024-2034 stormwater projects include ($58 million). These projects include;

District Wide

- Upgrade and improvement to TCDC SW infrastructure to improve LOS, minimise flooding impacts and create climate change resilience.
- Stormwater quality treatment - Upgrade and improvement to TCDC SW infrastructure to improve discharge quality and meet legislative requirements
- Stormwater management and drainage upgrades
- District renewals including all components of the network

Thames

- Pollen Street Redevelopment Infrastructure Upgrade &
- Upgrade and improvement of Albert St stormwater

Pauanui

- Upgrade and improvement to Holland Stream to improve LOS and minimise flooding impacts

Whangamata

- Upgrade/improvement to stormwater infrastructure to improve LOS, minimise flooding impacts and create climate change resilience

5.9 Development

As part of both resource consent and building consent application processes, Council aims to ensure that applications contain sufficient detail to enable informed and accurate decisions to be made on a particular application. Through these processes, all stormwater disposal associated with new development is required to be carried out in accordance with the TCDC Code of Practice for Subdivision and Development, the District Plan, and the Building Act 2004. Hydraulic neutrality with respect to buildings is a requirement of all new development.

5.9.1 Development Controls - District Plan, Subdivision and Building Consent

Pursuant to Section 17 of the RMA, the Thames Coromandel District Plan Rules allow for any monitoring and enforcement which may be sought for any activity that has, or is likely to have, an

adverse effect on the environment requiring that action be taken to avoid, remedy or mitigate any adverse environmental effect.

224c certification for any new development is not issued until the stormwater system has been met the standards for system design and construction as stipulated in the TCDC Code of Practice for Subdivision.

- Issue of resource consent and consent monitoring – planning department
- Engineering design, construction and 224c sign off – development engineering

Specific requirements within the stormwater section of the Code of Practice for Subdivision and Development include:

- Section 6.2.1.3 - Stormwater generated by a property is required to be disposed of within the boundary of that property unless there is sufficient capacity within the network and discharge to the network is specifically authorised by Council.
- Section 6.3.2.2 - All developments within catchments where TCDC have discharge resource consents will need to comply with any of the conditions that may apply to the proposed drainage system. In addition, any Catchment Management Plans' recommendations must be adhered to.
- Section 6.4.20.1 - Specific Ward Requirements for Stormwater & Land Drainage as shown in Table 6.3 (Figure 4 below). These requirements are a minimum and may be increased at the Councils discretion.

Specific Ward requirements for Stormwater & Land Drainage		
Community	**Function**	**Requirement**
All Ward communities	**Properties**	Stormwater generated on a property will be disposed of in a managed manner and authorisation of disposal will be required in each case. The on-site system must be capable of carrying a 1 in 10 year rain event and must be maintainable.
All Ward communities	**Stormwater Retention Ponds**	Permitted. Any pond used as a retention pond or water feature will be subject to Management Plan approval.
	Open Water Courses	Permitted. Subject to Design Constraints and Management Plan approval.
	Kerb Discharge	Not permitted. Unless otherwise specifically permitted.
	Existing stormwater reticulation	Conditional. On existing system's capacity and resource consent conditions.
	New Discharges	Subject to meeting Council's requirements relating to resource consent conditions.

Specific Ward requirements for Stormwater & Land Drainage		
Community	**Function**	**Requirement**
	Proposed Reticulation Design	Primary piped system in all urban areas capable of carrying 5 year (20% AEP) rain event. Culvert in all areas capable of carrying a 20 year (5% AEP) rain event. Open channels and overland flow-path capable of carrying a 50 year (2% AEP) rain event to ensure that such surface water shall not enter buildings. Bridges capable of withstanding a 100 year (1% AEP) rain event.
	Global Warming Factor	All stormwater calculation will be subject to a global warming factor of 20%

Figure 4. Table 6.3 from TCDC Code of Practice

5.9.2 Low Impact Urban Design

Increased impermeable surfaces resulting from more intensive development and subdivision in urban areas can have a significant impact on the capacity and effectiveness of the stormwater network, which in turn can adversely impact receiving environments. Managing new development is therefore vital when managing stormwater quality and quantity and also when considering the future provision of stormwater services within the District.

Council engineers and planners promote low impact urban design as set out in NZS4404:2010 and the Code of Practice for Subdivision and Development.

Stormwater retention and treatment on site in the form of soakage pits or detention tanks are also promoted, and often required, to help reduce surface flooding. Many of the Coromandel urban areas have excellent soakage capacity and therefore on-site disposal is highly cost effective and, accordingly, is often promoted by Council.

5.9.3 New Assets

As part of the subdivision consent application process, Council also ensures all new stormwater networks and devices that are to be vested in TCDC are designed, constructed, and certified by Chartered Professional Engineers in accordance with the Code of Practice for Subdivision and Development.

Appendix B contains the administrative process for incorporating new municipal stormwater diversion and discharge activities into the comprehensive discharge consents.

Compliance with Appendix B infers the new network is consistent with the receiving environment outcomes of the CSDC including water quality treatment, flood hazard management and local erosion. In terms of reporting, new stormwater networks are also documented in the TCDC Annual Report required by Condition 6 of the CSDC. Update and maintenance of asset registers – Three Waters & relevant contractor for operation and maintenance depending on the nature of the asset.

6.0 MONITORING AND REPORTING

6.1 Stormwater Quality Improvement Program

The stormwater quality improvement program is an ongoing program of works, in compliance with CSDS Condition 23 and reported, as per condition 6 in the annual report.

A summary of the program is detailed below.

6.1.1 Education Programmes

To date the focus has been on industrial / commercial stormwater education as outlined in Section 6.1.2 below.

6.1.2 Industrial / Commercial Properties

The Stormwater Education Programme for Industrial / Commercial Properties was commenced in 2023 -2024. This is a seven-step program which aims to provide compliance with TCDC CSDC Condition 23.b - *Provide education and promotion of at-source stormwater management measures to the owners/operators of commercial and industrial properties*.

The Steps are outlined below;

1. Identify - provide compliance with TCDC CSDC Condition 23.b - Provide education and promotion of at-source stormwater management measures to the owners/operators of commercial and industrial properties.
2. Target Industries - Identify the commercial and industrial industries which have a high risk of generating stormwater quality pollutants.
    - Construction and machinery
    - Automobile & Painting
    - Marine & Food processing
    - Hotels, Public places, and utility providers
    - Offices, Restaurants, Retails and General businesses
3. Priority List - Cross reference the identified properties with the targeted industries to generate a priority list of commercial and industrial properties to target for an education program.
4. Basic Education Resource - Create education resource for each industry for at-source stormwater management measures including housekeeping options.

5. Initial Contact - Initial phone conversation with priority list operators to determine how aware they are about at-source stormwater management and to determine if they are using any good housekeeping practises or devices
6. Onsite Meeting - Meet onsite with priority list operators to tailor the education resource to their site and operation.
7. Continuous Monitoring - Develop a programme

Steps 1-5 have been completed and reported in the Annual Reports. Work is currently underway with Step 6.

6.1.3 Illicit Wastewater Connections

A programme of CCTV investigations of Stormwater Networks has been created, incorporating 59,105 metres of stormwater pipes over five years. One of the components of the CCTV is to identify illicit wastewater connections to the stormwater network.

Completed to date;

- 2023-2024 – Tairua - 110m and Thornton Bay 132m
- 2024-2025 - Thames 1,934m
- Proposed for 2025-2026 Whitianga 10,984m

6.1.4 Catchpit Upgrade Programmes

The assessment of traffic count numbers and catchpit locations against the Ecological and Sediment Monitoring Results completed and submitted to WRC via email on 11 March 2024 identified the highest risk catchpit sites are on State Highway 25 and, while TCDC is responsible for maintaining State Highway Catchpits, any upgrade or improvement of these systems are the responsibility of NZTA.

Given the not insignificant cost of increased maintenance on any upgraded structure it would be prudent to ensure consistency of outlet devices throughout the network. Based on this, rather than commencing a design process as advised in the Next Steps document submitted in March 2024, TCDC now await advice from NZTA on how they wish to progress catchpit upgrades prior to commencing upgrades on the lower risk catchpits within TCDC's control. The report was provided to NZTA in March 2024.

6.1.5 Retrofit Stormwater Management Devices

The prioritised work schedule to improve stormwater discharges is available in the report 'Urban Stormwater Quality Thames Coromandel District Council' by Land Development and Civil dated 29

February 2024 (ECM Doc Set #8009648). This report prioritises the sub-catchments in which to retrofit Stormwater Quality Management Devices.

Funding for the retrofitting of Stormwater Management Devices has been approved in the 2024-2034 LTP and approved $2.29 million of works.

TCDC proposes to design and install a new device each year using the outcomes of the report to prioritise the areas.

As identified in the Report on Retrofitting of Stormwater Treatment Devices, the Thames Central sub-catchment has been identified as the highest priority and this area will be the focus for the 2025-2026 period. To maximise available budget, the retrofitting is planned to be tied in with other civil works in the area.

The catchment priority list for retrofitting stormwater treatment devices is available in Appendix D.

6.2 Monitoring Program

The Stormwater Comprehensive Discharge Consents Monitoring Programme has been designed by 4Sight Consulting, titled 'Urban Area Stormwater Monitoring Program' dated 28 February 2024 (ECM Doc Set # 7995479).

The purpose of the monitoring programme is to monitor the effects of stormwater discharging from the TCDC stormwater network urban areas on the receiving environment as required by Condition 4 of the CSDCs.

The receiving environment monitoring follows established practice and seeks to understand the influence of typical urban contaminants (metals and hydrocarbons) entrained in stormwater runoff with the aim of identifying trends over the duration of the CSDCs. Ecological monitoring including visual assessment of fish populations and biological health are also useful tools to assist with understanding the overall health of the various receiving environments.

The monitoring programme also provides a link to asset management and the physical operation of the stormwater network. This includes monitoring local outfall erosion; changes in fish passage associated with structures; flood hazard monitoring and response; stormwater management device operation and maintenance and street cleaning/sweeping.

