

Notice of Requirement Taupō District Council

33 Pokuru Road North, Whakamaru

Whakamaru: Wastewater Treatment Plant

27 February, 2025



Planz Consultants

Quality Assurance Statement:

Application Prepared By:

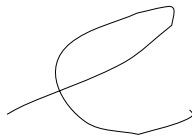
Planz Consultants Ltd,
Level 3, 79 Lichfield Street,
Christchurch 8140
planzconsultants.co.nz

A handwritten signature in blue ink, appearing to read "Matt Bonis", with a long horizontal flourish underneath.

Name: Matt Bonis
Position: Consultant Planner

M: 021 796 670 E: matt@planzconsultants.co.nz

Reviewed By:

A handwritten signature in black ink, appearing to read "Terri Winder", with a long horizontal flourish underneath.

Name: Terri Winder
Position: Consultant Planner

M: 021 225 9323 E: terri@planzconsultants.co.nz

Project Number: J17536

Document Status: Lodgement

Date: 27 February, 2025

The information contained in this document produced by Planz Consultants Ltd is solely for the use of the Client for the purpose for which it has been prepared and Planz Consultants Ltd undertakes no duty to or accepts any responsibility to any third party who may rely upon this document.

All rights reserved. No section or element of this document may be removed from this document, reproduced, electronically stored or transmitted in any form without the written permission of Planz Consultants Ltd.

TABLE OF CONTENTS

1	Introduction -----	1
2	Description of the site to which this notice applies-----	1
3	Nature of the proposed works-----	3
4	Assessment of Effects -----	3
	4.1 Construction effects-----	3
	4.2 Operational effects-----	3
5	Statutory considerations-----	4
	5.1 Section 171(1)(a) Relevant provisions -----	4
	5.2 Section 171(1)(b) Adequate consideration given to alternatives-----	6
	5.3 Section 171(1)(c) reasonably necessary -----	7
	5.4 Section 171(1)(d) 'any other matter' -----	7
6	Consultation-----	8
7	Conclusion -----	8

Attachments:

- Attachment A:** Whakamaru Wastewater Treatment Facility
- Attachment B:** Designation Table
- Attachment C:** Record of Title

NOTICE OF REQUIREMENT FOR DESIGNATION PURSUANT TO S168 OF THE RESOURCE MANAGEMENT ACT 1991

1 Introduction

Pursuant to s168 of the Resource Management Act (**the Act / RMA**), Taupō District Council hereby gives notice of its requirement (**Notice**) for a new designation in the Taupō District Plan for the operation and maintenance of a wastewater treatment plan (**WWTP**) and associated infrastructure as described below. The designation will enable the infrastructure and facilities as associated with Regional Council consent APP130354 but does not further nor authorise that discharge.

Taupō District Council, as a local authority, is an approved requiring authority under s166 of the RMA. The designation is required in order to enable the treatment of wastewater to the Wakamaru Community.

2 Description of the site to which this notice applies

The proposed site to which this notice applies is at 33 Pokuru Road North, Whakamaru as legally described as Lot 1 DP South Auckland 61116 under the Record of Title SA62D/492. The property is owned by the Taupō District Council.

The location (and details) of the site is shown in **Attachment A**, and a designation table in accordance with the format required by the National Planning Standards is provided as **Attachment B**. The Record of Title is provided in **Attachment C**.

The site is zoned General Rural Environment in the Taupō District Plan and is owned by the Taupō District Council. The grassed site has a flat topography rising only 2m from north to south, and is devoid of mature trees or substantial landscaping. There is a small 16m² shed on the site, ponds and soakage pits. The primary treatment is by way Packed Bed Reactor (**PBR**). Access via Pokuru Road North is by way of unformed crossing to a closed 'farm style' gate.

The Whakamaru WWTP was built in the 1950's to service the Whakamaru hydro village. The design capacity services up to 200 people in 60 dwellings.

Electricity lines transect the site from east to west – however these are not notated in the Taupō District Plan as 'transmission lines' with any buffer separation requirement. Management of any development or works proximate to the lines would therefore be a matter to be undertaken under the NZ Code of Practice:NZEC34 (Electrical Safe Distances) rather than regulation under a planning framework established under the RMA. Notated Electricity Transmission lines in the Taupō District Plan and their associated 20m restrictive buffer¹ are located to the west and south of the site and do not traverse the site (**Figure 1**).

¹ Taupō District Plan Rule 4b.2.6

The property is identified as a 'known contaminated site' in terms of being an identified HAIL (Hazardous Activities and Industries List) site (Category G.6 Wastewater Treatment).

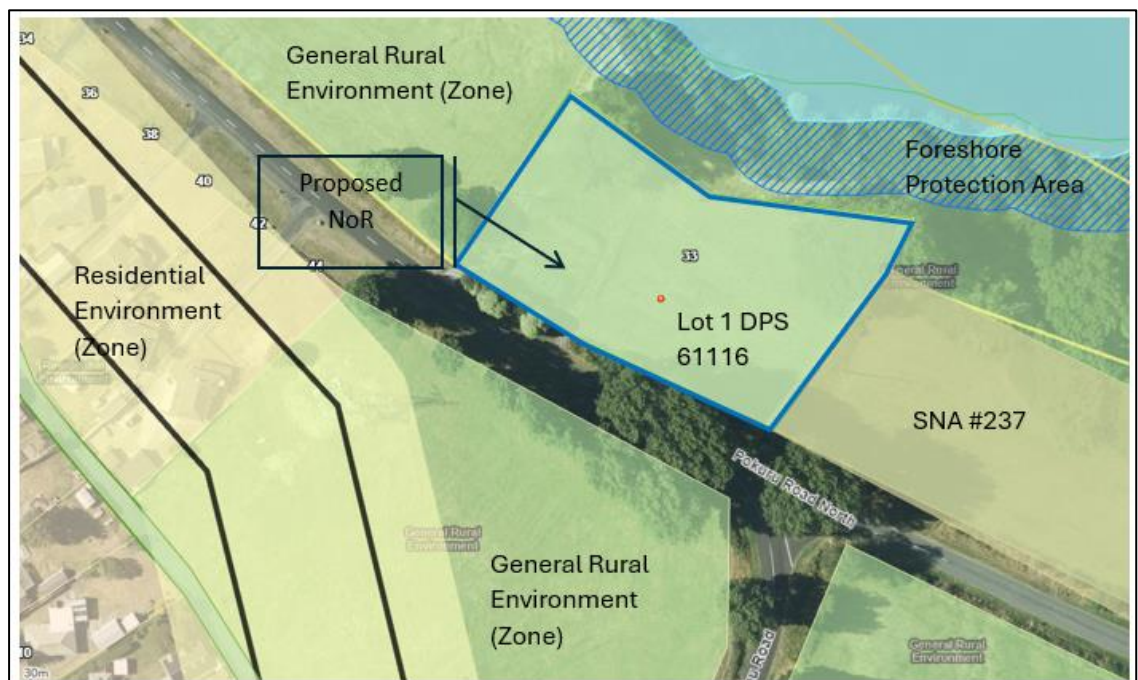
To the north, a 30m strip of esplanade as also zoned General Rural Environment separates the site from the Waikato River as part of a 48Ha land parcel under the ownership of Mercury NZ Limited. Part of that esplanade is notated as Foreshore Protection Area under Taupō District Plan.

The site adjoins (but outside of) the notated Electricity Core Site as associated with the Whakamaru Dam and Hydro Electric Power Station.

Immediately to the west, the adjoining site, as also zoned General Rural Environment, is notated as a Significant Natural Area (SNA #237²) under the Taupō District Plan. Rules applicable to indigenous vegetation clearance³ within a notated SNA therefore do not apply to the site.

The nearest Residential Environment Zone is located some 25m to the west, although the existing dwelling on that site is located some 70m from the site.

Figure 1: NoR and surrounds (modified from Taupō District Plan)



² Taupō District Plan. Schedule 7. Whakamaru Conservancy area

³ Taupō District Plan. Rule 4e.6.1 and 4e.6.2

3 Nature of the proposed works

This Notice relates to a new designation for the **purpose** of the operation and maintenance of infrastructure for wastewater treatment.

This allows for the continuing operation of the existing WWTP, tanks and ancillary activities including infrastructure associated with soakage⁴.

No substantial upgrades are identified for the site within the Long Term Plan (LTP), and the designation is considered to provide for necessary maintenance works as these arise.

The designation is necessary to continue to provide wastewater treatment to the Whakamaru community.

4 Assessment of Effects

The designation allows for continued operation and maintenance of the existing wastewater infrastructure. The effects associated with the operational and maintenance of the site are described below.

4.1 Construction effects

WWTP and irrigation infrastructure is located on the site and is operating.

Any additional construction effects will come from maintenance activities, and incremental increases in capacity and efficiency to address improvements in discharge quality as these are needed.

Maintenance effects will be short term, localised and temporary, and will not materially change the scale of the infrastructure already present on the site.

Existing perimeter planting along Pokuru Road North is located within the road reserve and is not anticipated to be altered. Additional planting is not proposed, nor considered necessary.

4.2 Operational effects

The operation of the site involves pumping wastewater, and associated treatment and irrigation. Wastewater treatment will continue to operate automatically, and no material upgrades in infrastructure are anticipated.

The periodic visits by Taupō District Council Officers to take water samples and confirm efficient operations will continue. These and other visits for reactive maintenance will continue on an infrequent basis as required and will not generate material transport trips.

⁴ The discharge itself is subject to Waikato Regional Council Consent 130354

The designation will not alter the existing (lawfully established) operation and frequency of activity being undertaken on the site.

There is no other material effects associated with the operation of the site.

5 Statutory considerations

s171(1) of the RMA sets out that when considering a Notice, a Territorial Authority must, as subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to matters s171(a) – (d), as are considered below.

5.1 Section 171(1)(a) Relevant provisions

For completeness, s171(1)(a) of the RMA requires a consideration having regard to –

a) any relevant provisions of—

(i) a national policy statement:

(ii) a New Zealand coastal policy statement:

(iii) a regional policy statement or proposed regional policy statement:

(iv) a plan or proposed plan; and

National Policy Statements (NPS)

There are eight National Policy Statements. The only NPS of relevance is the NPS-Freshwater Management given the nature of the discharge and irrigation undertaken at the site. These remain under the management regime through Waikato Regional Council consent 130354. The Notice and subsequent designation would not facilitate or alter the quality and volume of the discharge authorised by that consent.

The Notice does not relate to a site that is notated for Electricity Transmission lines, and hence of relevance to the NPS-Electricity Transmission.

The Notice site is not classified as Highly Productive Land under clause 3.5(7) the NPS-Highly Productive Land. The Land Use Classification for the site is Land Use Capability Class 4⁵.

There are no implications in terms of the requirements of the National Policy Statements to the designation.

National Environment Standards (NES)

As the site is recognised as a HAIL site, the requirements of the NES-Assessing and Managing Contaminants in Soil to Protect Human Health prevail over a Designation⁶.

Waikato Regional Policy Statement (WRPS)

⁵ <https://waikatomaps.waikatoregion.govt.nz/Viewer/?map=3e5673e57fa24e89a30e54b7fb8511d5>

⁶ Section 43D(4)

Part 3 – Topic EIT Energy, Infrastructure and Transport relates to the integration of land use planning with infrastructure.

Policy EIT-P1 seeks that the built environment is managed having particular regard to ensuring that the effectiveness and efficiency of existing and planning regionally significant infrastructure is protected.

Part 3 – Topic Urban Form and development relates to co-ordinating growth and infrastructure, including **Policy UFD-P2** which seeks that *‘the efficient and effective functioning of infrastructure ... is maintained, and the ability to maintain and upgrade that infrastructure is retained’*.

