

NOVEMBER 2013
APPLICATION EDITION

Matatā Wastewater Scheme

Resource Consents and Notices of Requirement
Assessment of Effects on the Environment



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Matatā Wastewater Scheme

Resource Consents and Notices of Requirement

Assessment of Effects on the Environment

AUTHORS		
Inka Krawczyk	Whakatāne District Council	General Information Input
Santha Agas	Whakatāne District Council	Engineering Input
Michal Akurangi	Whakatāne District Council	Planning Input
Fiona Hennessey	Whakatāne District Council	Reserve Management Input
Jim Bradley/Garrett Hall	MHW New Zealand Limited	Technical and Overall Approach
Kylie O'Dwyer	MHW New Zealand Limited	Planning Assessment
Annie Feng	MHW New Zealand Limited	Air Quality Assessment
Bob Shaw	URS New Zealand Limited	Siting Assessment Alternative Selection
Martin Evans	URS New Zealand Limited	Proposed Wastewater Scheme

REVIEWERS		
Inka Krawczyk	Whakatāne District Council	Overall
Jim Bradley	MHW New Zealand Limited	Overall
Paula Hunter	MHW New Zealand Limited	Planning
Paul Heveldt	MHW New Zealand Limited	Air Quality
Bob Shaw	URS New Zealand Limited	Overall

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Whakatāne District Council

Matatā Wastewater Scheme

Resource Consents and Notices of Requirement

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APPENDICES

- Appendix A Affected Parties' Consent
- Appendix B Accidental Discovery Protocol

COMPANION DOCUMENT – CULTURAL IMPACT ASSESSMENT

SUPPORT DOCUMENTS

1. MATATĀ WASTEWATER SCHEME – CONSULTATION STRATEGY
2. NATURAL HAZARDS, CONSTRAINTS AND RISK ASSESSMENT
3. FLOWRATES AND MASS LAND ASSESSMENT FOR DETERMINATION OF LAND DISPOSAL FIELD REQUIREMENTS
4. ALTERNATIVES ASSESSMENT INFORMATION
5. MATATĀ WASTEWATER SCHEME – WASTEWATER LAND APPLICATION GROUNDWATER ASSESSMENT
6. MATATĀ WASTEWATER SCHEME – RECEIVING ENVIRONMENT WATER QUALITY, ECOLOGICAL AND PUBLIC HEALTH RISK ASSESSMENT
7. ECOLOGICAL ASSESSMENT OF POTENTIAL SITES FOR THE PROPOSED MATATĀ WASTEWATER TREATMENT PLANT AND DISPOSAL FIELD – AMENDED FOLLOWING SELECTION OF THE DISPOSAL FIELD SITE
8. ASSESSMENT OF LANDSCAPE AND VISUAL EFFECTS FOR THE PROPOSED MATATĀ WASTEWATER TREATMENT PLANT
9. DRAFT RESTORATION AND ENHANCEMENT PLAN FOR THE MITIGATION AND MANAGEMENT OF THE PROPOSED MATATĀ WASTEWATER TREATMENT DISPOSAL FIELD AND ADJACENT DUNELANDS
10. CONSULTATION RECORDS

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Executive Summary

Introduction

Whakatāne District Council (WDC) has been investigating options for wastewater management for Matatā since 2003.

In 2011 Whakatāne District Council secured a commitment of funding from the Ministry of Health (MoH) under the Sanitary Works Subsidy Scheme (SWSS), for either a full or partial reticulation scheme. More recently Bay of Plenty Regional Council (BoPRC) has also granted funding in its Annual Plan 2013/14 to support the Matatā Wastewater Scheme.

Based on the results of community consultation and consideration of a sustainable and long term solution to Matatā wastewater management, WDC has decided to proceed with a full reticulation option. This full reticulation option includes new wastewater reticulation through the town of Matatā, a new Wastewater Treatment Plant (WWTP) and Land Application Field for the land application of treated wastewater.

This Assessment of Effects on the Environment and Companion and Support Documents

This Assessment of Effects on the Environment (AEE) Report has been prepared in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991 (RMA) to support the resource consents application for the proposed Matatā Wastewater Scheme. This AEE also support the four Notices of Requirement (NoR) being sought as well as the required resource consents.

One Companion Document accompanies this AEE. This is the Cultural Impact Assessment of the Proposed Matatā Wastewater Scheme, prepared by the following iwi groups:

- Te Runanga o Ngati Awa;
- Te Mana o Ngati Rangitahi Trust; and
- Ngati Tuwharetoa BOP Settlement Trust.

Ten Support Documents contain additional information on key aspects of this Project.

Resource Consents and Notices of Requirement Being Sought (Section 1 of this AEE)

Three resource consents are being sought from the BoPRC as follows:

1. Discharge permit for air contaminants (odour) from the Wastewater Treatment Plant site and the pump station at the Land Application Field;
2. Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land where it may enter water at the Land Application Field (maximum discharge of up to 605m³ per day); and
3. Land use consent for the following works:
 - a. Approximately 5,500m³ of earthworks on land within the Erosion Hazard Zone at the Land Application Field; and
 - b. Disturbance of land and soil resulting from approximately 4.6 hectares of vegetation clearance on land within the Erosion Hazard Zone at the Land Application Field.

Thirty-five (35) year durations are being sought for the resource consents.

Four new designations, that are covered by the NoR's, are also being sought from the WDC. These include the following purposes:

1. The construction, operation, maintenance and upgrading of the Matatā Wastewater Treatment Plant and associated facilities;
2. Environmental Protection Buffer for the Matatā Wastewater Treatment Plant and associated facilities;
3. Access to the Wastewater Treatment Plant site; and
4. Installation, operation, maintenance and upgrading of the treated wastewater Land Application Field and associated facilities.

Project Objectives (Section 2 of this AEE)

In order to advance this Project and to achieve WDC's goal of securing long term resource consents, while following a robust decision making process that meets the WDC's statutory obligations, project objectives have been developed. An 'Overall Objective' and separate 'Environmental', 'Social', 'Economic', 'Tangata Whenua' and 'Technical' objectives were set.

The 'Overall Objective' is

"To work in partnership with the community and tāngata whenua to achieve a sustainable, long term solution for the collection, treatment and disposal of Matata's wastewater. The solution shall achieve a high level of public health protection, safeguard the life supporting capacity of natural resources, be the best practicable option and meet the following objectives."

Key Drivers for the Proposed Wastewater Scheme (Section 3 of this AEE)

This following presents a list of key drivers for a fully reticulated Wastewater Scheme in Matatā:

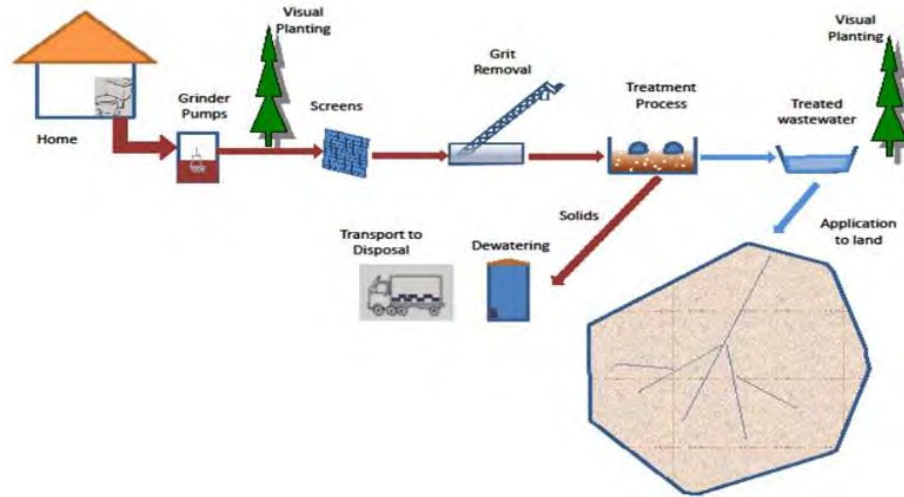
1. Public Health Considerations
 - a. Existing on-site septic tank disposal systems are mostly of over 20 years old, in poor conditions and have poor performance;
 - b. Failure of these septic tank systems could lead to increased exposure to disease-causing pathogens from the wastewater;
 - c. Complaints about odour issues have been recorded.
2. Environmental Considerations
 - a. The Matatā area is not well suited to septic tank fields due to a high groundwater table in parts and poor drainage of the soils;
 - b. Failure of these septic tanks systems could lead to increased risk of surface, water and groundwater contamination.
3. Cost Considerations
 - a. Replacement of the old septic tanks with new septic tanks and/or more advanced on site treatment systems will incur considerable cost per household and a longer term sustainable option is needed.
4. Community Feedback
 - a. The latest results of community consultation support a full wastewater reticulation system for Matatā.

Description of the Proposed Wastewater Scheme (Section 5 of this AEE)

The Proposed Wastewater Scheme consists of the following three main components:

1. Low Pressure Wastewater System including:
 - a. Low Pressure Grinder Pump System within individual properties;
 - b. Wastewater Reticulation Collection System from individual property boundaries to WWTP.
2. Wastewater Treatment Plant and Conveyance to Land Application Field
3. Treated Wastewater Land Application Field

These components and their inter-linkages are illustrated in the generalised schematic in the Figure below.

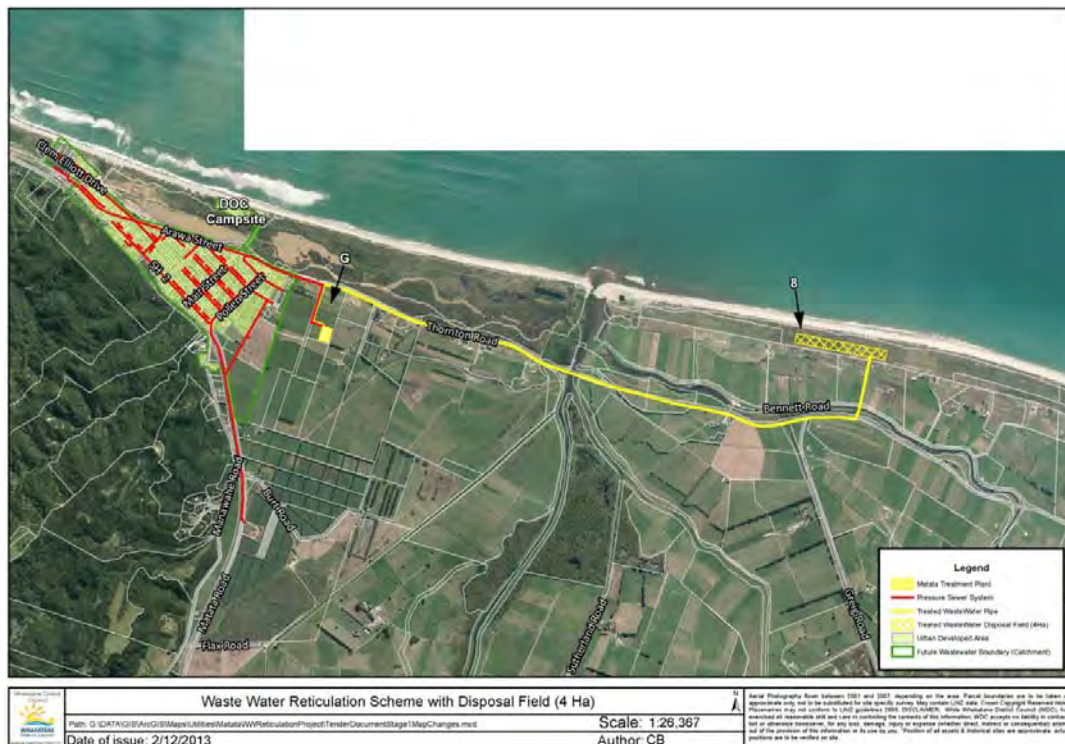


Generalised Schematic of the Proposed Wastewater Scheme

A Proposed Wastewater Scheme concept and layout plan is demonstrated in the Figure below. The proposed WWTP will be located near to Thornton Road within a site denoted as site G during the site selection process. Site G is hereafter referred to as the WWTP site.

Raw wastewater collected from the Matatā township and Department of Conservation Campsite within the pressure sewer and grinder pump collection catchment (marked with green boundary) is proposed to be delivered via a pressure sewer conveyance system (marked in red) to the WWTP site for treatment. The WWTP site is located just about 200m from the wastewater catchment boundary.

The treated wastewater is then conveyed via a 4 km pipeline (marked in yellow) to the Land Application Field of approximately 4ha, situated within the Western Recreation Reserve. The Western Recreation Reserve, denoted as site 8 in the site selection process is owned and managed by WDC.



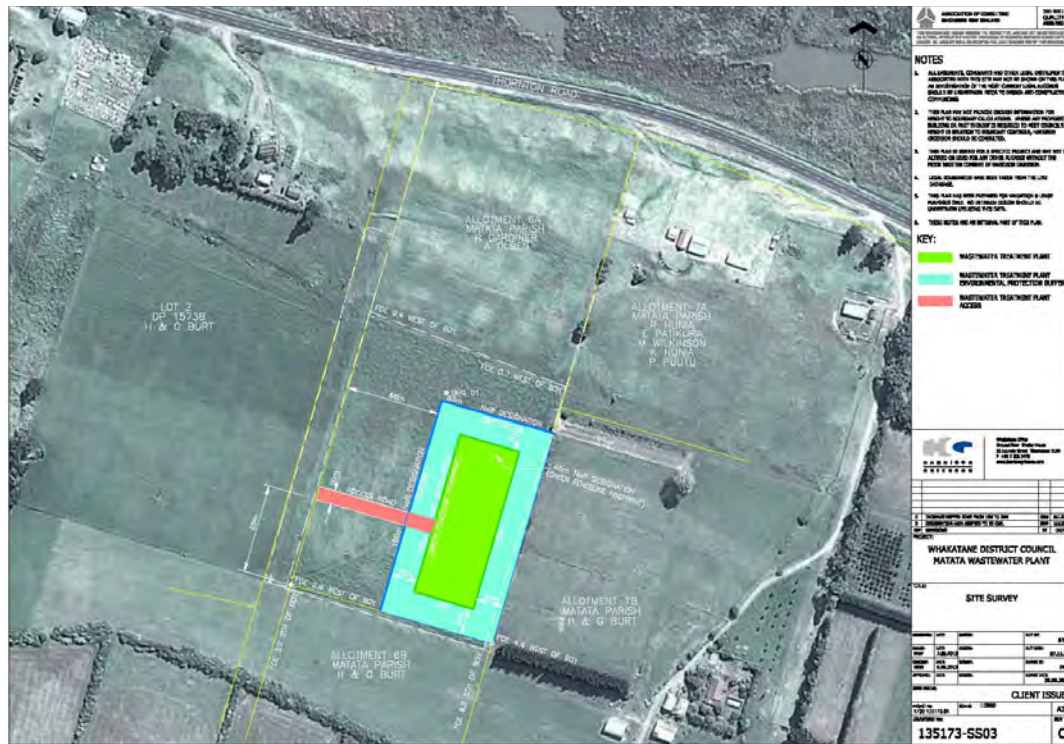
The Proposed Wastewater Scheme Concept and Layout Plan

The WWTP and Land Application Field will be designed and constructed using a Design-Build-Operate (DBO) contract. The key advantage of DBO contract is for WDC to have access to advanced technology

often available through a competitive tendering process. However, for the same reason, some detailed aspects of the actual design/process/size of the WWTP is unknown at this consenting stage. Accordingly this AEE has been based on an envelope of environmental effects within which the Proposed Wastewater Scheme will be constructed and operated and the effects assessment undertaken based on that envelope. Such a process has been successfully used in other wastewater consenting processes.

Key components of the WWTP design are available from the Employer's Requirement Technical Specification 402 Design Criteria. At the time of preparing this AEE, the Employer's Requirement Technical Specification is at 75% final stage and is to be released to shortlisted tenderers.

The Figure below shows the site layout of the designations being sought for the new WWTP and access road. Larger size presentation of this figure is included in Figure 5-4 of this AEE.



Layout of Designations Sought for the WWTP Site

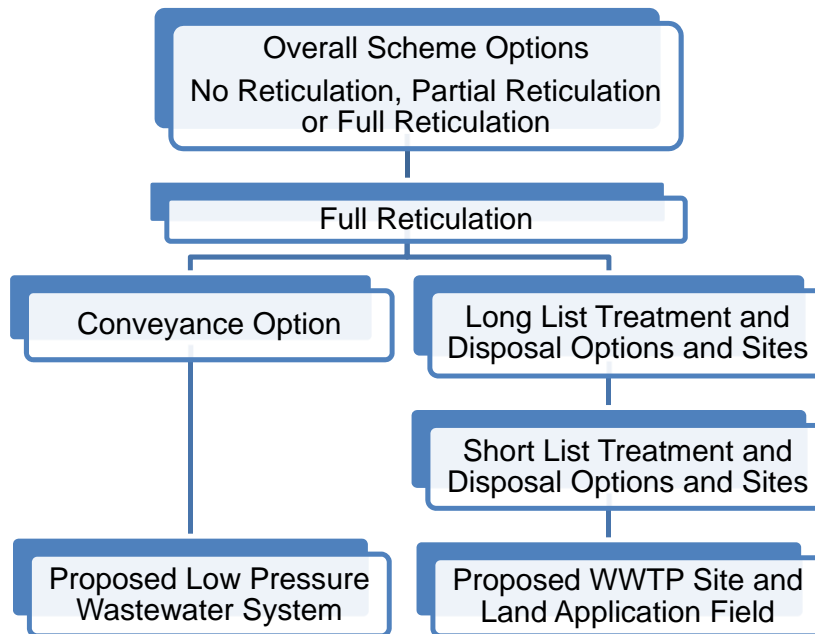
The following Figure shows the designation being sought for the Land Application Field and the proposed access road (outside of the designation). Larger size presentation of this figure is included in Figure 5-8 of this AEE.



Layout of Designation Sought for the Land Application Field

Alternatives Considered (Section 6 of this AEE)

Over the years different many options for reticulation and wastewater treatment and disposal have been considered for Matatā. The Figure below maps out the recent journey that WDC has taken to identify the Proposed Wastewater Scheme option and site location.



The Alternatives/Options Assessment Process

A GIS based constraints risk analysis was carried out for the short-listed sites identified for treatment and disposal through the above process as part of investigations undertaken to inform this AEE. The criteria considered included: natural hazard risks, technical, constructability, operability and cost risk. The outcome of this risk analysis was the selection of the preferred sites for the WWTP and Land Application Field.

Consultation (Section 9 of this AEE)

Whakatāne District Council has been consulting with the Matatā community about a reticulated system since 2003 and some targeted consultation has occurred during that time.

Consultation prior to 20 May 2013, when WDC made the decision to proceed with full reticulation scheme in Matatā included:

1. Consultations undertaken during the 2009-19 Long Term Community Consultation Plan (LTCCP) and the 2012-2022 Long Term Plan (LTP) and 2014 Annual Plan;
2. Resident surveys (June 2012, April 2013);
3. Community updates – newsletters send by post;
4. Webpage;
5. Community meetings;
6. Meetings with individual property owners;
7. Hui with local iwi; and
8. Meetings with key stakeholders.

Consultation since 20 May 2013, when WDC made the decision to proceed with a full reticulation scheme in Matatā has included:

1. Meetings with individual owners of properties neighbouring the WWTP and Land Application sites;
2. Hui with local iwi;
3. Community updates – newsletters send by post;
4. Community meetings; and
5. Meetings with key stakeholders;

A summary of some 39 separate consultation activities that have been undertaken since 20 May 2013 and WDC responses to key issues raised is provided in the AEE.

Assessment of Effects of Discharge to Air (Section 10 of this AEE)

The key components of the proposed WWTP, as described in the final Employer's 75% Requirement Technical Specification (URS, 2013), has been used to identify the potential sources of odour from the WWTP site. The wastewater treatment processes that could produce odorous emissions will be covered and the odorous air extracted and treated using biofilter(s) or similar. The biological treatment unit, as long as it is provided with sufficient aeration, generally has low potential to generate odour.

It is also proposed to plant dense vegetation area around the perimeter of the WWTP footprint. There will be a 20m buffer from this planting.

Due to the expected relatively low level of odorous contaminants in the treated wastewater and its aerobic nature and the relatively short travel distance to the Land Application Field, septicity is unlikely to be an issue when the treated wastewater arrives at the Land Application Field.

More importantly, the treated wastewater will be applied into the Land Application Field using subsurface drip. This means there will be no direct odour emission from the drip line into the air. Furthermore, the 200mm - 300mm layer of soil together with the vegetation can be expected to act as natural biofilter that will help minimise odour (if any) emissions. A flushing return pump station will be constructed at the Land Application Field. The pump station will periodically return flushing water from the Land Application Field to the WWTP for treatment. The 75% Employer's Requirement Technical Specification states that odour from these flushing and cleaning systems will need to be controlled at a minimum, using a biofilter(s) or similar.

To mitigate potential adverse effects from discharges to air WDC suggest resource consent conditions that require no objectionable odour beyond the boundary of the WWTP site and Land Application Field. The WWTP design will be required to comply with this condition. An Odour Management Plan (as part of a wider Operation and Management Plan) is also suggested as a resource consent condition.

Assessment of Effects of the Discharge of Treated Wastewater to Land (Section 11 of this AEE)

The proposed Land Application Field is located on coastal dunes, north of the Bennett Road Stream. Farmland, reclaimed from swamp with excavated dune sand, is located immediately south of the dunes. A drainage network extends across the farm paddocks suppressing groundwater levels across the farm.

The proposed land application of treated wastewater has the potential to influence the soil and water quality. In doing so, there is potential for adverse effects to the water and soil environment, and human health where there is direct contact with contaminated soil and/or water.

The proposed land application is expected to locally elevate groundwater levels and flow to the drains to the south of the Land Application Field. A significant thickness of unsaturated soils is present beneath the proposed land application area, with relatively high permeability of the dune sands and underlying materials mitigating significant increase in groundwater levels with wastewater application. The predicted increase in groundwater levels are not expected to change the current groundwater flow regime, with flow from the coast to the drains maintained.

Groundwater quality beneath the land application area and at the point of discharge is predicted to have increased nutrient loads resulting from the land application. However, the salinity of the water is predicted to decrease to some extent. The farm sources water for stock and potable use from off-site, with groundwater currently beneath the dunes and that reporting to the drains considered to be unusable for potable supply owing to salinity and existing pathogen load. On this basis, effects to groundwater quality are considered to be minor.

The water quality and ecological value of the Bennett Road Stream and the surface drainage network are currently not considered by Bay of Plenty Regional Council, due to their pure agricultural purposes and current degraded status. Monitoring of the ecological status and sensitivity of the Bennett Road Stream also confirms the degraded nature of the stream in terms of ecological values and overwhelming effects of tidal influence. The slight likelihood of nutrient increase within the Bennett Road Stream as a result of the wastewater land application at the Land Application Field should be considered to have no more than minor effects on the current status of the water body.

The public health risk issues of the Bennett Road Stream were assessed qualitatively based on the current pathogen load within the stream from surrounding land use.

The shortest travel time for the groundwater from the land application site to the surface drainage network was estimated to be approximately one year. This is significantly longer than the estimated time for complete microbial inactivation of faecal coliforms or E.coli, with or without UV disinfection. A conservative microbial die-off rate was applied in the public health assessment, the results of which indicate that an increase in pathogen load in the receiving environment due to the irrigated wastewater should be considered very unlikely.

Due to the limited public access to the Bennett Road Stream, and essentially minimal pathogen input into the receiving aquatic environment, the public health risks associated directly with the proposed wastewater land application discharge may be considered no more than minor.

An extensive suite of resource consent monitoring conditions is proposed by WDC to monitor the potential effects of the treated wastewater discharge to land.

Assessment of Effects of Earthworks and Land Disturbance at the Land Application Field (Section 12 of this AEE)

As part of the overall construction of the Proposed Wastewater Scheme, earthworks and vegetation clearance will be required to construct the Land Application Field and the private road access to the Field over the adjoining property to the south.

The Land Application Field will be installed utilising methods to protect the groundcover of the dunes as far as possible. During construction of the Land Application Field WDC propose to:

1. Ensure that no stripping of grass sward or topsoil is to occur;
2. Protect the groundcover of the dunes as far as possible;
3. Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar; and
4. Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.

The total volume of earthworks at the Land Application Field is 4,900m³.

Approximately 600m³ of earthworks will be required to create the access road from Thornton Road to the Land Application Field over the existing vehicle access route (farm track) to the south of the site at 1432B Bennett Road, Matatā. Proposed works will include stormwater swales and a pipeline trench together with access lengthening and possibly upgrade over the full length.