The objectives of the monitoring program, as per condition 4 of the CSDC are as follows;

- Investigate the actual and potential adverse effects of municipal stormwater diversion and discharge activities on the environment.

- Provide information to refine Best Practicable Option stormwater management measures that assist the Consent Holder in avoiding, remedying or mitigating actual and potential adverse effects on the environment.
- Assess the performance of utilised stormwater management devices to determine their overall effectiveness in managing and/or treating stormwater, and to guide the best practicable application of these devices in respective catchments.
- Provide guidance on the ongoing and necessary changes to the Stormwater Management Plan to address any shortcomings with the operational procedures, management initiatives and implementation measures adopted by the Stormwater Management Plan.
- Review the level of subdivision and development that is occurring in developing catchments, relative to the land use assumptions underlying the integrated catchment management approaches adopted by approved Catchment Management Plans.
- Determine overall compliance with the conditions of this consent.
- The monitoring programme address the following monitoring the effects of the stormwater discharges on aquatic ecosystems and associated stormwater network management.

6.2.1 Adaptive Management

The monitoring approach may be adapted over time based on the results from the current monitoring programme, community complaints, or additional information. Adaptations to the monitoring programme could include the addition or removal of monitoring locations, monitoring frequency and parameters, or a one-off investigation. An adaptive management approach has been adopted. This allows TCDC to identify triggers and key steps for responding to monitoring findings. The benefit of adopting an adaptive management approach is that it provides flexibility for TCDC to best utilise monitoring data and to respond in line with best practicable option principles, while providing improved certainty for consent condition compliance over the lifetime of the consents. The adaptive management approach also allows TCDC to respond to monitoring trends and if necessary, tailor aspects of the monitoring programme accordingly.

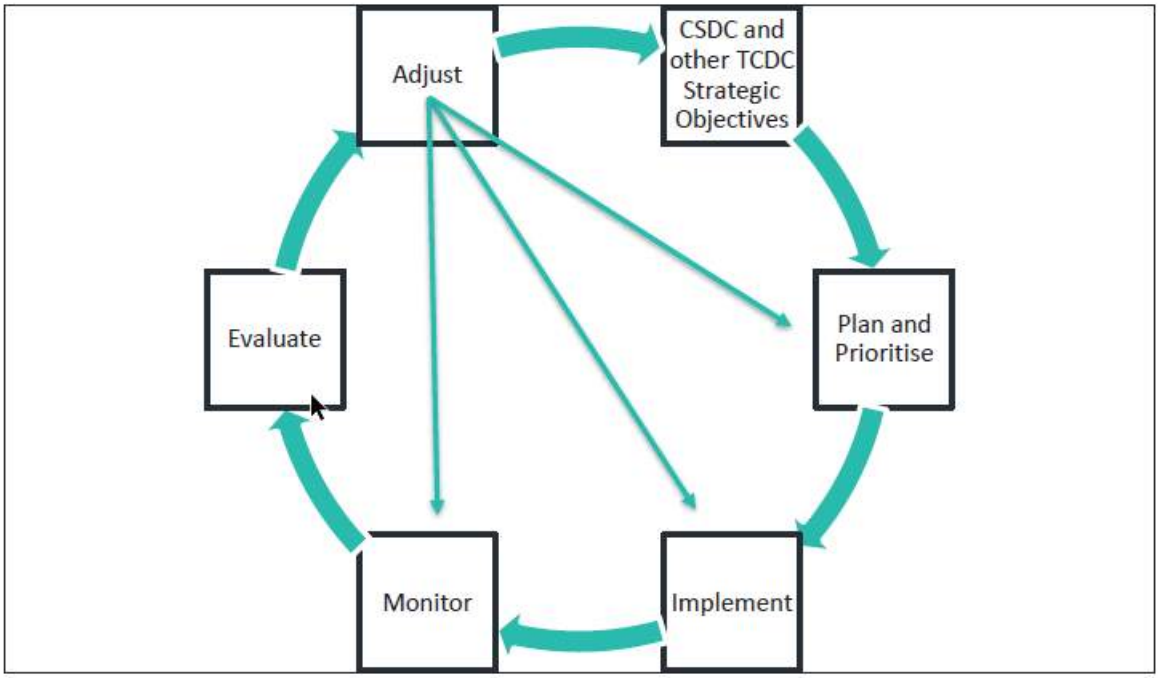


Figure 5. CSDC Adaptive management Approach from 4Sight Consultants SW Monitoring Program

6.2.2 Receiving Environmental and Ecological Monitoring

The requirements for receiving environment and ecological monitoring include;

- Visual Assessment undertaken six-monthly
- Receiving environment water quality. This is undertaken six-monthly.
- Sediment Quality Sampling. This undertaken two-yearly at the high-risk site (Whitianga, Thames and Whangamatā) and four-yearly at the low risk sites (Coromandel, Tairua and Pāuanui)
- Biological sampling of macroinvertebrate communities and fish populations. Monitoring frequency is as per sediment quality sampling.

6.2.3 Visual contaminant monitoring and erosion surveillance

Visual monitoring for the incidence of contaminants and evidence of erosion is carried out by TCDC contractors twice yearly and when the 2 and 4 yearly ecological assessment is carried out at the locations specified in Table 12.

Table 12. Monitoring Frequencies and Locations

Component	Frequency	Location
Visual Inspection	6-monthly	Thames Marina Sealy Street, Thames Burke Street, Thames Kotuku Street, Whangamatā Moana Anu Anu Estaury, Whangamatā Whangarahi Stream, Coromandel Marquet Place, Tairua Sheppard Avenue, Pāuanui Marina Hardstand, Whitianga Moewai Road, Whitianga
Receiving environment water quality		
Low Risk Sites - Sediment quality and visual and biological assessment	4-yearly	Whangarahi Stream, Coromandel Marquet Place, Tairua Sheppard Avenue, Pāuanui
High Risk Sites - Sediment quality and visual and biological assessment	2-yearly	Thames Marina Sealy Street, Thames Burke Street, Thames Kotuku Street, Whangamatā Moana Anu Anu Estaury, Whangamatā Marina Hardstand, Whitianga Moewai Road, Whitianga

Remaining outfalls throughout the district are programmed for inspection by the respective contractor along with inspection findings and any required remedial actions for work orders and requests for service.

Where non-routine contaminant discharges (pollution incidents) are evident during inspections, contractors and/or staff are referred to the Standard Operating Procedure for Non-Routine Contaminants Discharges detailed in the TCDC SMP and the associated notification and reporting requirements. TCDC staff and contractors also respond to non-routine contaminant discharges when notified by members of the public.

6.3 Annual Report

The CSDC, condition 5, requires an annual report entitled ‘Municipal Stormwater Network Operation Annual Report’ otherwise known as the ‘Annual Report’ for the year ending 30 June and submitted to the WRC 30 September each year.

The annual report includes a summary of the operational procedures, management initiatives and implementation methods adopted by the Stormwater Management Plan which have been implemented during the year, the results of these initiatives and the proposal for the following year.

6.3.1 Performance Measures

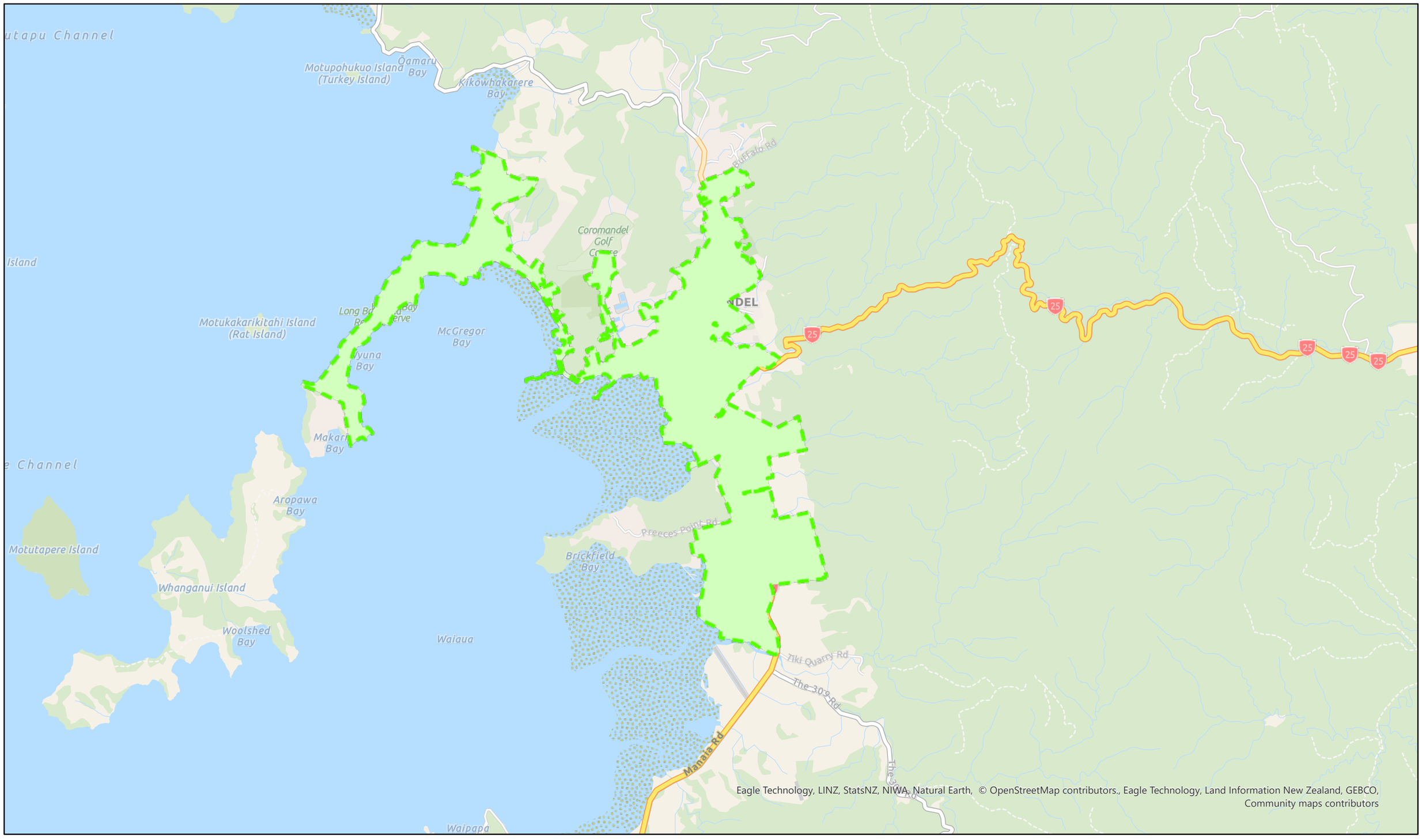
The performance measures, which provide compliance with the CSDC, are included within the Annual Report. This includes;

- Summary of Monitoring Progam
- Details of all Non- Routine Contaminant Discharge Incidents and outcomes
- Summary of Formal Complaints
- Summary of Level of Compliance with Conditions of Consent

6.4 Review

The SMP is required to be reviewed, updated and submitted to Waikato Regional Council (WRC) for approval in a technical certification capacity by 31 March every third year, with the next review to be undertaken in 2028.