This Notice is considered to be consistent with the WRPS objectives and policies, specifically IM-O1(4), EIT-P1 and UFD-P2.

The designation of this site will enable the effective continued operation of the wastewater network to provide for the social and economic wellbeing of the Whakamaru community.

Waikato Regional Plan

Made operative in September 2007, the Waikato Regional Plan does not contain rules specifically relating to infrastructure assets.

In terms of discharges, Section 3 – Water Module seeks to enable discharges to water with only minor effects, with Policy 3 seeking alternative land-based treatment systems being promoted. These matters are the subject of the relevant discharge resource consent held by Taupō District Council for land-based irrigation at the site which is due for renewal in 2036 and is not affected by the designation proposal.

In terms of odour discharges regional resource consent 130354 (**Attachment D**, Condition 20) held by the Taupō District Council to manage the discharge extends to nuisance odour discharges from the site. These respond to Part 3 / Air of the Waikato Regional Plan, including **AIR-O1(3)** and **AIR-P3** that seek to manage air quality in a way that avoids, where practicable, adverse effects on local amenity values from discharges of odour with objectionable effects to be managed at the property boundary.

Taupō District Plan

The Taupō District Plan recognises Wastewater Treatment Plants as Regionally Significant Infrastructure⁷.

Strategic Objectives in the Taupō District Plan seek that the district develops in a cohesive, compact and structured way, including that ensuring infrastructure is efficiently and effectively integrated with land use (**Objective 2.3.2.1**).

Strategic Objective 2.5.2.1 seeks that:

⁷ Taupō District Plan. Chapter 10 Definitions.

The wider benefits and strategic importance of Nationally and Regionally Significant Infrastructure, to the District and wider, are recognised in decision making and land use planning.

Associated Policies 2.5.3.4 and 2.5.3.5 seek:

Planning and development of national and regional infrastructure will consider the needs and the well-being of current and future communities.

Recognise that national and regional infrastructure can have important environmental, economic, cultural and social effects.

The Taupō District Plan seeks (**Objective 3n.2.1**) to enable the operation, maintenance and upgrading of network utilities (which extends to networks for the reticulation of wastewater), which ensuring that network utilities are designed and located to manage adverse effects on the environment and protect the health and safety of the community (**Objective 3n.2.2**). A specific policy (**Policy 3n.2.1(iii)**) requires regard be had to the contribution of network utilities to the functioning and wellbeing of the community.

The proposed designation site has been in operation for a number of years, and is located on land owned by the Taupō District Council. The site is located some distance from the nearest sensitive residential dwelling, and is also located behind mature landscape screening along the frontage with Pokuru Road North. The site and associated infrastructure provide for the wellbeing of the local Whakamaru communities.

5.2 Section 171(1)(b) Adequate consideration given to alternatives

For completeness, s171(1)(b) of the RMA requires a consideration having regard to –

(b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—

(i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or

(ii) it is likely that the work will have a significant adverse effect on the environment; and

Taupō District Council as owner of the site has financial interest in the site. In addition, it is not considered that the works associated with the designation will have significant adverse effects on the environment.

The site has been operating as a community WWTP for a number of years and is the subject of appropriate Regional Council consent.

In conclusion, no consideration of alternative sites has been given, and the effects of continued operation and maintenance will be negligible. No other methods have been considered.

5.3 Section 171(1)(c) reasonably necessary

s171(1)(c) of the RMA requires consideration having regard to whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.

It is considered that the new designation, as a planning tool, is necessary to allow the Taupō District Council, as Requiring Authority, appropriate management and control to ensure a safe and secure wastewater treatment network is supplied for the Whakamaru Community.

The alternative, as is the existing status quo is continued reliance on the Taupō District Plan rules and / or the resource consent process. It is considered that these options do not provide certainty or a long-term solution to effectively and efficiently address the ongoing use and maintenance of the existing WWTP. The designation is also necessary to include all of the Taupō District Council's wider network of water and wastewater infrastructure under the designation mechanism umbrella in the Taupō District Plan.

5.4 Section 171(1)(d) 'any other matter'

Improving resilience and reducing environmental impacts through appropriate maintenance and upgrades of infrastructure associated with WWTP Infrastructure is a primary objective of the Notice.

The Notice and associated works will assist the Taupō District Council in terms of managing the effects of wastewater, including ensuring appropriate levels of treatment and reducing nitrogen levels. Noting again that the Notice (and any subsequent Outline Plan as required pursuant to s176A of the RMA) does not extend to wastewater discharges or treatment. These remain the subject of Waikato Regional consent 1303354

Broader engagement between the Taupō District Council and local iwi and hapu has identified common ground to secure improvements within the wastewater treatment train and to avoid wastewater (including treated wastewater) entering waterways in the district. Maintenance and upgrades to the Whakamaru WWTP will be consistent with the approach undertaken by the Taupō District Council as facilitated at its largest wastewater plants (Taupō, Tūrangi and Mangakino) as well as smaller plants (Motuoapa) to reduce nitrogen discharges into the Lake Taupō catchment.

It is acknowledged that Ngāti Tūwharetoa hold mana whenua and kaitiakitanga over the Central North Island including the Lake Taupō catchment and part of the Waikato River, Upper Waikato, Whanganui, Rangitikei and Rangitaiki catchments.

This approach is also consistent with key policy documents which are aimed at improving water quality throughout the District's catchments. These documents include Te Ture Whaimana o Te Awa o Waikato - Vision and Strategy for the Waikato River for the Waikato River catchment, Te Ara Whānui o Rangitāki – Pathways of the Rangitāki for the Rangitāki catchment, and Te Kaupapa Kaitiaki', a plan developed for the Taupō catchment.

6 Consultation

No consultation has been undertaken or is considered necessary.

7 Conclusion

Taupō District Council gives notice of its requirement to designate land related to an existing WWTP. The preceding assessment of effects concludes that the effects associated with the maintenance and operation of the facility will be minimal. Overall, it is concluded that the designation is consistent with the relevant statutory provisions and the principles and purpose of the RMA.

Attachment A: Whakamaru WWTP (33 Pokuru Road North)

Designation	Detail
Legal Description	Lot 1 DP South Auckland 61116
Site Address	33 Pokuru Road North, Whakamaru
Landowner	Taupō District Council
Purpose of the Site	Operation and maintenance of infrastructure for wastewater treatment purposes.
Area of Designation / Site Plan	5778m ² 

Site Plan (Existing)	
Site Plan (Proposed)	No Change
Description of the activity	The following provides a description of the works and environment using s176A(3) as a basis. Consideration against the requirements of s171(1) is provided in the main report. General: Operating Wastewater facility <i>The height, shape, and bulk of the public work, project, or work:</i> The site incorporates a circa 16m² shed / pump station and associated unformed parking and vehicle crossing to Pokuru Road North. Specific wastewater facilities include screens, oxidation ponds / aeration ponds plus irrigation lines and pivots. Access from Pokuru Road North is by way of unformed crossing to a 'rural type' farm gate at the entrance to the property. A secondary unformed and less used access is located midway along the road frontage. A number of mature trees are located along the frontage of the site as established on the berm of the road reserve. The perimeter of the site is demarcated by a batten and wire fence. <i>The location on the site of the public work, project or work:</i> The site is located to the east of the Whakamaru residential settlement, as accessed via Pokuru Road North, immediately to the east of the intersection with Kaahu Road.

The site is located some 500m south of the Whakamuru Hydroelectric Power Station and dam, and is separated from the Waikato River by a narrow (30m wide) esplanade which is part of the larger Mercury NZ Limited property owned as adjoining the site.

The nearest residential dwelling in the General Residential Environment is located some 70m to the west of the site.

The likely finished contour of the site:

The contour, which is level, will not change.

Vehicular access, circulation and the provision for parking:

Activities will not generate material vehicle trips on the network.

The site is accessed directly from Pokuru Road North, with the (main) access located at the western edge of the frontage of the site. The access crossing is unformed, as is the access within the site.

There is considerable unformed parking and manoeuvring areas on site to accommodate the infrequent and low levels of vehicles generated by activities on the site.

There is an unformed berm width of some 5.5m between the formed part of the road reserve and the access gate. This provides sufficient queuing space to access the site. In combination with the low levels of vehicle movements on Pokuru Road North it is considered there are no implications on the effective and efficient use of Pokuru Road North.

The landscaping proposed:

No further landscaping is proposed.

There is mature landscaping along the frontage with Pokuru Road North as contained within the road reserve berm.

Views of low-level structures and facilities located on the site as viewed from Pokuru Road North are fleeting, with the infrastructure readily visually absorbed within the receiving environment. Public views of the site would be considered to be materially different to those that would be anticipated with built form within the General Rural Environment.

Any other matters to avoid, remedy or mitigate adverse effects on the environment:

There are no effects from arising from the site and activities that require consideration. Odour is managed through both the design and management of the treatment plant and separation to sensitive receivers as well as the requirements of Waikato Regional Council Consent 130354.

Established / Upgraded	The WWTP is pre-existing.
Relevant Resource Consents	Waikato Regional Council Consent 130354
Recommended Conditions	No
Zoning and Overlays	Zone: General Rural Environment Overlays: • NA

Attachment B: Designation Table

Whakamuru Wastewater Treatment Facility	
Designation unique identifier	TDCXX
Designation Purpose	Wastewater Treatment Facility
Site Identifier	33 Pokuru Road North, Whakamaru
Lapse Date	Given effect to
Designation hierarchy under s177 of the Resource Management Act	Primary
Conditions	No
Additional information	n/a

Attachment C: Record of Title



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land
Transfer Act 2017**




R.W. Muir
Registrar-General
of Land

Identifier SA62D/492
Land Registration District South Auckland
Date Issued 19 November 1997

Prior References
SA51A/452

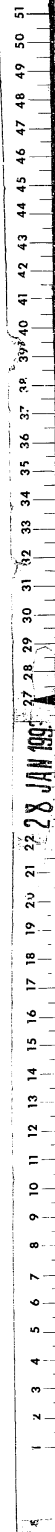
Estate Fee Simple
Area 5778 square metres more or less
Legal Description Lot 1 Deposited Plan South Auckland
61116
Purpose Local purpose sewage reserve
Registered Owners
Taupo District Council

Interests

SUBJECT TO THE RESERVES ACT 1977

Subject to an electricity right (in gross) over part marked A on DPS 88016 in favour of Tuaropaki Power Company Limited created by Transfer B650471.3 - 16.3.2001 at 9.00 am

Author: CHRISTOPHER CHURCHMAN, GENERAL DEPARTMENT OF LANDS AND SURVEY NEW ZEALAND WELLINGTON



Attachment D: Regional resource consent 130354

Consent Evaluation Report

Applicant:	Taupo District Council	File No.:	60 01 88A
Address of Site:	(Whakamaru Village) Pokuru Rd, Whakamaru	Project Code:	RC20134
Application Number:	APP130354		

1 Introduction

On 30 September 2013 a discharge consent application was received from the Taupo District Council who seek a replacement wastewater discharge permit for the continued operation of the Whakamaru Wastewater Treatment Plant at Whakamaru. As there is no permitted activity rule in the Waikato Regional Plan that provides for a wastewater discharge of the volume requested, authorisation by consent is required. A consent duration of 20-years is requested.

There is confusion as to the exact details for the street address of the wastewater treatment plant. Both this Council's Smart Maps GIS programme and Google Maps show different locations for the address given in the application (i.e. 33 Pokuru Road North). An inquiry to TDC did not resolve the confusion. I have personally visited the plant a number of times and confirm that the plant is physically located along Pokuru Road North immediately below Whakamaru Village as shown in figure 1 below:

Figure 1. Aerial map showing location of WWTP



The NZ map reference and legal description for the wastewater plant site is NZTM 1845243E, 5743336N; and Lot 1 DP61116 respectively.