A range of mitigation measures are proposed including:

1. A Site Management Plan that identifies how sediment, stormwater and erosion will be controlled and contained, be submitted to BoPRC for approval prior to commencement of the works;
2. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities";
3. Once works are completed the Land Application Field is to be replanted with suitable indigenous species which will have a stabilising effect on the land surface and minimise future erosion. Replanting of the site will occur in the first available planting season (Autumn through to Winter/early Spring).

An ecological assessment for the Proposed Wastewater Scheme prepared by Wildlands dated August 2013 and a Draft Ecological Restoration and Enhancement Plan prepared by Wildlands dated November 2013 are contained as Support Document 7 and 9 respectively.

The site is part of the Te Teko Ecological District which contains a suite of threatened indigenous species and habitats and is recognised as having regional and national ecological significance. The vegetation on the area for the Land Application Field is predominantly exotic grassland species, with some coastal mahoe, but is managed as a protective buffer to the nationally significant population of Thornton kanuka (classified as Threatened – Nationally Vulnerable) and nationally significant coastal dune systems with which it is contiguous. The site is presently used for animal grazing and is considered to be of low ecological value with low quality habitat for both introduced and indigenous bird species. The proposed access route is also of low ecological value as it follows an existing vehicle route.



Photo of Land Application Field (currently grazed)

Once the construction works are complete the whole site containing the Land Application Field will be re-planted with suitable ecosourced indigenous species, as part of the Ecological Restoration Plan, which will include appropriate weed and pest (rabbits and hares) control measures. In addition weed and pest control will be undertaken on adjacent dunes. Whakatāne District Council has a long term goal of rehabilitating native vegetation over the entire Western Reserve network, with the Land Application Field site seen as a catalyst for this work.

To ensure that the adjacent stands of Thornton kanuka and other native coastal vegetation are not affected during works, suitable best practice site practices will be deployed. A 5m buffer will be left undisturbed adjacent to these areas, within which there will be no vegetation clearance or vehicular access, and no soil dumping or stockpiling.

The treated wastewater to be discharged into the land application area may increase the nutrient levels within the soils, which could result in the colonisation of nutrient-tolerant exotic species. It is expected

that some grass or weed species may remain on the site however a robust on-going weed eradication programme will ensure that weeds are kept to a minimum.

The potential ecological effects of the vegetation removal and earthworks are therefore considered to be minor, and the overall outcome for the site as a result of the proposed works is considered to be positive given the current grazing use will cease, exotic grass species will be removed and replaced with indigenous species, and the site will be rehabilitated in accordance with a suitable restoration plan.

The site of the Land Application Field is part of a wider area which is recognised for its high natural character which includes its existing visual characteristics and qualities. The site is identified in the Proposed Regional Policy Statement as an area of high natural character (Thornton Dunes).

In terms of soil disturbance within the Land Application Field, the method of laying the pipes will be by mole plough or similar, and they will occur over a 4 hectare area therefore changes to the existing landform will be minimal. The proposed works will avoid disturbance to the naturally undulating landforms of the dunes and existing contours will not be altered.

It is considered that the landscape and visual effects of the proposed earthworks will be minor in the short term, and overall will have positive benefits to the site given the area is to undergo rehabilitation as outlined above.

The Operative and Proposed Whakatāne District Plans do not include any archaeological sites for the Western Whakatāne Coastal Recreation Reserve or near the proposed access way. In addition the site is not included in the Historic Places Trust Register. The proposed access route is to be approximately 1.5km from the Otaramuturangi urupa (Maori burial ground) located to the west of the access road. It is not therefore expected that proposed earthworks are likely to uncover any archaeological remains, however in the event of an accidental discovery, works are to cease and the relevant authorities notified. It is proposed that a condition of consent to this effect be included (accidental discovery protocol).

Assessment of Effects on Tāngata Whenua (Section 13 of this AEE)

Three Cultural Impact Assessment's (CIA) have been prepared for the Proposed Scheme and WDC has provided a response to these recommendations within this AEE. For a full statement of the CIA findings please refer to the CIA reports in the Companion Document to this AEE.

The outcome of the CIA process has been an agreed Accidental Discovery Protocol which WDC has accepted and is attached to this AEE.

Whakatāne District Council is currently in the process of finalising the three CIAs. At this stage the three initial versions of the CIAs are included in this AEE as Companion Documents. Once the final CIAs are completed these will be made available.

Positive Effects (Section 14 of this AEE)

The single most positive effect of the Proposed Wastewater Scheme is the provision of a safe and reliable public health protection and sanitation system. This key positive effect should be 'kept to the fore' in assessing the balance of all effects as defined under the RMA, and also in the determination of a Best Practicable Option scheme for treatment and discharge such as this.

Assessment of Effects of Designations for Wastewater Treatment Plant Site (Section 16 of this AEE)

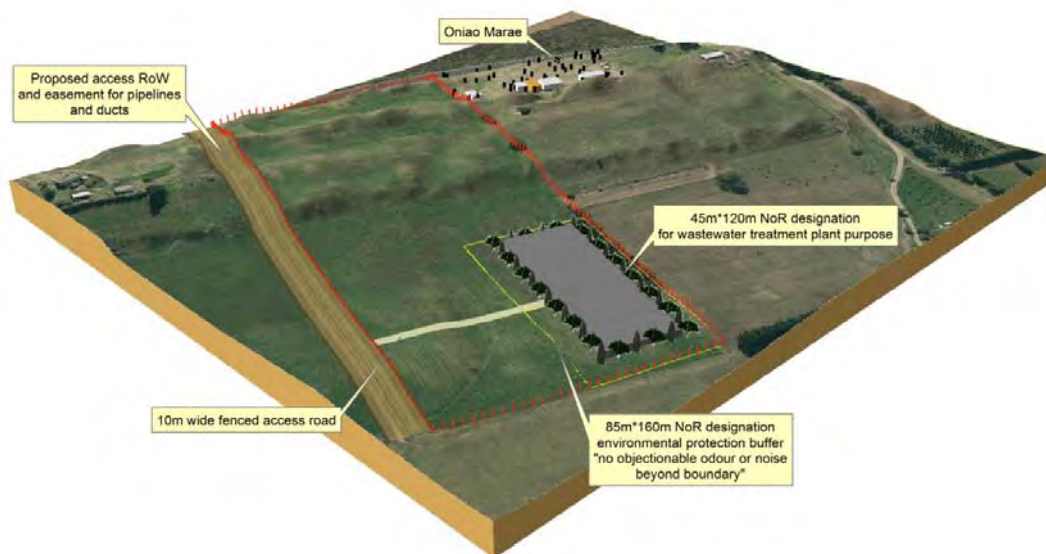
The three designations (for the WWTP site) sought include the WWTP itself, the WWTP Environmental Protection Buffer and the WWTP Access.

The site of the Proposed is within a rural area and is zoned Rural 3 (Coastal) in the Whakatāne Operative District Plan. The Whakatāne Operative District Plan seeks to maintain the character and diversity of rural and urban landscapes (Objective LS2). The proposed WWTP is to be sited towards the southern end of the property behind the low rise dunes that are located in the middle of the site in an east-west direction. The WWTP has been sited to enable the dunes to provide visual relief from properties towards the north, north-west and north-east and from Thornton Road. It also takes into account a fault line running diagonally across the property, and allows for a 20 metre buffer between the fault line and the Treatment Plant. Section 16.10 provides further information on the fault line.

As the wastewater scheme is to be constructed using a Design-Build-Operate process (refer to Section 5.7 of this AEE), the final design of the WWTP structures has not yet been confirmed. It is considered that the scale of structures will not be substantial and that the Plant is likely to comply with the

Whakatāne Operative District Plan standards for height (being approximately 3.5 metres in height), setbacks and site coverage for buildings within the Rural 3 (Coastal) zone.

The WWTP will be surrounded on 3 sides (excluding the western side containing the access) by an embankment with a height of approximately 2 metres and a width of 5 metres. It is proposed that this embankment is planted with vegetation to a width of 5m and height of 5m once fully established. A 3-D visualisation of the WWTP site is provided below. It is proposed that a condition on the designation be included, requiring that a Landscape and Visual Effects Management Plan be submitted to WDC for approval.



3-D Visualisation of the WWTP Site

An Ecological Assessment for the Proposed Wastewater Scheme prepared by Wildlands dated August 2013 is contained within Support Document 7.

The site is within a rural setting and is currently in pasture and used for grazing. The ecological value of the site is of low, and the proposal does not involve the discharge of any contaminants to the site. As such any ecological effects as a result of the proposed WWTP will be minor.

The proposed works will suitably integrate into the existing landscape and will maintain the rural character and amenity values of the area. It is considered that the landscape and visual effects of the proposal will be minor.

The WWTP will be designed to ensure noise levels are kept to a minimum level. It is proposed that a condition on the designation be included requiring that the activity is within the relevant noise levels subject to the applicable New Zealand standards as contained within WDC's Proposed District Plan.

The Operative and Proposed Whakatāne District Plans do not include any archaeological sites within the site. In addition the site is not included in the Historic Places Trust Register. Consultation with Ngati Awa iwi has revealed that the sacred talisman Matatāketake o Ngati Awa may be buried on the site. The recommendation from iwi is for the adoption of accidental discovery protocol and the presence of a cultural monitor during excavations. It is proposed that conditions to this effect be included on the designation.

The management of construction effects is to form part of the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan be submitted to WDC for certification prior to commencement of the works.

Assessment of Effects for Designation of the Land Application Field (Section 17 of this AEE)

The requirement is for a total of 4.2 hectares for the Land Application Field and 0.4 hectares for the access road, giving a total of 4.6 hectares. The amount of land required for the Land Application Field has been determined based on the future (year 2056) estimated wastewater flow rate, the mass loads

for the Matatā WWTP, and the required areas for land disposal based on the site specific soil characteristics.

The proposed works will avoid disturbance to the naturally undulating landforms of the dunes and existing contours will not be altered.

The pipework will be installed underground so will not be visible. This is in accordance with Objective WNU1, Policy 2 of the Operative Whakatāne District Plan which states that services associated with network utilities should be placed underground where technically and feasibly practical. The only visible structure will be a small building to house the pump, measuring approximately 1.8m x 1.8m x 1.8m (i.e. the size of a small garden shed). This building will be appropriately sited behind the higher rear dunes, on a low area of dune out of view from SH2 and the nearby Otaramuturangi urupa and Tarawera River, and will be partially buried below ground if necessary. The building will be designed and constructed to ensure it blends into the surrounding area using a recessive design and naturally coloured materials that match the dunes.

The Land Application Field will be fenced with post and wire fencing to allow for the vegetation to establish. Fencing is to be removed from the site once this occurs.

The access is to be formed in accordance with WDC standard access road requirements.

It is considered that the proposed works will be suitably integrated into the existing landscape and that the landscape and visual effects of the proposal will be minor.

Ecological effects of the proposed construction of the Land Application Field are described earlier.

The site of the Land Application Field is identified in the BoPRC Coastal Environment Plan as being within an Area Sensitive to Coastal Hazards, and in the Whakatāne Operative and Proposed District Plans as being subject to erosion and inundation. The District Council planning documents are based on research undertaken by Tonkin and Taylor in 2001 to define the extent of the risk area and are therefore more definitive than the Regional Council map. The proposed Land Application Field itself is to be sited outside (landward side) of the erosion and inundation hazard lines, which run along the coast and is therefore unlikely to be significantly affected by coastal erosion or inundation.

Conclusion

The Proposed Wastewater Scheme is critically important to the community of Matatā, the wider WDC and the Bay of Plenty region and a significant part of the infrastructure of the Matatā area and will contribute significantly to the health, safety and well-being of the Matatā area. Accordingly, there are very many positive or beneficial effects associated with the Proposed Wastewater Scheme.

There are a number of minor potential and actual adverse effects of the Proposed Wastewater Scheme that have been outlined and evaluated associated with the construction and operational components of the Proposed Scheme and the proposed mitigation measures WDC have determined. These include the WWTP and land application field areas. Whakatāne District Council suggested resource consent and designation conditions have been proposed to avoid, remedy or mitigate any adverse effects associated with the Scheme.

Cross Reference to the Provisions of the Fourth Schedule of the Resource Management Act

1. Matters that should be included in an assessment of effects on the Environment	Relevant Section in this AEE
(a) A description of the proposal	Section 5
(b) Description of any possible alternative locations or methods for undertaking the activity	Section 6 Support Document 4
(c) Repealed	--
(d) An assessment of the actual or potential effect on the environment of the proposed activity	Sections 10-14, 16-17 Support Documents 5, 6
(e) Hazardous risk assessment	Section 16
(f) Discharge of contaminants	
(i) The nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects	Sections 5, 7 Support Documents
(ii) Any possible alternative methods of discharge, including discharge into any other receiving environment	Section 6 Support Document 4
(g) Mitigation measures (safeguards and contingency plans where relevant) to help prevent or reduce the actual or potential effect	Sections 10-14, 16-17 Support Documents 5, 6
(h) Consultation undertaken, and any response to the views of those consulted:	Section 9 Support Document 10
(i) Monitoring	Sections 10-14, 16-17 Support Documents 5, 6

2. Matters that should be considered when preparing an assessment of effects on the Environment	Relevant Section in this AEE
(a) Any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects	Sections 16, 17
(b) Any physical effect on the locality, including any landscape and visual effects	Sections 16, 17
(c) Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity	Sections 16, 17 Support Documents 6, 7
(d) Any effect on natural and physical resources on plants or animals and any physical disturbance of habitats in the vicinity	Section 16, 17 Support Documents 6, 7
(e) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants	Sections 10-14, 16-17 Support Documents 5, 6, 7
(f) Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations	Section 16, 17

Application Forms for Resource Consents



Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

Free Phone: 0800 884 880

Free Fax: 0800 884 882

Website: boprc.govt.nz

File ref.

	SEEN		SEEN

Office Use Only

**Application for a Resource Consent Resource Management Act 1991 (s.88)
Form 2A Land Disturbing Activities (e.g. earthworks and quarrying)**

Before you make an application it is recommended that you talk or meet with a Consents Officer to discuss. A Consents Officer may also be able to undertake a site visit to provide further advice.

If you would like to arrange this, please phone 0800 884 880.

If you are applying for more than one activity and you have already completed the basic details in Parts 1 on another form, go straight to Part 2 of this form.

See notes to applicant (last pages of form) before proceeding with application form.

Under section 88 of the Resource Management Act 1991, the undersigned hereby makes application for resource consent(s).

PART 1

A consent can only be issued to a legal entity such as a person(s), limited company, incorporated society, etc.

1 Full name of applicant(s) (the name that will be on the consent)

Surname

First names

OR

If the application is being made on behalf of a trust, the Trustees must be named.

Trust name

Trustees' names

OR

Company name Whakatāne District Council

Contact person Inka Krawczyk

Postal address Private Bag 1002, Whakatane 3158

Telephone (please tick preferred contact number)

Residential

Business 07 306 0577

Cell

Facsimile 07 307 0718

Email inka.krawczyk@whakatane.govt.nz

2 **Details of consultant** (or other person authorised to make application on behalf of applicant)

Company name MWH NZ Ltd

Contact person Garrett Hall

Postal address PO Box 12-941, Auckland

Telephone (please tick preferred contact number)

Residential

Business 09 580 7664

Cell 027 240 9017

Facsimile

Email garrett.j.hall@mwhglobal.com

All correspondence, including invoices for charges, relating to this application(s) should be sent to:

Applicant

Consultant

3 **Name and address of owner/occupier** (of the site relating to application)

Owner Whakatāne District Council

Postal address Private Bag 1002, Whakatāne 3158

Residential phone

Business phone 07 306 0577

Occupier

Postal address

Residential phone

Business phone

4 **Name and address of owner/occupier** (of the site relating to application)

Owner Sheryl Margaret Robinson, Shayne Aaron Robinson, Whakatāne Trustee Services Ltd

Postal address 27A James Street, Whakatane

Residential phone 07 308 8341 or 027 312 0394 Business phone

Occupier

Residential phone

Business phone

Please note: If the applicant is not the owner of the land to which the activity relates, then it is good practice to submit the application with written approval from the landowner.

5 Consent(s) being applied for from Bay of Plenty Regional Council

(a) You will need to fill in a separate form for each of the activities you propose to undertake. You may also need consent for one or more of the following.

Land Use

- Form 1A Culverts, Bridges, Fords, Erosion Protection, Pipes, and Associated Works
- Form 1B Disturbance In or Around a Water Body (e.g. diversion, dredging, wetland disturbance, gravel extraction)
- Form 1C Lake Structures (new and existing)
- Form 2A Land Disturbing Activities (e.g. earthworks & quarrying)
- Form 2B Land Disturbing Activities (forest harvesting/vegetation clearance)

Discharge (including coastal)

- Form 3A Onsite Effluent Discharge
- Form 3B Discharge Farm Dairy Effluent
- Form 3C Land Use Activities in the Catchments of Lakes Okareka, Rotoehu, Okaro, Rotorua, and Rotoiti
- Form 4A Discharge Stormwater to Water and/or Land from Urban Residential, Rural
- Form 4B Industrial Discharges to Water or Land (including stormwater)
- Form 4C Discharge Contaminants to Air

Water (including coastal)

- Form 5A Water Permit Application (s.14) – Take Surface Water (includes intake structure (s.13))
- Form 5B Water Permit Application (s.14) – Take Groundwater
- Form 5C Dam Water
- Form 5D Divert Water
- Form 6A Geothermal Take and Discharge – Domestic and Light Commercial

Coastal (see point 4 of Notes to Applicant for explanation of the Coastal Marine Area)

- Form 7A Application for Permit for Coastal Structures (including associated occupation and disturbance)
- Form 7B Application to Disturb Coastal Marine Area (no structure)

(b) In which District is the activity located?

- | | |
|--|--|
| <input checked="" type="checkbox"/> Whakatane District | <input type="checkbox"/> Opotiki District |
| <input type="checkbox"/> Rotorua District | <input type="checkbox"/> Kawerau District |
| <input type="checkbox"/> Western BOP District | <input type="checkbox"/> Tauranga District |
| <input type="checkbox"/> Taupo District | |

(c) Is this application to replace an existing or expired consent(s)? Yes No
If Yes, please state the consent number(s)

(d) Please specify the duration sought for your consent(s).

35 Years Months

Start date

Completion date (if applicable)

(e) Do you also require resource consent(s) from a district council? Yes No

Type of consent required Earthworks

Has it been applied for? Yes No

Has it been granted? *(If Yes, please attach.)*

Yes

No

6 Location description of activity

Site Address 1186Z Thornton Road, Matatā, 1432B Bennett Road, Matatā

Legal description *(legal description can be obtained from your certificate of title, valuation notice, or rate demand)*

Pt Allot 273 Rangitaiki Parish (SO 332912), Allot 107 Rangitaiki Parish (SO 21226)

Map reference NZMS 260, (if known)

3 Site information

See Section 12 of AEE

Dominant slope

Depth to water table (*from ground level*)

Existing vegetation type

Existing land use (*your property*)

Neighbouring land use(s)

Soil type and geology

If any of the following apply to your site and the receiving environment, please describe them:

(a) Streams/drains (*including permanently and intermittently flowing*).

(b) Wetlands.

(c) Identified archaeological and/or sites of cultural significance.

(d) Neighbouring roads, power lines, railway lines, etc.

(e) Protected natural areas or sites of ecological importance.

(f) Proximity to Coastal Marine Area.

4 Site plan

See Section 12 of AEE

Please provide detailed site plans showing the site and surrounding area, including:

- (a) An existing site plan detailing:
 - Surface features (*e.g. streams, wetlands*).
 - The name(s) of the current owner(s) and occupiers of the site and adjoining properties.
 - Drainage patterns.
- (b) A proposed final site plan (*post-development*) detailing:
 - Proposed finished contour (*heights*). This includes ground levels in relation to neighbouring properties.
 - Drainage patterns.
- (c) Proposed development plan(s) detailing:
 - Area of proposed activity.
 - Areas of cut.
 - Areas of fill.
 - Stockpile areas (*e.g. topsoil and fill*).
- (d) For each stage, an erosion and sediment control plan(s) detailing:
 - Location and types of erosion and sediment controls, including types of controls (*e.g. sediment ponds, bunds, silt fences*).
 - Control design details (*including cross sections*).
 - Cleanwater diversions and internal contour drains.
 - Discharge locations.
- (e) Winter earthworks plan, where applicable, detailing:
 - Winter earthworks areas of the site, including stabilised and exposed catchment areas.
 - Location and types of erosion and sediment controls.
 - Control design details (*including cross sections*).
 - Cleanwater diversions and internal contour drains.
 - Discharge locations.

If you do not have access to mapping software, we recommend you use the regional mapping system available on our website (www.boprc.govt.nz keywords 'regional mapping'). The mapping system includes property boundary and contour layers, and allows you to carry out a property search, and view and/or print topographic maps or aerial photography.

5 Erosion and sediment control details

See Section 12 of AEE

- (a) Please provide supporting calculations for your proposed erosion and sediment controls as shown in your erosion and sediment control plan(s), including any relevant winter earthworks controls. (For help, refer to *Erosion and Sediment Control Guidelines* at www.boprc.govt.nz, Knowledge Centre, Our Library, Guideline Publications.)

Control Type				
Catchment e.g. area, slope, length, percentage of catchment				
Capacity of Control e.g. control dimensions				
Outlet Location(s) and Details e.g. number of decants, spillway width/depths				
Erosion Protection e.g. inlet/outlet				

- (b) Please specify surface stabilisation techniques at the completion of works, and the sequence.

- (c) Do you propose to use treatment chemicals? Yes No

If Yes, please provide a chemical treatment plan. The chemical treatment plan should detail:

- Sediment settlement (*bench testing*) results, including determination of appropriate chemical, and the application rate.
- Methods of application, including supporting calculations.
- Treated water discharge locations.
- Expectant discharge parameters and limits.
- Contingency management.
- Record keeping details.
- Storage details.
- Expectant discharge parameters and limits.

6 Dust control

See Section 12 of AEE

Please provide details of dust control, which considers the following:

- How water will be applied (*e.g. how sprinklers and/or water cart systems will be used, their capacities and hours of operation, the source of water, and the source capacity and availability*). Please provide written confirmation that the District Council can supply sufficient water for dust control, or confirm an alternative source.
- The use and access to binding agents/dust suppressants for use in the water carts or sprinkler systems. If dust inhibitors are to be used, please detail arrangements of their availability for the duration of any earthworks at the activity site.
- Restriction on total exposed area (*e.g. staging*).
- The erection of a sign displaying a 24-hour contact telephone number for the site contractor for dust and other complaints. This does not replace the pollution hot-line service, but should provide a further incentive for the site supervisor to maintain adequate dust control.
- The use of wind-break fencing in problem areas.
- Covering exposed areas with durable temporary windshield cloth or geotextile fabrics.
- Other options to be taken should attempts to manage dust nuisance be unsuccessful.

NB: If your take of water for dust suppression will be above 5 L/s and is from a natural water body e.g. lake, river or stream it will need to be measured (by a verified metering device) and reported to the Regional Council in accordance with the Measurement and Reporting of Water Takes Regulations 2010.

(a) What dust control measures are proposed?

Continue on a separate sheet if necessary.

(b) How will you prevent tracking of dust and sediment by vehicle movement off the work site (*e.g. stabilised site entrance, etc.*)?

7 Risk assessment

See Section 12 of AEE

Please provide a basic risk assessment for the proposed earthworks.

Factor	Effect	Severity	Likelihood	Significance	Measures to avoid, remedy, mitigate
		Low Very severe 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	
		Low Very severe 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	
		Low Very severe 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	
		Low Very severe 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	
		Low Very severe 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	Low High 1 2 3 4 5 Please circle	

8 Persons likely to be directly affected

Please publicly notify the application

Affected persons or parties may include neighbouring land owners and occupiers, and/or organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Fish and Game Council, local iwi, and community groups.

If you do not think there will be affected parties, you do not need to fill out this section; however, the Bay of Plenty Regional Council will make the final assessment of whether a person or party is affected by your proposal, and you may be asked to consult with such persons or parties at a later date.

*In order for your application to be considered for **non-notification** you **must** gain written approval from all persons who may be affected by the proposal. The Bay of Plenty Regional Council can help you identify people/organisations that are likely to be affected, and the form 'Affected Person's Written Approval', which can be filled out by the affected party and attached to this application, can be found at www.boprc.govt.nz keywords 'resource consent forms'.*

Please provide details below of those you have identified as parties who may be affected. If you have discussed your proposal with any of these parties, please record any comments made by them and your response to them, and submit this with your application.

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*).

Continue on a separate sheet if necessary.

9 Extending timeframes

The Resource Management Act 1991 (RMA) specifies timeframes for processing resource consent applications (e.g. 20 working days for a non-notified application); however, these timeframes can be extended, if necessary, with the applicant's agreement.

Do you agree to the Bay of Plenty Regional Council extending RMA consent processing timeframes?