APPENDIX A: STORMWATER PLANS COROMANDEL



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

COROMANDEL - AREA OF SERVICE

Stormwater

Legend

N W E S

1:36,112

0 0.15 0.3 0.6 0.9 mi

0 0.150.3 0.6 0.9 1.2 km

RECEIVING ENVIRONMENT COROMANDEL HARBOUR - HAURAKI GULF

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape

3 Waters Viewer - TCDC SMART Map

COROMANDEL - OAMURU CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

COROMANDEL - WYUNA BAY CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

COROMANDEL - LONG BAY CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

COROMANDEL CENTRAL CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km

WHITIANGA

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHITIANGA - AREA OF SERVICE

Stormwater

Legend

N W E S

1:36,112

0 0.15 0.3 0.6 0.9 mi

0 0.150.3 0.6 0.9 1.2 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHITIANGA CENTENIAL HEIGHTS AND WHAREKAHO CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHITIANGA BUFFALO BEACH CATCHMENT

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

WHITIANGA CENTRAL AND WATERWAYS CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

WHITIANGA MOEWAI ROAD CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

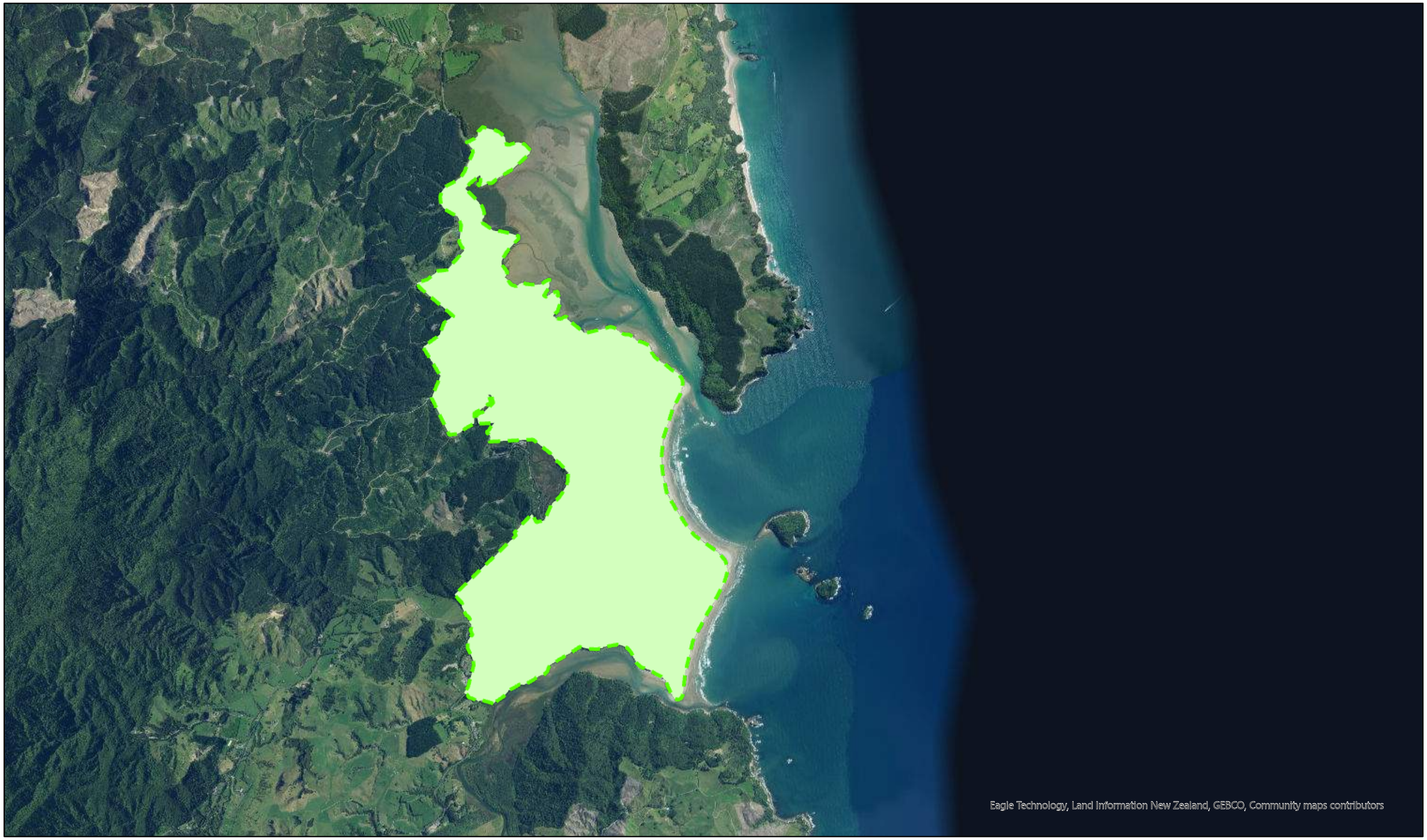
N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

WHANGAMATA



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHANGAMATA - AREA OF SERVICE

Stormwater

Legend

N W E S

1:36,112

0 0.15 0.3 0.6 0.9 mi

0 0.150.3 0.6 0.9 1.2 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHANGAMATA NORTH INCL. CBD CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

RECEIVING ENVIRONMENT MUD FLATS MOANA ANU ANU HARBOUR

RECEIVING ENVIRONMENT WAIKIEKIE AND TE WEITI STREAMS

GOVERNORS HEIGHTS & TE PAMAHUE DETENTION PONDS

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHANGAMATA MOANA ANU ANU CATCHMENT

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHANGAMATA CENTRAL CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

WHANGAMATA SOUTH CATCHMENT

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

RECEIVING ENVIRONMENT OLFP TO WENTWORTH RIVER AND OTAHU ESTAURY

RANGITUIA DETENTION PONDS

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape

3 Waters Viewer - TCDC SMART Map

WHANGAMATA TE TUTU SOUTH CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

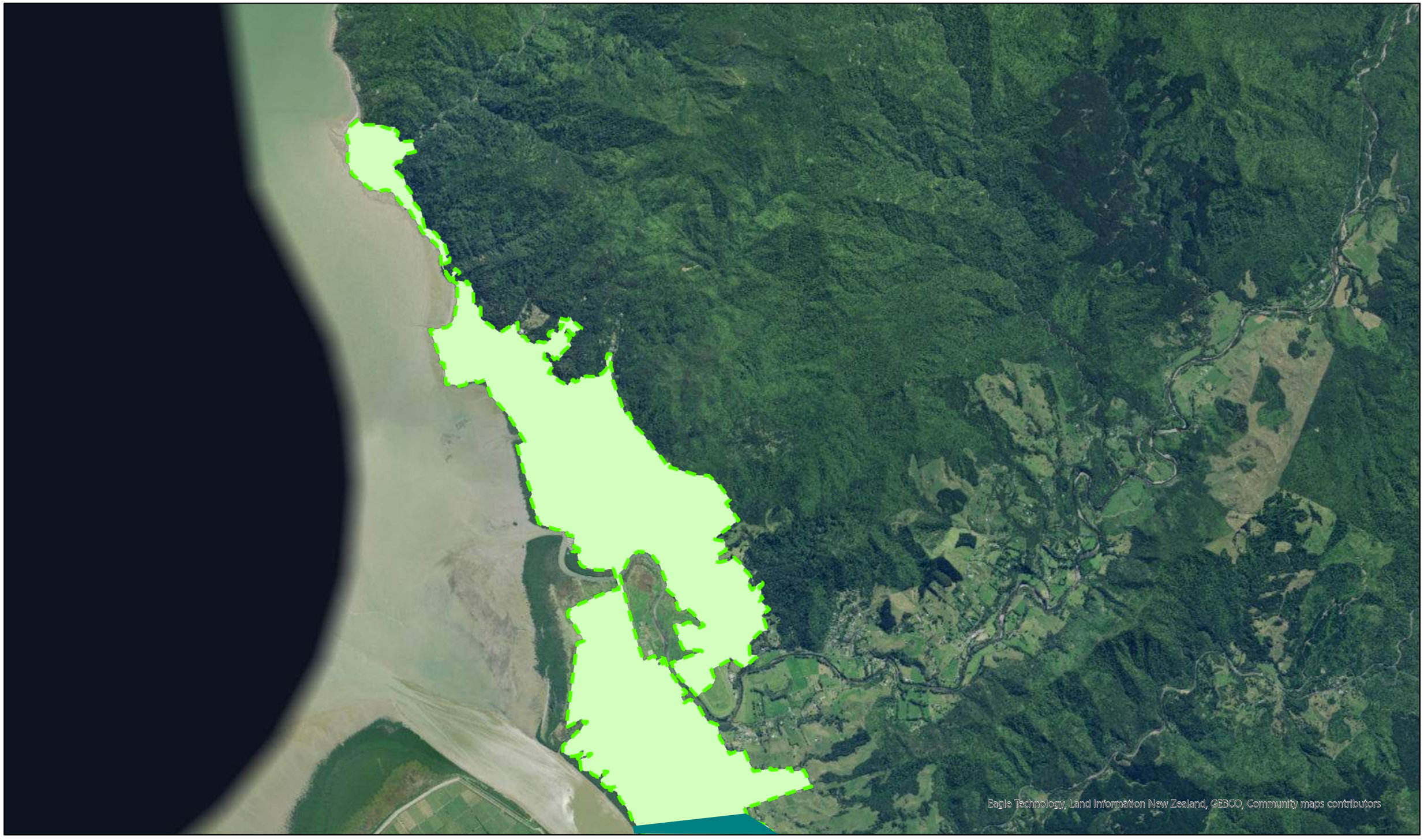
TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Stormwater