The activity is determined in accordance with s.15 of the Resource Management Act as a discharge to land, and by definition of s.87 as a discharge permit:

Reference Id	Activity Subtype	Activity Description
AUTH130354.01.01	Land - sewage	To discharge treated municipal wastewater to land (Whakamaru)

Application No. 130354 was made with a request it be placed on hold to enable monitoring of the wastewater flow over the coming 2013-2014 summer. TDC had in August 2013 installed accurate flow monitoring equipment and requested some more time to better determine the annual average daily flow, peak flows and flow variance. Prior to August 2013 wastewater flows from the plant were calculated from discharge pump hours. The measured discharge flow information has since been provided and confirms that previous estimates were reasonably accurate.

- The confirmed application is for a discharge of up to 75 cubic metres per day (peak wet weather flow) with a peak dry weather flows approaching 35m³/day.

Both the original application (#2852033) and the revised version (#3001133) which is dated 10 March 2014 contain technical information about the wastewater treatment plant as well as an assessment of environmental effects. The application is also complemented by an ecological assessment that was produced by Kessels and Associates for the Taupo District Council.

2 Existing environment

The wastewater treatment plant is located on a river terrace of the Waikato River and set back approximately 50m from the shore line of Lake Whakamaru, a reservoir lake created by the presence of the Whakamaru hydro-electricity dam. The soils at and about the WWTP site are free draining sands, pumice and graded alluvial sediments that are characteristic of the geology and volcanic origins of the upper river catchment. The Whakamaru village is within a rural setting that has been modified by human activities, such as hydro-electric power scheme development, farming, forestry, and some limited commercial activity. The area is also home to Maori who have marae along the river valley both above and below Whakamaru.

The water quality of the Waikato River at Whakamaru has suffered some marked levels of change from human activity and occupation as has much of the mid to lower river catchment. Lake Whakamaru has a moderate water quality in terms of recreational activities although it does display enhanced weed and algae growth in response to nutrients that have entered the water by point (directly) and non-point sources (diffuse). The NIWA developed 'Submerged Plant Indicator Index', which is an assessment method for indicating the ecological condition of NZ lakes, scores Lake Whakamaru with an SPI index of 10 - poor condition.¹

The wastewater plant discharge is a non-point source input to the lake. The treated wastewater is discharged into a series of soakage beds and enters the lake by way of groundwater. The discharge is therefore a diffuse input into the lake.

3 Background and technical attributes

The Whakamaru wastewater treatment plant (WWTP) was built in the 1950's to service the Whakamaru hydro village. WRC file records indicate that the WWTP was designed to meet the needs of up to 200 people in 60 dwellings. Two former generation consents authorised volumes

¹ Waikato Regional Council, 2010: *Assessment of the ecological condition of lakes in the Waikato Region using the Lake SP1-2010*. WRC Technical Report 2010/24, p. 75, prepared by the National Institute of Water and Atmospheric Research (NIWA), June 2010.

of discharge up to 64m³/day (1994), and 35 m³/day in 2004. The marked differences in the daily total flows authorised was due to the 1994 consent being based on design flows while the latter was based on calculated discharge volumes.

The WWTP provides a basic level of wastewater treatment (i.e. primary). Wastewater is treated in an Imhoff tank, a modified type of septic tank incorporating an upper zone to aid sedimentation of solids and a lower zone where the separated solids are digested and can be drawn off as sludge (i.e. broken down fats, oils, and colloidal solids). Refer Figure 2.0 below that displays a side elevation drawing of an Imhoff tank.

The treated wastewater (effluent) is drained from the tank to a pump chamber and then dosed to a series of shallow laid subsurface ground soakage beds. There are four beds of approximately 50m length each and 1.0m wide. There is also a series of soak-holes that can be brought into service in event the soakage bed system becomes unavailable (e.g. unforeseen blockages). TDC has previously reported that the soak-hole system would be used in preference to having effluent break out to the ground surface and risk overland flow off site.

The soakage beds were reconstructed in December 2009 after suffering decreasing soakage performance which was attributed to the time the beds had been in service. Post reconstruction the beds have functioned well and the soak-holes have not needed to be used.

The settled and digested solid matter in the Imhoff tank (i.e. sludge) is periodically drawn off into drying beds that are located on-site. The sludge gradually dries in the beds and then is removed from site for further treatment at the Taupo WWTP along with similar by-products from TDC's other wastewater treatment plants. The end product, termed processed biosolids are disposed to land and authorised by a separate consent held by the TDC.

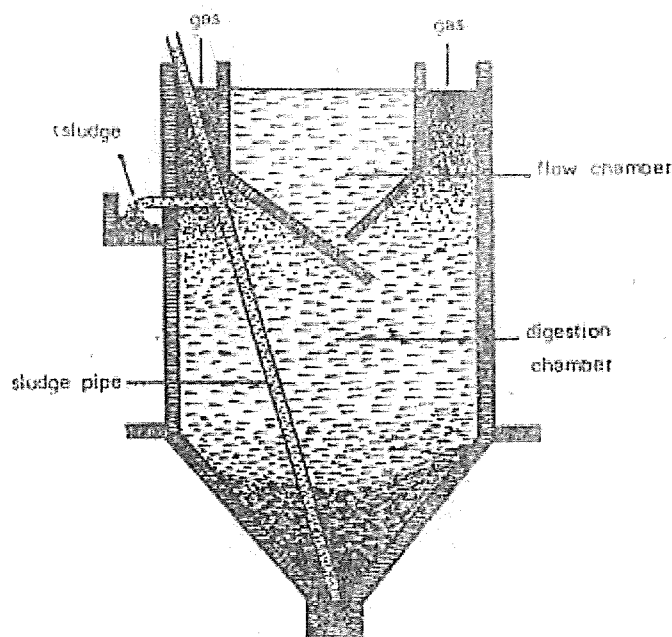


Figure 2.0 Elevation view of a Typical Imhoff Tank

There is a discharge of contaminants to air from the WWTP as a result of the microbial breakdown of the wastewater constituents. These are typically methane and sulphurous compound gases that are released into the local environment. The odours can be offensive as they are a product of an oxygen limited microbiological process, although do tend to be quickly dispersed by wind. As the plant is located on the edge of the village and away from households, reports of offensive odour issues are infrequent.

In summary the methods of wastewater treatment are settlement and separation of solids in the wastewater, anaerobic digestion of the solids within the Imhoff tank, and removal of the solids into drying beds. The dried sludge is then removed for further off-site treatment and disposal to land (as mentioned). The treated wastewater (effluent) is discharged into land on-site where further renovation mainly through aerobic processes in the soil takes place. Lake Whakamaru and the wider Waikato River is the ultimate receiving environment of the treated wastewater discharge. Treated wastewater only is disposed on site and some contaminants are discharged to air.

3.1 System capacity and capability

The wastewater treatment system has adequate capacity to treat and discharge the current wastewater load from the Whakamaru village even though it is a basic type of system. The range of discharge flow determined since accurate monitoring equipment was installed indicates that the plant is operating at below capacity. The reason is that there is currently less people living in Whakamaru than in previous times when the local hydro-scheme employed more workers.

Primary treated wastewater contains elevated concentrations of nutrients (nitrogen and phosphorus), and pathogenic organisms (faecal coliforms and viruses) which are harmful to human health if ingested. While the Imhoff tank removes a large proportion of the fats, oils and other solid matter, the effluent still carries a high biochemical oxygen demand, a moderate concentration of suspended solids and sufficient concentrations of nutrients to give rise to some surface water quality issues through accelerated weed growth. With primary treatment systems the soil processes into which the discharge is applied is where the majority of contaminant deactivation takes place.

The wastewater hydraulic loading on the basal area of the soakage beds is high at around 113mm/day (113 litres/m²/day) when calculated at an average daily flow of 23m³/day. The design of the soakage beds is such that the effluent is distributed evenly over the entire soakage system. Over time the soil interface on the base of the beds develops a biomat, a microbiologically active zone that slows up the downward movement of effluent so that the bed sidewalls also become part of the infiltrative surface. It is across this active zone that much of the removal of contaminants takes place. Some contaminants will ultimately pass through the soil and into groundwater in concentrations sufficiently elevated to present potential issues when exposed into the wider environment, although at distance from source dilution of those contaminants in groundwater will offset the actual effects the discharge may have.

Over the summer of 2013-2014 TDC carried out a monitoring programme to more accurately determine the discharge flows from the plant. From this study and other historical records, the following is determined:

- Average daily flows per month from ranging from 20.8 m³/day – 26m³/day,
- Peak dry weather flows up to 32.7 m³/day
- Wet weather peak flow is expected to be up to 75 m³/day, this latter figure based on historical observations of wet weathers flows being up to three times dry weather flows. Such observations are not unusual for older reticulated networks.

3.2 Improvements proposed, mitigation offered

The Taupo District Council through their 2015 – 2025 Long Term Community Plan (LTCP) and Asset Management Plan have recognised the Whakamaru WWTP offers a basic level of treatment and needs to be upgraded to meet future environmental expectations, and well as a reliable level of service delivery. The following is stated in LTCP:

2016/17	Investigations for the upgrade of the Whakamaru wastewater treatment plant to meet likely consent renewal conditions.
2017/18	Upgrade the Whakamaru Wastewater Treatment Plant to meet likely consent renewal conditions.

The application document mentions that TDC intend to upgrade the WWTP to a secondary standard of treatment. A series of correspondence and dialogue with TDC staff involved in the application process has confirmed an intent to reduce the nitrogen content of the discharge by at least 35%. Such reduction would require secondary wastewater process treatment improvement to achieve. Accordingly it is understood by myself and interested parties of the application that improvements of at least secondary standard will be implemented in the short term. June 2018 is mentioned as a time when improvements are expected to commence.

There is also some other improvements that TDC have offered as part of TDC demonstrating a commitment to the Vision and Strategy for the Waikato River. These other improvements are discussed in section 5.0 of this report.

4 Status of Activities under the Plans

Both the wastewater discharge and the air discharge subject to rules of the Waikato Regional Plan (WRP).

The wastewater discharge is determined a discretionary activity in terms of rule 3.5.7.7–Discretionary Activity Rule – Other On-site Sewage discharges, and by the rule for general discharges, 3.5.4.5. Under these rules the proposed activity is evaluated on a case by case basis for the effects it may or may not have in accordance with relevant policies, plans and rules.

The discharge of contaminants to air would be a permitted activity in accordance with rule 6.1.18.1 (Waste Management Processes) of the WRP providing no offensive odour is detected beyond the boundary of the wastewater treatment site, which is the case most of the time. At other times if foul odour were to pass over the site boundary, the discharge would be determined a discretionary activity in terms of rule 6.1.9.2 (General) of the WRP. Therefore in order that the air discharge is legally provided for at all times the wastewater discharge consent will incorporate some conditions specific to the discharge of contaminants to air. As both the wastewater and air discharge activities are subject to s.15 of the RMA, both can be provided for by a single (joint) discharge permit.

5 Consultation/Affected Party Approvals

In their application documents, TDC stated that the effects of the discharge are minor and accordingly did not consult with any parties prior to lodgement of the application. TDC did stress in their application of an intention to consult with Iwi once further information had been gathered over the summer of 2013-2014 to conclude the assessment of environmental effects.

In the time post application lodgement local iwi Ngati Raukawa (Raukawa) through Putake Taiao (Environment) of the Raukawa Charitable Trust have been consulted. Raukawa has a partnership status in terms of the RMA and a vested interest in the Waikato River that is cemented by the Raupatu Settlement Acts that incorporate the Vision and Strategy for the Waikato River.