- Yes, provided that I can continue to exercise my existing consent until processing of this application is completed (*renewal applications only*).
- Yes, provided that the extension is for the specific purpose of discussing and trying to agree on consent conditions.
- Yes, provided that the application process is completed before .
- No.

10 Deposit fee

A deposit fee of \$774.00, inclusive of GST, is payable with this application. This may be paid online, by cheque, or by eftpos at one of the Regional Council's reception desks.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Please use the applicant's name as the reference. A GST invoice marked "PAID" will be issued on receipt of payment.
- An application will not be accepted as a complete application until the deposit fee has been paid. **Please note:** while we are happy to hold the forms in the meantime, the processing time will not start until payment is received.
- Additional charges are usually incurred, and will vary depending on the resources we use in the course of processing your application (e.g. *staff time*). Staff can give an estimate of expected costs. Please see the schedule of fees attached.

Checklist

If you have dealt with a staff member regarding your consent application, please provide their name here

- Complete all details applicable in this application form.
- Complete all details on the specific consent activity form(s) (e.g. *Land Disturbing Activities*).
- Include an Assessment of Environmental Effects (AEE) of the activity, as set out in Schedule 4, summarised at the back of this form. (*For minor activities, complete the relevant section in the activity application form. For major activities, a more detailed AEE must be attached to the application.*)
- Supply written approval from all affected parties, if any, and/or summary of consultation carried out.
- Include a site plan.
- Sign and date the application form.
- Pay the required deposit.
- Include any other information you think relevant (e.g. *Certificate of Title, details from the Companies Register, etc.*).
- If your application is a large application, please submit an electronic version on CD, and one hard copy.
- Assessment of cultural impacts.

Please be aware any unchecked boxes may result in your application being returned under s.88.

Information privacy issues

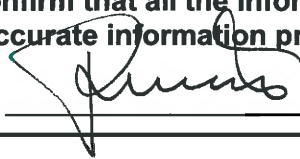
The information you provide in this application is regarded as official information. It is required under the provisions of the Resource Management Act 1991 to process this application, and to assist in the management of the region's natural and physical resources.

The information will be held by Bay of Plenty Regional Council, Quay Street, Whakatāne. This information is subject to the provisions of the Local Government Official Information and Meetings Act 1987, and the Privacy Act 1993. The information you provide in this application will generally be available to the public. If there is any information that you would like to remain confidential please contact a Consents Officer to discuss.

Failure to provide this information will mean that Bay of Plenty Regional Council will be unable to process your application.

1. I confirm that I have authority to sign on behalf of the party/ies named as the applicants for this consent.
2. I have read, and understand, all of the information contained on this application form, including the requirement to pay additional costs that will be itemised.
3. I confirm that all the information provided is true and correct and understand that any inaccurate information provided could result in my resource consent later being cancelled.

Signature _____



Date _____

29/11/2013

IMPORTANT

NOTE TO THE APPLICANT

PLEASE READ THIS BEFORE PROCEEDING WITH THE APPLICATION FORM

If you are unsure whether you require a resource consent for your proposed activity, or you have any other queries, please contact a consents officer at Bay of Plenty Regional Council on 0800 884 880.

IMPORTANT INFORMATION

- 1 **Processing of the application by Bay of Plenty Regional Council will not begin until the deposit fee of \$774.00 (including GST) is paid, unless prior arrangement has been made. If, at the end of the processing of the application, the actual cost exceeds the deposit, you will be invoiced for the balance.**
- 2 You may also be required to pay a resource management charge associated with holding a consent. The Water Administration team will be able to provide you with more details. All charges are in accordance with section 36 of the Resource Management Act 1991. All accounts are payable by the 20th of the month following date of invoice. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, you may be requested to pay an additional amount by way of interim payment against the final total costs.
- 3 The Coastal Marine Area is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high water springs. For activities at river mouths, please contact a consents officer at Bay of Plenty Regional Council for clarification.
- 4 Section 42 of the Resource Management Act 1991 allows the protection of sensitive information; therefore, if your application includes trade secrets and/or commercially and culturally sensitive material, please advise Bay of Plenty Regional Council.
- 5 Schedule 4 of the Resource Management Act 1991 (summarised at the back of this form) sets out the information you must provide with your consent application, including an Assessment of Environmental Effects (AEE). An AEE must be prepared in accordance with Schedule 4 of the Resource Management Act 1991. To assist in the preparation of the assessment, a summary of the key requirements of Schedule 4 follows this information sheet. Failure to provide the correct information will result in delays in the processing of your application.
- 6 Bay of Plenty Regional Council may decide not to proceed with the application until applications for further resource consents are made (section 91). It is, therefore, important to identify every consent required for the proposal at the outset.
- 7 Bay of Plenty Regional Council may request the applicant, by written notice, to provide further information if required (section 92). If this occurs, the application will be put on hold, and the processing timeframes stopped. Processing will not recommence until the information is received.
- 8 An application does not need to be publicly notified if the environmental effects are minor, and if written approval has been obtained from everyone who is adversely affected by the granting of the consent (sections 95D and 95B respectively). Bay of Plenty Regional Council has forms available to obtain approvals.
- 9 Under section 128(1)(c) of the Resource Management Act 1991, Bay of Plenty Regional Council may undertake a review of any consent at any time if the application contains any inaccuracies that materially influence the decision made.

How to prepare an Assessment of Effects on the Environment

as outlined in

Schedule 4, Section 88(2)(b) of the Resource Management Act 1991

Summary of the Key Points of Schedule 4

You need to include enough information in your Assessment of Environmental Effects (AEE) so that the Regional Council can evaluate your proposal. The amount of information should correspond to the scale and significance of the environmental effects that may be generated by your proposal.

Your AEE needs to include:

- A full description of the proposal, including the site and locality (including a site plan and plans of your proposal).
- A description of the environmental effects, including the significance and nature of the effects (address specific environmental effects that you have identified, as well as referring to issues identified in the District and/or Regional Plan).
- A description of alternatives to avoid, remedy, or mitigate any significant environmental effects.
- An assessment of any risks to the environment that may arise from hazardous substances, and/or the discharge of contaminants.
- A record of any consultation, including names and views of people with whom you talked.
- A discussion of any effects that may need to be controlled or monitored, how the control or monitoring will be carried out, and by whom.

You should also refer to Schedule 4 of the Resource Management Act 1991. This sets out matters that should be included and considered when preparing an AEE.

For more complex applications, you may need to get specialist advice. There are a number of professionals who assist in preparing AEEs, such as engineers and resource management consultants. Council staff may be able to tell you if you need specialist advice.

It is NOT adequate to state in your AEE that there are NO environmental effects.

It is important that you provide the Council with a well-prepared AEE; otherwise, the Council may:

- not accept your application,
- turn down your application,
- impose a lot of conditions on your resource consent,
- ask you for more information, delaying the time taken to process your application, or
- commission someone else to review your application at a cost to you.

For more detailed information

see the Ministry for the Environment's Good Practice Guide on How to Prepare an AEE,
and have a look at its brochure on making resource consent applications, at

www.mfe.govt.nz/publications/rma

Bay of Plenty Regional Council
Section 36 Resource Management Act 1991
Charges Policy 2012-2013

Table 1: Consent application fees

General Application Fee (GST inclusive) <i>Note: this is a deposit and other fees incurred will be recovered on an actual and reasonable basis.</i>	
<ul style="list-style-type: none"> • Resource Consent applications (except those specified below as fixed charges). • Certificates of Compliance (excluding Onsite Effluent Treatment). • Changes or cancellation of conditions of consents. • Review of consent conditions. • Transfer of consent to another site or another person at another site. • Lapsing period extensions. 	\$774
<ul style="list-style-type: none"> • Publicly Notified Applications 	\$10,000
Other application fees (GST inclusive)	
<i>Note: these are fixed charges with no additional costs payable.</i>	
Certificates of compliance – Onsite Effluent Treatment Regional Plan	\$50
Land use consent to construct a single geotechnical, freshwater bore or domestic geothermal bore	\$390
Applications for activities listed in regional plans that have zero fee ²	\$0
Transfer of consent to another person at the same site	\$90
Short term onsite effluent treatment systems in communities scheduled for reticulation	\$390
Application to reduce the allocated volume in a water take consent	\$0
Applications for existing and previously consented structures on the Rotorua Lakes where the structure/s will remain unchanged, are not for commercial use and where the application follows a non-notified consent process	\$390
<p>Notes:</p> <p>A. Where fees are deposits only, the applicants will be charged all actual and reasonable costs above the deposit fee. Such costs may include, but not be limited to, staff time (see Schedule A), advertising, hearing costs (including costs of Committee members, Commissioners, Technical Appointees and the Minister of Conservation's representative), disbursements, and costs of consultants.</p> <p>B. Where an application is withdrawn, the fixed fee of \$500 will be retained and any actual and reasonable costs incurred will also be charged.</p> <p>C. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, the applicant may be requested to pay an additional amount by way of an interim payment against the final total costs.</p> <p>D. In accordance with section 36(7), the processing of any application may be suspended until any relevant charge is paid in full.</p> <p>E. Where the deposit fee exceeds the processing costs by \$25 or more, the difference will be refunded to the applicant.</p> <p>F. Applications involving restricted coastal activities (RCAs) will attract a surcharge of \$250 (GST inclusive). This fee is required by Regulation 34 of the Resource Management (Forms, Fees and Procedure) Regulations 2003 (Schedule 2), and is payable to the Minister of Conservation.</p> <p>G. Notwithstanding the above fee structure, the Consents Manager may require an appropriate application deposit fee for complex, multi-consent projects, or limited notified applications, up to a maximum of \$10,000 (GST inclusive).</p> <p>H. Costs for Hearing Committee members and Commissioners will be recovered from applicants at their set charge-out rate. Disbursements will be charged at actual and reasonable cost.</p> <p>I. The deposit fee for a Review of Consent Conditions is payable by the 20th of the month following service of notice by Council.</p> <p>J. All charges apply from 1 July 2012.</p>	

¹ At the time of writing, this includes some bore permits under the Rotorua Geothermal Regional Plan (rule 19.6.3(d)), and some wetland works under the Regional Water and Land Plan (rule 80 and method 261).

Schedule A – Hourly fixed charges for staff and consultants (GST exclusive)

Grouping	Positions	Hourly Charge
Administration	Planning Administration Officer Water Administration Officer Committee Administration Officer	\$75
Officers/Planners	Planner Pollution Prevention Officer Consents Officer Maritime Officer	\$91
Senior Officers/Senior Planners	Senior Consents Officer Senior Planner	\$108
Engineer/Scientist	Environmental Engineer Environmental Scientist	\$112
Team Leader	Pollution Prevention Team Leader Governance Team Leader	\$118
Senior Engineer/Senior Scientist/Harbourmaster	Harbourmaster Senior Environmental Scientist Principal Technical Engineer	\$123
Managers/Regional Harbourmaster	Regional Harbourmaster Consents Manager Data Services Manager Planning Frameworks Manager Sustainable Development Manager Water Science and Support Manager Pollution Prevention Manager Engineering Manager	\$159
Consultants	External Consent Processing or Specialist Technical Consultant	As charged by consultant

Note: Some positions may not be listed. In such cases the charge will be calculated from actual time (including travel time) charged at rates determined from annual salary plus on-cost.

The full Section 36 Charges Policy is available at
www.boprc.govt.nz/Knowledge-Centre/Section-36-Charges-Policy.aspx

What you need to know before you apply for a Resource Consent



Resource consents are used to manage the impact that certain activities have on people and the environment.

Regional plans identify activities that require resource consents. There are four types of resource consents that the Bay of Plenty Regional Council can issue:

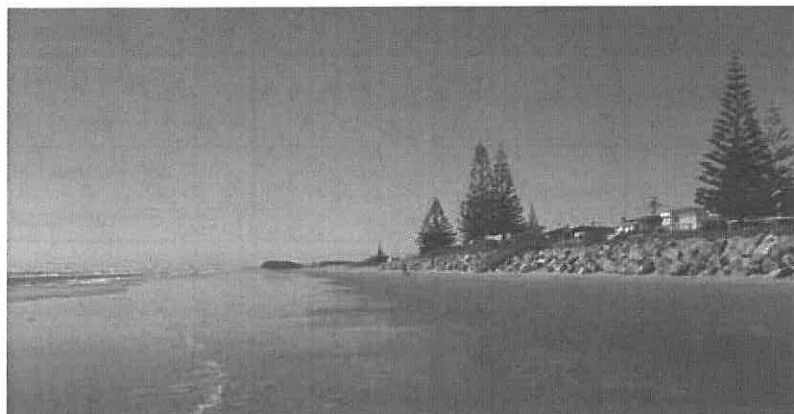
1. Land use consents
2. Discharge consents
3. Water consents
4. Coastal consents

Subdivision, building and some land use consents are issued by District and City Councils.

Land use consents

Certain types of land use can have negative environmental effects such as decreased water quality, erosion, flooding or ecological effects. You may need a land use consent if you want to:

- build or alter a bridge, culvert, stopbank or ford,
- construct or alter a well or bore,
- disturb or alter a wetland area,
- disturb the bed of a river or lake (e.g. reclaim, dredge, excavate, drill or erect a structure),
- carry out earthworks, soil cultivation, roading, tracking, mining or quarrying activities,
- plant or clear vegetation,
- install or use a structure (e.g. jetties, retaining walls, steps, boat launch or moorings),
- disturb contaminated or potentially contaminated land, and
- disturb or alter a geothermal surface feature in Rotorua.



Coastal Protection works, Waiti Beach

Discharge consents

Discharge consents cover activities which discharge to water, land or air. You may need a discharge consent if your activity will or may discharge:

- Water into water (this includes clean or contaminated water),
- Effluent, waste products or contaminated water onto, or into land,
- Landfill or cleanfill leachate,
- Carry out a nutrient discharging activity (e.g. increase stocking rates within the Rotorua Lakes Catchment area),
- Water and/or contaminants into water, or onto or into land, in association with a geothermal take, and
- Dust, steam, smoke or other contaminants into the air and/or those that create offensive odours.

Water consents

You may need a water consent if you want to, construct a dam or stopbank, divert a water course or take or use;

- Surface water (e.g. water from a river, stream, dam, lake, spring or the coast),

- Groundwater (e.g. water from an underground source), and
- Geothermal water, heat or energy.

Coastal consents

Coastal consents relate to resources in the coastal marine area (CMA). The CMA is a defined area of foreshore, seabed, coastal water, and air space above the sea typically taken from the average high tide level on the beach out to the territorial limit (12 nautical miles) and a set distance upstream of most rivers. If you are carrying out an activity near the coast or in a river near the coast, check out the full definition of the CMA in our Regional Coastal Environment Plan at www.boprc.govt.nz keywords 'coastal plan'.

You may need a coastal consent if you want to occupy space associated with structures or reclamations or carry out an activity within the CMA such as:

- installing or using a structure (e.g. jetties, retaining walls, steps, boat launch, or moorings),
- reclamations, and
- disturbance (e.g. dredging or associated with construction).

How to apply for a Resource Consent

You should talk to a Consents Officer for advice before you begin the application process. A Consents Officer can help identify if a consent is needed, and also what information should be submitted.

To contact an officer for helpful advice call 0800 884 880 or visit either Whakatāne or Mount Maunganui Regional Council offices.

Required information

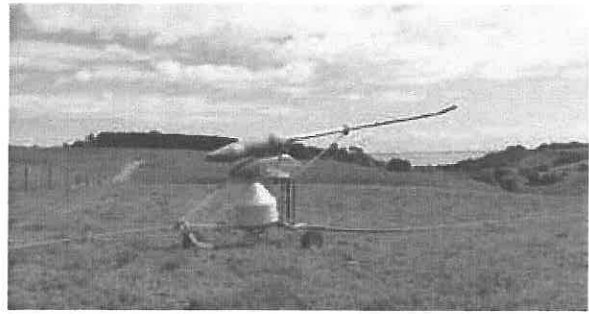
Making sure that your information is accurate and the application forms are complete will ensure that your application is processed quickly, and will reduce costs.

The application must as a minimum include:

- a completed, signed and dated 'Base Form' (unless applying for a bore or well which has its own form),
- a description of the activity you are proposing,
- any specific information requested on the relevant application form,
- the Ministry for the Environment provides additional advice on preparing AEEs (www.mfe.govt.nz), a description of the site including relevant features such as streams, wetlands, vegetation, past development and the wider environment,
- a detailed description of any consultation undertaken. This includes all written and verbal correspondence, and
- details about the location of your activity such as a map, aerial photograph or detailed sketch plan. You can visit www.boprc.govt.nz (Regional Mapping) to use the mapping tool to locate, and print maps of properties.

Your submitted map should at least show:

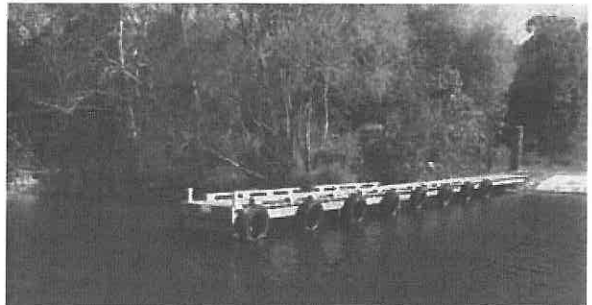
- your property boundary and neighbouring properties,
- the nearest country road or state highway,
- the location of any waterways, wetlands or wildlife habitats in the area,
- any known historic or wahi tapu sites, and
- any known significant features, including geothermal or archaeological sites.



Dairy effluent irrigation to pasture requires a resource consent in the Bay of Plenty



Works in stream beds such as building bridges or dams may need a consent



Structures over the bed of the Rotorua Lakes including jetties, platforms, pontoons, retaining walls and ramps will need a resource consent

Cost of Consents

Under the Resource Management Act (RMA), the Bay of Plenty Regional Council will recover costs associated with processing applications, and administering, supervising, and monitoring granted consents.

For more information on resource consents costs view our factsheet 'What does a resource consent cost?' which is available on our website visit www.boprc.govt.nz.

If you have any questions about costs involved with resource consents or about resource consents in general, contact us on 0800 884 880 or check out our website www.boprc.govt.nz, search: resource consents



0800 12378



Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

Free Phone: 0800 884 880

Free Fax: 0800 884 882

Website: boprc.govt.nz

File ref.

	SEEN		SEEN

Office Use Only

Application for a Resource Consent - Resource Management Act 1991 (s.88) Form 4B Industrial Discharges to Land and/or Water (including stormwater)

Before you make an application it is recommended that you talk or meet with a Consents Officer to discuss. A Consents Officer may also be able to undertake a site visit to provide further advice.

If you would like to arrange this, please phone 0800 884 880.

If you are applying for more than one activity and you have already completed the basic details in Parts 1 on another form, go straight to Part 2 of this form.

See notes to applicant (last pages of form) before proceeding with application form.

Under section 88 of the Resource Management Act 1991, the undersigned hereby makes application for resource consent(s).

PART 1

A consent can only be issued to a legal entity such as a person(s), limited company, incorporated society, etc.

1 **Full name of applicant(s)** *(the name that will be on the consent)*

Surname

First names

OR

If the application is being made on behalf of a trust, the Trustees must be named.

Trust name

Trustees' names

OR

Company name Whakatāne District Council

Contact person Inka Krawczyk

Postal address Private Bag 1002, Whakatāne 3158

Telephone *(please tick preferred contact number)*

Residential

Business 07 306 0577

Cell

Facsimile 07 307 0718

Email inka.krawczyk@whakatane.govt.nz

2 **Details of consultant** (or other person authorised to make application on behalf of applicant)

Company name MWH NZ Ltd

Contact person Garrett Hall

Postal address PO Box 12-941

Telephone (please tick preferred contact number)

Residential

Business 09 580 7664

Cell 027 240 9017

Facsimile

Email

All correspondence, including invoices for charges, relating to this application(s) should be sent to:

Applicant

Consultant

3 **Name and address of owner/occupier** (of the site relating to application)

Owner Whakatāne District Council

Postal address Private Bag 1002, Whakatāne 3158

Residential phone

Business phone 07 306 0577

Occupier

Postal address

Residential phone

Business phone

Please note: If the applicant is not the owner of the land to which the activity relates, then it is good practice to submit the application with written approval from the landowner.

4 **Consent(s) being applied for from Bay of Plenty Regional Council**

(a) You will need to fill in a separate form for each of the activities you propose to undertake. You may also need consent for one or more of the following.

Land Use

- Form 1A Culverts, Bridges, Fords, Erosion Protection, Pipes, and Associated Works
- Form 1B Disturbance In or Around a Water Body (e.g. diversion, dredging, wetland disturbance, gravel extraction)
- Form 1C Lake Structures (new and existing)
- Form 2A Land Disturbing Activities (e.g. earthworks & quarrying)
- Form 2B Land Disturbing Activities (forest harvesting/vegetation clearance)

Discharge (including coastal)

- Form 3A Onsite Effluent Discharge
- Form 3B Discharge Farm Dairy Effluent
- Form 3C Land Use Activities in the Catchments of Lakes Okareka, Rotoehu, Okaro, Rotorua, and Rotoiti
- Form 4A Discharge Stormwater to Water and/or Land from Urban Residential, Rural
- Form 4B Industrial Discharges to Water or Land (including stormwater)
- Form 4C Discharge Contaminants to Air

Water (including coastal)

- Form 5A Water Permit Application (s.14) – Take Surface Water (includes intake structure (s.13))
- Form 5B Water Permit Application (s.14) – Take Groundwater
- Form 5C Dam Water
- Form 5D Divert Water
- Form 6A Geothermal Take and Discharge – Domestic and Light Commercial

Coastal (see point 4 of Notes to Applicant for explanation of the Coastal Marine Area)

- Form 7A Application for Permit for Coastal Structures (including associated occupation and disturbance)
- Form 7B Application to Disturb Coastal Marine Area (no structure)

(b) In which District is the activity located?

- | | |
|---|--|
| <input type="checkbox"/> Whakatane District | <input type="checkbox"/> Opotiki District |
| <input type="checkbox"/> Rotorua District | <input type="checkbox"/> Kawerau District |
| <input type="checkbox"/> Western BOP District | <input type="checkbox"/> Tauranga District |
| <input type="checkbox"/> Taupo District | |

(c) Is this application to replace an existing or expired consent(s)? Yes No
If Yes, please state the consent number(s)

(d) Please specify the duration sought for your consent(s).

35 Years Months

Start date

Completion date (if applicable)

(e) Do you also require resource consent(s) from a district council? Yes No

Type of consent required Earthworks

Has it been applied for? Yes No

Has it been granted? (If Yes, please attach.) Yes No

5 Location description of activity

Site Address 1186Z Thornton Road, Matatā

Legal description (legal description can be obtained from your certificate of title, valuation notice, or rate demand)

Pt Allot 273 Rangitaiki Parish (SO 332912)

Map reference NZMS 260, (if known)

Also refer to Section 7 of the AEE

PART 2

1 Description of activity

Where are industrial discharges sourced from? (*tick all that apply*)

- Sewage treatment plant, servicing (*please specify*)
- Industrial premises/processes (*specify type*)
- Water treatment
- Other (*please specify*)

2 Process details

- (a) Please supply a detailed flow chart and description of the process that either results in a discharge to water or land, or could potentially result in a discharge to water or land. Describe what raw materials by-products and final products will be generated during the transformation process.

Please refer to sections 5 and 11 of the AEE

- (b) How often does the operation run during the day and year? (hours/day and days/year)

3 Discharge Rate Information – Process water

- (a) Maximum flow rate Litre (L) per second **or** cubic metre (m³) per second (*delete one*)

- (b) Maximum daily flow m³

- (c) What will be the maximum discharging period?

hours per day days per week weeks per year

- (d) Does the discharge also involve:

Piping across a waterway or water body?

Yes No

Any structure in a waterway or water body?

Yes No

If Yes, please describe

See Section 11 of the AEE

4 Discharge Rate Information – Stormwater

(a) Maximum flow rate L per second **or** m³ per second (*delete one*)

(b) Maximum daily flow m³

(c) What will be the maximum discharging period?

hours per day days per week weeks per year

(d) Does the discharge also involve:

Stormwater discharge of more than 125 L/s during a 10% Annual Exceedence Probability (AEP), 10 minute event?

Yes No

Piping across a waterway or water body?

Yes No

Any structure in a waterway or water body?

Yes No

If Yes, please describe

Please include drawings and plans of stormwater runoff, and treatment calculations. Include the manufacturer's design specifications and performance standard of any existing treatment device that is already installed on the site.