Legend

N W E S

1:36,112

0 0.15 0.3 0.6 0.9 mi

0 0.150.3 0.6 0.9 1.2 km

RECEIVING ENVIRONMENT - TARARU STREAM AND FIRTH OF THAMES

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES - TARARU CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES NORTH CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

CENTRAL THAMES CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

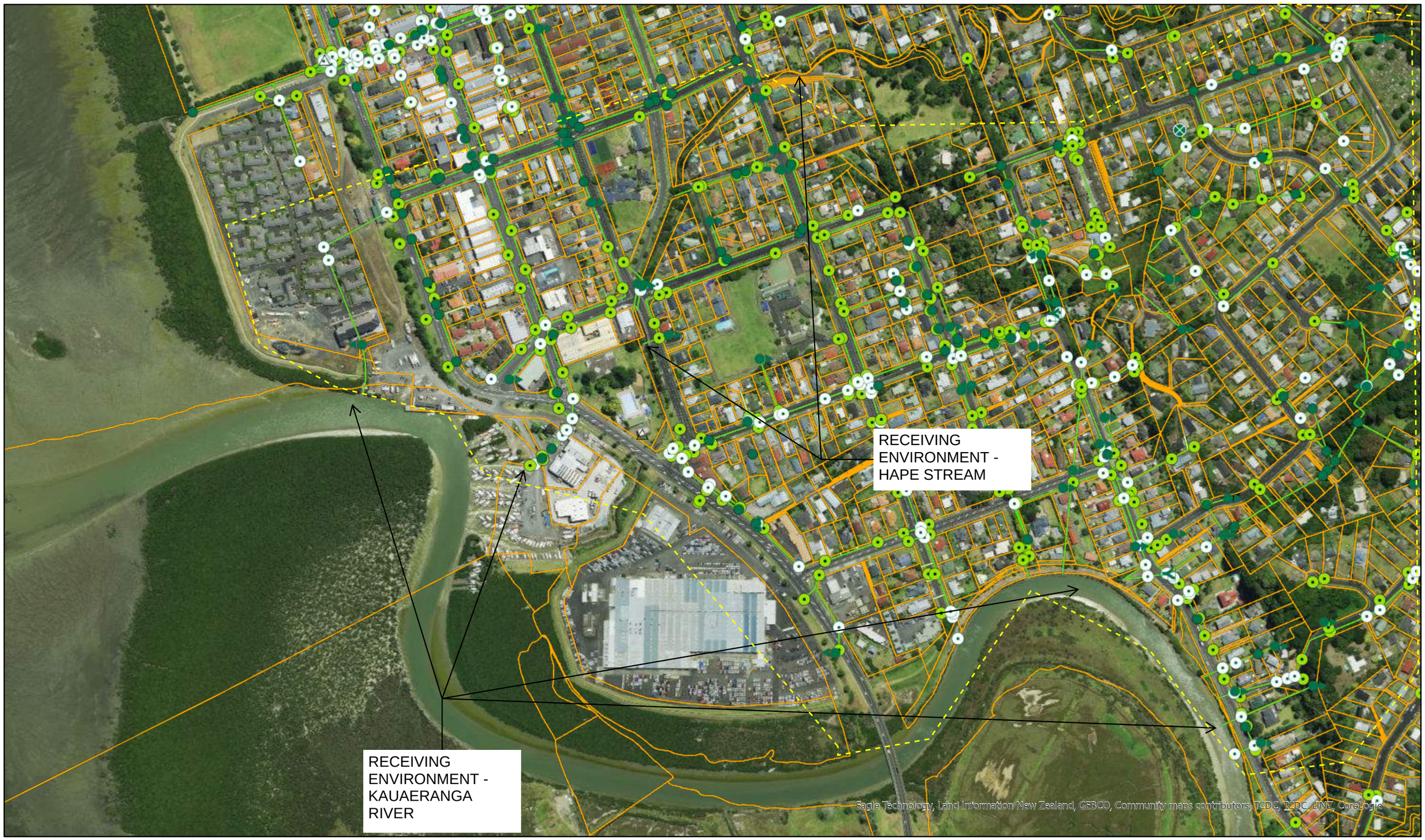
Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES SOUTH CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

RECEIVING ENVIRONMENT - KAUAERANGA RIVER

TOTARA EAST

TOTARA WEST

RECEIVING ENVIRONMENT - FARM DRAINS AND FIRTH OF THAMES

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape

3 Waters Viewer - TCDC SMART Map

THAMES - TOTARA EAST AND WEST CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

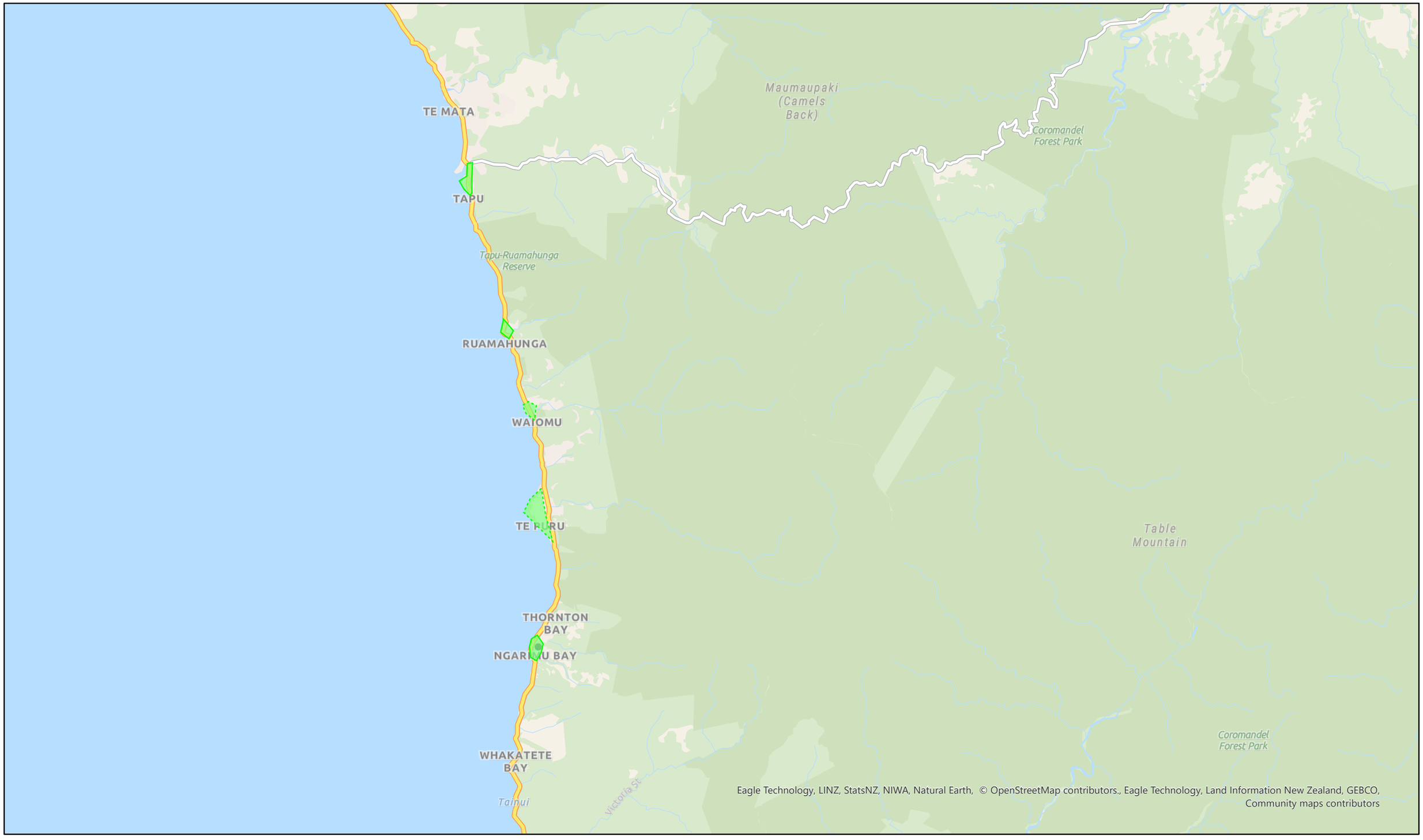
N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

THAMES COAST



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES COAST - AREA OF SERVICE

Stormwater

Legend

N W E S

1:72,224

0 0.28 0.55 1.1 1.65 mi

0 0.28 0.55 1.1 1.65 2.2 km

RECEIVING
ENVIRONMENT
FIRTH OF THAMES
TAPU RIVER

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape

3 Waters Viewer - TCDC SMART Map

THAMES COAST - TAPU CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

THAMES COAST - RUAMAHUNGA CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:2,257

0 0.01 0.01 0.03 0.04 mi

0 0.01 0.01 0.03 0.04 0.06 km

RECEIVING
ENVIRONMENT
FIRTH OF THAMES
WAIOMU STREAM

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, TCDC, TCDC, LINZ, CoreLogic