5.1 Iwi

The application is subject to area B as identified in the “Waikato River” settlement legislation arising from the Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act, 2010. The legislation provides for co-management and sets out the principles for restoring and protecting the health and wellbeing of the Waikato River for present and future generations. The Waikato Regional Council through a joint management agreement (JMA) with Ngati Raukawa has developed protocols for the way resource consents are managed. The JMA in particular contains the principles for giving effect to the Vision and Strategy for the Waikato River that appears in schedule 2 of the settlement act.

5.1.1 Ngati Raukawa (Raukawa)

The Whakamaru WWTP is within the tribal boundary of Raukawa who are Kaitiaki of the Waikato River at and about Whakamaru. Such responsibility gives Raukawa status as an

interested/affected party of the wastewater discharge. The applicant (TDC) has consulted with the Kaiwhakahaere Ropu Environmental Group of the Raukawa Charitable Trust (since renamed Putake Taiao - Environment) who have stated in writing (#3282874), support for the application to be processed along a non-notified pathway.

The records of dialogue are held on file and report a meeting held in Cambridge on 22 October 2014, as well as numerous verbal and written correspondences, and a technical report. A fundamental message that came out of the consultation process was that in setting out to mitigate the effects of the discharge, TDC would need to:

- Add value to the Vision and Strategy for the Waikato River,
- Add value to Raukawa's expectations with real and effective contributions.

The consultation process has determined that Raukawa's position and support is vested in the following understanding:

- The wastewater plant will be upgraded to include secondary treatment processes as proposed in the application. The improvements will include site landscaping, although with limitations dependent on the type of secondary plant installed,
- A robust management plan is to be developed by TDC in association with Raukawa for riparian vegetation protection and enhancement works as part of giving effect to the Vision and Strategy for the Waikato River.
- TDC has offered up a (draft) consent condition (#3576772) that commits them to fund up to \$30,000 towards a programme of lakeshore enhancement works.

5.1.2 Pouakani Marae Trust

People of Wairarapa moana decent have a Marae (Pouakani) at Mangakino and were identified as interested parties to the application. The Chairman of the Pouakani Marae Committee, Mr Whitu Karauna was initially approached for comment in August 2014.

As the wastewater discharge application involves some technically challenging issues for those who are unfamiliar with wastewater treatment processes, in September 2014 I produced a report titled "*Whakamaru WWTP comments*" that was provided to Mr Karauna (#3163099) and to the Putake Taiao Environmental Group of Raukawa Charitable Trust (#3144171). The purpose of the report was to assist consulted parties understanding by explaining the wastewater treatment plant operation, its technical attributes and the effects that WRC considers the discharge has.

On 02 October 2014, I received an email message from Mr Karauna advising that on behalf of the Pouakani Marae Whanau, he was satisfied with the work/report and would not have any objection to the consent proceeding. A record of this transcript is held on file (#3180898).

5.1.3 Ngati Tuwharetoa

TDC has not consulted Ngati Tuwharetoa about this application and nor I have not contacted Ngati Tuwharetoa as I understand that the mandate for resource consent type issues regarding a wastewater discharge at Whakamaru is with Raukawa.

I acknowledge that the traditional rohe of Ngati Tuwharetoa does extend into the wider Waikato River Catchment and there are further afield interests (i.e. *From the mountain to the Sea*) but it is my also understanding that under the Joint Management Agreements that WRC has with the Waikato tribes, Whakamaru is outside of Ngati Tuwharetoa's area of direct involvement so far as this consent process is placed.

5.2 Other Parties

No other parties have been consulted nor have been requested to be consulted on grounds that I consider no further parties likely to be affected by the discharge of treated wastewater into land and contaminants to air.

5.3 Reasons for Non-notification

The decision not to non-notify this application is a separate part of the application process and is held on file as part of the application process records. The consultation process undertaken has determined that there is support for a non-notified application process. The technical report I released earlier in the consultation process contained a good deal of detail about the discharge activity and the effects of the discharge. This assisted the interested parties to understand the effects of the discharge and to engage in constructive dialogue to conclude a non-notified decision on the application.

Written support for the application was provided by the Chairman of the Pouakani Marae Committee on behalf of the Pouakani Marae Whanau. The Putake Taiao Environmental Group of Raukawa Charitable Trust provided written support for the application while reserving their right to peruse the conditions of consent prior to the application decision being made.

I consider that the effects of this proposal are no more than minor and that potentially affected parties have given their support for a non-notified application process. As such there are no adversely affected parties to this proposal and the requirements for a non-notified application as set out in Section 95A of the Resource Management Act (RMA) are met.

6 Process Matters

The main steps in the application process are documented:

Date	Process Detail
30/09/2013	Lodged
04/10/2013	Active - reviewed, application acceptance letter issued
08/10/2013	On Hold – s.37(5) time frame waiver in place
	Period of consultation with interested parties
30/05/15	Decision to non-notify application process is made
01/06/2015	Consent evaluation report commenced
21/01/2015	Draft consent evaluation report and conditions of consent released for comment
November 2015 to May 2016	A period on on-going dialogue and correspondence about conditions of consent. Some further work is required before a final draft is released and the recommendation presented for the decision to be made.

7 Statutory matters

This application is subject to the Resource Management Act, 1991 and all amendments that were in force as of the date of application on 30 September 2013. Section 104(1) requires a consenting authority when considering an application for a resource consent and any submissions received, subject to Part 2 (Purpose and Principles) of the RMA, to have regard to –

- (a) any actual and potential effects on the environment of allowing the activity; and
- (b) any relevant provisions of—
 - (i) a national environmental standard,
 - (ii) other regulations,
 - (iii) a national policy statement,
 - (iv) a New Zealand coastal policy statement:
 - (v) a regional policy statement or proposed regional policy statement:
 - (vi) a plan or proposed plan; and

- (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

Section 104(2A) is also relevant to replacement applications that are affected by section 124 (Exercise of resource consent while applying for new) whereby the consent authority must have regard to the value of the investment of the existing consent holder.

The following statutory instruments and policy documents have been considered in this evaluation:

- The Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act, 2010
- The National Policy Statement for Freshwater Management
- National Environmental Standards for Air Quality
- National Environmental Standard for Sources of Human Drinking Water
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
- The Waikato Regional Policy Statement
- The Waikato Regional Plan
- Other Matters

The RMA says that in accordance with s.104B, after considering a consent application for a discretionary activity the consent authority –

- (a) may grant or refuse the application; and
- (b) if it grants the application may impose conditions under section 108.

Furthermore, when considering any discharge permit section 105(1) requires that the consent authority must have regard to a number of additional matters -

- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
- (b) the applicant's reasons for the proposed choice; and
- (c) any possible alternative methods of discharge, including discharge into any other receiving environment."

Also,

Section 107 of the RMA (Restriction on grant of certain discharge permits) places a further restriction on the to grant a discharge permit where the discharge of a contaminant onto or into land in circumstances which may result in that contaminant entering water; and if after reasonable mixing is likely to give rise to all or some of the following effects in the receiving waters:

- (a) The production of any conspicuous oil or grease films, scums or foams, or floatable suspended materials,
- (b) Any conspicuous change in the colour or visual clarity,
- (c) Any emission of objectionable odour,
- (d) The rendering of fresh water unsuitable for consumption by farm animals,
- (e) Any significant adverse effects on aquatic life.

The actual and potential effects of the discharge proposed are discussed in the following section.

7.1 Assessment of Environmental Effects

Section 104(1)(a) requires the consent authority when considering a consent application, subject to Part 2, to have regard to the actual and potential effects on the environment of allowing the activity.

Section 104(2) provides that when forming an opinion about the actual or potential effects of the activity, the consent authority may disregard an adverse effect of the activity on the environment if the regional plan permits an activity with that effect. There are two comparable permitted activity wastewater rules in the Waikato Regional Plan (WRP), one for primary treated wastewater discharges (1.3m³/day, rule 3.5.7.5) and another for secondary treated wastewater discharges

(3.0m³/day, rule 3.5.7.6). The upper discharge limit of these rules is a very insignificant amount compared to the 75m³/day volume of discharge sought. The average monthly discharge from the Whakamaru WWTP has been determined to range between 20-26m³/day. In discounting a permitted activity level of effect, I can acknowledge around 11.5% – 15% of the average daily flow, a marginal amount that offers some minor of offsetting off the overall effects.

With regard to the actual and potential effects of the discharge, I consider these can be examined under the following categories:

- Effects on Groundwater
- Effects on Surface Water
- Potential Odour Effects
- Effects on Maori Interests
- Effects on Soils

My technical assessment of this application was assisted by WRC's in-house ecological and groundwater specialists, Mr Bill Vant and Mr John Hadfield respectively. Both of these specialist considered the effects of the discharge, and either provided comment to me or discussed the nature of the effects particular to their discipline.

7.1.1 Domestic wastewater

The Whakamaru WWTP is a municipal infrastructure that serves a rural village. The nature of the wastewater is therefore from domestic sources. Domestic wastewater contains elevated concentrations of nutrients such as nitrogen and phosphorus, high concentrations of potentially harmful bacteria, typically Escherichia Coliform Bacteria, some lesser concentrations of trace elements (e.g. cadmium, zinc, copper) and some other emerging contaminants and compounds about which little is known. The following table characterises some typical parameter ranges for untreated, primary treated and secondary treated domestic wastewater:

Table 1.0 Typical range influent/effluent quality

Parameter (mg/l), (cfu/100ml)	Raw domestic Wastewater (influent)	Septic Tank effluent	Advanced system effluent (e.g. Aerated WWP)
BOD	210 - 400	120 - 180	15 - 50
SS	220 - 350	60 - 80	10 - 80
TN	45 - 100	45 - 60	20 - 45
NH ₄	42 - 90	40 - 50	6 - 40
NO ₃	0.5 - 2	0.5 - 2	10 - 35
TP	4 - 18	4 - 12	6 - 10
FC	10 ⁷ - 10 ⁹	10 ⁵ - 10 ⁷	10 ⁴ - 10 ⁶
E coli	10 ⁶ - 10 ⁷	10 ⁴ - 10 ⁶	10 ³ - 10 ⁵

(Data source: Crites & Tchobanoglous, 1998, Metcalf & Eddy Inc.199, NZLTC 2000, Roberts 1999, Simonson 2009, & Taupo DC 2010).

It is common practice to pre-treating the wastewater to a lesser or greater degree prior to discharging the treated wastewater (effluent) to land where soil process, assimilation and dispersion of the effluent occurs into the wider environment. Discharging treated domestic wastewater to land is a robust and reliable method of disposal and deactivation of potentially harmful contaminants and organisms providing it is undertaken properly.

Both nutrient compounds and bacterial organisms in wastewater can have adverse environmental and health related effects when exposed in concentrations where they can cause an imbalance in the receiving environment. In particular nutrients such as Nitrogen and Phosphorus when available to plants in elevated concentrations will promote accelerated rates of growth. In aquatic systems the negative effects of nutrient enrichment can manifest and maintain unsightly weed and algae blooms, dying plant matter, deoxygenated water and eventually a degenerated ecosystem. Poor water clarity, fish kills and toxic algal blooms are associated with more advanced states of nutrient enrichment (e.g. eutrophication).

Wastewater contains a range of organisms that are harmful to human health (e.g. protozoa, coliform bacteria, & viruses). The accepted indicator of public health is a bacterial found in the human bowel called *Escherichia Coliform* bacteria (*E. coli*). The typical pathways through which harmful wastewater sourced organisms can have negative effects on human health are through contact with contaminated water (e.g. swimming, paddling), and ingestion (contaminated gathered food, and drinking water). Other wastewater derivatives such as trace metals and emerging compounds can accumulate in soils and have potential to cause health issues if introduced into the food chain. There can be toxicity potential in more extreme situations where the management of wastewater end products is lacking or ignored.