5 Nature of the contaminant(s)

Describe the contaminant (s)

including, where appropriate:

Temperature	°C	pH	
Suspended Solids	mg/L	BOD5	mg/L
Faecal Coliforms	n/100mL	Copper	mg/L
Enterococci	n/100mL	Zinc	mg/L
Total Petroleum Hydrocarbons	mg/L	Ammonia	
Poly Chlorinated Byphenols		Sodium	
Phosphates		Nitrate	
Dissolved reactive phosphorous			
Other heavy metals			
Other contaminants as identified in section 2 above			

See Section 11 of the AEE

6 Site Plan

See Section 11 of the AEE

On a separate piece of good quality A4 (*minimum*) paper, please provide a site plan showing location of the activity, site layout, and receiving environment in relation to property boundaries. The receiving environment should clearly show the immediate areas where stormwater runs off your site, and the wider areas that could be affected by stormwater from your site, including open drains, streams, rivers, and the harbour.

Please include any architectural/surveyor's plans showing all buildings, developments, and a comprehensive site drainage plan (*including any privately-installed drainage, and all council drains*), with soakpits, catchpits, interceptors, tanks, sumps, and filters that are currently on site.

If you do not have access to mapping software, we recommend you use the regional mapping system available on our website (www.boprc.govt.nz keywords '**regional mapping**'). The mapping system includes property boundary and contour layers, and allows you to carry out a property search, and view and/or print topographic maps or aerial photography.

7 Receiving Environment

See Section 11 of the AEE

Please fill out the receiving environment information for **either** (a) surface water, **or** (b) land soakage.

(a) Surface water body (*stream, pond, drain, wetland, etc.*) or land where it may enter water

Name(s) of water body(ies)

Sensitivity of water body

Is the discharge:

Diffuse (*discharge that does not occur at a specific, identifiable point*)

In the Coastal Marine Area

Point source (*discharge at one location through outlet such as a pipe or channel*)

If discharge is point source, please describe erosion protection provided at the discharge point:

Is there any water abstraction (*e.g. municipal, irrigation*) in the vicinity? Yes No

Is the surrounding area used for food gathering? Yes No

Are there any recreational areas close to the discharge? Yes No

If Yes, name of area

Are there any culturally significant areas close to the Yes No

proposed discharge area?

If Yes, name of area

Are there any special features (*e.g. wetlands, scenic reserves, Yes No*

bird habitats, etc.) close to the proposed discharge area?

If Yes, please describe

(b) Land soakage

Name of area where land soakage will occur

Sensitivity of land

Is the discharge:

Point source (*discharge at one location through outlet such as a pipe or channel*)

Diffuse (*discharge that does not occur at a specific, identifiable point*)

In the Coastal Marine Area

What is the soil type of the area where land soakage will occur?

What is the drainage of the area where land soakage will occur?

What is the distance to groundwater at the point of discharge? m

Is the surrounding area used for food gathering? Yes No

Are there any recreational areas close to the discharge?

Yes Name of area No

Are there any culturally significant areas close to the proposed discharge area?

Yes Name of area No

Are there any special features (*e.g. wetlands, scenic reserves, bird habitats, etc.*) close to the proposed discharge area?

Yes No

If Yes, please describe

8 **Treatment**

See Section 11 of the AEE

Source controls

Treatment

Other mitigation (*e.g. Environmental Management Plan (EMP), spill response plan*)

Continue on a separate sheet if necessary.

9 **Assessment of Environmental Effects (AEE)**

An AEE is attached

Where your discharge could have a significant adverse effect on the environment, a more detailed environmental assessment is required in accordance with the Fourth Schedule of the Resource Management Act 1991.

Comment on the possible effect the discharge may have on the quality of the receiving environment and users.

Continue on a separate sheet if necessary.

If your company has an Environmental Management Plan, please submit this with your application. If you would like to put one together, check out our Environmental Management Plan Checklist on our website (www.boprc.govt.nz).

10 **Alternatives**

- (a) What alternative methods of disposal, or discharge locations, have you considered?

- (b) Why did you choose the proposed method of disposal and location?

See Sections 6 and 11 of the AEE

Continue on a separate sheet if necessary.

11 **Maintenance and contingency**

How will the equipment controlling the discharge be operated and maintained to prevent equipment failure, and what measures will be implemented to ensure that the effects of any malfunction are remedied?

See Section 11 of the AEE

Continue on a separate sheet if necessary.

12 **Monitoring**

What, if any, monitoring do you propose to carry out to avoid, remedy or mitigate potential adverse effects of the discharge?

See Section 11 of the AEE

Continue on a separate sheet if necessary.

13 Persons likely to be directly affected

Please publicly notify the application.

Affected persons or parties may include neighbouring land owners and occupiers, and/or organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Fish and Game Council, local iwi, and community groups.

If you do not think there will be affected parties, you do not need to fill out this section; however, the Bay of Plenty Regional Council will make the final assessment of whether a person or party is affected by your proposal, and you may be asked to consult with such persons or parties at a later date.

*In order for your application to be considered for **non-notification** you **must** gain written approval from all persons who may be affected by the proposal. The Bay of Plenty Regional Council can help you identify people/organisations that are likely to be affected, and the form 'Affected Person's Written Approval', which can be filled out by the affected party and attached to this application, can be found at **www.boprc.govt.nz keywords 'resource consent forms'**.*

Please provide details below of those you have identified as parties who may be affected. If you have discussed your proposal with any of these parties, please record any comments made by them and your response to them, and submit this with your application.

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*).

Name

Address

Written approval supplied (*attached*)

14 Extending timeframes

The Resource Management Act 1991 (RMA) specifies timeframes for processing resource consent applications (e.g. 20 working days for a non-notified application); however, these timeframes can be extended, if necessary, with the applicant's agreement.

Do you agree to the Bay of Plenty Regional Council extending RMA consent processing timeframes?

Yes, provided that I can continue to exercise my existing consent until processing of this application is completed (*renewal applications only*).

Yes, provided that the extension is for the specific purpose of discussing and trying to agree on consent conditions.

Yes, provided that the application process is completed before .

No.

15 Deposit fee

A deposit fee of \$774.00, inclusive of GST, is payable with this application. This may be paid online, by cheque, or by eftpos at one of the Regional Council's reception desks.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Please use the applicant's name as the reference. A GST invoice marked "PAID" will be issued on receipt of payment.
- An application will not be accepted as a complete application until the deposit fee has been paid. **Please note:** while we are happy to hold the forms in the meantime, the processing time will not start until payment is received.
- Additional charges are usually incurred, and will vary depending on the resources we use in the course of processing your application (*e.g. staff time*). Staff can give an estimate of expected costs. Please see the schedule of fees attached.

Checklist

If you have dealt with a staff member regarding your consent application, please provide their name here

- Complete all details applicable in this application form.
- Complete all details on the specific consent activity form(s) (*e.g. Land Disturbing Activities*).
- Include an Assessment of Environmental Effects (AEE) of the activity, as set out in Schedule 4, summarised at the back of this form. (*For minor activities, complete the relevant section in the activity application form. For major activities, a more detailed AEE must be attached to the application.*)
- Supply written approval from all affected parties, if any, and/or summary of consultation carried out.
- Include a site plan.
- Sign and date the application form.
- Pay the required deposit.
- Include any other information you think relevant (*e.g. Certificate of Title, details from the Companies Register, etc.*).
- If your application is a large application, please submit an electronic version on CD, and one hard copy.
- Assessment of cultural impacts.

Please be aware any unchecked boxes may result in your application being returned under s.88.

Information privacy issues

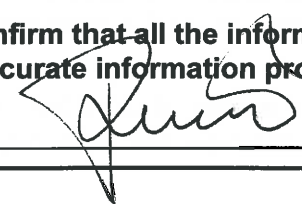
The information you provide in this application is regarded as official information. It is required under the provisions of the Resource Management Act 1991 to process this application, and to assist in the management of the region's natural and physical resources.

The information will be held by Bay of Plenty Regional Council, Quay Street, Whakatāne. This information is subject to the provisions of the Local Government Official Information and Meetings Act 1987, and the Privacy Act 1993. The information you provide in this application will generally be available to the public. If there is any information that you would like to remain confidential please contact a Consents Officer to discuss.

Failure to provide this information will mean that Bay of Plenty Regional Council will be unable to process your application.

1. I confirm that I have authority to sign on behalf of the party/ies named as the applicants for this consent.
2. I have read, and understand, all of the information contained on this application form, including the requirement to pay additional costs that will be itemised.
3. I confirm that all the information provided is true and correct and understand that any inaccurate information provided could result in my resource consent later being cancelled.

Signature _____



Date

29/11/2013

IMPORTANT

NOTE TO THE APPLICANT

PLEASE READ THIS BEFORE PROCEEDING WITH THE APPLICATION FORM

If you are unsure whether you require a resource consent for your proposed activity, or you have any other queries, please contact a consents officer at Bay of Plenty Regional Council on 0800 884 880.

IMPORTANT INFORMATION

- 1 **Processing of the application by Bay of Plenty Regional Council will not begin until the deposit fee of \$774.00 (including GST) is paid, unless prior arrangement has been made. If, at the end of the processing of the application, the actual cost exceeds the deposit, you will be invoiced for the balance.**
- 2 You may also be required to pay a resource management charge associated with holding a consent. The Water Administration team will be able to provide you with more details. All charges are in accordance with section 36 of the Resource Management Act 1991. All accounts are payable by the 20th of the month following date of invoice. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, you may be requested to pay an additional amount by way of interim payment against the final total costs.
- 3 The Coastal Marine Area is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high water springs. For activities at river mouths, please contact a consents officer at Bay of Plenty Regional Council for clarification.
- 4 Section 42 of the Resource Management Act 1991 allows the protection of sensitive information; therefore, if your application includes trade secrets and/or commercially and culturally sensitive material, please advise Bay of Plenty Regional Council.
- 5 Schedule 4 of the Resource Management Act 1991 (summarised at the back of this form) sets out the information you must provide with your consent application, including an Assessment of Environmental Effects (AEE). An AEE must be prepared in accordance with Schedule 4 of the Resource Management Act 1991. To assist in the preparation of the assessment, a summary of the key requirements of Schedule 4 follows this information sheet. Failure to provide the correct information will result in delays in the processing of your application.
- 6 Bay of Plenty Regional Council may decide not to proceed with the application until applications for further resource consents are made (section 91). It is, therefore, important to identify every consent required for the proposal at the outset.
- 7 Bay of Plenty Regional Council may request the applicant, by written notice, to provide further information if required (section 92). If this occurs, the application will be put on hold, and the processing timeframes stopped. Processing will not recommence until the information is received.
- 8 An application does not need to be publicly notified if the environmental effects are minor, and if written approval has been obtained from everyone who is adversely affected by the granting of the consent (sections 95D and 95B respectively). Bay of Plenty Regional Council has forms available to obtain approvals.
- 9 Under section 128(1)(c) of the Resource Management Act 1991, Bay of Plenty Regional Council may undertake a review of any consent at any time if the application contains any inaccuracies that materially influence the decision made.

How to prepare an Assessment of Effects on the Environment

as outlined in
Schedule 4, Section 88(2)(b) of the Resource Management Act 1991

Summary of the Key Points of Schedule 4

You need to include enough information in your Assessment of Environmental Effects (AEE) so that the Regional Council can evaluate your proposal. The amount of information should correspond to the scale and significance of the environmental effects that may be generated by your proposal.

Your AEE needs to include:

- A full description of the proposal, including the site and locality (including a site plan and plans of your proposal).
- A description of the environmental effects, including the significance and nature of the effects (address specific environmental effects that you have identified, as well as referring to issues identified in the District and/or Regional Plan).
- A description of alternatives to avoid, remedy, or mitigate any significant environmental effects.
- An assessment of any risks to the environment that may arise from hazardous substances, and/or the discharge of contaminants.
- A record of any consultation, including names and views of people with whom you talked.
- A discussion of any effects that may need to be controlled or monitored, how the control or monitoring will be carried out, and by whom.

You should also refer to Schedule 4 of the Resource Management Act 1991. This sets out matters that should be included and considered when preparing an AEE.

For more complex applications, you may need to get specialist advice. There are a number of professionals who assist in preparing AEEs, such as engineers and resource management consultants. Council staff may be able to tell you if you need specialist advice.

It is NOT adequate to state in your AEE that there are NO environmental effects.

It is important that you provide the Council with a well-prepared AEE; otherwise, the Council may:

- not accept your application,
- turn down your application,
- impose a lot of conditions on your resource consent,
- ask you for more information, delaying the time taken to process your application, or
- commission someone else to review your application at a cost to you.

For more detailed information
see the Ministry for the Environment's Good Practice Guide on How to Prepare an AEE,
and have a look at its brochure on making resource consent applications, at
www.mfe.govt.nz/publications/rma

Bay of Plenty Regional Council
Section 36 Resource Management Act 1991
Charges Policy 2012-2013

Table 1: Consent application fees

General Application Fee (GST inclusive) <i>Note: this is a deposit and other fees incurred will be recovered on an actual and reasonable basis.</i>	
<ul style="list-style-type: none"> • Resource Consent applications (except those specified below as fixed charges). • Certificates of Compliance (excluding Onsite Effluent Treatment). • Changes or cancellation of conditions of consents. • Review of consent conditions. • Transfer of consent to another site or another person at another site. • Lapsing period extensions. 	\$774
<ul style="list-style-type: none"> • Publicly Notified Applications 	\$10,000
Other application fees (GST inclusive) <i>Note: these are fixed charges with no additional costs payable.</i>	
Certificates of compliance – Onsite Effluent Treatment Regional Plan	\$50
Land use consent to construct a single geotechnical, freshwater bore or domestic geothermal bore	\$390
Applications for activities listed in regional plans that have zero fee ²	\$0
Transfer of consent to another person at the same site	\$90
Short term onsite effluent treatment systems in communities scheduled for reticulation	\$390
Application to reduce the allocated volume in a water take consent	\$0
Applications for existing and previously consented structures on the Rotorua Lakes where the structure/s will remain unchanged, are not for commercial use and where the application follows a non-notified consent process	\$390
<p>Notes:</p> <p>A. Where fees are deposits only, the applicants will be charged all actual and reasonable costs above the deposit fee. Such costs may include, but not be limited to, staff time (see Schedule A), advertising, hearing costs (including costs of Committee members, Commissioners, Technical Appointees and the Minister of Conservation's representative), disbursements, and costs of consultants.</p> <p>B. Where an application is withdrawn, the fixed fee of \$500 will be retained and any actual and reasonable costs incurred will also be charged.</p> <p>C. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, the applicant may be requested to pay an additional amount by way of an interim payment against the final total costs.</p> <p>D. In accordance with section 36(7), the processing of any application may be suspended until any relevant charge is paid in full.</p> <p>E. Where the deposit fee exceeds the processing costs by \$25 or more, the difference will be refunded to the applicant.</p> <p>F. Applications involving restricted coastal activities (RCAs) will attract a surcharge of \$250 (GST inclusive). This fee is required by Regulation 34 of the Resource Management (Forms, Fees and Procedure) Regulations 2003 (Schedule 2), and is payable to the Minister of Conservation.</p> <p>G. Notwithstanding the above fee structure, the Consents Manager may require an appropriate application deposit fee for complex, multi-consent projects, or limited notified applications, up to a maximum of \$10,000 (GST inclusive).</p> <p>H. Costs for Hearing Committee members and Commissioners will be recovered from applicants at their set charge-out rate. Disbursements will be charged at actual and reasonable cost.</p> <p>I. The deposit fee for a Review of Consent Conditions is payable by the 20th of the month following service of notice by Council.</p> <p>J. All charges apply from 1 July 2012.</p>	

¹ At the time of writing, this includes some bore permits under the Rotorua Geothermal Regional Plan (rule 19.6.3(d)), and some wetland works under the Regional Water and Land Plan (rule 80 and method 261).

Schedule A – Hourly fixed charges for staff and consultants (GST exclusive)

Grouping	Positions	Hourly Charge
Administration	Planning Administration Officer Water Administration Officer Committee Administration Officer	\$75
Officers/Planners	Planner Pollution Prevention Officer Consents Officer Maritime Officer	\$91
Senior Officers/Senior Planners	Senior Consents Officer Senior Planner	\$108
Engineer/Scientist	Environmental Engineer Environmental Scientist	\$112
Team Leader	Pollution Prevention Team Leader Governance Team Leader	\$118
Senior Engineer/Senior Scientist/Harbourmaster	Harbourmaster Senior Environmental Scientist Principal Technical Engineer	\$123
Managers/Regional Harbourmaster	Regional Harbourmaster Consents Manager Data Services Manager Planning Frameworks Manager Sustainable Development Manager Water Science and Support Manager Pollution Prevention Manager Engineering Manager	\$159
Consultants	External Consent Processing or Specialist Technical Consultant	As charged by consultant

Note: Some positions may not be listed. In such cases the charge will be calculated from actual time (including travel time) charged at rates determined from annual salary plus on-cost.

The full Section 36 Charges Policy is available at
www.boprc.govt.nz/Knowledge-Centre/Section-36-Charges-Policy.aspx

What you need to know before you apply for a Resource Consent



Resource consents are used to manage the impact that certain activities have on people and the environment.

Regional plans identify activities that require resource consents. There are four types of resource consents that the Bay of Plenty Regional Council can issue:

1. Land use consents
2. Discharge consents
3. Water consents
4. Coastal consents

Subdivision, building and some land use consents are issued by District and City Councils.

Land use consents

Certain types of land use can have negative environmental effects such as decreased water quality, erosion, flooding or ecological effects. You may need a land use consent if you want to:

- build or alter a bridge, culvert, stopbank or ford,
- construct or alter a well or bore,
- disturb or alter a wetland area,
- disturb the bed of a river or lake (e.g. reclaim, dredge, excavate, drill or erect a structure),
- carry out earthworks, soil cultivation, roading, tracking, mining or quarrying activities,
- plant or clear vegetation,
- install or use a structure (e.g. jetties, retaining walls, steps, boat launch or moorings),
- disturb contaminated or potentially contaminated land, and
- disturb or alter a geothermal surface feature in Rotorua.



Coastal Protection works, Waiti Beach

Discharge consents

Discharge consents cover activities which discharge to water, land or air. You may need a discharge consent if your activity will or may discharge:

- Water into water (this includes clean or contaminated water),
- Effluent, waste products or contaminated water onto, or into land,
- Landfill or cleanfill leachate,
- Carry out a nutrient discharging activity (e.g. increase stocking rates within the Rotorua Lakes Catchment area),
- Water and/or contaminants into water, or onto or into land, in association with a geothermal take, and
- Dust, steam, smoke or other contaminants into the air and/or those that create offensive odours.

Water consents

You may need a water consent if you want to, construct a dam or stopbank, divert a water course or take or use;

- Surface water (e.g. water from a river, stream, dam, lake, spring or the coast),

- Groundwater (e.g. water from an underground source), and
- Geothermal water, heat or energy.

Coastal consents

Coastal consents relate to resources in the coastal marine area (CMA). The CMA is a defined area of foreshore, seabed, coastal water, and air space above the sea typically taken from the average high tide level on the beach out to the territorial limit (12 nautical miles) and a set distance upstream of most rivers. If you are carrying out an activity near the coast or in a river near the coast, check out the full definition of the CMA in our Regional Coastal Environment Plan at www.boprc.govt.nz keywords 'coastal plan'.

You may need a coastal consent if you want to occupy space associated with structures or reclamations or carry out an activity within the CMA such as:

- installing or using a structure (e.g. jetties, retaining walls, steps, boat launch, or moorings),
- reclamations, and
- disturbance (e.g. dredging or associated with construction).

How to apply for a Resource Consent

You should talk to a Consents Officer for advice before you begin the application process. A Consents Officer can help identify if a consent is needed, and also what information should be submitted.

To contact an officer for helpful advice call 0800 884 880 or visit either Whakatāne or Mount Maunganui Regional Council offices.

Required information

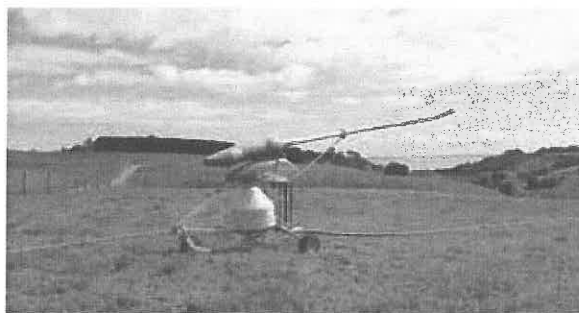
Making sure that your information is accurate and the application forms are complete will ensure that your application is processed quickly, and will reduce costs.

The application must as a minimum include:

- a completed, signed and dated 'Base Form' (unless applying for a bore or well which has its own form),
- a description of the activity you are proposing,
- any specific information requested on the relevant application form,
- the Ministry for the Environment provides additional advice on preparing AEEs (www.mfe.govt.nz), a description of the site including relevant features such as streams, wetlands, vegetation, past development and the wider environment,
- a detailed description of any consultation undertaken. This includes all written and verbal correspondence, and
- details about the location of your activity such as a map, aerial photograph or detailed sketch plan. You can visit www.boprc.govt.nz (Regional Mapping) to use the mapping tool to locate, and print maps of properties.

Your submitted map should at least show:

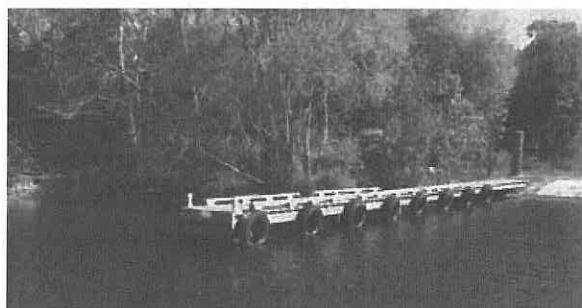
- your property boundary and neighbouring properties,
- the nearest country road or state highway,
- the location of any waterways, wetlands or wildlife habitats in the area,
- any known historic or wahi tapu sites, and
- any known significant features, including geothermal or archaeological sites.



Dairy effluent irrigation to pasture requires a resource consent in the Bay of Plenty



Works in stream beds such as building bridges or dams may need a consent



Structures over the bed of the Rotorua Lakes including jetties, platforms, pontoons, retaining walls and ramps will need a resource consent

Cost of Consents

Under the Resource Management Act (RMA), the Bay of Plenty Regional Council will recover costs associated with processing applications, and administering, supervising, and monitoring granted consents.

For more information on resource consents costs view our factsheet 'What does a resource consent cost?' which is available on our website visit www.boprc.govt.nz.

If you have any questions about costs involved with resource consents or about resource consents in general, contact us on 0800 884 880 or check out our website www.boprc.govt.nz, search: resource consents



0800 123778



Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

Free Phone: 0800 884 880

Free Fax: 0800 884 882

Website: boprc.govt.nz

File ref.

	SEEN		SEEN

Office Use Only

Application for a Resource Consent Resource Management Act 1991 (s.88) Form 4C Discharge Contaminants to Air

Before you make an application it is recommended that you talk or meet with a Consents Officer to discuss. A Consents Officer may also be able to undertake a site visit to provide further advice.

If you would like to arrange this, please phone 0800 884 880.

If you are applying for more than one activity and you have already completed the basic details in Parts 1 on another form, go straight to Part 2 of this form.

See notes to applicant (last pages of form) before proceeding with application form.

Under section 88 of the Resource Management Act 1991, the undersigned hereby makes application for resource consent(s).

PART 1

A consent can only be issued to a legal entity such as a person(s), limited company, incorporated society, etc.

1 **Full name of applicant(s)** *(the name that will be on the consent)*

Surname

First names

OR

If the application is being made on behalf of a trust, the Trustees must be named.

Trust name

Trustees' names

OR

Company name Whakatāne District Council

Contact person Inka Krawczyk

Postal address Private Bag 1002, Whakatane 3158

Telephone *(please tick preferred contact number)*

Residential

Business 07 306 0577

Cell

Facsimile 07 307 0718

Email inka.krawczyk@whakatane.govt.nz

2 **Details of consultant** (or other person authorised to make application on behalf of applicant)

Company name MWH NZ Ltd

Contact person Garrett Hall

Postal address PO Box 12-941, Auckland

Telephone (please tick preferred contact number)

Residential

Business 09 580 7664

Cell 027 240 9017

Facsimile

Email garrett.j.hall@mwhglobal.com

All correspondence, including invoices for charges, relating to this application(s) should be sent to:

Applicant

Consultant

3 **Name and address of owner/occupier** (of the site relating to application)

Owner Whakatāne District Council

Postal address Private Bag 1002, Whakatane 3158

Residential phone

Business phone 07 306 0577

Occupier

Postal address

Residential phone

Business phone

Owner Anthony Olsen and Robert Tukehu Gardiner

C/- Anthony Olsen 16 Captains Cove Coastlands Whakatāne 3120

Residential phone 027 555 0420

Business phone 07 3222452

Occupier

Postal address

Residential phone

Business phone

Please note: If the applicant is not the owner of the land to which the activity relates, then it is good practice to submit the application with written approval from the landowner.