A3 Landscape
3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES COAST - WAIOMU CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

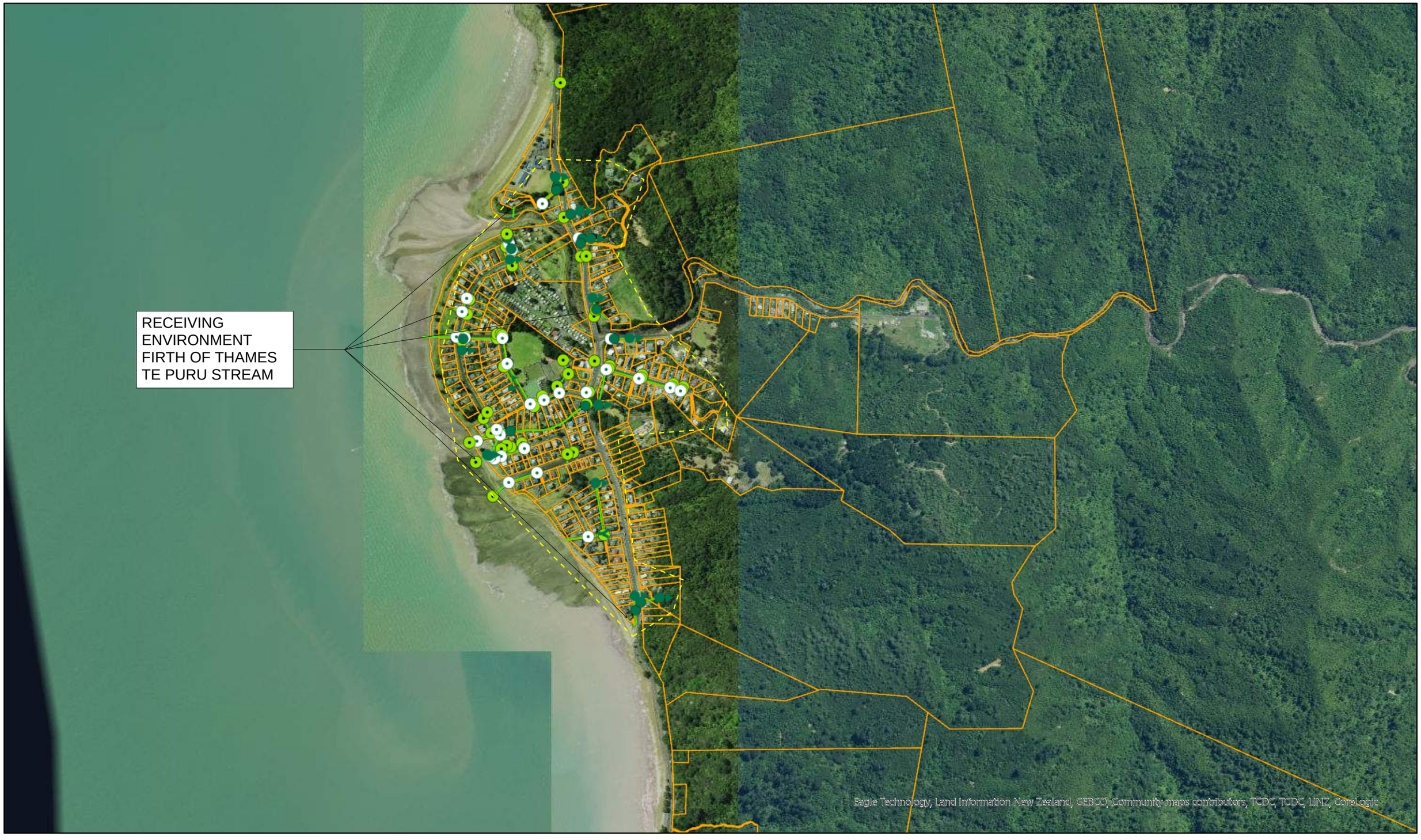
Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES COAST -TE PURU CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

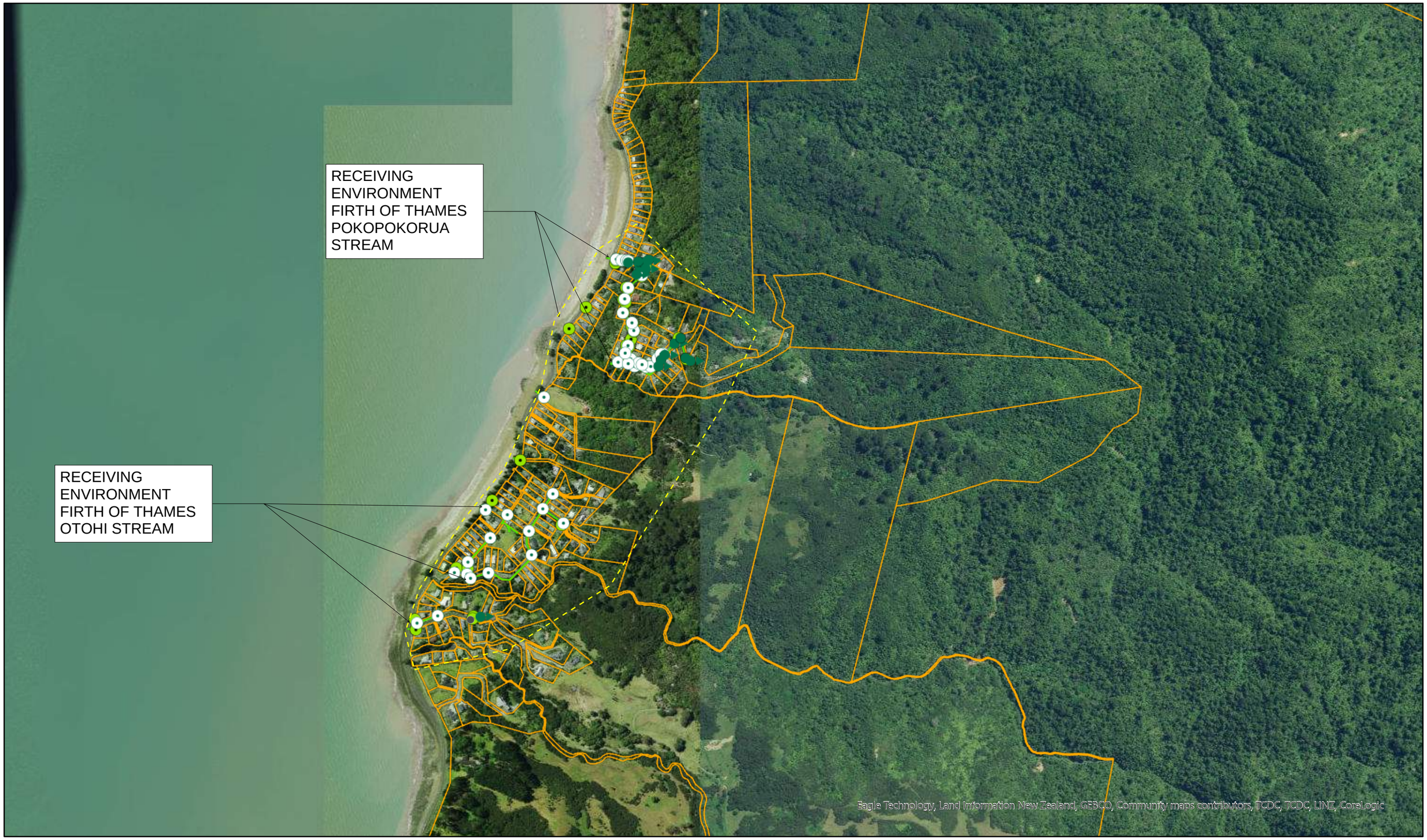
Legend

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

THAMES COAST - NGARIMU CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

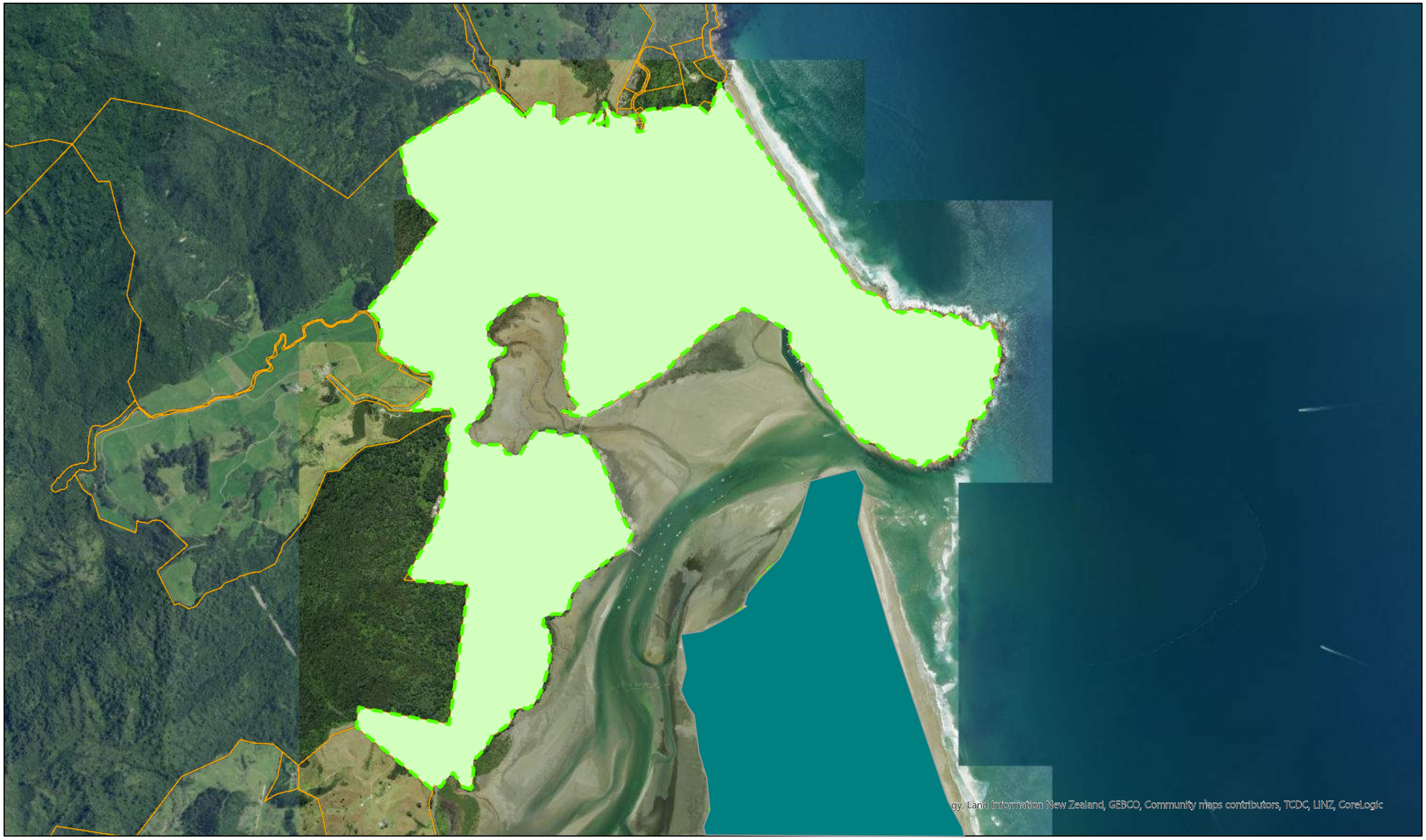
N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