7.1.2 Effects on Groundwater Quality

The discharge of wastewater into the ground at Whakamaru as noted in section 3.1 of this report, is via a series of absorption trenches that are loaded rather heavily. As the wastewater moves through the soil profile the microbiological processes in the soil break down the majority of contaminants before the wastewater plume enters the groundwater. TDC monitors the effects of the wastewater discharge on the groundwater under and about the disposal beds via four monitoring bores.

Figure 1 WWTP Groundwater Monitoring Bores



The following table presents a summary of the median concentrations of wastewater parameters in the groundwater monitoring bore at the WWTP:

Table 2.0 Groundwater quality under WWTP site (2007-20016)

Bore	Depth to water (m)	pH	Conductivity $\mu\text{S/cm}$	DO (mg/l)	TDS (mg/l)	NH ₄ N (mg/l)	NO ₃ N (mg/l)	TOXN (mg/l)	TKN (mg/l)	Total N (mg/l)	Chloride (mg/l)	Total P (mg/l)	<i>E.coli</i> cfu/100ml
1	9.87	6.0	78	8.6	55.0	0.01	1.6	1.6	0.1	1.7	4.9	0.07	0
2	7.78	5.6	286	1.6	215.00	1.6	11.1	11.1	1.8	13.6	17.0	0.06	0
3	6.62	5.9	159	6.9	105.0	0.01	3.3	3.3	0.10	3.4	7.6	0.06	0
4	7.50	6.1	82	7.9	57.0	0.01	2.1	2.1	0.1	2.1	4.6	0.09	0

The monitoring record indicates that the wastewater signature in the groundwater is pronounced directly under the soakage beds (bore 2), while towards Lake Whakamaru the concentrations steadily fall (bores 3 & 4). Of note is the absence of *E.coli* bacteria in the groundwater, indicating that it is deactivated in the soil layers.

The Ministry of Health Drinking Water Standards (2008) have a Maximum Acceptable Value (MAV) limit for Nitrate of 50mg/L (or 11.3mg/L Nitrate-nitrogen) in water that is used drinking. This is a safety limit primarily to avoid a potential methaemoglobinaemia risk (lacking blood oxygen) in bottle fed infants but the limit also includes some other health risk considerations (e.g. human gastrointestinal tract).

The Nitrate-nitrogen concentration in the groundwater in bore 2 approaches the 11.3mg/L limit, but is significantly lower in the other monitoring bores. It is highly unlikely the discharge does or might compromise any drinking water supply given it is not normal practice to locate a potable water bore in the centre of a wastewater discharge field. Further away the concentrations are lower and accordingly the health risk is abated.

As nitrate-nitrogen and phosphorus are nutrients for plant and algae growth, the discharge has a potential impact on aquatic systems where the groundwater enters surface water (refer below). Of the other indicators for water quality listed in Table 2.0, most are low and do not indicate serious adverse effects on the groundwater.

With the assistance of Mr Hadfield, Waikato Regional Council's Groundwater Scientist, a series of groundwater dilution calculations were undertaken to gauge the impact of the discharge on the groundwater under the WWTP and at distance. The calculations are held on file and determined that in its current state, the groundwater migrates to the nearby surface water of Lake Whakamaru where it has some minor effects that are contributing to the nitrogen load of the lake. The indication is that the Nitrate-nitrogen ($\text{NO}_3\text{-N}$) concentration in groundwater entering the lake is around 2.57mg/L. The background $\text{NO}_3\text{-N}$ is 1.7mg/l so the net increase due to the discharge is around +0.87mg/L $\text{NO}_3\text{-N}$. In clear surface waters a concentration of $\text{NO}_3\text{-N}$ mg/L at or about 1.0mg/L will begin to contribute to (green) weedy plant and algae growth.

My conclusion is that the discharge has some moderate to minor observable effects on groundwater in terms a public health risk limit from nitrates that quickly abates from the point of source. The nutrients contained in discharge are diluted and transported by groundwater to emerge in the lake where it manifests as a minor contributing factor to some near-shore enhanced plant and algae growth effects. By association with other terrestrial inputs in the catchment the discharge is also a very minor cumulative contribution to the nitrogen load of the Waikato River.

The proposed improvements to the plant to provide secondary wastewater treatment should result in at least a 35% reduction of the effects associated with the discharge. The planting programme should contribute some further improvements particularly if larger trees are located between the WWTP and Lake Whakamaru (Waikato River).

7.1.3 Effects on Surface Water

The effects of the discharge on surface water have been advanced in the above section when discussing the consequences of elevated nutrients (N and P) in groundwater migrating into Lake Whakamaru, as it does. Both nitrogen and phosphorus will stimulate plant and algae growth when introduced to impacted surface water bodies such as Lake Whakamaru, at concentrations approaching 1.0mg/L (N) and 0.1mg/L (P). The bore monitoring information presented in table 2 above, indicates that nitrogen is of more potential than phosphorus at WWTP discharge given that (P) tends to be bound up in the soils and is low in the groundwater.

The noted nutrient type effects are most telling along the edges of the lake and in the (diminished) clarity of the water in Lake Whakamaru. Mr Vant, Waikato Regional Council's freshwater scientist has commented that the nitrogen contribution from the WWTP is about 0.03% of the total N load

that enters Lake Whakamaru on an annual basis. This is a very minor amount and implies the effects are likely to be limited to the lake-side edge closest to the WWTP.

The types of effects discussed are expected to reduce considerably with the proposed WWTP improvements, and according to my opinion the effects of the discharge on surface water are minor.

7.1.4 Odour Effects

The Imhoff tank system treats the wastewater primarily by the settlement and separation of solids, and some partial degradation of the solid matter by anaerobic digestion. With anaerobic biological digestion oxygen is either absent or present in low concentrations, and so the process is facilitated by other mechanisms that can produce malodorous compounds such as mercaptans and hydrogen sulphide. The Whakamaru WWTP has not been absent of foul odour incidents over its history but they have been very infrequent. The location of the plant and exposure to wind tends to disperse and dilute most foul odour so that it is not offensive at distance from the plant. During my years of plant inspections, foul odour has not been reported as a problematic issue.

The plant is to be upgraded to secondary treatment which in most instances involves aerobic processes that are oxygen abundant and foul odour generation is significantly abated. With secondary processes such as submerged air flotation reactors (i.e. SAF units), TDC has these in place at Mangakino and Motutere WWTPs, air is forced into the wastewater to accelerate aerobic bacterial breakdown of the solids and other dissolved contaminants. As there is excess air in these types of processes the potential for foul odour is significantly reduced. Foul odour should not be expected to arise from a normally running SAF plant or similar.

In addition to the treatment process currently in place or planned to be in place in the short term, the plant environs are to be enhanced by plantings, some of which I understand will be screen planting. These improvements should contribute to limiting foul odour potential at distance from the plant to the point it does not cause annoyance. Furthermore adverse public health effects are generally not associated with low levels of odour from low to medium sized WWTPs that have good separation distances from nearby housing. The particulate sizes of the gas are too small to carry or present harmful organisms in abundance to the point it is harmful.

I therefore consider that the likelihood of adverse effects on any person due to foul odour discharges from the WWTP is low.

7.1.5 Effects on Maori

Inappropriate methods of wastewater treatment and disposal that have net tangible negative impacts on the environment such as the degradation of water resources, have an adverse effect on Maori because it is an affront to their principles of life. Many non-Maori share similar views. Maori culture and tradition has borne the burden of insensitive practices and methodologies that have long caused concern and in some cases has excluded Maori involvement in the choices that have been made and with it their ability to exercise Kaitiakitanga.

As discussed in section 5.0 of this report, Maori have been consulted during the course of this consent application process and have been able to express their views and interests in the application. The disposal of wastewater to land at the Whakamaru WWTP is generally consistent with returning wastes to Papatunuku - Earth Mother. Some minor impacts on the nearby surface water of Lake Whakamaru, are less consistent with Maori culture, traditions and their desires for the world in which they are Tangata Whenua.

Raukawa Iwi through their Putake Taiao Environmental Group have been able to and continue to provide guidance via principles of Tino Rangitiratanga and Kaitiakitanga in this consent application process. Concerns about the discharge of contaminants from the WWTP and how those effects can be avoided, remedied or mitigated have been discussed. Furthermore the status of Maori and their vested responsibility for the Waikato River through Te Ngati Tuwharetoa,

Raukawa and Te Arawa River Iwi Waikato River Act, 2010 incorporating the Vision and Strategy, has been given particular regard.

The effects of the discharge are to be both reduced and mitigated by the proposed improvements to the WWTP to include secondary treatment. The riverbank enhancement programme of works will help offset the presence and impact of the WWTP and the discharge on Maori, and accordingly is a contributing factor towards objectives and outcomes of the Vision and Strategy for the Waikato River.

Maori are not unaffected by this proposal but their concerns and issues raised about the discharge are not unsurmountable, and there are plans in place for improvements to take place. Maori have given support for a non-notified application process and the consent to be granted.

I therefore consider that the effects of the WWTP on Maori will be managed and will reduce with the proposed treatment process improvements, and the riverside enhancement works in which Maori continue to be involved.

7.1.6 Effects on Soils

The wastewater discharged from the WWTP is domestic sourced and would not normally be expected to contain concentrations of hazardous substances more commonly associated with industrial effluents. Human wastes and cleaning products used in homes are normally diluted or broken down in treatment processes or deactivated by microbes in the soil. Some household products such as cosmetics, solvents and paints can contain potentially harmful trace metals (e.g. cadmium, mercury, lead) that do end up in the wastewater system. If trace metals do accumulate it is usually at the base of the soakage trenches where exposure into the wider environment is limited. Most of the potentially harmful contaminants are bound up in the sludge which is removed from site for further treatment and stabilisation at the Taupo WWTP before final application to land. The disposal of TDC's biosolids is authorised by separate consents and therefore not party to this application.

7.2 Policy Statements, Plans and regulations

There are a number of national policy statements, national environmental standards, regulations, statutory declarations, a regional policy statement and regional plan, and some other matters that includes an iwi environmental management plan that are relevant to the discharge activities. These collective instruments have been considered as part of this consent evaluation.

7.3 National Policy Statement for Freshwater Management

The National Policy Statement for Freshwater Management (NPS-FWM) has policies and objectives that direct local government to manage water in an integrated and sustainable way while providing for economic growth within specified water quality and quantity limits. The NPS-FWM requires regional councils to develop standards to safeguard the life supporting capacity of water bodies, with objectives that water quality will be maintained or improved (as the case may be). This will involve protection of high quality water bodies and implementation of methods to improve degraded water bodies. In the interim, when considering consent applications regional council's must have regard for any effects (actual or cumulative) that contaminants contained in the discharge may have on freshwater and fresh water ecology.

While the current status of the discharge is not inconsistent with the NPS-FWM, it warrants some improvement when considering objective A1 (Safeguarding). I consider the improvements proposed to the WWTP are consistent with improving water quality and is therefore consistent with the objectives of the Freshwater NPS.

7.3.1 National Environmental Standard for Sources of Human Drinking Water

The National Environmental Standard for Sources of Human Drinking Water (20 June 2008) requires that a regional council must not grant a water or discharge permit for an activity that will occur upstream of a drinking water abstraction point if specific water quality focused criteria at the point of abstraction are exceeded.

The discharge is upstream of a number of water supply schemes as it occurs in the Waikato River Catchment. However due to the scale and concluded effects the discharge has on groundwater and surface water bodies (as discussed), I consider that no drinking water supplies are being adversely effected by the WWTP discharge.

7.3.2 NES for Assessing & Managing Contaminants in Soil to Protect Human Health

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health commenced on 01 January 2012. It provides a nationally consistent set of planning controls and soil contaminant values so as to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed. All territorial authorities (district and city councils) are required to give effect to and enforce the requirements of the NES. The NES does not affect existing land uses, as is the case with the WWTP discharge.