4 **Consent(s) being applied for from Bay of Plenty Regional Council**

(a) You will need to fill in a separate form for each of the activities you propose to undertake. You may also need consent for one or more of the following.

Land Use

- Form 1A Culverts, Bridges, Fords, Erosion Protection, Pipes, and Associated Works
- Form 1B Disturbance In or Around a Water Body (e.g. diversion, dredging, wetland disturbance, gravel extraction)
- Form 1C Lake Structures (new and existing)
- Form 2A Land Disturbing Activities (e.g. earthworks & quarrying)
- Form 2B Land Disturbing Activities (forest harvesting/vegetation clearance)

Discharge (including coastal)

- Form 3A Onsite Effluent Discharge
- Form 3B Discharge Farm Dairy Effluent
- Form 3C Land Use Activities in the Catchments of Lakes Okareka, Rotoehu, Okaro, Rotorua, and Rotoiti
- Form 4A Discharge Stormwater to Water and/or Land from Urban Residential, Rural
- Form 4B Industrial Discharges to Water or Land (including stormwater)
- Form 4C Discharge Contaminants to Air

Water (including coastal)

- Form 5A Water Permit Application (s.14) – Take Surface Water (includes intake structure (s.13))
- Form 5B Water Permit Application (s.14) – Take Groundwater
- Form 5C Dam Water
- Form 5D Divert Water
- Form 6A Geothermal Take and Discharge – Domestic and Light Commercial

Coastal (see point 4 of Notes to Applicant for explanation of the Coastal Marine Area)

- Form 7A Application for Permit for Coastal Structures (including associated occupation and disturbance)
- Form 7B Application to Disturb Coastal Marine Area (no structure)

(b) In which District is the activity located?

- | | |
|---|--|
| <input type="checkbox"/> Whakatane District | <input type="checkbox"/> Opotiki District |
| <input type="checkbox"/> Rotorua District | <input type="checkbox"/> Kawerau District |
| <input type="checkbox"/> Western BOP District | <input type="checkbox"/> Tauranga District |
| <input type="checkbox"/> Taupo District | |

(c) Is this application to replace an existing or expired consent(s)? Yes No

If Yes, please state the consent number(s)

(d) Please specify the duration sought for your consent(s).

35 Years Months

Start date

Completion date (if applicable)

(e) Do you also require resource consent(s) from a district council? Yes No

Type of consent required Earthworks

Has it been applied for? Yes No

Has it been granted? (If Yes, please attach.)

Yes No

5 Location description of activity

Site Address 1186Z Thornton Road, Matatā, 1715 Thornton Road, Matatā

Legal description (*legal description can be obtained from your certificate of title, valuation notice, or rate demand*)

Pt Allot 273 Rangitaiki Parish (SO 332912), Allot 6A Matatā Parish (ML 9665)

Map reference NZMS 260, (if known)

Also refer to Section 7 of the AEE

PART 2

Notes on nature of the discharge(s)

- (a) The nature of the discharge refers to the composition of the discharge with flows and concentrations.
- (b) For a boiler, the expected contaminants, concentrations, and flows should be listed (*i.e. nitrogen oxides, sulphur oxides, particulate matter, heat output, and any others present*).
- (c) The make up of the particulate matter should be known, and a particle size range is required to indicate whether particles are likely to drift or be inhaled.
- (d) The sensitivity of the receiving environment is related to the location of the operation.
- (e) Any materials used to make the effects of the contaminants less severe should also be listed to assess any possible hazards or emissions from these.

1 Description of activity

- (a) Combination gases (*boiler using coal, wood waste, etc.*)

Material(s) being discharged

Concentration of contaminant(s) in air (*corrected to 0°C, 1 Atm and dry gas basis*), if applicable

Discharge flow m³/s of flue or vent, if applicable

Discharge rate for particulate (*Ks/h*)

Particulate matter size range, if applicable

Heat output (*gross*) of a boiler/heating plant, if applicable

Fuel being used in a boiler/heating plant, if applicable

Sulphur content of fuel used in a boiler/heating plant if applicable

Height of flue above ground level and height of buildings adjoining the flue, if applicable

Pollution control equipment used to reduce particulate discharges, if applicable

- (b) Odours (*composting, wastewater treatment plant, industrial farming – piggery/poultry*)

Is the discharge: Point source Diffuse (*fugitive*)

Describe all possible sources of discharge Wastewater treatment components, see section 10 of the AEE.

Height of building in vicinity of flue m

For spray painting, please submit a Material Safety Datasheets with your application

- (c) Other (*geothermal venting, landfill, abrasive blasting, dust, particulate matter, volatile organic compounds, spray painting, other industrial activity*)

Material(s) being discharged

Concentration of contaminant(s) in air (*corrected to 0°C, 1 Atm, and dry gas basis*) if applicable

If applicable:

Volume flow of flue or vent m³/s

Flue Velocity m/s

Height of flue above ground level m

2 Process details

- (a) Please supply a detailed **flow chart** and **description of the process** that either results in a discharge to the atmosphere, or could potentially result in a discharge to air. Show what raw materials and products are in your process.
- (b) How often does the operation run during the day and year?
Continuous. See section 10 of the AEE

3 Receiving environment

- (a) Site plan

On a separate piece of good quality A4 (*minimum*) paper, please provide a site plan showing the location of the activity and receiving environment in relation to property boundaries.

If you do not have access to mapping software, we recommend you use the regional mapping system available on our website (www.boprc.govt.nz keywords 'regional mapping'). The mapping system includes property boundary and contour layers, and allows you to carry out a property search, and view and/or print topographic maps or aerial photography.

See section 10 of the AEE

- (b) How sensitive is the receiving environment to these discharges (*i.e. what is the main use of the surrounding area, e.g. north, residential – closest 500 m; south, industrial, etc*)?

See section 10 of the AEE

- (c) Describe the actual and potential effects that the proposed activity/operation could have on the environment.

See section 10 of the AEE

- (d) Describe any effects your operation may have on the neighbourhood, including cultural effects. Other areas that need effects assessed are historic sites and recreational areas, such as parks, scientific areas, and scenic features, etc.

See section 10 of the AEE

- (e) Describe any visual effects (*e.g. may be caused by wet plumes from a drying kiln, cooling tower, or wet scrubber*) and/or landscape effects (*e.g. deposition of matter onto land from an aerial discharge*).

See section 10 of the AEE

- (f) *Some contaminants, such as nitrogen oxides, sulphur oxides, fluorides, and heavy metals can damage flora and fauna.* Please describe any effects your operation will have on physical habitats of plants and animals.

See section 10 of the AEE

- (g) Have there been any complaints associated with the proposed activity? Please describe.

The activity is not yet constructed

- (h) Describe any effects of the proposal downwind, under prevailing wind conditions.

See section 10 of the AEE

Continue on a separate sheet if necessary.

4 **Mitigation**

What methods or actions will be used to reduce or prevent these environmental effects (*include a plan(s) of any discharge control system used*)?

- Describe what methods are going to be used to reduce the actual or potential effects.
- Include plans of the emission control system, if applicable.
- Detail contingency plans in the event of a breakdown, such as a back-up system, stopping the process, alarms to warn of a problem, etc.
- Show what your schedule of maintenance will be for the control equipment.
- Provide an odour-management plan.

Proposed mitigation methods

See section 10 of the AEE

What alternative contaminant control methods or discharge locations have you considered?

See sections 6 and 10 of the AEE

Why did you choose the proposed location and mitigation method?

See AEE

5 **Hazards and waste generation**

- (a) Where your operations include the use of hazardous substances or installations, please provide an assessment of the risks to the air environment likely to arise from such use:

See section 10 of the AEE

- (b) *If any of the contaminants are hazardous to people or the environment, or the installation is hazardous, the risk of these shall be assessed.* If there are any hazardous air pollutants, as listed in Appendix 3 of the Regional Air Plan, discharged from your operation, please list quantities.

N/A

- (c) Describe the type of waste generated by the proposed activity, and how you intend to manage that waste.

See section 10 of the AEE

6 **Further information**

Provide any other relevant information that may assist this application.

The Assessment of Effects on the Environment that supports this application contains all the information as required by the Bay of Plenty Regional Air Plan, the Resource Management Act 1991 and any regulations made under that Act.

7 **Monitoring**

- (a) What, if any, monitoring do you propose to carry out to avoid, remedy, mitigate the potential adverse environmental effects of the proposal?

See section 10 of the AEE

(b) In a large operation, regular compliance tests may be required to be done by the company. How do you plan to monitor the discharges?

See section 10 of the AEE

8 Persons likely to be directly affected

Please publicly notify the application

Affected persons or parties may include neighbouring land owners and occupiers, and/or organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Fish and Game Council, local iwi, and community groups.

If you do not think there will be affected parties, you do not need to fill out this section; however, the Bay of Plenty Regional Council will make the final assessment of whether a person or party is affected by your proposal, and you may be asked to consult with such persons or parties at a later date.

In order for your application to be considered for **non-notification** you **must** gain written approval from all persons who may be affected by the proposal. The Bay of Plenty Regional Council can help you identify people/organisations that are likely to be affected, and the form 'Affected Person's Written Approval', which can be filled out by the affected party and attached to this application, can be found at www.boprc.govt.nz keywords 'resource consent forms'.

Please provide details below of those you have identified as parties who may be affected. If you have discussed your proposal with any of these parties, please record any comments made by them and your response to them, and submit this with your application.

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Name

Address

Written approval supplied (attached).

Continue on a separate sheet if necessary.

9 Extending timeframes

The Resource Management Act 1991 (RMA) specifies timeframes for processing resource consent applications (e.g. 20 working days for a non-notified application); however, these timeframes can be extended, if necessary, with the applicant's agreement.

Do you agree to the Bay of Plenty Regional Council extending RMA consent processing timeframes?

- Yes, provided that I can continue to exercise my existing consent until processing of this application is completed (*renewal applications only*).
- Yes, provided that the extension is for the specific purpose of discussing and trying to agree on consent conditions.
- Yes, provided that the application process is completed before
- No.

10 Deposit fee

A deposit fee of \$774.00, inclusive of GST, is payable with this application. This may be paid online, by cheque, or by eftpos at one of the Regional Council's reception desks.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Please use the applicant's name as the reference. A GST invoice marked "PAID" will be issued on receipt of payment.
- An application will not be accepted as a complete application until the deposit fee has been paid. **Please note:** while we are happy to hold the forms in the meantime, the processing time will not start until payment is received.
- Additional charges are usually incurred, and will vary depending on the resources we use in the course of processing your application (*e.g. staff time*). Staff can give an estimate of expected costs. Please see the schedule of fees attached.

Checklist

If you have dealt with a staff member regarding your consent application, please provide their name here

Yves Denicourt

- Complete all details applicable in this application form.
- Complete all details on the specific consent activity form(s) (e.g. *Land Disturbing Activities*).
- Include an Assessment of Environmental Effects (AEE) of the activity, as set out in Schedule 4, summarised at the back of this form. (*For minor activities, complete the relevant section in the activity application form. For major activities, a more detailed AEE must be attached to the application.*)
- Supply written approval from all affected parties, if any, and/or summary of consultation carried out.
- Include a site plan.
- Sign and date the application form.
- Pay the required deposit.
- Include any other information you think relevant (e.g. *Certificate of Title, details from the Companies Register, etc.*).
- If your application is a large application, please submit an electronic version on CD, and one hard copy.
- Assessment of cultural impacts.

Please be aware any unchecked boxes may result in your application being returned under s.88.

Information privacy issues

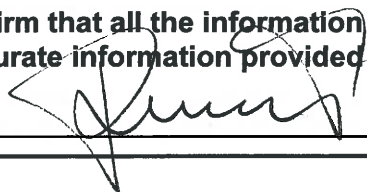
The information you provide in this application is regarded as official information. It is required under the provisions of the Resource Management Act 1991 to process this application, and to assist in the management of the region's natural and physical resources.

The information will be held by Bay of Plenty Regional Council, Quay Street, Whakatāne. This information is subject to the provisions of the Local Government Official Information and Meetings Act 1987, and the Privacy Act 1993. The information you provide in this application will generally be available to the public. If there is any information that you would like to remain confidential please contact a Consents Officer to discuss.

Failure to provide this information will mean that Bay of Plenty Regional Council will be unable to process your application.

1. I confirm that I have authority to sign on behalf of the party/ies named as the applicants for this consent.
2. I have read, and understand, all of the information contained on this application form, including the requirement to pay additional costs that will be itemised.
3. I confirm that all the information provided is true and correct and understand that any inaccurate information provided could result in my resource consent later being cancelled.

Signature _____



Date

29/11/2013

IMPORTANT

NOTE TO THE APPLICANT

PLEASE READ THIS BEFORE PROCEEDING WITH THE APPLICATION FORM

If you are unsure whether you require a resource consent for your proposed activity, or you have any other queries, please contact a consents officer at Bay of Plenty Regional Council on 0800 884 880.

IMPORTANT INFORMATION

- 1 **Processing of the application by Bay of Plenty Regional Council will not begin until the deposit fee of \$774.00 (including GST) is paid, unless prior arrangement has been made. If, at the end of the processing of the application, the actual cost exceeds the deposit, you will be invoiced for the balance.**
- 2 You may also be required to pay a resource management charge associated with holding a consent. The Water Administration team will be able to provide you with more details. All charges are in accordance with section 36 of the Resource Management Act 1991. All accounts are payable by the 20th of the month following date of invoice. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, you may be requested to pay an additional amount by way of interim payment against the final total costs.
- 3 The Coastal Marine Area is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high water springs. For activities at river mouths, please contact a consents officer at Bay of Plenty Regional Council for clarification.
- 4 Section 42 of the Resource Management Act 1991 allows the protection of sensitive information; therefore, if your application includes trade secrets and/or commercially and culturally sensitive material, please advise Bay of Plenty Regional Council.
- 5 Schedule 4 of the Resource Management Act 1991 (summarised at the back of this form) sets out the information you must provide with your consent application, including an Assessment of Environmental Effects (AEE). An AEE must be prepared in accordance with Schedule 4 of the Resource Management Act 1991. To assist in the preparation of the assessment, a summary of the key requirements of Schedule 4 follows this information sheet. Failure to provide the correct information will result in delays in the processing of your application.
- 6 Bay of Plenty Regional Council may decide not to proceed with the application until applications for further resource consents are made (section 91). It is, therefore, important to identify every consent required for the proposal at the outset.
- 7 Bay of Plenty Regional Council may request the applicant, by written notice, to provide further information if required (section 92). If this occurs, the application will be put on hold, and the processing timeframes stopped. Processing will not recommence until the information is received.
- 8 An application does not need to be publicly notified if the environmental effects are minor, and if written approval has been obtained from everyone who is adversely affected by the granting of the consent (sections 95D and 95B respectively). Bay of Plenty Regional Council has forms available to obtain approvals.
- 9 Under section 128(1)(c) of the Resource Management Act 1991, Bay of Plenty Regional Council may undertake a review of any consent at any time if the application contains any inaccuracies that materially influence the decision made.

How to prepare an Assessment of Effects on the Environment

as outlined in

Schedule 4, Section 88(2)(b) of the Resource Management Act 1991

Summary of the Key Points of Schedule 4

You need to include enough information in your Assessment of Environmental Effects (AEE) so that the Regional Council can evaluate your proposal. The amount of information should correspond to the scale and significance of the environmental effects that may be generated by your proposal.

Your AEE needs to include:

- A full description of the proposal, including the site and locality (including a site plan and plans of your proposal).
- A description of the environmental effects, including the significance and nature of the effects (address specific environmental effects that you have identified, as well as referring to issues identified in the District and/or Regional Plan).
- A description of alternatives to avoid, remedy, or mitigate any significant environmental effects.
- An assessment of any risks to the environment that may arise from hazardous substances, and/or the discharge of contaminants.
- A record of any consultation, including names and views of people with whom you talked.
- A discussion of any effects that may need to be controlled or monitored, how the control or monitoring will be carried out, and by whom.

You should also refer to Schedule 4 of the Resource Management Act 1991. This sets out matters that should be included and considered when preparing an AEE.

For more complex applications, you may need to get specialist advice. There are a number of professionals who assist in preparing AEEs, such as engineers and resource management consultants. Council staff may be able to tell you if you need specialist advice.

It is NOT adequate to state in your AEE that there are NO environmental effects.

It is important that you provide the Council with a well-prepared AEE; otherwise, the Council may:

- not accept your application,
- turn down your application,
- impose a lot of conditions on your resource consent,
- ask you for more information, delaying the time taken to process your application, or
- commission someone else to review your application at a cost to you.

For more detailed information

see the Ministry for the Environment's Good Practice Guide on How to Prepare an AEE,
and have a look at its brochure on making resource consent applications, at

www.mfe.govt.nz/publications/rma

Bay of Plenty Regional Council
Section 36 Resource Management Act 1991
Charges Policy 2012-2013

Table 1: Consent application fees

General Application Fee (GST inclusive) <i>Note: this is a deposit and other fees incurred will be recovered on an actual and reasonable basis.</i>	
<ul style="list-style-type: none"> • Resource Consent applications (except those specified below as fixed charges). • Certificates of Compliance (excluding Onsite Effluent Treatment). • Changes or cancellation of conditions of consents. • Review of consent conditions. • Transfer of consent to another site or another person at another site. • Lapsing period extensions. 	\$774
<ul style="list-style-type: none"> • Publicly Notified Applications 	\$10,000
Other application fees (GST inclusive)	
<i>Note: these are fixed charges with no additional costs payable.</i>	
Certificates of compliance – Onsite Effluent Treatment Regional Plan	\$50
Land use consent to construct a single geotechnical, freshwater bore or domestic geothermal bore	\$390
Applications for activities listed in regional plans that have zero fee ²	\$0
Transfer of consent to another person at the same site	\$90
Short term onsite effluent treatment systems in communities scheduled for reticulation	\$390
Application to reduce the allocated volume in a water take consent	\$0
Applications for existing and previously consented structures on the Rotorua Lakes where the structure/s will remain unchanged, are not for commercial use and where the application follows a non-notified consent process	\$390
<p>Notes:</p> <p>A. Where fees are deposits only, the applicants will be charged all actual and reasonable costs above the deposit fee. Such costs may include, but not be limited to, staff time (see Schedule A), advertising, hearing costs (including costs of Committee members, Commissioners, Technical Appointees and the Minister of Conservation's representative), disbursements, and costs of consultants.</p> <p>B. Where an application is withdrawn, the fixed fee of \$500 will be retained and any actual and reasonable costs incurred will also be charged.</p> <p>C. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, the applicant may be requested to pay an additional amount by way of an interim payment against the final total costs.</p> <p>D. In accordance with section 36(7), the processing of any application may be suspended until any relevant charge is paid in full.</p> <p>E. Where the deposit fee exceeds the processing costs by \$25 or more, the difference will be refunded to the applicant.</p> <p>F. Applications involving restricted coastal activities (RCAs) will attract a surcharge of \$250 (GST inclusive). This fee is required by Regulation 34 of the Resource Management (Forms, Fees and Procedure) Regulations 2003 (Schedule 2), and is payable to the Minister of Conservation.</p> <p>G. Notwithstanding the above fee structure, the Consents Manager may require an appropriate application deposit fee for complex, multi-consent projects, or limited notified applications, up to a maximum of \$10,000 (GST inclusive).</p> <p>H. Costs for Hearing Committee members and Commissioners will be recovered from applicants at their set charge-out rate. Disbursements will be charged at actual and reasonable cost.</p> <p>I. The deposit fee for a Review of Consent Conditions is payable by the 20th of the month following service of notice by Council.</p> <p>J. All charges apply from 1 July 2012.</p>	

¹ At the time of writing, this includes some bore permits under the Rotorua Geothermal Regional Plan (rule 19.6.3(d)), and some wetland works under the Regional Water and Land Plan (rule 80 and method 261).

Schedule A – Hourly fixed charges for staff and consultants (GST exclusive)

Grouping	Positions	Hourly Charge
Administration	Planning Administration Officer Water Administration Officer Committee Administration Officer	\$75
Officers/Planners	Planner Pollution Prevention Officer Consents Officer Maritime Officer	\$91
Senior Officers/Senior Planners	Senior Consents Officer Senior Planner	\$108
Engineer/Scientist	Environmental Engineer Environmental Scientist	\$112
Team Leader	Pollution Prevention Team Leader Governance Team Leader	\$118
Senior Engineer/Senior Scientist/Harbourmaster	Harbourmaster Senior Environmental Scientist Principal Technical Engineer	\$123
Managers/Regional Harbourmaster	Regional Harbourmaster Consents Manager Data Services Manager Planning Frameworks Manager Sustainable Development Manager Water Science and Support Manager Pollution Prevention Manager Engineering Manager	\$159
Consultants	External Consent Processing or Specialist Technical Consultant	As charged by consultant

Note: Some positions may not be listed. In such cases the charge will be calculated from actual time (including travel time) charged at rates determined from annual salary plus on-cost.

The full Section 36 Charges Policy is available at
www.boprc.govt.nz/Knowledge-Centre/Section-36-Charges-Policy.aspx

What you need to know before you apply for a Resource Consent



Resource consents are used to manage the impact that certain activities have on people and the environment.

Regional plans identify activities that require resource consents. There are four types of resource consents that the Bay of Plenty Regional Council can issue:

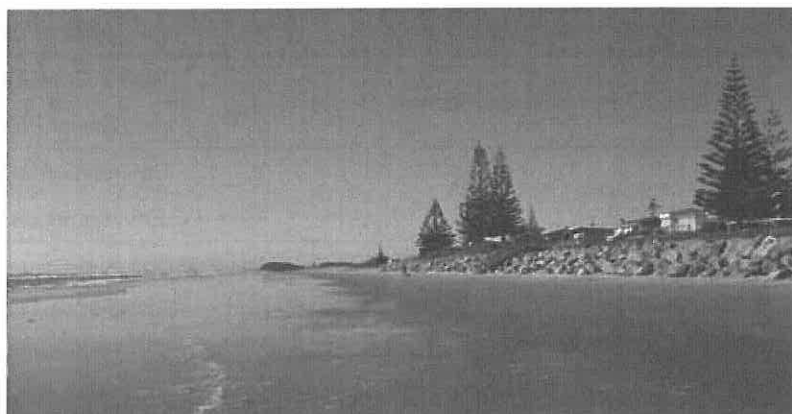
1. Land use consents
2. Discharge consents
3. Water consents
4. Coastal consents

Subdivision, building and some land use consents are issued by District and City Councils.

Land use consents

Certain types of land use can have negative environmental effects such as decreased water quality, erosion, flooding or ecological effects. You may need a land use consent if you want to:

- build or alter a bridge, culvert, stopbank or ford,
- construct or alter a well or bore,
- disturb or alter a wetland area,
- disturb the bed of a river or lake (e.g. reclaim, dredge, excavate, drill or erect a structure),
- carry out earthworks, soil cultivation, roading, tracking, mining or quarrying activities,
- plant or clear vegetation,
- install or use a structure (e.g. jetties, retaining walls, steps, boat launch or moorings),
- disturb contaminated or potentially contaminated land, and
- disturb or alter a geothermal surface feature in Rotorua.



Coastal Protection works, Waititi Beach

Discharge consents

Discharge consents cover activities which discharge to water, land or air. You may need a discharge consent if your activity will or may discharge:

- Water into water (this includes clean or contaminated water),
- Effluent, waste products or contaminated water onto, or into land,
- Landfill or cleanfill leachate,
- Carry out a nutrient discharging activity (e.g. increase stocking rates within the Rotorua Lakes Catchment area),
- Water and/or contaminants into water, or onto or into land, in association with a geothermal take, and
- Dust, steam, smoke or other contaminants into the air and/or those that create offensive odours.

Water consents

You may need a water consent if you want to, construct a dam or stopbank, divert a water course or take or use:

- Surface water (e.g. water from a river, stream, dam, lake, spring or the coast),

- Groundwater (e.g. water from an underground source), and
- Geothermal water, heat or energy.

Coastal consents

Coastal consents relate to resources in the coastal marine area (CMA). The CMA is a defined area of foreshore, seabed, coastal water, and air space above the sea typically taken from the average high tide level on the beach out to the territorial limit (12 nautical miles) and a set distance upstream of most rivers. If you are carrying out an activity near the coast or in a river near the coast, check out the full definition of the CMA in our Regional Coastal Environment Plan at www.boprc.govt.nz keywords 'coastal plan'.

You may need a coastal consent if you want to occupy space associated with structures or reclamations or carry out an activity within the CMA such as:

- installing or using a structure (e.g. jetties, retaining walls, steps, boat launch, or moorings),
- reclamations, and
- disturbance (e.g. dredging or associated with construction).