TAIRUA



A3 Landscape

3 Waters Viewer - TCDC SMART Map

TAIRUA - AREA OF SERVICE

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

Legend

Stormwater

N W E S

1:18,056

0 0.07 0.15 0.3 0.45 mi

0 0.05 0.1 0.2 0.3 0.4 km

RECEIVING ENVIRONMENT - GRAHAM STREAM

A3 Landscape

3 Waters Viewer - TCDC SMART Map

TAIRUA GRAHAM STREAM CATCHMENT

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

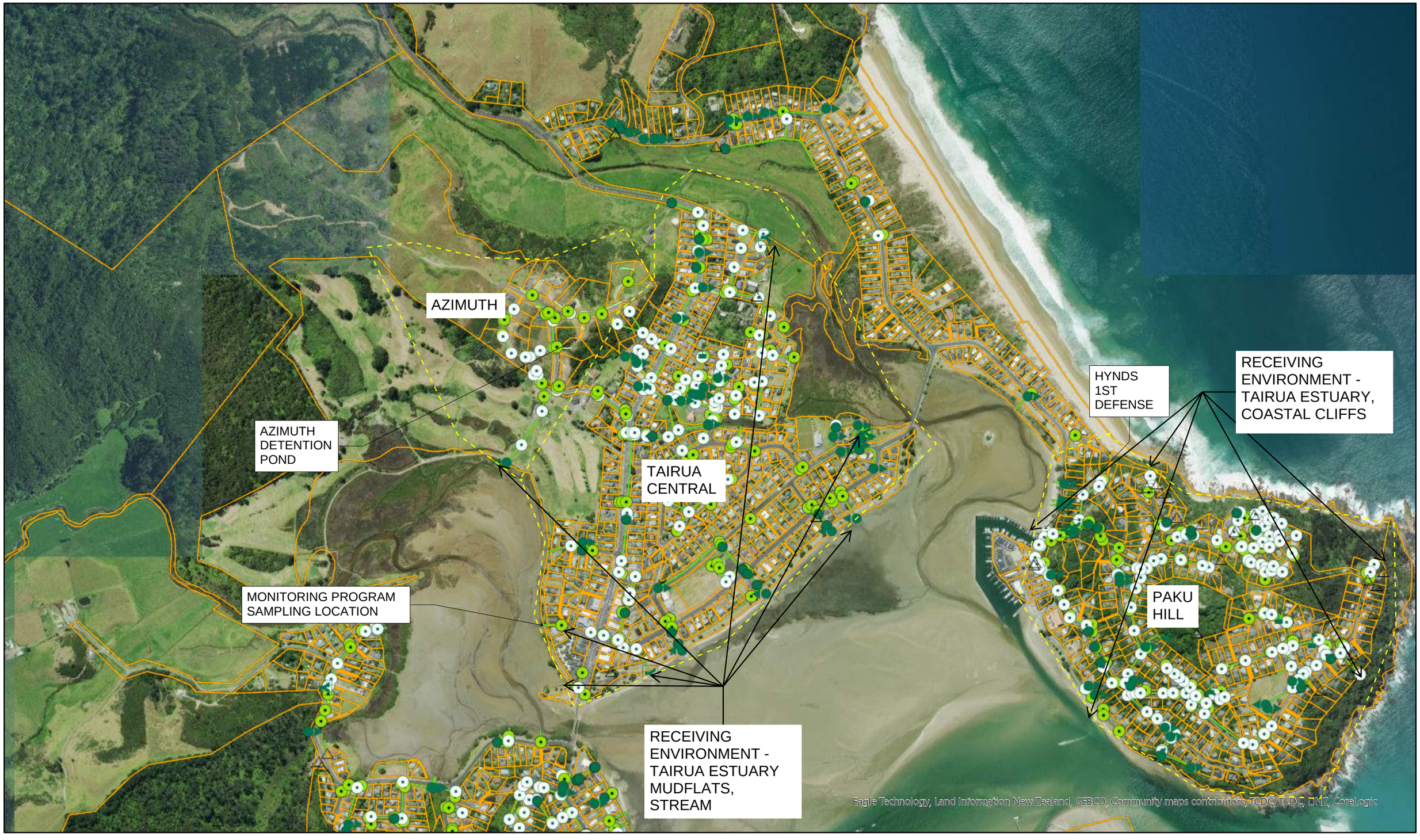
Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TAIRUA CENTRAL, AZIMUTH AND PAKU HILL CATCHMENT

TCDC Storm Water Lines

TCDC Storm Water Points

TCDC Storm

Legend

- Stormwater Connection
- Stormwater Main
- Catchment Boundary
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

TAIRUA SOUTH CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

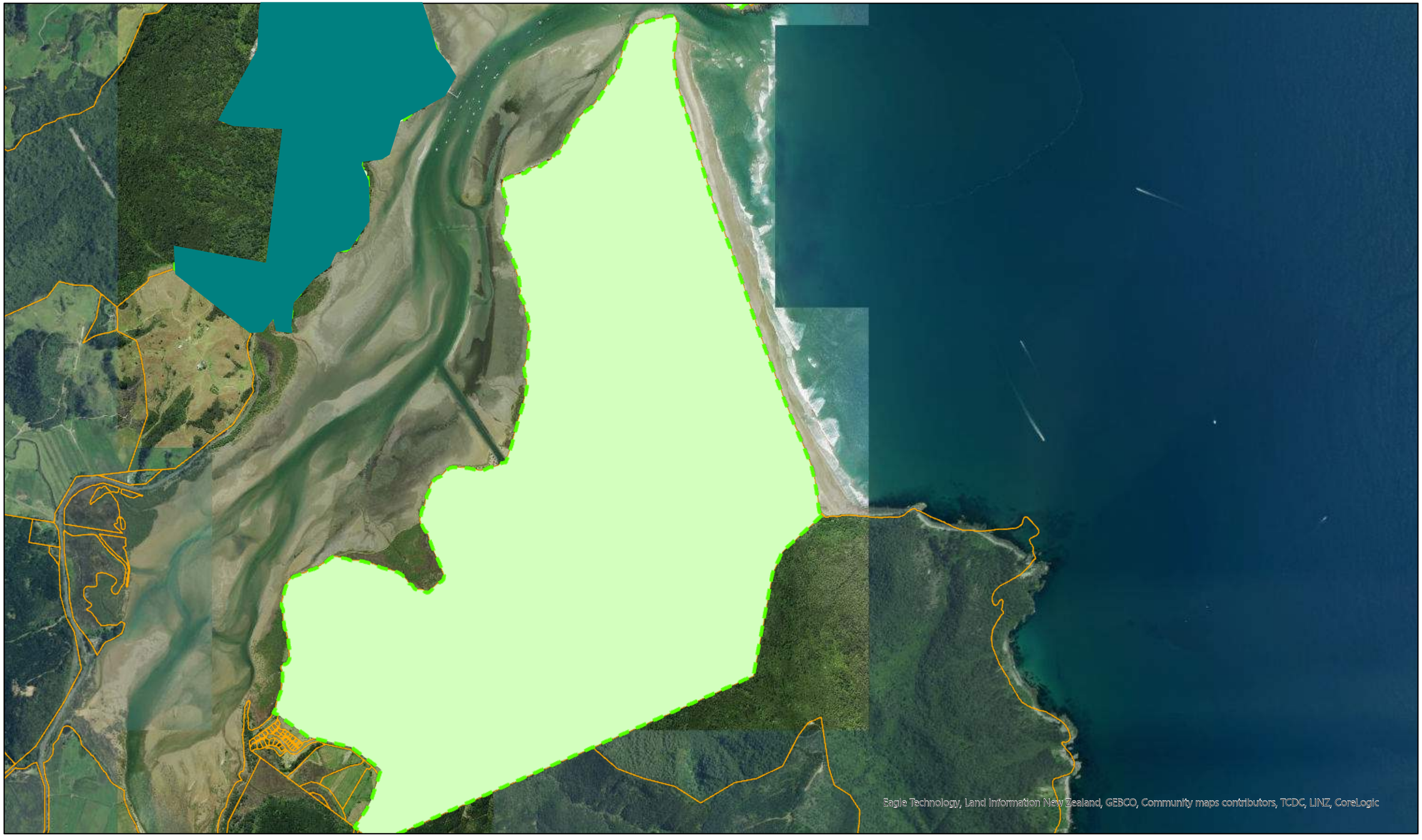
N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