The wastewater is domestic sourced and the use of the land where wastewater is discharged is not changing. Treated domestic wastewater is not normally associated with harmful contaminants in concentrations or bio-accumulation that should render soil unsuitable for other uses.

I consider that the discharge of treated wastewater is consistent with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

7.4 Waikato Regional Policy Statement

The Waikato Regional Policy Statement has been operative since January 2016. It provides an overview of the resource management issues of the region and sets out the ways in which the integrated management of the regions natural and physical resources will be achieved.

The key issues in the RPS that relate to discharge consent applications are the state of resources (Issue 1.1), the relationship of tangata whenua with the environment (Issue 1.5), and the health and well-being of the Waikato River catchment (Issue 1.6).

Post the 2010 Raupatu River Settlement Acts and inclusion of Te Ture Whaimana o Te Awa o Waikato, the Vision and Strategy for the Waikato River is now included in the RPS, as well as being a statute of Government in its own right.

There are a number of overlapping objectives and policies relevant to this proposal and these are listed as follows:

7.4.1 Objectives

- Integrated management (Objective 3.1);
- Resource use and development (Objective 3.1A)
- Decision making (Objective 3.2);
- Health and wellbeing of the Waikato River (Objective 3.3);
- Ecosystem services (Objective 3.7);
- Relationship of tangata whenua with the environment (Objective 3.8);
- Sustainable and efficient use of resources (Objective 3.9);
- Air quality (Objective 3.10);
- Mauri and values of fresh water bodies (Objective 3.13);
- Ecological integrity and indigenous vegetation (Objective 3.18);
- Amenity (Objective 3.20);
- Values of soil (Objective 3.24).

7.4.2 Policies

- Integrated management (4)
- Air (5)
- Built environment (6)

- Approach to identifying fresh water body values and managing fresh water bodies (8.1)
- All fresh water bodies (8.3)
- Catchment-based intervention (8.4)
- Waikato River Catchment (8.5)
- Landscape, natural character and amenity (12)
- Soils (14)

I consider this application subject to the recommended conditions that require an improvement in the wastewater discharge, is overall consistent with those objectives and policies. Furthermore the actual and potential effects of the discharge on the receiving environment and Maori is being appropriately mitigated and remedied in line with the scale and significance of the activity.

7.5 Waikato Regional Plan

The Waikato Regional Plan (WRP) has been operative since April 2007 and is the Regional Council's instrument for managing the way resources are used in accordance with the policies and objectives set out in the Regional Policy Statement. The WRP provides for minor discharges of treated wastewater discharges to land to be managed by permitted activity (PA) rules. For other discharge activities that fall beyond the limits of a permitted activity rule, the default position is to authorise the activity by resource consent. In such cases the activity is assessed on its merits and on a case by case basis.

The matters of importance regarding wastewater discharges are provided for by a hierarchy of issues, objectives, policies and rules of the WRP which is set out in modules. Of particular relevance to this application are the matters that appear in Module (2) - Matters of Significance to Maori, the Water module (Module 3) and the Air module (Module 6):

7.5.1 Matters of Significance to Maori (Module 2)

Matters of concern to Raukawa (2.2.2.1)

Tangata whenua relationship with natural and physical resources (2.3),

Policy (2) – Increase awareness

Implementation Methods (2.3.4), incorporating:

- Iwi Management Plans (2.3.4.5)
- Consultation with tangata whenua (2.3.4.15)
- Customary uses (2.3.4.18)
- Discharge of human based sewage effluents (highlights the preference for discharge to land over water (2.3.4.19).
- Consultation with Tangata whenua and promotion of Kaitiakitanga (2.3.4.23).

For the reasons presented this report, I consider the activities proposed are consistent with the above matters of Module 2 of the WRP.

7.5.2 Water (Module 3)

The National Policy Statement on Freshwater Management (2011) directed regional councils to include two policies in their Regional Plans until such time that plans can be amended through the RMA First Schedule process to give effect to the Freshwater NPS:

- Policy A4 of the NPS for Freshwater Management
- Policy B7 of the NPS for Freshwater Management.

Water Resources (3.1)

Issue 3.1.1: point source discharges can cause deterioration in water quality and the values of water, and contribute to cumulative adverse effects on water quality.

Objective (3.1.2): To manage water bodies in such a way that results in a net improvement of water quality across the region, avoids adverse effects on aquatic ecosystems, groundwater quality is maintained or enhanced, and the leaching of contaminants from land use activities does not reach levels that present serious adverse effects for human health or aquatic ecosystems.

Adverse effects (including cumulative) on tangata whenua as Kaitiaki over water is remedied or mitigated.

Management of water Resources (3.2) contains the general policies and methods that apply to the management of water quality and flow regimes in the Region.

Policy (2) Managing degraded water bodies to enhance the quality of degraded water through improved management of activities.

Policy (7) Fisheries Water Class. The purpose of the fishery class is to maintain or enhance existing water quality and aquatic habitat in water bodies that currently support a diverse range of fish species and fish habitats with significant conservation values, or which support significant recreational, traditional or commercial fisheries so that for these fisheries, trout or indigenous fish can complete their life cycles and/or maintain self-sustaining populations and managed trout and indigenous fisheries can be sustained.

Discharges (3.5)

Objective (3.5.2): discharges undertaken in a manner that does not cause adverse effects and that are not inconsistent with the management objectives of s.3.1.2, and with the land objectives of s.5.2.2. Decisions regarding contaminant discharges do not result in the assimilative capacity of the water body being unable to be utilised for water allocation.

Policies (3.5.3)

Policy (2) Managing discharges to water with more than minor effects. This policy provides for the control of discharges through authorisation by consent.

Policy (3) Alternatives to direct discharge to water, promotes land treatment methods.

Policy (4) Discharges to land, promotes the principle of reuse of contaminants.

Policy (5) Groundwater is focused to minimise effects on groundwater.

Policy (6) Tangata whenua uses and values are recognised and provided for.

7.5.2.1.1 Rules

Under the discharge rules of the regional plan, the status of application 130354 is determined by two rules:

- Discretionary activity rule 3.5.7.7 - Other on-site wastewater discharges, and
- Discretionary activity rule 3.5.4.5 – Discharges, general rule.
- This discharge to land, can be undertaken and managed in a way that I consider is consistent with the above issues, objectives, policies and rules of the WRP. I consider that the overall effects are minor, and my reasons for this conclusion are explained in this report.

7.5.3 Air (Module 6)

Regional and local air management (6.1)

Issue (6.1.1) ambient air quality in the Region is perceived to be high. However, in some parts of the Region, air quality is degraded by individual site sources and/or by cumulative discharges from diffuse sources.

Objectives (6.12)

1. Significant characteristics of air quality are protected where they are high, enhanced where they are degraded, otherwise maintained.
2. No significant adverse effects from individual sites sources on characteristics of air quality beyond property boundary.

Policies (6.1.3)

Managing effects of other discharges (Policy 2), discharges of contaminants to air are managed through controlled and discretionary activity rules, with particular regard (in this case) to:

adverse effects from contaminants that are hazardous in ambient air, particularly with respect to human health,

- the significant characteristics of air quality within an area,

- the sensitivity of the receiving environment.

Policy (4) Best Practicable Option,
Policy (5) Positive Benefits of Resource Use.

7.5.3.1.1 Rules

Discretionary Activity Rule (6.1.9.2) – General Rule. The discharge of contaminants to air from the WWTP is determined a discretionary activity in terms of this rule as it does not meet the criteria of permitted activity rule 6.1.18.1 (waste management processes).

- I consider that the discharge of contaminants to air proposed as part of the operation of the Whakamaru WWTP can be undertaken and managed in a way that is consistent with the policies and rules identified in the regional plan. With the secondary treatment process in place, the quality of the discharge to air should improve.

7.6 Section 105 analysis

In terms of alternative methods of wastewater treatment and disposal, TDC will continue with the existing WWTP and upgrade it to improve the treatment process. There is a considerable community investment in this infrastructure and around \$500,000 is allocated for the improvements. As the discharge is to land and with the tabled treatment process improvements in place by 2018, should result in a sustainable activity for least over the next two decades. The nature and sensitivity of the receiving environment while impacted by many inputs, is not such that the proposed discharge of wastewater treatment and disposal is out of place.

- I consider there has been appropriate regard for the receiving environment and the applicant's reasoning for the proposed choice, and I am therefore satisfied that the proposal is consistent with s105 of the RMA.

7.7 Section 107 analysis

I have considered the effects of the discharge on the immediate receiving environment and Lake Whakamaru (Waikato River). With the proposed secondary treatment addition to the WWTP, the types effects listed in section 107 are expected to diminish, and in the least be minor in the time prior to the upgrade. The effects due to the wastewater discharge tend to be cumulative in the lake along with other inputs and so in expectation that the effects of the discharge will reduce, I consider that s.107 is not being contravened.

7.8 Other Matters

RMA s104(1)(c) directs a consenting authority to regard any other matter that is considered relevant and reasonably necessary to determining a decision. The following other matters have been considered:

7.8.1 Te Rautaki Taiao A Raukawa (Raukawa Environmental Management Plan 2015)

The Raukawa environmental management plan is a significant document that:

- Represents the views and perspectives of Raukawa with regards to environmental resource management,
- Incorporates the Ngati Tuwharetoa, Raukawa and Te Awara Iwi Waikato River Act 2010, (including the Vision and Strategy for the Waikato River),
- Regards sections 5, 6, 7, and 8, sections 61, 66, 74 and 104 of the Resource Management Act 1991.
- Incorporates the Raukawa Fisheries Plan.

In acknowledging the importance of Raukawa status and participation in this discharge consent application process, a more detailed examination of the plan is presented.

Te Rautaki Taiao A Raukawa has a two-fold purpose:

- Provides a statement of Raukawa values, experiences and aspirations pertaining to the use and management of our environment,

- ii. Is a living practical document that will assist Raukawa too proactively and effectively engage in and shape; current and future policy, planning processes and resource management decisions.

The plan is structured in four main sections:

1. Te Wahanga Tuatahi: Raukawa - provides a summary of Raukawa history and traditions,
2. Te Wahanga Tuarua: Raukawa policy – focuses on environmental objectives as well as proposed actions and outcomes of priority to Raukawa.
3. Te Wahanga Tuatoru: Plan Development – the background to the plans development, glossary of Maori and technical terms, and acknowledgments.
4. Te Wahanga Tuawha: Appendices

Te Rautaki Taiao A Raukawa is a comprehensive and detailed document. Pursuant to the structure outlined above, the main issues and policies I understand are relevant to this discharge consent application are stated as follows:

In section 1 (Te Wahanga Tuatahi) it is stated that Whakamaru is within the rohe of Te Pae o Raukawa (districts of Raukawa). Contemporary Raukawa (iwi) environmental management is guided by a frame work or mataranga, which is referred to as the Nga Mana O Nga model – three worldly interconnected realms; spiritual, land and people (Nga Mana o Nga Atua, Nga Mana o te Whenua, Nga Mana o Nga Tangata).

The values and tikianga of Raukawa that formed the basis of the objectives of the Reference Group in developing Te Rautaki Taiao A Raukawa, assist in defining and regulating acceptable or unacceptable behaviour in relation to the use and management of the environment.

Section 2 Te Whanga Tuarua (Policy)

The principles of interconnectedness, and in particular – that cumulative effects are managed effectively, the precautionary approach regarding decision making, that the Raukawa worldview is shared, acknowledged and applied in matters that effects Raukawa takiwa, and an expectation that industry and sector groups apply or exceed best practice at all times.

S.2.1 Water (Wai)

Current issues:

- Aging and inefficient community and urban wastewater systems and reticulation systems have created legacy issues as Raukawa seeks to restore and protect the rivers to meet higher environmental standards.
- The loss of natural character and amenity of the watercourse with our takiwa.