How to apply for a Resource Consent

You should talk to a Consents Officer for advice before you begin the application process. A Consents Officer can help identify if a consent is needed, and also what information should be submitted.

To contact an officer for helpful advice call 0800 884 880 or visit either Whakatane or Mount Maunganui Regional Council offices.

Required information

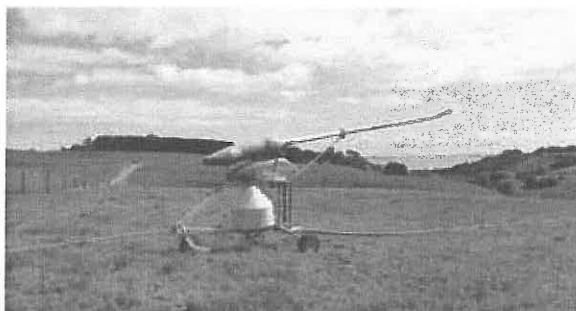
Making sure that your information is accurate and the application forms are complete will ensure that your application is processed quickly, and will reduce costs.

The application must as a minimum include:

- a completed, signed and dated 'Base Form' (unless applying for a bore or well which has its own form),
- a description of the activity you are proposing,
- any specific information requested on the relevant application form,
- the Ministry for the Environment provides additional advice on preparing AEEs (www.mfe.govt.nz), a description of the site including relevant features such as streams, wetlands, vegetation, past development and the wider environment,
- a detailed description of any consultation undertaken. This includes all written and verbal correspondence, and
- details about the location of your activity such as a map, aerial photograph or detailed sketch plan. You can visit www.boprc.govt.nz (Regional Mapping) to use the mapping tool to locate, and print maps of properties.

Your submitted map should at least show:

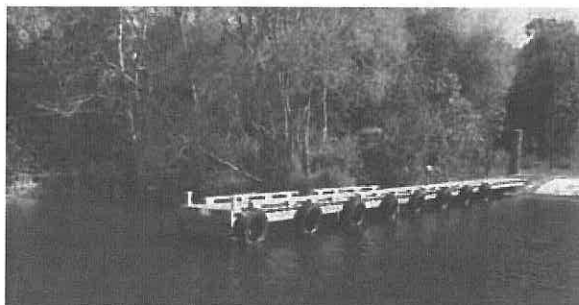
- your property boundary and neighbouring properties,
- the nearest country road or state highway,
- the location of any waterways, wetlands or wildlife habitats in the area,
- any known historic or wahi tapu sites, and
- any known significant features, including geothermal or archaeological sites.



Dairy effluent irrigation to pasture requires a resource consent in the Bay of Plenty



Works in stream beds such as building bridges or dams may need a consent



Structures over the bed of the Rotorua Lakes including jetties, platforms, pontoons, retaining walls and ramps will need a resource consent

Cost of Consents

Under the Resource Management Act (RMA), the Bay of Plenty Regional Council will recover costs associated with processing applications, and administering, supervising, and monitoring granted consents.

For more information on resource consents costs view our factsheet 'What does a resource consent cost?' which is available on our website visit www.boprc.govt.nz.

If you have any questions about costs involved with resource consents or about resource consents in general, contact us on 0800 884 880 or check out our website www.boprc.govt.nz, search: resource consents



0800 183788

Whakatane District Council
- ServiceRequest - (including previous Actions)

Transaction No: 55756	Priority: WDC DEFAULT
Status: SCHEDULED	Method: PHONE
Call Type: ROADING - x Drainage - Roadside drain open	
Linked transactions: ()	
Referred to: Ann-Elise Moon	
Location: 296 TE TEKO ROAD, RURAL	

Contact Name: JASON WAKEFIELD
Contact Address: C/O WARREN SMART PO BOX 224 WHAKATANE 3158
Contact Phone: cel 0064 027 6543718 - a/h 0064 07 3229223 <i>(Refer CC transaction for any further contact numbers)</i>
Temp Phone: <i>(For this transaction if different from contacts usual details)</i>
Reference:

Created on: 23 Aug 2012 - 04:00pm (by Helen Toby)	Received: 23 Aug 2012 - 04:12pm
Schedule by: 24 Aug 2012 - 04:12pm	Scheduled on: 24 Aug 2012 - 08:00am
Complete by: 29 Nov 2013 - 06:43pm	Completed on: -

Call Details:

HAS SOME QUERIES REGARDING THE DRAINAGE ROADSIDE - PROPERTY NEEDS TO DRAIN INTO OUR FACILITY. PLEASE CALL HIM TO DISCUSS ASAP

Date	Time	Action	Comments
23 Aug 2012	04:00pm	DETAILS CONFIRMED	Auto Confirmation
23 Aug 2012	04:10pm	WORK FLOW ACTION	Email sent to whakatane@opus.co.nz
23 Aug 2012	04:12pm	REFERRAL CHANGED	
23 Aug 2012	04:12pm	WORK FLOW ACTION	Referred to Z_EXT_OP6 [AIDANG].
23 Aug 2012	04:12pm	WORK FLOW ACTION	Email sent to Roding.wk@opus.co.nz
23 Aug 2012	04:12pm	DETAILS CONFIRMED	
24 Aug 2012	08:00am	STATUS CHANGED	
03 Sep 2012	04:20pm	WORK FLOW ACTION	Email sent to Roding.wk@opus.co.nz
10 Sep 2012	09:53am	COMPLETION TARGET	Dave has inspected
18 Sep 2012	09:02am	CHANGED	in november program
01 Dec 2012	11:41am	COMPLETION TARGET	drain clering to be carried out during march program when crew returns to this zone. Was missed
01 Dec 2012	11:42am	CHANGED	during October round as reseals had to be the priority
31 Jan 2013	03:42pm	COMPLETION TARGET	as per above note (year should have been 2013 not 2012)
18 Feb 2013	08:09am	CHANGED	for march program
27 Feb 2013	09:47am	COMPLETION TARGET	presented in march program, to review along with rest of program
23 Aug 2013	08:12am	CHANGED	Water table redefining has been programmed for this section of drain. However due to budget
23 Sep 2013	09:37am	COMPLETION TARGET	constraints the work must be pushed forward to the new financial year. To be in September when
18 Oct 2013	02:44pm	CHANGED	crew returns to this zone
		COMPLETION TARGET	to be programmed in care taker contract
		CHANGED	tp prioritise following completion of RS sites
		COMPLETION TARGET	to program in new contract
		CHANGED	
		COMPLETION TARGET	
		CHANGED	
		COMPLETION TARGET	
		CHANGED	
		COMPLETION TARGET	
		CHANGED	

Comments (record all comments/progress that are not part of scheduling or completing)	Date:	Time:
.....		
.....		
.....		
.....		

Officer: _____ **Time Spent:** _____ **Entered in Contact Centre:**

Form 20 for Notices of Requirement

FORM 20
NOTICE OF TERRITORIAL AUTHORITY'S REQUIREMENT FOR DESIGNATION
UNDER SECTION 168A
OF THE RESOURCE MANAGEMENT ACT 1991

NOTICE OF REQUIREMENT 1

Whakatāne District Council gives notice of its requirement for a designation for the public work described as follows:

The construction, operation, maintenance and upgrading of the Matatā Wastewater Treatment Plant and associated facilities.

1. The site to which the requirement applies is as follows:

1715 Thornton Road, Matatā

Allotment 6A Matatā Parish (ML 9665).

2. The nature of the proposed work is:

The construction, operation, maintenance and upgrading of a plant for the treatment of wastewater from the community of Matatā and the conveyance of the treated wastewater to the land application field.

The nature of the proposed work is more fully described in Section 5 of the Assessment of Effects on the Environment that supports this Notice.

3. The nature of the proposed conditions that would apply is:

Conditions that are proposed to be applied to the designation are set out in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

4. The effects that the public work will have on the environment, and the ways in which any adverse effects will be mitigated, are:

The proposed Matatā Wastewater Treatment Plant and associated facilities will have a range of positive and adverse effects on the environment. These effects and proposed mitigation measures are more fully described in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

5. Alternative sites, routes, and methods have been considered to the following extent:

A wide range of alternatives (options) have been assessed in terms of sites and methods for the treatment and disposal of wastewater from the community of Matatā. These alternatives are more fully described in Section 6 of the Assessment of Effects on the Environment that supports this Notice.

6. The proposed works and alteration are reasonably necessary for achieving the objectives of the requiring authority because:

The reasons the proposed works are reasonably necessary for achieving the objectives of the Whakatāne District Council are outlined in Section 8.17 of the Assessment of Effects on the Environment that supports this Notice.

7. The following resource consents are needed for the proposed activity and have been applied for:

- 1) Discharge permit for the discharge of contaminants (odour) from the Wastewater Treatment Plant Site and the pump station at the Land Application Field.
- 2) Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land at the Land Application Field in circumstances which may result in the treated wastewater entering water.
- 3) Land use consent for earthworks and the disturbance of land and soil resulting from vegetation removal on land within the Erosion Hazard Zone at the Land Application Field.

8. The following consultation has been undertaken with parties that are likely to be affected:

Extensive consultation has been undertaken with parties potentially affected by the proposed Matatā Wastewater Treatment Plant. The consultation process, the issues raised through the process and Whakatāne District Council's response to issues measures are more fully described in Section 9 of the Assessment of Effects on the Environment that supports this Notice.

9. Whakatāne District Council attaches the following information required to be included in this notice by the district plan, regional plan, or any regulations made under the Resource Management Act 1991:

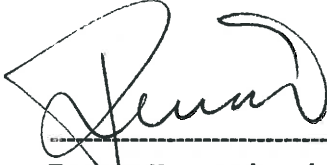
Whakatāne District Council - Matatā Wastewater Scheme - Resource Consents and Notices of Requirement Assessment of Effects on the Environment

Companion Documents – Cultural Impact Assessments

Support Documents

- 1) Matatā Wastewater Scheme – Consultation Strategy
- 2) Natural Hazards, Constraints and Risk Assessment
- 3) Flowrates and Mass Land Assessment for Determination of Land Disposal Field Requirements
- 4) Alternatives Assessment Information
- 5) Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment
- 6) Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment
- 7) Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field – Amended Following Selection of the Disposal Field Site
- 8) Assessment of Landscape and Visual Effects for the Proposed Matatā Wastewater Treatment Plant

- 9) Draft Restoration and Enhancement Plan for the Mitigation and Management of the Proposed Matatā Wastewater Treatment Disposal Field and Adjacent Dunelands
- 10) Consultation Records



**Tomasz Krawczyk on behalf of the
Whakatāne District Council**

December 2013

Address for service:

Whakatāne District Council
Commerce Street, Private Bag 1002, Whakatāne 3158

Attention: Inka Krawczyk Project Manager
Phone: 07 306 0577
Email: Inka.Krawczyk@whakatane.govt.nz

FORM 20
NOTICE OF TERRITORIAL AUTHORITY'S REQUIREMENT FOR DESIGNATION
UNDER SECTION 168A
OF THE RESOURCE MANAGEMENT ACT 1991

NOTICE OF REQUIREMENT 2

Whakatāne District Council gives notice of its requirement for a designation for the public work described as follows:

Environmental protection buffer for the Matatā Wastewater Treatment Plant and associated facilities.

1. The site to which the requirement applies is as follows:

1715 Thornton Road, Matatā

Allotment 6A Matatā Parish (ML 9665).

2. The nature of the proposed work is:

The establishment and maintenance of an environmental protection buffer on land surrounding the Matatā Wastewater Treatment Plant site.

The nature of the proposed work is more fully described in Section 5 of the Assessment of Effects on the Environment that supports this Notice.

3. The nature of the proposed conditions that would apply is:

Conditions that are proposed to be applied to the designation are set out in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

4. The effects that the public work will have on the environment, and the ways in which any adverse effects will be mitigated, are:

The environmental protection buffer is a key component of the mitigation that has been developed to appropriately manage adverse effects of the Matatā Wastewater Treatment Plant on surrounding properties. The proposed mitigation measures are more fully described in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

5. Alternative sites, routes, and methods have been considered to the following extent:

A wide range of alternatives (options) have been assessed in terms of sites and methods for the treatment and disposal of wastewater from the community of Matatā. These alternatives are more fully described in Section 6 of the Assessment of Effects on the Environment that supports this Notice.

6. The proposed works and alteration are reasonably necessary for achieving the objectives of the requiring authority because:

The reasons the proposed works are reasonably necessary for achieving the objectives of the Whakatāne District Council are outlined in Section 8.17 of the Assessment of Effects on the Environment that supports this Notice.

7. The following resource consents are needed for the proposed activity and have been applied for:

- 1) Discharge permit for the discharge of contaminants (odour) from the Wastewater Treatment Plant Site and the pump station at the Land Application Field.
- 2) Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land at the Land Application Field in circumstances which may result in the treated wastewater entering water.
- 3) Land use consent for earthworks and the disturbance of land and soil resulting from vegetation removal on land within the Erosion Hazard Zone at the Land Application Field.

8. The following consultation has been undertaken with parties that are likely to be affected:

Extensive consultation has been undertaken with parties potentially affected by the proposed Matatā Wastewater Scheme. The consultation process, the issues raised through the process and Whakatāne District Council's response to issues measures are more fully described in Section 9 of the Assessment of Effects on the Environment that supports this Notice.

9. Whakatāne District Council attaches the following information required to be included in this notice by the district plan, regional plan, or any regulations made under the Resource Management Act 1991:

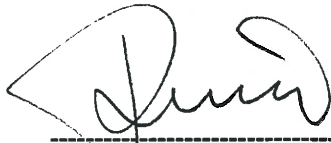
Whakatāne District Council - Matatā Wastewater Scheme - Resource Consents and Notices of Requirement Assessment of Effects on the Environment

Companion Documents – Cultural Impact Assessments

Support Documents

- 1) Matatā Wastewater Scheme – Consultation Strategy
- 2) Natural Hazards, Constraints and Risk Assessment
- 3) Flowrates and Mass Land Assessment for Determination of Land Disposal Field Requirements
- 4) Alternatives Assessment Information
- 5) Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment
- 6) Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment
- 7) Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field – Amended Following Selection of the Disposal Field Site
- 8) Assessment of Landscape and Visual Effects for the Proposed Matatā Wastewater Treatment Plant

- 9) Draft Restoration and Enhancement Plan for the Mitigation and Management of the Proposed Matatā Wastewater Treatment Disposal Field and Adjacent Dunelands
- 10) Consultation Records



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December 2013

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FORM 20
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NOTICE OF REQUIREMENT 3

Whakatāne District Council gives notice of its requirement for a designation for the public work described as follows:

Access to the Matatā Wastewater Treatment Plant site.

1. The site to which the requirement applies is as follows:

1715 Thornton Road, Matatā

Allotment 6A Matatā Parish (ML 9665).

2. The nature of the proposed work is:

The establishment and maintenance of access to the Matatā Wastewater Treatment Plant site.

The nature of the proposed work is more fully described in Section 5 of the Assessment of Effects on the Environment that supports this Notice.

3. The nature of the proposed conditions that would apply is:

Conditions that are proposed to be applied to the designation are set out in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

4. The effects that the public work will have on the environment, and the ways in which any adverse effects will be mitigated, are:

Any adverse effects associated with the construction and use of the access to the Matatā Wastewater Treatment Plant site have been assessed as minor. The effects of the proposed Matatā Wastewater Treatment Plant and associated facilities are more fully described in Section 16 of the Assessment of Effects on the Environment that supports this Notice.

5. Alternative sites, routes, and methods have been considered to the following extent:

A wide range of alternatives (options) have been assessed in terms of sites and methods for the treatment and disposal of wastewater from the community of Matatā. These alternatives are more fully described in Section 6 of the Assessment of Effects on the Environment that supports this Notice.

6. The proposed works and alteration are reasonably necessary for achieving the objectives of the requiring authority because:

The reasons the proposed works are reasonably necessary for achieving the objectives of the Whakatāne District Council are outlined in Section 8.17 of the Assessment of Effects on the Environment that supports this Notice.

7. The following resource consents are needed for the proposed activity and have been applied for:

- 1) Discharge permit for the discharge of contaminants (odour) from the Wastewater Treatment Plant Site and the pump station at the Land Application Field.
- 2) Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land at the Land Application Field in circumstances which may result in the treated wastewater entering water.
- 3) Land use consent for earthworks and the disturbance of land and soil resulting from vegetation removal on land within the Erosion Hazard Zone at the Land Application Field.

8. The following consultation has been undertaken with parties that are likely to be affected:

Extensive consultation has been undertaken with parties potentially affected by the proposed Matatā Wastewater Scheme. The consultation process, the issues raised through the process and Whakatāne District Council's response to issues measures are more fully described in Section 9 of the Assessment of Effects on the Environment that supports this Notice.

9. Whakatāne District Council attaches the following information required to be included in this notice by the district plan, regional plan, or any regulations made under the Resource Management Act 1991:

Whakatāne District Council - Matatā Wastewater Scheme - Resource Consents and Notices of Requirement Assessment of Effects on the Environment

Companion Documents – Cultural Impact Assessments

Support Documents

- 1) Matatā Wastewater Scheme – Consultation Strategy
- 2) Natural Hazards, Constraints and Risk Assessment
- 3) Flowrates and Mass Land Assessment for Determination of Land Disposal Field Requirements
- 4) Alternatives Assessment Information
- 5) Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment
- 6) Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment
- 7) Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field – Amended Following Selection of the Disposal Field Site
- 8) Assessment of Landscape and Visual Effects for the Proposed Matatā Wastewater Treatment Plant

- 9) Draft Restoration and Enhancement Plan for the Mitigation and Management of the Proposed Matatā Wastewater Treatment Disposal Field and Adjacent Dunelands
- 10) Consultation Records



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December 2013

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FORM 20
NOTICE OF TERRITORIAL AUTHORITY'S REQUIREMENT FOR DESIGNATION
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NOTICE OF REQUIREMENT 4

Whakatāne District Council gives notice of its requirement for a designation for the public work described as follows:

Installation, operation, maintenance and upgrading of the treated wastewater Land Application Field and associated facilities.

1. The site to which the requirement applies is as follows:

1186Z Thornton Road, Matatā

Pt Allot 273 Rangaitki Parish (SO 332912). Recreation Reserve vested in the Whakatāne District Council.

2. The nature of the proposed work is:

Installation, operation, maintenance and upgrading of a land application sub-surface drip system for the disposal of treated wastewater from the Matatā Wastewater Treatment Plant.

The nature of the proposed work is more fully described in Section 5 of the Assessment of Effects on the Environment that supports this Notice.

3. The nature of the proposed conditions that would apply is:

Conditions that are proposed to be applied to the designation are set out in Section 17 of the Assessment of Effects on the Environment that supports this Notice.

4. The effects that the public work will have on the environment, and the ways in which any adverse effects will be mitigated, are:

The proposed Land Application Field and associated facilities will have a range of positive and adverse effects on the environment. These effects and proposed mitigation measures are more fully described in Section 17 of the Assessment of Effects on the Environment that supports this Notice.

5. Alternative sites, routes, and methods have been considered to the following extent:

A wide range of alternatives (options) have been assessed in terms of sites and methods for the treatment and disposal of wastewater from the community of Matatā. These alternatives are more fully described in Section 6 of the Assessment of Effects on the Environment that supports this Notice.

6. The proposed works and alteration are reasonably necessary for achieving the objectives of the requiring authority because:

The reasons the proposed works are reasonably necessary for achieving the objectives of the Whakatāne District Council are outlined in Section 8.17 of the Assessment of Effects on the Environment that supports this Notice.

7. The following resource consents are needed for the proposed activity and have been applied for:

- 1) Discharge permit for the discharge of contaminants (odour) from the Wastewater Treatment Plant Site and the pump station at the Land Application Field.
- 2) Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land at the Land Application Field in circumstances which may result in the treated wastewater entering water.
- 3) Land use consent for earthworks and the disturbance of land and soil resulting from vegetation removal on land within the Erosion Hazard Zone at the Land Application Field.

8. The following consultation has been undertaken with parties that are likely to be affected:

Extensive consultation has been undertaken with parties potentially affected by the proposed Matatā Wastewater Scheme. The consultation process, the issues raised through the process and Whakatāne District Council's response to issues measures are more fully described in Section 9 of the Assessment of Effects on the Environment that supports this Notice.

9. Whakatāne District Council attaches the following information required to be included in this notice by the district plan, regional plan, or any regulations made under the Resource Management Act 1991:

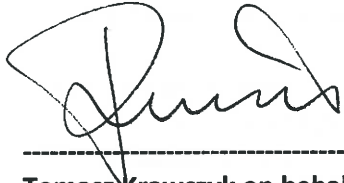
Whakatāne District Council - Matatā Wastewater Scheme - Resource Consents and Notices of Requirement Assessment of Effects on the Environment

Companion Documents – Cultural Impact Assessments

Support Documents

- 1) Matatā Wastewater Scheme – Consultation Strategy
- 2) Natural Hazards, Constraints and Risk Assessment
- 3) Flowrates and Mass Land Assessment for Determination of Land Disposal Field Requirements
- 4) Alternatives Assessment Information
- 5) Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment
- 6) Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment
- 7) Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field – Amended Following Selection of the Disposal Field Site
- 8) Assessment of Landscape and Visual Effects for the Proposed Matatā Wastewater Treatment Plant

- 9) Draft Restoration and Enhancement Plan for the Mitigation and Management of the Proposed Matatā Wastewater Treatment Disposal Field and Adjacent Dunelands
- 10) Consultation Records



**Tomasz Krawczyk on behalf of the
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December 2013

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Attention: Inka Krawczyk Project Manager
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Email: Inka.Krawczyk@whakatane.govt.nz

Part A Information Common to Resource Consents and Notices of Requirement

1 Introduction

1.1 Context and Background

Matatā is a coastal town located in Whakatāne District. The town has historically relied on septic tanks and on-site ground disposal systems for community wastewater management. Most of these septic tank disposal systems were constructed 20 – 30 years ago. Due to aging and poor performance of some of the septic tank disposal systems, potential public health and environmental contamination as a result of the failure of these septic tanks has been identified.

Whakatāne District Council (WDC) has been investigating options for wastewater disposal for Matatā since 2003. Whakatāne District Council secured a commitment of funding from the Ministry of Health (MoH) under the Sanitary Works Subsidy Scheme (SWSS), for either a full or partial reticulation scheme. Based on the results of community consultation and consideration of a sustainable and long term solution to Matatā wastewater management, WDC has decided to proceed with a full reticulation option. In addition to the MoH Subsidy, Bay of Plenty Regional Council (BoPRC) also granted funding in its Annual Plan 2013/14 to support the Matatā Wastewater Scheme.

Provision of a waterborne wastewater scheme is fundamentally important in terms of public health protection and safety and community well-being. It provides significant positive (beneficial) effects as interpreted in the Resource Management Act 1991 (RMA). Without wastewater schemes, there would be significant environmental and human health issues, especially within populated urban areas. In today's modern urban environment, wastewater schemes are developed in conjunction with the statutory processes of the RMA to ensure that environmental effects are avoided, remedied or mitigated to an acceptable level.

1.2 Purpose of this Document

This Assessment of Effects on the Environment (AEE) report has been prepared to support WDC's application to BoPRC for the resource consents required for the construction and operation of the Proposed Wastewater Scheme in Matatā. It has also been prepared to support WDC's assessment of the Notice of Requirement for land use for the wastewater treatment plant (WWTP) site and the Land Application Field.

The AEE has been prepared in accordance with Section 88 and the Fourth Schedule of the RMA. It includes:

1. A description of the Proposed Wastewater Scheme, including the low pressure wastewater collection system, WWTP and treated wastewater Land Application Field;
2. A description of the operational and management procedures of the Proposed Wastewater Scheme;
3. An evaluation of alternatives (options) considered;
4. A description of the existing environment;
5. Information on the statutory framework against which the applications will be tested;
6. Consultation activities, outputs and responses;
7. An assessment of the effects on the environment from discharges of contaminants to air and land, vegetation removal and earthworks;
8. Measures to avoid, remedy or mitigate adverse effects; and
9. Whakatāne District Council suggested resource consent and designation conditions for consideration by the BoPRC and those making submissions on the application.