PAUANUI



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

PAUANUI - AREA OF SERVICE

Legend

Stormwater

N

W E

S

1:18,056

0 0.07 0.15 0.3 0.45 mi

0 0.05 0.1 0.2 0.3 0.4 km

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

PAUANUI NORTH CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

MONITORING PROGRAM - SAMPLE LOCATION

RECEIVING ENVIRONMENT - OCEAN BEACH & TAIRUA ESTUARY

A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

PAUANUI CENTRAL CATCHMENT

TCDC Storm Water Lines

- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points

- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

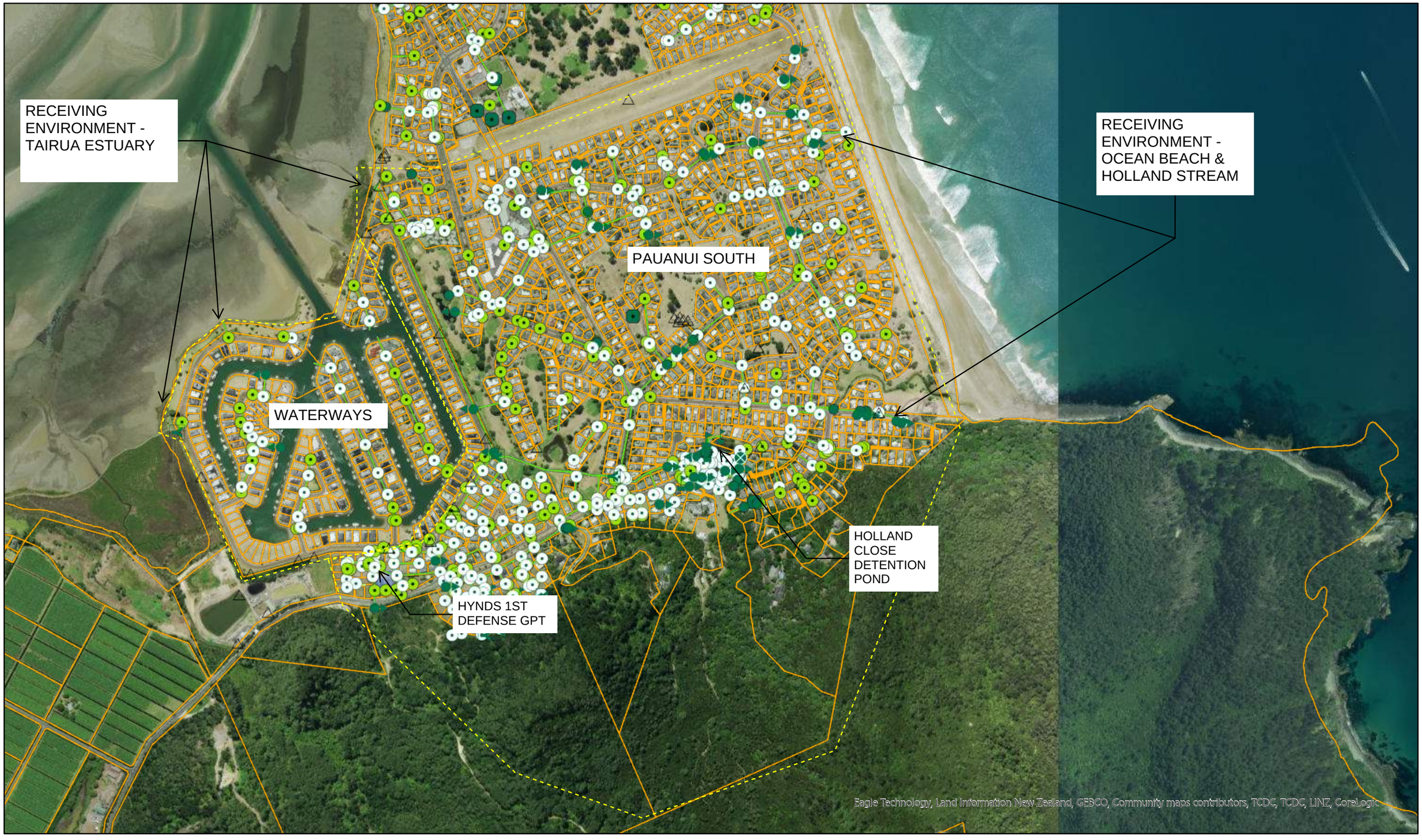
Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

PAUANUI SOUTH AND WATERWAYS CATCHMENT

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

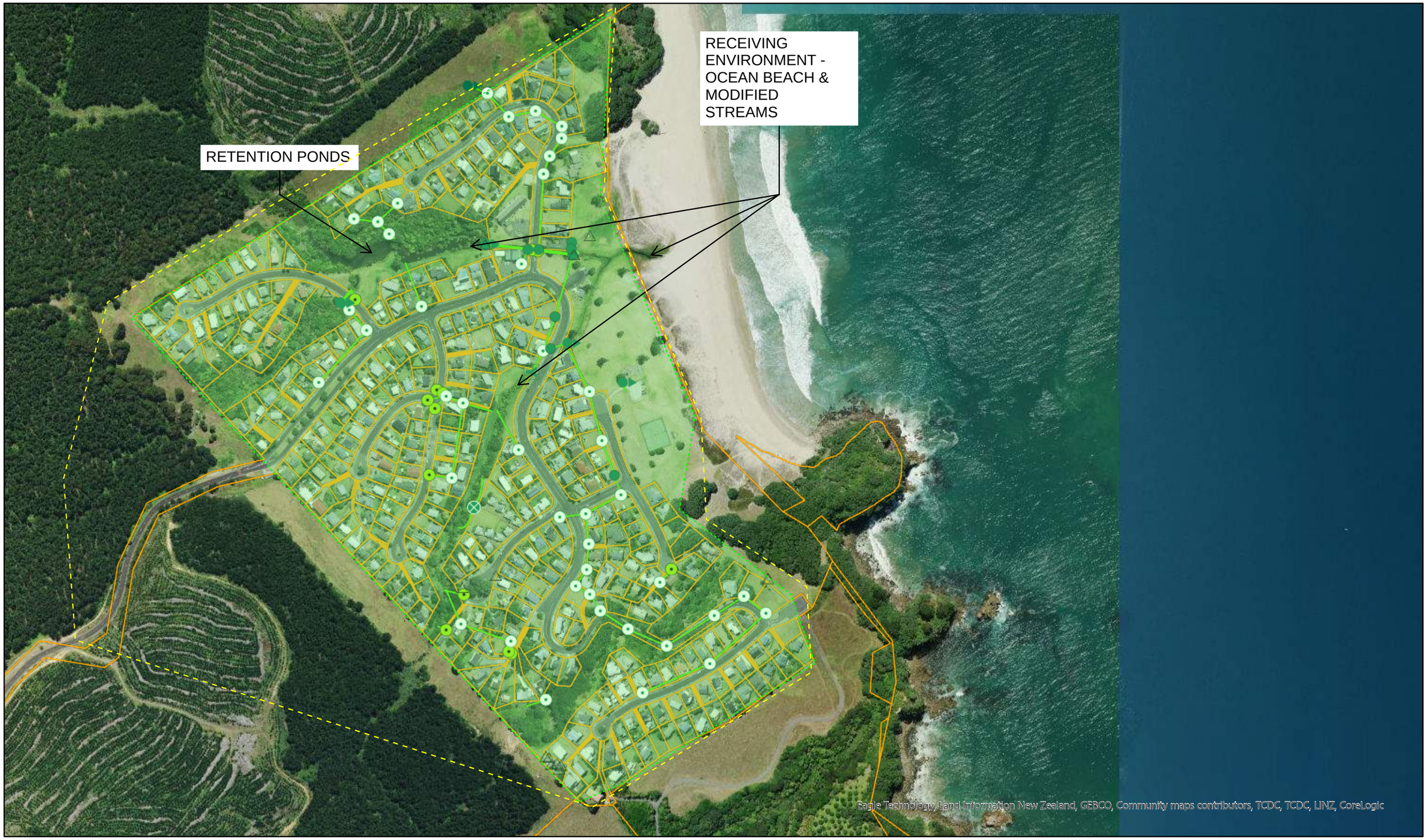
N W E S

1:9,028

0 0.04 0.07 0.14 0.21 mi

0 0.04 0.07 0.14 0.21 0.28 km

ONEMANA



A3 Landscape

3 Waters Viewer - TCDC SMART Map

Date:	29/07/2025
Authored:	
Projection:	Transverse Mercator

ONEMANA - AREA OF SERVICE

Stormwater

TCDC Storm Water Lines
- Stormwater Connection
- Stormwater Main
- Catchment Boundary

TCDC Storm Water Points
- Blankcap
- Inlet
- Outlet
- Manhole
- Node
- Catch Pit
- Pump Station
- Rodding Eye
- Soak Pit
- Valve
- Wingwall
- Other
- Asset Plants
- Property Boundary

Legend

N W E S

1:4,514

0 0.02 0.04 0.07 0.11 mi

0 0.02 0.04 0.07 0.11 0.14 km

APPENDIX B: ADMINISTRATIVE PROCESS FOR INCORPORATING NEW MUNICIPAL STORMWATER DIVERSION AND DISCHARGE ACTIVITIES INTO THE CSDC'S