2.1.2 Vision Statement - Water

2.1.3 Co-Management framework for the Waikato River

These two issues involve the vision and strategy for the Waikato River, and in that regard I consider the following statement that appear in that section pertinent to this application:

- Restore and enhance the Raukawa relationship as Kaitiaki with the Waikato River,
- Restore and Protect the health and wellbeing of the of the river for present and future generations including access, fisheries, water quality, mahinga kai, rongoa Maori and cultural landscapes.

2.1.9 Methods:

- M10 Raukawa will champion and implement the Te Ture Whaimana/Vision and Strategy for the Waikato River,
- M24 Local authorities will ensure that all consent applications in respect of the Waikato River contain sufficient information to enable an assessment of the activity against:
 - a. Te Ture Whaimana/Vision and Strategy for the Waikato River,
 - b. The values and interests of Raukawa.

S.2.2 Land (Whenua)

Current issues:

- The mana and mauri of our whenua is degraded,
- Increased non-point sourced discharges to water (e.g. nitrogen, phosphates, sediment, bacteria and other contaminants).

S.2.2.4 Objectives

- The whenua across our takiwa is healthy and resilient,
- Our relationship with Papa-tu-a-nuku is reflected both in her health and ours
- Land use activities align with land use capability to protect long term soil health.

2.2.6 Methods:

- M6 Raukawa will advocate for and support land base treatment of wastewater before discharge to water, however the impacts on soil health and cumulative impacts over time on the whenua need to be minimised.
- M18 Local authorities, industry groups and land owners should promote riparian planting and other activities that assist to avoid sedimentation, erosion and contaminants entering water.

S. 2.3 Sky and Air (Ranginui)

S. 2.3.3 Objectives

- The Raukawa Kaitiaki relationship with our air and sky is acknowledged, respected and provided for,
- Air quality is improved and protected across the takiwa
- Community health and wellbeing is protected and all communities enjoy clean, clear air.

S. 2.11 Infrastructure

S. 2.11.3 Objectives

- Providers of infrastructure networks, developments and operations within the Raukawa takiwa understand Raukawa values and interests,
- The Raukawa cultural landscape and Raukawa values and associations are protected and provided for in infrastructure planning and developments,
- Resilient and efficient infrastructure networks and renewable technologies are promoted with the Raukawa takiwa.

S. 2.11.5 Methods

- M10 RCT to promote the Vision and Strategy for the Waikato River and how infrastructure development and operations can work sensitively to uphold the objectives of the Waikato River
- M22 Local Authorities and sector operators will ensure resource consent applications in respect to the Waikato River catchment contain an assessment of the proposed activity against the Vision and Strategy for the Waikato River.
- M25 Local authorities and sector operators should ensure early collaboration with Raukawa in the development of new or major upgrade of existing infrastructure and avoid, remedy or mitigate any adverse effects.

Appendix B Statutory Acknowledgements and Statements of Association

- Lake Whakamaru is an area of statutory recognition.
- I consider the discharge proposed can be undertaken and managed in a way that is consistent with Te Rautaki Taiao A Raukawa. The participation of the RCT in the application process, continuing involvement with the proposed riverbank enhancement programme is testimony a good working relation that has RCT support.

7.8.2 Ngati Tuwharetoa, Raukawa and Te Awara River Iwi Authority River Act, 2010 incorporating the Vision and Strategy for the Waikato River

In addition to any requirement specified in the RMA, consenting authorities must have particular regard to the Vision and Strategy (Schedule 2 of the above noted Settlement Claims Act). The Act applies to applications relating to the Waikato River; or activities in the catchment that affect the Waikato River. I provide the following comment in the context of the proposed discharges.

The status of River Iwi, their needs and aspirations is cemented in the Vision and Strategy. As this application involves a discharge to land on a margin of the Waikato River the vision and strategy is determining. Some minor attributed and cumulative contribution of wastewater contaminants, particularly nitrogen and potentially phosphorus are associated with the discharge and have been examined under the vision and strategy through principles such as:

- *the recognition and avoidance of adverse cumulative effects, and potential cumulative effects, of activities undertaken both on the Waikato River and within the catchment on the health and wellbeing of the Waikato River;*
- *the recognition that the Waikato River is degraded and should not be required to absorb further degradation as a result of human activities.*
- *The principles of highest regard to be given for restoration and protection,*
- *The interrelated, holistic and coordinated approach toward managing the river.*

I consider that the discharge from the Whakamaru WWTP, as evaluated and discussed in this report, will have no more than minor effects on Lake Whakamaru and less than minor cumulative effects on wider Waikato River Catchment. I conclude that the discharge proposed along with the planned improvements and involvement of RCT with the implementation of some of the improvements, is consistent with the vision and strategy for the Waikato River.

7.8.3 Pouakani Land Settlement Act, 2000

This act is a statutory acknowledgement by the Crown of the particular cultural, spiritual, holistic and traditional association of the Pouakani people with the crown owned area of Titiraupenga. As this involves areas close to the wastewater treatment plant the Pouakani Land Settlement Act awards status to the Pouakani people to be acknowledged regarding resource consent applications. The Pouakani people were approached as interested parties of the application.

As mentioned in s. 5.1.2 of this report, the people of the Pouakani Marae Trust through their chairman have viewed and commented on the application proposal. Written support for the proposal has been given.

- I therefore consider that the discharge activity is not inconsistent with the Pouakani Land Settlement Act, 2000.

7.8.4 Customary activities

So far as I am aware there are no customary activities that are directly affected by this application.

7.8.5 Relevant Regulations

So far as I am aware there are no other regulations that are relevant or may be limiting on this application.

7.9 Relevant Part 2 Considerations

All resource consent applications must be considered subject to Part 2 (sections 5 to 8) of the Resource Management Act, 1991:

Purpose (5)

Matters of National Importance (6)

Other Matters (8)

Treaty of Waitangi (9)

Each section has been considered in relation to this application. I have had particular regard to the fact the discharge occurs in a priority catchment that has a separate legislation of the River Settlement Acts. The status and participation of Maori in this consent process has been given high regard and attention.

- I conclude that the discharge activities proposed are not contrary to Part 2 matters.

7.10 Duration of Consent

TDC has requested a term of 20 years for the consents to reflect the level of investment in the WWTP, the minor level of effects of the discharge, and regarding the improvements to the wastewater treatment process that are to be made.

My assessment also concludes that the effects of the discharge activities overall are considered to be minor. The recommended conditions of consent are set to limit the level of effects that the discharges can or may have, and require improvements to the plant to reduce the effects on water quality that currently occur. The value of the community infrastructure investment in the WWTP is recognised and provided for in supporting the term requested.

- In line with my assessment of effects and in maintaining a consistent approach with the term of consent awarded to holders of other discharge consents of similar scale and intensity, I consider that in accordance with s.113(1)(b) of the RMA that a 20-year duration with five yearly review can be supported.

8 Discussion/Conclusions

This proposal to continue to discharge wastewater into land and wastewater contaminants to air has been assessed as a discretionary consent application in accordance with s104B of the Resource Management Act, and in line with this Council's policies and rules of the Waikato Regional Plan.

While the wastewater treatment plant has generally provided a level of service adequate to the needs of the community, in later times it has been associated with some low level water quality type effects that should be avoided, remedied or mitigated. TDC through their application proposal and as result of the consultation process, intend to upgrade the treatment process to secondary treatment, and offer a vegetation protection and enhancement works as part of giving effect to the Vision and Strategy for the Waikato River.

The consultation process has benefited this application by an outcome that is acceptable to TDC, and the Raukawa Charitable Trust (RCT). The Pouakani Marae Whanau through their chairperson have also been involved in the application process and have tendered their support for the continued operation of the WWTP.

I am satisfied that the improvements and mitigation proposed is a good practicable option in terms of meeting the needs of the community and minimising effects on the receiving environment.

I consider that in the time post granting of the new consent and before the wastewater treatment process improvements are commissioned the effects of the discharge will not unduly compromise nearby water bodies (surface and ground). The programme of planting as offered to mitigate the effects of the discharge need not be delayed but can commence as soon as the planting programme is set up with agreement and in dialogue with the RCT.

9 Monitoring

Included in the TDC application document is a set of recommended consent conditions from which I have set out to be consistent with in formulating the conditions of consent. TDC seek to retain the same monitoring regime that has been in place at the WWTP for many years, to state when the proposed upgrade to the plant shall occur. I consider this is a practicable approach to take.

TDC's Long Term Community Plan and Asset Management Plan provides for an upgrade to the Whakamaru WWTP to take place in the near term future (2018). The position of interested parties regarding plant improvements as determined from the consultation process, is one of no less an expectation. Accordingly it is my opinion that the conditions of consent which do require plant improvements should be consistent with the TDC Long term Community Plan / Asset Management Plan time frame projections for rolling out improvements to the WWTP.

The mitigation condition offered by TDC to fund a programme of riverside enhancement plantings is accounted for by condition (9) of consent.

In setting out to ensure the effects of the discharge activities will be no more than minor, I consider that the conditions of consent should also account for:

- The required performance level of the treatment and disposal system which can be specified and/or reflected by setting discharge quality requirements, nominally by setting an upper limit on the quantity of wastewater and the annual load of nitrogen discharged,
- A responsibility of the consent holder to ensure the wastewater plant is correctly operated and maintained at all times so as to be at optimum performance,
- A requirement on the consent holder to routinely monitor and report on the performance of the wastewater treatment plant,
- A requirement on the consent holder to routinely monitor and report on the effects of the discharge on the environment (namely the Waikato River in this case),
- To keep and maintain an operations document for the WWTP
- To keep and maintain a complaints register
- A review clause
- Some standard administration conditions.

10 Recommended Decision

I recommend that in accordance with s104B that resource consent application **130354.01.01** be granted in accordance with the duration and conditions prescribed in the attached Resource Consent Certificate for the following reasons:

- The activity will have no more than minor actual or potential adverse effects on the environment,
- The activity is not contrary to any relevant plans or policies, national standards or regulations,
- The activity is consistent with the purpose and principles of the Resource Management Act 1991



Brent Fletcher
Resource Officer
Resource Use Directorate

Date: 24-05-16

11 Decision

That the resource consent application is granted in accordance with the above recommendations.



Hugh Keane

Team Leader

Resource Use Directorate

Date: 24/5/2016

Acting under authority delegated subject to the provisions of the Resource Management Act 1991 which at the time of decision had not been revoked.

Resource Consent Certificate

Resource Consent: APP130354.01.01

File Number: 60 01 88A

*Pursuant to the Resource Management Act 1991, the Waikato Regional Council hereby grants
consent to:*

Taupo District Council
Private Bag 2005
Taupo Mail Centre
Taupo 3352

(hereinafter referred to as the Consent Holder)

Consent Type: Discharge Permit

Consent Subtype: Discharge to Land

Activity authorised: To discharge treated municipal wastewater to land and
contaminants to air from the Whakamaru Wastewater Treatment
Plant

Location: (Whakamaru Village) Pokuru Rd – Whakamaru

Spatial References: NZTM 1845240.00 E, 5723337.00 N

Consent duration: This consent will commence on the date of decision notification and
expire on 31 May 2036.

Subject to the conditions overleaf:

Conditions

1. The discharge of wastewater to land and contaminants to air shall be undertaken in accordance with the application document, titled "*Application for Resource Consent Whakamaru Wastewater Discharge Revision 10 March 2014*" (#3001133), subject to the resource consent conditions below, which shall prevail should there be any inconsistencies between the conditions and application document.
2. The consent holder shall inform the Waikato Regional Council in writing at least 10 working days prior to the commencement date of the construction works associated with the plant improvements, and no later than 10 working days following commissioning of the improvements.
3. The consent holder shall pay the Waikato Regional Council any administrative charge fixed in accordance with section 36 of the Resource Management Act 1991, or any charge prescribed in accordance with regulations made under section 360 of the Resource Management Act 1991.