This AEE also provides information regarding:

1. The activities of WDC Project Control Group (PCG) for the Project;
2. The Project Approach in particular allowance for future growth;
3. The Project Vision and Objectives and how they have been applied in determining the rationale of the Proposed Wastewater Scheme; and

4. The WDC's rationale for seeking 35 year consent durations.

1.3 Structure of this AEE

The structure of the AEE is as follows:

- Executive Summary
- Cross reference to the Fourth Schedule of the RMA
- Application Forms for Resource Consents
- Form 18 for Notices of Requirement

Part A Information Common to Resource Consents and Notices of Requirement

- Section 1: Introduction
- Section 2: Project Vision, Objectives, Structure and Development
- Section 3: Needs and Drivers for the Wastewater Scheme
- Section 4: Ministry of Health Sanitary Works Subsidy Scheme and Regional Council Grant
- Section 5: Description of the Proposed Wastewater Scheme
- Section 6: Alternatives/Options Considered
- Section 7: Description of the Environment
- Section 8: Statutory Framework
- Section 9: Consultation

Part B Resource Consents – Effects Assessment

- Section 10: Assessment of Effects of Discharge to Air from the Wastewater Treatment Plant and Associated Components
- Section 11: Assessment of Effects of the Discharge of Treated Wastewater to the Land Application Field
- Section 12: Assessment of Effects of Earthworks and Land and Soil Disturbance by Vegetation Clearance for the Land Application Field
- Section 13: Assessment of Effects on Tāngata Whenua
- Section 14: Positive Effects
- Section 15: Suggested Resource Consent Conditions

Part C Notices of Requirement – Effects Assessment

- Section 16: Assessment of Effects of Designation for Wastewater Treatment Plant Site
- Section 17: Assessment of Effects of Designation for Land Application Field
- Section 18: Conclusion and Suggested Designation Conditions

The AEE also includes a list of Acknowledgement, Glossary of Terms and Abbreviation and a project reference list.

Ten Support Documents, each covering specific topic areas, support this AEE. The Support Documents should be read in conjunction with this AEE. Table 1-1 sets out the list of Support Documents.

Table 1-1: List of Support Documents

Support Document Number	Title	Date
1	Matatā Wastewater Scheme – Consultation Strategy, prepared by WDC	November 2013
2	Natural Hazards, Constraints and Risk Assessment – This support document includes the following reports: a) Quantitative landslide risk assessment – Matatā escarpment final draft, prepared by Tonkin & Taylor Ltd b) Tsunami effects on WWTP and associated disposal field, prepared by URS c) Geoscience assessment of proposed WWTP and disposal field sites, prepared by URS d) GIS constraints analysis for WWTP and disposal field, prepared by URS e) Additional geological assessment of W site, prepared by URS f) Additional risk assessment analysis, prepared by URS g) Site G Geotechnical Investigation, prepared by URS h) Matatā Wastewater Treatment Plant: Matatā Fault Location at 1715 Thornton Road, prepared by URS	May – September 2013
3	Flowrates and Mass Land Assessment for Determination of Land Disposal Field Requirements, prepared by URS	June 2013
4	Alternatives Assessment Information – This support document includes the following reports: a) Summary table of previous investigation and reports undertaken b) Matatā proposed local wastewater treatment & Disposal concept design and costing, prepared by AWT c) Matatā sewerage scheme options deliberation and decision – report 20.14.1 prepared for Extraordinary Council Meeting, prepared by WDC d) Wastewater treatment and management options for Edgumbe and Matatā, prepared by Opus	April – July 2013
5	Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment, prepared by URS	November 2013
6	Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment, prepared by URS	November 2013
7	Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field – Amended Following Selection of the Disposal Field Site, prepared by Wildland Consultants	November 2013
8	Assessment of Landscape and Visual Effects for the Proposed Matatā Wastewater Treatment Plant, prepared by Wildland Consultants	November 2013
9	Draft Restoration and Enhancement Plan for the Mitigation and Management of the Proposed Matatā Wastewater Treatment Disposal Field and Adjacent Dunelands, prepared	November 2013

Support Document Number	Title	Date
10	by Wildland Consultants Consultation Records, compiled by WDC	November 2013

In order to keep this AEE reasonably concise, cross referencing is made to the Support Documents which provide the detailed information that underpins the development of the Project, the AEE and the resource consent applications being applied for.

1.4 Resource Consents and Notices of Requirement

Three consents are sought for the Proposed Wastewater Scheme as set out in the Table 1-2 below. The consents are required to enable the operation and maintenance of the WWTP, treated wastewater Land Application Field and to meet the future growth needs of the community over a 35 years horizon.

Table 1-2: Proposed Wastewater Scheme – Resource Consents Sought

Type of Resource Consent	
Operational	
1	Discharge permit for air contaminants (odour) from the Wastewater Treatment Plant site and the pump station at the Land Application Field
2	Discharge permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land where it may enter water at the Land Application Field (maximum discharge of up to 605m ³ per day)
3	Land use consent for the following works: <ul style="list-style-type: none"> Approximately 5,500m³ of earthworks on land partly within the Erosion Hazard Zone at the Land Application Field Disturbance of land and soil resulting from approximately 4.6 hectares of vegetation clearance on land within the Erosion Hazard Zone at the Land Application Field

Four Notice(s) of Requirement are submitted seeking Designations for the Proposed Wastewater Scheme as set out in Table 1-3 below.

Table 1-3: Proposed Wastewater Scheme – Notices of Requirement

	Notices of Requirement	Site
1	The construction, operation, maintenance and upgrading of the Matatā Wastewater Treatment Plant and associated facilities	Allot 6A Matatā Parish (ML 9665)
2	Environmental Protection Buffer for the Matatā Wastewater Treatment Plant and associated facilities	Allot 6A Matatā Parish (ML 9665)
3	Access to the Wastewater Treatment Plant site	Allot 6A Matatā Parish (ML 9665)
4	Installation, operation, maintenance and upgrading of the treated wastewater Land Application Field and associated facilities	Pt Allot 273 Rangaitki Parish (SO 332912)

1.5 Duration of Resource Consents Being Sought

Whakatāne District Council is seeking consent durations of 35 years for all three consents.

Whakatāne District Council and its ratepayers are investing in a substantial and regionally significant infrastructure asset in terms of the Proposed Wastewater Scheme. This includes the collection system (including individual grinder pump system, pipes and pump stations), the WWTP, transfer pipelines and the Land Application Field. The estimated capital cost of the Proposed Wastewater Scheme is \$10.85 million (excluding GST).

It is important that WDC has financial security for this substantial infrastructural asset and is able to provide future flexibility to accommodate domestic growth.

To achieve financial security and provide certainty for future investors and community and business growth, it is important for WDC to have long term certainty in terms of the on-going operation of the Wastewater Scheme. This is a critical consideration in seeking 35 year durations for the proposed consents.

2 Project Vision, Objectives, Structure and Development

2.1 Project Vision and Objectives

2.1.1 Background

Matatā is a coastal township and has approximately 700 residents (260 households). For wastewater disposal the town has been relying on concrete cast in-situ septic tanks and on-site ground disposal systems, constructed mostly 20 - 30 years ago. From the present investigations it is apparent that apart from some low laying areas (50 households), the risk of wide spread failures in the present septic tanks and disposal systems in Matatā within the next 10 to 15 years is minimal. However, if these septic tanks and disposal systems are not maintained properly and or the ground water situation changes unfavourably, the possibility of failing septic tank disposal systems is high in the long term.

Inclusion of Matatā in the Regional Council's Maintenance Zone within the On-Site Effluent Treatment Plan for on-site effluent disposal may force some residences to install new septic tanks and/or more advanced on site treatment systems at considerable cost per household.

Rate equalisation across the Whakatāne District and Ministry of Health subsidy made it possible for WDC to look for sustainable and affordable options for the community solution of wastewater treatment and disposal.

In view of the importance of this project and the need to ensure the most appropriate long term sustainable wastewater scheme is put in place, it was considered appropriate to set a Project Vision and Objectives that would assist guiding the project through to completion.

The Project Vision and Objectives have been used to assist in determining the Proposed Wastewater Scheme for which the Resource Consents and Designations will be sought.

2.1.2 Purpose of Settling a Project Vision and Objectives

In order to advance this Project, and achieve the goal of WDC to secure long term consents and any other approvals required, a Project Vision and Objectives have been developed.

The purpose of setting a Project Vision and Objectives is as follows:

- To ensure consistency with WDC's Strategic Framework and annual and long term planning processes.
- To ensure that public health protection is appropriately addressed.
- To ensure that compliance with environmental standards is appropriately addressed.
- To meet local hapu and iwi cultural and spiritual objectives as far as is practically possible.
- To achieve effective and meaningful consultation with stakeholders, tangata whenua and the wider community.
- To establish benchmarks against which all key decisions can be assessed and measured as they apply to formulating the resource consent applications and any further designations for the Proposed Wastewater Scheme.
- To ensure compliance with all legal and environmental requirements.
- To demonstrate that any works subject to the notice of requirement for designation are clearly necessary for WDC to achieve its objectives and demonstrate these in terms of the RMA procedures.
- To achieve a robust decision making process, in arriving at the Preferred Scheme, that is both auditable and defensible in terms of RMA, WDC and BoPRC procedures.

2.1.3 Whakatāne District Council – Our Strategic Framework

Whakatāne District Council's community outcomes as outlined in Council's Long Term Plan (LTP) 2012-22 identify WDC's six priority areas that group around Council's activities. This document is a key consideration in setting project objectives.

These outcomes seek to improve the social, economic, environmental and cultural wellbeing of the Whakatāne District and are used as a guide to inform the planning process and set out the WDC's priorities and direction.

- Effective Leadership – Striving for our future well-being
- Sustainable Economic Development – Working in partnership
- Community Well-being – A caring community
- Quality Services – Excellent value for money
- Valuing our Environment – Sustaining for future generations
- Reliable and Affordable Infrastructure – Meeting current and future needs

Each of these outcomes provides relevant inputs into determining the Project Vision and Objectives.

2.1.4 Key Drivers for Setting Project Objectives

The guiding principles for setting objectives included WDC's Vision and Purpose, the Local Government Act 2002 (LGA) and the RMA. There are a number of important factors and considerations that must be taken into account in formulating the Project Objectives, including:

- Achieving sustainable management of natural and physical resources in terms of the purpose of the RMA.
- Promoting the social, economic, environmental and cultural well-being of community, in the present and future. This driver will follow directly from the purpose of the LGA.
- Provide public health protection.
- Provide a cost efficient Wastewater Scheme that is affordable to residential and business communities whilst also meeting WDC's other requirements including the need to produce a high standard of treated wastewater quality.
- Assist in meeting, as far as is practical and practicable Maori cultural and spiritual concerns and also public perceptions and expectations.
- Avoid, mitigate or remedy the potential and actual adverse effects on the natural environment.
- Financial security for WDC by seeking to obtain the resource consents for the longest possible duration (35 years under the RMA), consistent with the Project Drivers, other considerations and consultation outputs.
- Being able to meet the current and future needs of the community in a way that is most cost effective for households and businesses, as per the LGA.

2.1.5 Project Vision and Objectives

Whakatāne District Council's Annual Plan 2013/2014 sets goal for Sewage Treatment and Disposal as follows:

"To provide high quality, efficient and reliable sewerage systems that meets the reasonable needs of the urban and commercial communities."

This was consulted under the Annual Plan 2013/2014. This goal has been developed into the Project Vision as follows:

- To provide a modern, fully reticulated sewerage scheme for the Matatā community, that provides a sustainable solution that protects health and wellbeing of the people and the receiving environment.

2.1.5.1 Project Objectives

In order to advance this Project and then to achieve WDC's goal of securing long term resource consents, while following the robust decision making process that meets the WDC's statutory obligations, project objectives have been developed. These Objectives are:

Overall Project Objective

- To work in partnership with the community and tāngata whenua to achieve a sustainable, long term solution for the collection, treatment and disposal of Matata's wastewater. The solution shall achieve a high level of public health protection, safeguard the life supporting capacity of natural resources, be the best practicable option and meet the following objectives.

Environmental Objectives

- To protect the natural character, indigenous biodiversity and visual amenity of the coastal environment.
- To ensure that the water quality of the Tarawera River is not degraded through the land application of treated wastewater.
- To enable the appropriate disposal of treated wastewater by land application rather than discharge to coastal waters.
- To ensure that the visual impact on the environment of the Wastewater Treatment Plant and Land Application Field is minimised.
- To ensure a high level of compliance with recreational, ecological and water quality standards and guidelines, and Regional and District Planning requirements.
- To promote the efficient use and development of natural and physical resources, and if appropriate the sustainable reuse of wastewater products.
- To avoid, remedy or mitigate significant adverse effects on natural and physical environments including communities within those environments.

Social Objectives

- To ensure that the Matatā Wastewater Scheme achieves the greatest practicable protection of public health.
- To ensure the Matatā Wastewater Treatment Scheme supports development and growth while continuing to meet the needs of existing residents and wider community including their recreation activities in the area.
- To work in partnership with the community, Project Control Group and key stakeholders to achieve a good understanding of the Matatā Wastewater Consents Project, so as to enable genuine and effective consultation
- To achieve more sustainable wastewater management for the Matatā community.

Economic Objectives

- To maximise the cost effective use of the Ministry of Health subsidy and BoPRC grant.
- To provide an economically sustainable future Wastewater Scheme which will match the anticipated growth in the area, - i.e. affordable for both the existing and growth communities and businesses now and in the future.
- To promote outcomes that ensure sufficient flexibility to adopt appropriate technology and more sustainable solutions in the future, including treated wastewater reuse, where they provide more effective solutions.
- To apply appropriate technology that will protect public health and meet environmental standards and tangata whenua and community aspirations while achieving lowest whole of life costs.
- To meet the current and future needs of the community in a way that is most cost effective for households and businesses, as required by the LGA.

Tangata Whenua Cultural Objectives further being developed in consultation associated with Cultural Impact Assessment (CIA)

- To recognise and provide for tangata whenua as kaitiaki.
- To work in partnership with tangata whenua to share knowledge and achieve a good understanding of this Project, so as to enable genuine and effective consultation, engagement and participation.

Technical Objectives

- To promote outcomes that ensure sufficient flexibility to adopt new appropriate technology and more sustainable solutions in the future, including treated wastewater reuse where that provides more effective solutions.
- To provide a Scheme that can be maintained and efficiently operated to best practice standards.

2.2 Best Practicable Option

The Overall Project Objective above includes for a Best Practicable Option (BPO) approach.

In accordance with the provisions of the RMA, an appropriate approach to determine the Proposed Wastewater Scheme for which WDC are seeking resource consents is to follow a BPO assessment. The term BPO was consequently adopted in the Project Objectives as described above.

Under the RMA, best practicable option means; -

“Best practicable option, in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to –

- a) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and*
- b) The financial implications, and the effects on the environment, of that option when compared with other options; and*
- c) The current state of technical knowledge and the likelihood that the option can be successfully applied”*

A BPO approach is becoming commonly used by local authorities in assessing options and working with their communities, other key stakeholders and tāngata whenua in determining the most appropriate solution for a wastewater infrastructure.

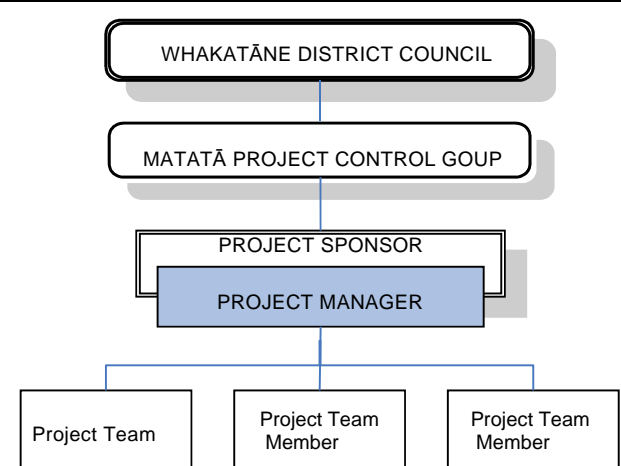
Such an approach is particularly relevant to this Project as it brings in the sensitivity of the receiving environment, the financial implications of the Proposed Wastewater Scheme as compared to other options and it also brings in assessment of the state of technical knowledge. These key components are all well embodied in the RMA definition of BPO.

2.3 Project Structure and Processes Followed

To assist in smooth Project delivery, decision making and communication with the outside public bodies, particularly the grantor of subsidy, MoH and grant provider BoPRC, the Project Management Structure has been adopted as outlined in Table 2-1 below. The adopted Project Structure and procedures were implemented to accommodate project progress to a very tight schedule.

On 20 May 2013, WDC approved a full reticulation wastewater scheme as the preferred solution to a reticulation scheme in Matatā and informed the Ministry of Health of the Council’s decision by 30 May 2013, in accordance with the MoH subsidy conditions. To provide WDC council members with adequate information to enable a decision to be made, public consultation on available options and initial site selection was carried out with the Matatā community. WDC appointed two key consulting companies to assist in the process: Resource consent consultants - MWH New Zealand Limited and technical advisor – URS New Zealand Limited.

Table 2-1: Project Management Structure

Project Organisation	
Reporting Structure	 <pre> graph TD A[WHAKATĀNE DISTRICT COUNCIL] --> B[MATATĀ PROJECT CONTROL GOUP] B --> C[PROJECT SPONSOR] C --> D[PROJECT MANAGER] D --> E[Project Team] D --> F[Project Team Member] D --> G[Project Team Member] </pre>
Roles and Responsibilities:	
<p>Project Control Group</p> <ul style="list-style-type: none"> • <i>Chair - Russel Oruz</i> • <i>Gerhard van Beek</i> • <i>Marty Grenfell</i> • <i>Tomasz Krawczyk</i> 	<p>Oversee progress of the project:</p> <ul style="list-style-type: none"> • Receive regular reports from the Project Manager • Report progress and findings of the project to the Projects and Services Committee, or otherwise to full Council • Provide recommendations to the Council where high-level decision-making is required.
<p>Project Sponsor</p> <p><i>General Manager Infrastructure</i></p> <p><i>Tomasz Krawczyk</i></p>	<p>The Sponsor has final accountability for the project. The Sponsor will provide support in organisational and contractual matters and matters of principle, without playing an operational role in the project. Specific responsibilities are to:</p> <ul style="list-style-type: none"> • Formally authorise the project establishment • Define the project goals and objectives • Authorise and approve the Project Execution Plan and any changes • Resolve escalated issues • Authorise final acceptance of the outcomes • Approve and authorise significant project budget, quality and work schedule
<p>Project Manager</p> <p><i>Inka Krawczyk</i></p>	<p>The Project Manager has day to day responsibility for management of all project activities. Specific responsibilities are to:</p> <ul style="list-style-type: none"> • Prepare and implement the Project Execution Plan • Monitor progress and prepare project status reports • Identify and resolve issues and address project risks • Ensure effective communication of relevant project-related matters to all stakeholders • Continue to appraise project priorities and scheduled activities, and develop, recommend and action changes to the project plan • Be accountable to the Project Sponsor for achievement of project objectives, including schedule, budget and specification requirements • Manage consultants and contractors delivering on subprojects within this project

Project Team	
<p><i>Manager Utilities</i> <i>Santha Agas</i></p>	<p>Provide input into the project as required</p> <ul style="list-style-type: none"> • History of project to date • Technical or District specific detail • Level of Service deliverable required • On-going operational impacts for the Council
<p><i>General Manager Finance</i> <i>Phillip Jones – Acting General Manager Finance</i></p>	<p>Manage expenditure of the project</p> <ul style="list-style-type: none"> • Managing the financial accounting • Implementing the rating implications for the scheme • Securing funding for the project where available • Inputting into project budget • Controlling expenditure
<p><i>Manager Public Affairs</i> <i>Ross Boreham</i></p>	<p>Ensure community are kept involved in the progress of the project:</p> <ul style="list-style-type: none"> • Key milestones are communicated • Any variations to the plan are communicated including delays • Bi-monthly newsletter prepared for Matatā community
<p><i>Policy Planner</i> <i>Michal Akurangi</i></p>	<p>Providing advice as required:</p> <ul style="list-style-type: none"> • Policy implications • LTP and Annual Plan requirements • Compliance with the Local Government Act 2002
<p><i>Technical Advisor</i> <i>Fiona Hennessey</i></p>	<p>Providing advice and assistance</p> <ul style="list-style-type: none"> • Disposal field impact on dunes • Reserve Management Plan • Reserve Restoration
<p><i>Consultant – Resource Consent</i> <i>MWH New Zealand Limited</i></p>	<p>Manage process for developing a Resource Consent Application:</p> <ul style="list-style-type: none"> • Development of wastewater scheme with URS • Analysis of alternative solutions considered • Compilation of AEE from technical reports • Development of suggested resource consent conditions with URS and WDC
<p><i>Consultant – Technical Advisor</i> <i>URS New Zealand Limited</i></p>	<p>Provide advice on development of Proposed Wastewater Scheme:</p> <ul style="list-style-type: none"> • GIS Risk Assessment and Multicriteria Analysis of selected sites; • Hydrogeological investigation of preferred site; • Groundwater hydrogeology and Effect study; • Geotechnical Liquefaction and foundation investigation; • Freshwater quality & ecology assessment, public health risk assessment <p>Preparation of Design-Built-Operate Contract Documentation for wastewater treatment plant and Land Application Field:</p> <ul style="list-style-type: none"> • Design/Built/Operate Contract Documents • Performance Specification and Specimen Design • Development of Schedules to the Contract <p>Assist WDC with Tender Procedure</p> <ul style="list-style-type: none"> • Registration of Interest and Shortlisting • Draft Tender Documents • Early Contractor Involvement – Interactive Tender process • Issue of Final Tender Documents • Tender Evaluation • Negotiation with Preferred Tenderer • Issue Construction Documents <p>Provide Technical advice during Design, Construction and Operation period.</p>

<p><i>Contractor – Design, Construction and 2 year Operation of Wastewater Treatment Plant and Land Application Field</i></p>	<p>Develop a detailed design of the WWTP and Land Application Field according to the Employers Requirements and Resource Consent stipulations.</p> <p>Construct WWTP according to the accepted design within specified timeframe and cost.</p> <p>Operate WWTP for two years.</p> <p>Maintain plant during two years operation to prove maintenance costs are agreed.</p>
<p><i>Consultant – Detailed Reticulation Design Harrison & Grierson</i></p>	<p>Develop a detailed design for the Reticulation:</p> <ul style="list-style-type: none"> • Design and specification for the purchase of grinder pumps sets • Pipework design • Detailed design within each property • Detailed costing of proposal • Design detail specific enough to hand over to construction contractor
<p><i>Contractor – grinder pump sets supplier</i></p>	<p>Supply grinder pump sets and boundary units</p> <ul style="list-style-type: none"> • Within agreed timeframe • To agreed cost • At agreed specification
<p><i>Contractor – Construction of Reticulation</i></p>	<p>Reticulation of wastewater pipework and grinder pump sets installation:</p> <ul style="list-style-type: none"> • Within agreed timeframe • To agreed cost • At agreed specification
<p>Communication Plan</p>	
<p>Internal</p>	<p>Project Manager to organise regular team meetings to monitor progress and ensure communication across the Project Team. Meetings to be held fortnightly or as required, reducing to monthly as the project moves to the construction phase.</p> <p>The Matatā Project Control Group to meet six weekly to review progress of project, including making recommendations to WDC if required.</p> <p>Project Manager prepares fortnightly project status updates following fortnightly meetings, which will be distributed to the Project Team, the Matatā Project Control Group and the Executive.</p> <p>Wider staff communication occurs though updates on the intranet - Whoogle and milestones will be included in CE's staff update – Marty's Message.</p> <p>Elected Members are kept informed of progress through CE's Council update – Council Catch-up. Decisions will be made through the Council as required, including recommendations from the Matatā Project Control Group.</p>
<p>External</p>	<p>A Bi-monthly newsletter prepared for the Matatā community by the Public Affairs Manager, in conjunction with the Project Manager. This includes project updates and any new decisions or considerations for the project.</p> <p>Consultation on specific disposal options carried out as part of the project on an as needed basis to contribute towards the decision-making process.</p>
<p>Project Monitoring and Control</p>	
<p>Progress Reporting</p>	<p>The Project Manager provides a Status Report to the Project Sponsor every fortnight and distributes this to project team members, the Matatā Project Control Group and the Executive.</p>

Issue Management	Issues are identified and actioned via the project reporting and meetings described above. The Project Manager will initially endeavour to resolve issues and seek assistance from the Project Sponsor for resolution of more significant issues. The Matatā Project Control Group will also be involved in any high-level issue management if required.
Record Management	Records are managed following WDC's record management procedures.

2.4 Project Inputs

A wide range of scientific and technical investigations, WDC officer and adviser considerations and consultation output has fed into the development of the Proposed Wastewater Scheme. A summary of the input information includes the following:

- 1) Technical investigations including:
 - Natural hazard, constraints and risk assessment;
 - Wastewater flows and loads projection;
 - Current and previous alternatives assessment;
- 2) Scientific investigation and studies including:
 - Previous health impact assessment;
 - Hydrogeological effect assessment, water quality, ecological effects assessment, landscape and visual effects assessment, public health risk assessment and additional related documents.
- 3) Planning instruments assessment;
- 4) Project consultation deliberations and output to-date;
- 5) WDC Council Officers and Project Control Group deliberations to-date.