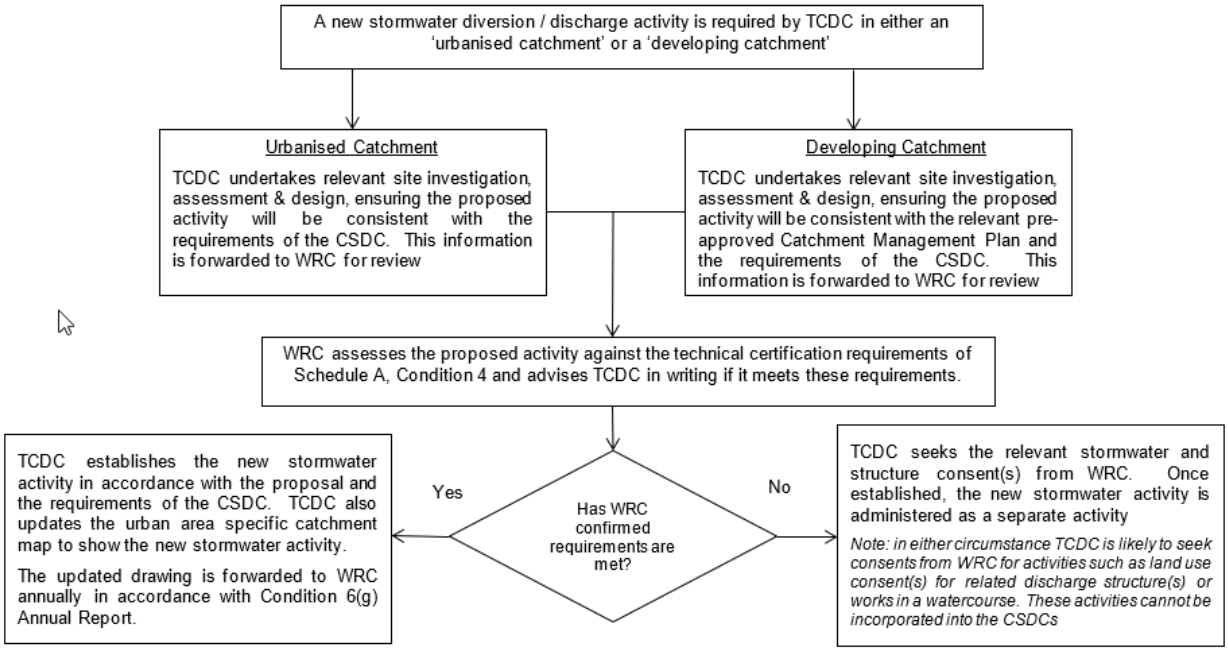
There are essentially two ways in which new municipal stormwater diversion and discharge activities come about. The first way is through TCDC directly establishing these activities, undertaking (or directly overseeing) all design and construction aspects of related stormwater infrastructure. The second way is through land developers who independently establish private stormwater networks and then seek to vest these networks with TCDC (generally on completion of all associated development). In both circumstances the relevant infrastructural information is recorded in TCDC asset management system, and the new infrastructure forms part of the municipal stormwater network.

The administrative process for incorporating new municipal stormwater diversion and discharge activities into the CSDCs, involves assessment against the technical certification requirements of Schedule A, Condition 4. This condition provides for new municipal stormwater activities in 'urbanised catchments' (Condition 4b) and 'developing catchments' (Condition 4c). These activities are also assessed for their consistency with the other conditions of the CSDCs. In particular, Schedule A, Condition 2 requires TCDC to not undertake any changes to the municipal stormwater network which would increase the scale or intensity of the actual and potential adverse effects of the authorise activities on the environment.

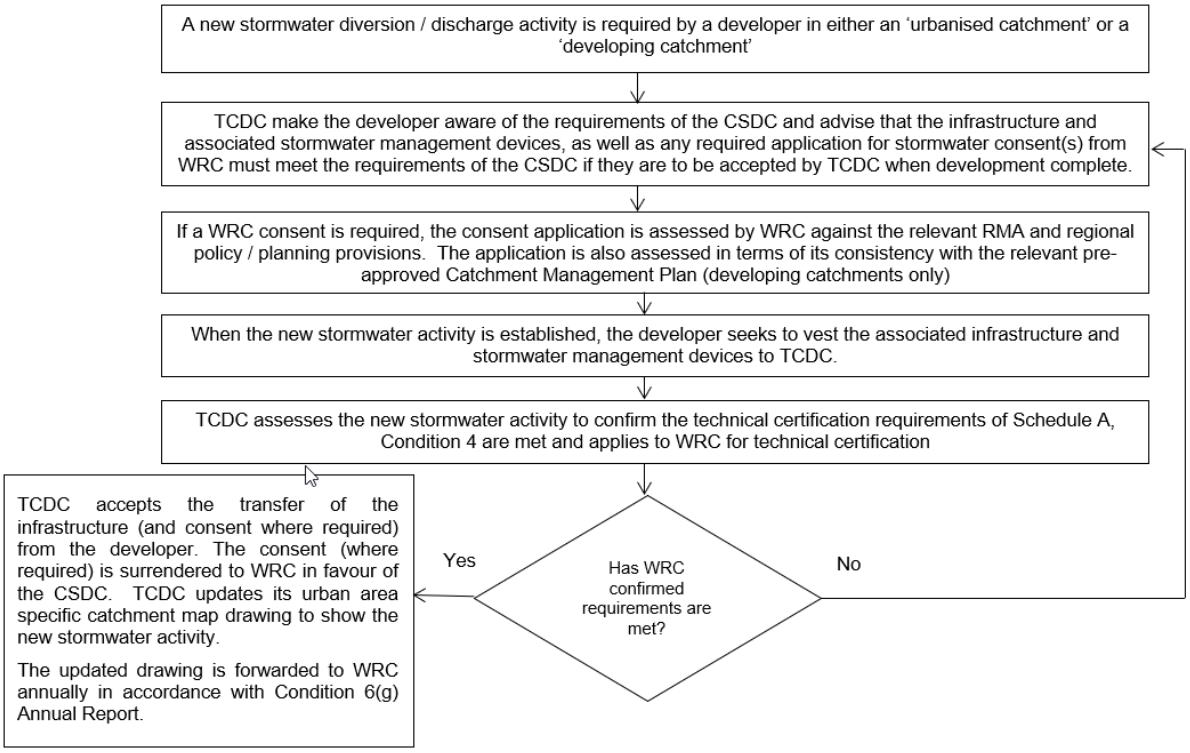
Therefore, for TCDC to incorporate new municipal stormwater diversion and discharge activities into the CSDC's, it will first need to undertake relevant site investigations and assessments to determine if the proposed new activities will in fact meet the technical certification requirements of Schedule A, Condition 4. If the proposed new activities will not meet these requirements, or if there is any doubt about this, then these activities will require separate resource consents in accordance with section 88 of the RMA (1991) and the rules of the Waikato Regional Plan and Regional Coastal Plan.

The following two diagrams show the respective administrative process for incorporating new municipal stormwater diversion and discharge activities into the CSDCs.

Administrative Process for new stormwater diversion and discharge activities established by TCDC



Administrative process for new stormwater diversion and discharge activities established by developers



APPENDIX C: STANDARD OPERATING PROCEDURES NON-ROUTINE CONTAMINANT DISCHARGE INCIDENT

In the event of a potentially significant discharge (spill) of contaminant carry out the following procedures:

- Call 111 – ask for Emgency Services (FIRE)
- Call TCDC - 07 868 0200
- Call Waikato Regional Council – 0800 800 401

- Clearly identify nature of the discharge
- Clearly identify whether there is stormwater infrastructure within the location of the spill

Carry out the necessary Spill Response and Clean-Up Procedures generally as follows;

1. Immediately protect yourself from harm
2. Identify the source of the spill
3. Obtain a spill response kit from one of the following locations
    a. Service Stations
    b. Fire Stations
    c. TCDC Refuse Transfer Stations

STOP THE STILL CONTINUING

CONTAIN THE SPILL – PREVENT SPREADING

DO NOT FLUSH OR WASH THE SPILL UNLESS THERE IS AN IMMEDIATE RISK TO PUBLIC HEALTH AND SAFETY

- Do no add anything to the spill which may cause harm or increase the risk of contamination.
- Locate the nearest stormwater drains/catchpits and protect from the spill
- Cover catchpit grates and plug drainage pipes if possible. Create dams around grates, open drains and area areas of unsealed ground.
- Remove all residues of the spill as carefully as possible, keeping stormwater grades and at-risk areas protected at all times.
- Carefully remove the hazardous material and clean-up material (e.g. absorbents) and store in appropriate container.
- Notify relevant people who could come in contact with the spill.
- Take note of clue up material used and replace.
- Follow provisions of the WRC Oil Spill Contingency Guidelines

APPENDIX D: CATCHMENT PRIORITY LIST FOR THE RETROFITTING OF STORMWATER TREATMENT DEVICES

Priority	Catchment	Catchment Description	
High	Thames Central	20ha The area is bound by Willoughby Street to the south and Walter Street to the north, Mackay Street to the east, Firth of Thames to west	
Medium	Thames North	18.1ha The area is bound by Burke Street to the north, Pollen Street to the east, Pauhau Street to the south and Queen Street to the west.	

Priority	Catchment	Catchment Description	
Medium	Thames South	15.3 ha Bound by Queen Street to the west, Richmond Street to the north, Mackay Street to the east and Thames Marina to the south.	
Medium	Whitianga - Moewai Industrial area	10ha Includes Moewai Road, Abrahamson Drive and Dakota Drive	
Medium	Whitianga - Marina	5ha Whitianga Marina, to Albert Street in the west, Campbell Street to the north and Lyon Park to the south.	

Priority	Catchment	Catchment Description	
Medium	Whangamata North	11.5ha Hetherington Drive and the central and southern sections of Port Road.	
Medium	Whangamata Industrial Area	11.5 ha Bound by the Moanu Anu Anu River to the west, Martyn Road to the east, Wattle Place to the south and Casement Road to the north.	
Low	Coromandel-	Central, Wyuna Bay, Long Bay and Oamaru Bay.	
Low	Thames –	Kopu, Totara West, Totara East and Tararu	
Low	Pauanui	Waterways, North, South and Central	
Low	Tairua	Graham Stream, Central, North and South of Pepe, Town Centre, Paku Hill and Red Bridge	
Low	Whitianga	Centennial Heights, Buffalo	

Priority	Catchment	Catchment Description	
		Beach Foreshore, Waterways and Inner	
Low	Whangamata	Moana Anu Anu, Beverly Hills, Central and South	