Discharge quantity

4. The wastewater discharge authorised is a maximum volume of up to **75** cubic metres per day (75m³/day) to land. For the purposes of this authorisation one day is any 24 hour consecutive period of time.

Discharge quality

5. **Up to the 30 June 2018**, the consent holder shall ensure that the annual total nitrogen (TN) load shall not exceed **460** kilograms per year for the year commencing 1 July and ending 30 June.
6. **Post 1 July 2018**, the consent holder shall ensure that the annual total nitrogen (TN) load shall not exceed **350** kilograms per year for the year commencing 1 July and ending 30 June.
Note: For the purposes of conditions (4), (5) and (6), the period of compliance is 1 July to 30 June annually.

Methods of discharge to land

7. At all times the loading rate of wastewater to land shall not exceed the absorptive capacity of the receiving soils.
8. There shall be no overland discharge of wastewater (i.e. leakage to the ground surface) from any part of the wastewater treatment plant or the land disposal system.

Mitigation and offsetting of effects

9. The consent holder shall:
 - (i) Contribute up to \$30,000 to enable lakeshore enhancement works along the western bank of Lake Whakamaru in vicinity of the wastewater treatment plant.
 - (ii) Provide written evidence to the Waikato Regional Council with six-months of the commencement date of this consent that the lakeshore enhancement funds are available,
 - (iii) Provide the Waikato Regional Council with a copy of the Lake shore enhancement works plan, within six-months of the commencement date of this consent.**Note:** This contribution has been identified based on current pricing as sufficient to enable planting of an average of a 3m wide planting strip for up to 1km in length, no more than 500m from the wastewater treatment plant. For clarity, this condition is proffered by the consent holder to address concerns of Ngati Raukawa in relation to the effects of the Wastewater Treatment Plant on Lake Whakamaru.

Plant performance monitoring

10. The consent holder shall monitor and record the daily wastewater discharge volumes.
11. The quality of the wastewater discharge shall be determined by the consent holder who will monitor the following parameters: total nitrogen (TN), ammoniacal-nitrogen (NH₄-N), nitrate-nitrogen (NO₃-N), total phosphorus (TP), suspended solids (SS), 5-day carbonaceous biochemical oxygen demand (cBOD₅), *Escherichia coliform* bacteria (*E.coli*) and chloride (Cl).

The monitoring programme shall measure:

 - i. the concentrations of TN, NH₄-N, NO₃-N, TP, SS, cBOD₅, *E. Coli* and Cl in the effluent at **monthly intervals**,
 - ii. **monthly average** mass discharge of nitrogen based on monthly total nitrogen concentrations in treated effluent and average daily discharge volumes,
 - iii. the **annual mass** of total nitrogen discharged from the plant based on the average discharge volumes and average total nitrogen concentrations in treated effluent for the year 1 July to 30 June.
12. The consent holder shall to the approval of the Waikato Regional Council acting in a technical certification capacity, define a discharge sampling location and the sampling methods to be used for monitoring the parameters in conditions **(5)**, **(6)** and **(11)**.
13. All wastewater quality analyses shall be undertaken by an IANZ accredited or equivalent laboratory. All methods used shall be appropriate for the wastewater analyses undertaken.

Receiving environment monitoring and reporting

14. The consent holder shall retain and continue a monitoring programme to evaluate the environmental effects of the discharge. This programme shall be to the approval of Waikato Regional Council acting in a technical certification capacity and shall include the following:
 - i. the continuance of groundwater quality and contaminant migration monitoring, which shall comprise a control and down-gradient monitoring bores,
 - ii. monitoring of groundwater samples taken from the bores shall be carried out at quarterly intervals each year (three monthly). The groundwater samples shall be analysed for nitrate-nitrogen (NO₃-N), ammoniacal-nitrogen (NH₄-N), Total Phosphorus (TP), conductivity (COND), *Escherichia coliform* bacteria (*E.coli*) and chloride (Cl),
 - iii. groundwater levels shall be monitored in the monitoring bores at **quarterly intervals** each year (i.e. three monthly),

Site management

15. Upon completion of the upgrades to the treatment facility, the consent holder shall develop and retain an Operations and Management Plan (OMP) for this site. This Plan shall be prepared by a suitably qualified and experienced person and shall detail how the treatment and disposal system will be operated and maintained to ensure compliance with the conditions of this consent. As a minimum the Plan shall include the following matters:
 - i. a comprehensive description of the treatment and disposal system,
 - ii. a description of routine inspection, maintenance and operations monitoring procedures undertaken to ensure effective plant operation;
 - iii. responsibilities of Management and Operations personnel including notification protocols for unforeseen and extreme events,
 - iv. procedures for monitoring the performance of the treatment system and the effects of discharge on groundwater,
 - v. contingency measures to address unforeseen and extreme events,
 - vi. a complaints register and response procedures,

- vii. recording of improvements undertaken to the treatment plant and disposal system,
 - viii. recording of routine maintenance and repairs undertaken,
 - ix. procedures for routine reporting of monitoring results, including the frequency of reporting; as well as unforeseen and extreme events, complaints and an annual monitoring report,
 - x. Operations and Management Plan review,
 - xi. a copy of this resource consent
16. The Operations and Management Plan (OMP) shall be lodged with the Waikato Regional Council within **six months** of commissioning of the system upgrades. The OMP shall be reviewed and updated at an interval of a minimum of every **five years** in order to account for any changes in plant configuration, operation or management. An electronic copy of the OMP shall be provided to Waikato Regional Council within **10 working days** of a request to do so.
17. The wastewater treatment and disposal system shall be operated, maintained and managed by appropriately experienced personnel in accordance with the Operations and Management Plan pursuant to condition **(15)** of this consent.
18. The consent holder shall ensure contractors are made aware of the conditions of this resource consent and shall take all reasonable steps to ensure contractors are able to comply with those conditions.
Note: An example of a reasonable step to ensure contractors are able to comply with the conditions is to require them to be familiar with the Operations and Management Plan required by Condition **(15)**.
19. Any erosion control works that become necessary as a result of the wastewater discharge, such as tomo formation, shall be undertaken at the expense of the consent holder.
20. The discharge of contaminants to air from the wastewater treatment plant or the disposal system shall not result in any objectionable effects from odour beyond the boundary of the subject property.
21. The consent holder shall retain and continue a Register for all complaints received about the treatment and discharge operations. The Register which is to be made available to the Waikato Regional Council at all reasonable times shall record:
- i. The date, time and duration of the alleged event/incident that has resulted in the complaint,
 - ii. The name and address of the complainant, unless the complainant wishes to remain anonymous,
 - iii. The location of the complainant when the alleged event/incident was detected,
 - iv. The possible cause of the alleged event/incident,
 - v. The weather conditions and wind direction at the site when the event/incident allegedly occurred, if significant to the complaint,
 - vi. Any corrective actions undertaken by the consent holder in response to the complaint.
22. Complaints which indicate non-compliance with the conditions of this resource consent shall be forwarded to the Waikato Regional Council within **5 working days** of the complaint being received.
23. The consent holder shall erect a sign at the entrance to the Wastewater Treatment Plant which provides the contact telephone numbers of first response personal in the event of

an emergency, complaint or enquiry. The sign shall also include the words 'warning-health risk', along with 'sewage treatment and disposal area'.

Reporting

24. The consent holder shall forward the results of the plant performance monitoring undertaken pursuant to condition **(11)** to the Waikato Regional Council, at **six-monthly intervals** by January 30th and July 30th respectively, in an agreed analyses report and data format unless otherwise confirmed in writing by Waikato Regional Council.
25. The consent holder shall provide to the Waikato Regional Council a written report by 30 October each year, addressing the following:
- i. A summary of all monitoring results required by conditions of this resource consent for the year ending 30 June;
 - ii. Critical analysis of the monitoring data collected and comments on any emerging trends;
 - iii. Comment on compliance with the conditions of this resource consent;
 - iv. Comment on the performance and adequacy of the disposal system, and matters of compliance;
 - v. Comment on the effects of the discharge on ground and surface water,
 - vi. Any reasons for non-compliance or difficulties in achieving compliance with the conditions of this resource consent and a description of and a summary of the efficacy of any remedial works undertaken; and
 - vii. Any other issue considered relevant to the consent holder.
26. The consent holder shall notify the Waikato Regional Council within **24 hours** (where practicable) of the consent holder becoming aware of any accidental discharge, plant breakdown or other circumstance which is likely to result in the limits of this consent being exceeded. The consent holder shall, within **seven working days** of the incident occurring, provide a written report to the Waikato Regional Council, identifying the non-compliance, possible causes and steps to ensure future compliance, which may include but not be limited to an investigation of the treatment plant operation and capabilities, bore monitoring and the implementation of remedial action to prevent recurring non-compliance.

Review

- 27 The Waikato Regional Council may in May 2021, 2026 and 2031 elect to serve notice on the consent holder under section 128(i) of the Resource Management Act 1991, of its intention to commence review of the conditions of this resource consent for the following purposes:
- i) to review the effectiveness of the conditions of this resource consent in avoiding or mitigating any adverse effects on the environment from the exercise of this resource consent and if necessary to avoid, remedy or mitigate such effects by way of further or amended conditions; or
 - ii) if necessary and appropriate, to require the holder of this resource consent to adopt the best practicable option to remove or reduce adverse effects on the surrounding environment due to odour, or contamination of ground or surface waters; or
 - iii) to review the adequacy of and the necessity for monitoring undertaken by the consent holder.

Advice Note: Costs associated with any review of the conditions of this resource consent will be recovered from the consent holder in accordance with the provisions of section 36 of the Resource Management Act 1991.

In terms of s116 of the Resource Management Act 1991, this consent commences on 24th May 2016

Advice notes

Summary of monitoring requirements, discharge consent 130354.01.01

Frequency	Monitor	Parameter	Reporting
Daily	Discharge flow	m ³ /day	Notify exceedance in 24hrs Six monthly data
Monthly	Discharge parameters	cBOD ₅ , SS, TN, NO ₃ -N, NH ₄ -N, TP, <i>E.coli</i> , Cl	Notify exceedance in 24hrs Six monthly data Annual Mass Total -N
Quarterly	Groundwater monitoring bores [i.e. piezometers]	NO ₃ -N, NH ₄ -N, TP, COND, WL, <i>E.coli</i> , Cl	Six-monthly data
Annually	Monitoring report	All	Annually

Legend:

cBOD ₅	Carbonaceous Biochemical Oxygen Demand	COND	Electrical Conductivity
SS	Suspended Solids	WL	Water level in bores
TN	Total Nitrogen	Cl	Chloride
NO ₃ -N	Nitrate Nitrogen	FC	Faecal Coliforms
NH ₄ -N	Ammoniacal Nitrogen	NO ₂ -N	Nitrite Nitrogen
TP	Total Phosphorus	<i>E.coli</i>	Escherichia coliform bacteria

1. In accordance with section 125 RMA, this consent shall lapse five (5) years after the date on which it was granted unless it has been given effect to before the end of that period.
2. This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.
3. This resource consent is transferable to another owner or occupier of the land concerned, upon application, on the same conditions and for the same use as originally granted (s.134-137 RMA).
4. The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
5. The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
6. Note that pursuant to s333 of the RMA 1991, enforcement officers may at all reasonable times go onto the property that is the subject of this consent, for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.
7. If you intend to replace this consent upon its expiry, please note that an application for a new consent made at least 6 months prior to this consent's expiry gives you the right to continue exercising this consent after it expires in the event that your application is not processed prior to this consent's expiry.