3 Needs and Drivers for the Wastewater Scheme

3.1 Existing On-site Sewage Disposal

The existing wastewater treatment and disposal system in Matatā is by individual concrete cast in septic tanks and on site ground disposal systems. Surveys undertaken in 2004 indicated that a significant percentage of the septic tanks are not working for one reason or another. Further survey of septic tanks was carried in October 2012. It found that many residents use soak holes together with their effluent fields. At least 15-20% residents separate their grey water from their black water and dispose of either onto their lawns or gardens, into soak holes or in one case, directly to the stream. In the majority of cases, effluent fields are small taking into consideration likely soakage rates. The Matatā area is not well suited to septic tank effluent fields due to a high groundwater table in parts and poor drainage of the soils.

Whakatāne District Council has been investigating options for wastewater disposal for Matatā since 2003, when a health impact assessment identified some issues with septic tanks systems in the area. Over the years Matatā residents have been complaining of health nuisance concerning septic tank and/effluent disposal type problems or similar. This has prompted further investigations by the WDC and number of WDC decisions based on the outcomes and recommendations of these investigations. These historical reports and investigations are summarised below.

3.2 Public Health and Environmental Situation

3.2.1 Matatā Wastewater Scheme Health Impact Assessment by Opus International Consultants, 15 June 2004

In 2004 a Health Impact Assessment (HIA) was prepared by Opus International Consultants to support WDC's application for funding from the MoH to install a reticulated treatment and disposal system for Matatā wastewater under the SWSS.

The Opus 2004 report declared that continued use of septic tanks was not an option for Matatā due to ground conditions being unsuitable for effluent fields, particularly due to high water tables. Evidence for problems with septic tanks was supported by:

- History of poor performance reported by WDC, and described in the WDC Records.
- Requirement for upgrades of septic tanks based on anecdotal reports by residents across the township (not just where the water table is high), of which some of the upgrades were recorded by WDC.

Five potential exposure pathways were identified:

- Failure of wastewater fields leading to surface contamination of sections with potential for exposure of children playing outside and pets carrying contaminants inside dwellings. Support for wastewater field failures was derived from WDC's records, where complaints from the public about effluent seepage and odour problems led to investigations by WDC.
- Contamination of surface streams with septic wastewater leading to exposure of children playing in streams. Bacterial monitoring in 2004 showed elevated levels of E. coli after rain (increase from 460 cfu/100ml upstream of the township to 4600 cfu/100ml downstream, in the Waimea stream), as well as increases in nitrate levels.
- Contamination of Matatā lagoon with wastewater leading to exposure via boating and fishing or (limited) swimming (regarded as much less likely than the two exposure pathways above).
- Contamination of water supply by negative pressures occurring in potable water reticulation pipes drawing in contaminated groundwater. E. coli had been found in drinking water samples, leading to a periodic requirement for chlorination of the reticulated drinking-water.
- Contamination of open coast (not considered likely)

The first two exposure routes (poor septic tank performance and required up-grades of some septic systems) were regarded as a particular problem after rainfall due to the high water table.

Notified disease data provided by Toi Te Ora Public Health Unit were reviewed by Opus. From 1987 to 2003 reported cases from Matatā (population approximately 670) were six of campylobacteriosis and one of salmonellosis. It was claimed in the Opus 2004 HIA that the incidence of campylobacteriosis was higher in Matatā than for the Whakatāne District as a whole, apparently based on campylobacteriosis being a higher proportion of all notified cases from Matatā, compared to Whakatāne. However a total of six cases over 16 years from a population of 670 represents a low reported rate by national standards. For Matatā the average annual rate of about 56 per 100,000 was at a period when the national notification rate of campylobacteriosis rose from 100 to 300 per 100,000.

The proposed reticulated scheme was considered by Opus to remove all of the main exposure pathways (except in the extreme circumstances of reticulation overflows).

3.2.2 Public Health Impact Assessment Update by Harrison and Grierson Consultants, December 2009

The HIA was updated in December 2009 by Harrison and Grierson Consultants. Part of this update included updated notifiable disease data from 2004 – 2009. Over this period one additional case of campylobacteriosis, two cases of salmonellosis, one case of giardiasis, and one of leptospirosis were reported. The Harrison and Grierson Consultants' report claimed that the incidence of these three diseases increased from 1987 compared to the 2003 data.

3.2.3 Bay of Plenty Regional Council Environmental Testing

The BoPRC undertook environmental testing in early 2012 and provided the following conclusion after analysis of results.

“Generally the results are similar to previous results around Matatā reported by Scholes in ‘Investigation of On-Site Effluent Disposal, Matatā’, Environment Bay of Plenty Environmental Publication 2005/04, May 2005.

The Waitepuru Stream and Waimea Stream do show some contamination likely to be of septic tank origin. However, there may be some additional influences from rural (or other) sources. Groundwater seemed to show no contamination from septic sources to this stage.

Groundwaters showed no indicator bacterial contamination from septic sources, with the exception of a spring opposite the Matatā Hotel. This may indicate some preferential flow paths or failing systems that contribute to contamination.

Bay of Plenty Regional Council received a complaint less than two weeks after the sampling regarding a property where the occupiers were pumping from their septic tank to the Waimea Stream at night. This complaint was later substantiated and may have been a contributor to the elevation found in the drain west of the Matatā Hotel in October of 2011.

Groundwaters sampled showed little contamination indicating preferential flow paths contaminating surface waters and/or other contaminant sources.”

3.2.4 Public Health Risk Assessment 2012 by Environmental Science and Research (ESR)/Beca

The PHRA report provided by ESR considered the previous HIA and reviewed the data available from those studies. It concluded that:

“There is not a compelling case for the introduction of a reticulated sewage disposal system in Matatā on the basis of risk to human health.”

The above conclusion is based on the following observations:

- Based on review of the notifiable disease and outbreak database EpiSurv. Reported disease incidence in Matatā is not elevated compared to the wider Whakatāne District area.
- Microbiological monitoring by both BoPRC and ESR/Beca indicate elevated E. coli numbers in the downstream part of Waitepuru Stream, Waimea Stream, and the Clark

Road Drain. The Waitepuru and Waimea Stream E. coli levels are not dissimilar to typical streams in reticulated sewage areas.

- Faecal source tracking analysis indicates that the stream water contamination is not consistent with raw human sewage. Some septic tank seepage may be getting into some of surface waters, but it has undergone a degree of treatment in the septic tanks and in passage through soil.
- However, the Clark Road drain and a pipe near the Matatā Hotel have had high numbers of E.coli, and are consistent with inadequately treated sewage. These should be investigated to track down the sources.
- Limited sampling of groundwater in Matatā revealed very low levels of E. coli (below the detection limit in this study).
- 2004 water quality testing results were hampered by high levels of E. coli at upstream sites before the streams enter the township. E. coli at upstream sites taken in 2011 and 2012 have been very low, with previous upstream sources no longer a significant factor in the microbial load of the streams.
- Council records and the survey responses indicate that problems with septic tanks and effluent disposal fields have occurred in Matatā, and some remediation work has been undertaken.
- Assessment of the onsite wastewater disposal systems using Auckland Healthcare Guidelines indicates potential issues with septic tanks, but environmental conditions are not such that septic tanks or some more advanced processes cannot be used for most properties if properly designed, installed and maintained.
- Residents are divided over the need for reticulation of sewage. Some report problems with their septic tanks, which in some cases it would appear they have rectified. Most residents are not aware of problems with their septic tanks.
- Arguably of most importance, contamination of the water is unlikely to result in disease because:
 - a. drinking water is reticulated from elsewhere,
 - b. there is no swimming in the streams or lagoon,
 - c. other recreational activities in the streams or lagoon would provide limited exposure, and
 - d. mahinga kai are not harvested from these waters.

However the report highlights that some on-site septic systems in Matatā are not functioning adequately and that the installation of a reticulated system would have benefits (and costs). The report also recommends a series of actions if WDC decides not to reticulate or if reticulation is to be significantly delayed.

The PHRA recommends a series of actions that WDC could undertake if it decided that a fully reticulated system at Matatā is not required but that further action is needed to address local issues in isolated areas at Matatā. These actions are required to understand the condition and efficiency of some septic tank systems and to determine appropriate rectification options.

The investigation actions included:

- Property inspections and maintenance advice to property owners;
- Water reduction initiatives and drainage/stormwater improvements;
- Initial targeting of identified priority areas; and
- Community Education.

Investigation actions were further developed through the Beca advice to include:

- Ground water monitoring;
- Soil investigations;

- Development of a field inspection team;
- Public consultation; and
- Discussions and consideration of appropriate lot size for onsite sewage disposal at Matatā.

3.3 Community Involvement

Community consultation is an important aspect of this project and the special consultative procedure, as outlined in the LGA and Consultation Strategy (Supporting Document 1 of the AEE), was followed to ensure the community were given appropriate opportunity to submit on this project. Given the nature and scope of the project, a number of consultation processes were utilised, including general District-wide consultation and specific targeted consultation.

Consultation will continue to remain an important part of this project and consultation will continue with key stakeholders, including iwi, landowners and the wider Matatā community. This will continue through the further investigations and resource consenting processes as appropriate to the scheme type that WDC decide on. WDC's decision with regards to this decision will be communicated back to the community.

The Matatā Scheme has been considered for many years, with consultation on a proposed scheme starting back in 2004. Given that this is a major infrastructure project, consultation on this project has occurred in the context of the WDCs strategic corporate planning documents. Other targeted consultation has occurred with the community over the years Consultation on WDC's corporate planning documents is open to the whole community. A summary of the information is distributed to all households. Key stakeholders, including community groups and Iwi are asked if they would like WDC to attend one of their meetings to discuss the proposals in the plan. Public open days are held to discuss the proposals, and radio adverts, press releases, social media and rates flyers are all used to get the message into the community.

The Iwi Liaison Committee (ILC) has also provided a link between Iwi groups and the Council, with presentations made to ILC about the proposals in the corporate planning documents resulting in submissions made to Council by ILC.

Before the Matatā Debris Flow Disaster in 2005, public meetings were held in April 2004 and February 2005. However following the debris flows, the focus on Matatā moved towards stormwater and disaster mitigation.

The potential installation of a system has been included in the 2009-19 LTCCP and the 2012-2022 LTP. There is an expectation from the community that a system will be installed, provided funding is available and an appropriate system can be achieved.

In June 2012 consultation occurred with property owners in the form of a questionnaire. The results indicated that 41% of the community believed that a reticulated system is required in Matatā, 45% of the community believed that a reticulated system is not required in Matatā and 14% didn't know. These findings were communicated to the Community in the newsletter 'Matatā Wastewater Scheme – Project Review Summary 27 June 2012 and during the Community meeting on 31 July 2012.

In March 2013, WDC made a decision to consider three options for Matatā wastewater disposal. The three options were; don't install a reticulation system and rely on existing on site disposal systems, install a partial reticulation system for identified hot spot areas, or install a full reticulation system.

Whakatāne District Council consulted with the Matatā community and the wider District community on the three options. This consultation process included a community forum, market days, press releases, a Matatā community mail-out, a summary in the newspaper, social network updates and radio interviews.

Wider district communities presently serviced by reticulated sewer schemes were consulted through the Annual Plan consultation process.

Through the Annual Plan and Matatā special consultation process, which concluded on 12 April 2013, the WDC received 101 submissions in total on a Matatā Wastewater Scheme. Of these submissions, 88 were received from the Matatā community and 13 were received from the wider Whakatāne District Community. These results are shown in the pie diagram below in Figure 3-1.

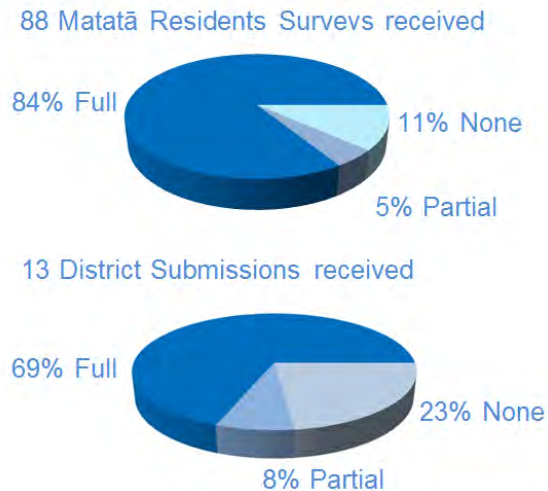


Figure 3-1: Results of Community Consultation on the Three Scheme Options

Submissions and feedback from the Matatā community indicate that 84% of the submitters are in favour of full reticulation, 5% for partial reticulation and 11% did not want any reticulation. The rest of the District submissions indicate that 69% of submitters are for full reticulation, 8% for partial reticulation and 23% did not support any reticulation in Matatā.

The feedback received from both the Matatā community and the wider District is strongly in favour of full reticulation.

On 20 May 2013 WDC approved Option 3 – Full reticulation as the preferred solution to a reticulation scheme in Matatā and informed the MoH of the WDC’s decision by 30 May 2013.

Following adoption of the Annual Plan 2013/14 all submitters received the letter informing them of the outcome of WDC’s decision. The letters were posted on 15 July 2013.

3.4 Summary of Key Drivers

This section presents a list of key drivers for a wastewater scheme in Matatā, summarising from the discussion above:

1. Public Health Consideration
 - a. Existing on-site septic tank disposal systems are mostly of over 20 years old, in poor conditions and have poor performance;
 - b. Failure of these septic tank systems could lead to increased exposure to disease-causing pathogens from the wastewater;
 - c. Complaints about odour issues have been recorded.
2. Environmental Consideration
 - a. The Matatā area is not well suited to septic tank fields due to a high groundwater table in parts and poor drainage of the soils;
 - b. Failure of these septic tanks systems could lead to increased risk of surface, water and groundwater contamination.
3. Cost Consideration
 - a. Replacement of the old septic tanks with new septic tanks and/or more advanced on site treatment systems will incur considerable cost per household and a longer term sustainable option is needed.
4. Community Feedback
 - a. The latest results of community consultation support a full wastewater reticulation system for Matatā.

4 Ministry of Health Sanitary Works Subsidy Scheme and Regional Council Grant

4.1 Background

Whakatāne District Council has been investigating options for wastewater disposal for Matatā since 2003, when a health impact assessment identified some issues with septic tanks systems in the area. In 2004, the cost of a gravity wastewater system with treatment and disposal to land was estimated to be \$4.03M. On the basis of that data, the Sanitary Works Subsidy Scheme (SWSS) of the Ministry of Health (MoH) approved a provisional sum of \$3.7M as a subsidy for the proposed wastewater reticulation and treatment plant for Matatā. All of the estimated costs exclude GST.

The Matatā debris flow disaster, which occurred in May 2005, put this project on hold; and in 2008 the WDC revisited the proposal. The cost estimate prepared in 2011 for a fully reticulated wastewater system in Matatā was approximately 10.5M. Following a revised provisional application in 2011, the MoH approved a provisional sum of \$6.7M for the project. The Council's funding requirement is approximately \$4M.

Affordability is a major issue for Matatā rate payers, who are already paying high rates due to disaster mitigation works carried out over the last 5 to 6 years.

In view of this situation, in late 2011 the WDC decided to review the original drivers for the project and to investigate whether a fully reticulated system is required in Matatā in the present context. The WDC engaged consultant CH2M Beca Limited (BECA) to carry out the review of the project including preparing a new Public Health Risk Assessment (PHRA).

As part of public consultation on the project, a questionnaire was sent to all Matatā residents to assess the public opinion on a fully reticulated wastewater system and to collect information on wastewater disposal issues in Matatā. The majority of the respondents were at that time not in favour of a fully reticulated system and only 11% of the respondents admitted to having a problem with the existing wastewater system.

Following the investigations and recommendation in the BECA report, WDC resolved not to proceed with the wastewater reticulation project at the time and to form a field investigation team, comprising of WDC and BoPRC staff, to investigate the hot spot areas in more detail and make recommendations on further action.

Inclusion of Matatā in the BoPRC's Maintenance Zone within the On-Site Effluent Treatment Plan for on-site effluent disposal may force some residences to install new septic tanks and/or more advanced on site treatment systems at considerable cost per household.

Rate equalisation across the Whakatāne District and the extension of MoH's subsidy made it possible for the WDC to look for sustainable and affordable options for the community solution of wastewater treatment and disposal.

In March 2013, WDC revisited the matter and made a decision to consider three options for Matatā wastewater disposal. The three options were; don't install a reticulation system and rely on existing on site disposal systems, install a partial reticulation system for identified hot spot areas, or install a full reticulation system.

The WDC consulted with the Matatā community and the wider Whakatāne District community on the three options and this time round received support to the full reticulation scheme.

On 20 May 2013 WDC approved Option 3 – Full reticulation as the preferred solution to a reticulation scheme in Matatā and informed the MoH of the WDC's decision by the SWSS deadline of 30 May 2013.

4.2 Approval Conditions for the Subsidy Granted

Whakatāne District Council secured a commitment of funding from the MoH for either a full or partial reticulation scheme. The MoH has granted provisional approval of \$6.7 million for a fully reticulated sewerage system in Matatā. The MoH confirmed that the subsidy already approved for a full reticulation system will be available on pro-rata basis, if the partial reticulation is pursued. Table 4-1 provides the MoH funding conditions for the Matatā scheme.

Table 4-1: Ministry of Health Funding Conditions

Due Date	Condition	WDC Action to Date
30 May 2013	WDC to inform the MoH of its decision on the wastewater scheme to be implemented (full, partial or none)	WDC informed the MoH on 30 May of the decision to implement full reticulation scheme.
31 December 2013	WDC to request tenders for the construction of the Proposed Wastewater Scheme	On 2 December tender documents for DBO are sent to shortlisted tenderers.
30 June 2014 OR 1 December 2014	WDC to confirm construction of a full reticulation scheme is underway WDC to confirm a partial reticulation scheme has been constructed and commissioned	

4.3 Progress and Approach to Uplift Subsidy

The following Table 4-2 outlines the key milestones in the progress and approach to uplifting the MoH subsidy.

Table 4-2: Outlines of Key Milestones

Date	Key Milestone
March 2013	WDC's decision to consult community on three options for reticulation
12 April 2013	Conclusion of consultations – community support for full Matatā Reticulation Scheme
May 2013	WDC engaged consultants (MWH New Zealand Ltd) to provide support and guidance with scheme development and resource consent application, and technical advisors (URS New Zealand Limited) to support AEE preparation and prepare tender documents for Design-Build-Operate (DBO) contract for wastewater treatment plant and land application
30 May 2013	WDC informed the MoH of the WDC's decision to proceed with full reticulation as the preferred solution to a reticulation scheme in Matatā
	Site investigation and GIS Risk Assessment and Multicriteria analysis
June 2013	Employment of Project Manager
	Public Consultations
August 2013	Finalising sites for WWTP and Land Application
September – October 2013	Hydrogeological and geotechnical investigations and public health assessment
	Cultural Impact Assessment and iwi consultations
16 September 2013	Request for tenders for design of wastewater reticulation and grinder pump sets
14 October 2013	Selecting design consultant of wastewater reticulation and grinder pump sets
10 December 2013	Design of reticulation completed
16 December 2013	Tenders for construction of low pressure wastewater reticulation system in Matatā

Date	Key Milestone
16 December 2013	Tenders for provision of grinder pump sets
23 September 2013	Request for Expression of Interest for DBO contract for WWTP and Land Application
30 October 2013	Shortlisting tenderers notified
2 December 2013	Issue 75% Draft Tender Document to shortlisted Tenderers for Design-Built-Operate WWTP and Land Application Field
2 December 2013	Lodgement of Resource Consents and Notices of Requirements application
15 April 2014	Start of construction of wastewater reticulation;
15 June 2014	Start of WWTP construction

4.4 Bay of Plenty Regional Council Grant

The BoPRC released its Draft Annual Plan 2013/14 in March 2013 and at that time WDC requested some direct funding for the Matatā Wastewater Scheme. The WDC noted in its submission the importance of this project for the community and natural environment. The WDC also submitted that a proposed wastewater reticulation scheme in Matatā complies with the BoPRC's Regional Assistance for Small-scale Sewerage Schemes Policy 2003. Based on the submission the BoPRC has granted \$1.88 million in its Annual Plan 2013/14. Notification was received from the BoPRC dated 8 July 2013 to confirm this and to outline conditions of funding approval as outlined below:

- Funds must be invoiced before 31 March in the year after the funding is allocated;
- The BoPRC is satisfied that robust analysis determines that the final option selected is the most cost-effective solution;
- Central Government funding is used for capital expenses and any surplus funds not required for capital works will not be released by BoPRC; and
- Appropriate resource consents are obtained.

5 Description of the Proposed Wastewater Scheme

5.1 Introduction

This section of the AEE sets out the basis and inputs that feed into the development of the Proposed Wastewater Scheme. Important inputs include the area and population to be serviced, the wastewater volumes, flows and loads, scheme operation and asset management procedures and risk considerations.

The Proposed Wastewater Scheme consists of three main components, namely 1) individual property grinder pumps and the pressure sewer collection and wastewater conveyance system, 2) wastewater treatment system and conveyance to the Land Application Field and 3) treated wastewater Land Application Field. Section 5.4 introduces the Proposed Scheme layout and a generalised schematic. These scheme components are discussed in Section 5.5 below.

This section concludes with setting out the rationale for the Proposed Wastewater Scheme by assessing against the Project Vision, key Objectives and other key Drivers. The Project Vision, key Objectives and Drivers are set in Sections 2 and 3 of this AEE.

5.2 Population and Area to be Serviced by the Scheme

The Proposed Wastewater Scheme will initially be set up to service the Matatā township, collecting and treating primarily domestic wastewater. The catchment is shown graphically in Figure 5-2 of Section 5.4. The Proposed Wastewater Scheme includes the wastewater from the Department of Conservation (DoC) camp ground.

The current and projected future Matatā population that will be serviced by the Proposed Wastewater Scheme are sourced from the report – Flowrate and Mass Load Assessment for Determination of Land Disposal Area Requirements, prepared by URS on 14 June 2013. This is included in Support Document 3 to the AEE.

The large majority of the wastewater flows and loads will be sourced from residential domestic wastewater. Based on the 2006 Census, there are approximately 642 residents in Matatā with a total number of 243 dwellings, equivalent to approximately 2.64 persons per household. Other significant wastewater sources include the (future) camping ground and Matatā Primary School. There are three marae in Matatā and a fire brigade with up to 23 volunteer fire fighters. With limited information being available regarding the marae attendance and council toilets water usage, similar wastewater production allowances has been assumed as those for Maketu WWTP.

The proposed Matatā WWTP will be designed based on a population projection for the next 50 years, but will be initially constructed for 20 years capacity. The population projection covers a 50 year horizon, as per the design capacity. According to an initial future growth assessment (WDC, 2013), the total number of residential dwellings (lots) may increase by up to 500 in the long term. In addition, with expected tourism growth, the total number of camping sites may be increased from 100 to 200. Occupation rate on the camp ground is assumed to be the same as current residential dwelling occupation rate. The Matatā Primary School currently has a total enrolment of 79 students and 13 staff members¹. The total number of people at the school may increase to approximately 190 if the similar growth rate as the general Matatā population is assumed.

The present (as per 2006 Census) and projected population equivalent in 50 years (i.e. 2056) in Matatā are presented in Table 5-1 below. The projection covers the proposed 35 year consent duration sought by WDC.

¹ Information sourced from TKI Te KETE IPURANGI, Ministry of Education and Matatā School website.

Table 5-1: Current and Projected Population Equivalent

Sources	Present as per 2006 Census	Projection in 2056
Residential dwelling population	642	1,320
Camp ground	264	528
Primary School	92	190
Others including Maraes, local business, fire station and council toilets etc.	71	150
Total Population Equivalent	1,069	2,188

5.3 Predicted Wastewater Volumes, Flows and Loads

5.3.1 Predicted Wastewater Volumes and Flows

The projected predicted wastewater flows and loads information is taken from the report – Flowrate and Mass Load Assessment for Determination of Land Disposal Area Requirements, prepared by URS on 14 June 2013. This is included in Support Document 3.

The average daily flow rates (ADF) for peak occupation based on the above population figures are provided in Table 5-2. This is estimated based on a per capita flow rate of 250 L/capita/day for residential, 150 L/capita/day for the camp ground and 60 L/capita/day for the Primary School. These per capita flow rates are higher than typical wastewater design flow rates in AS/NZS 1547: 2012. However they are considered realistic based on URS's previous experience. Detailed investigation may be required to obtain the accurate per capita flow allowance in Matatā.

The maximum peak daily flow rate into the treatment facility would occur during wet weather, however with the proposed type of sealed pressure system there is a relatively small amount of inflow and infiltration during wet weather as compared to a (conventional) gravity system. It is important to minimise the volumes of wastewater entering the treatment plant in order to minimise capital and operating costs. Therefore the average wet weather flows (AWWF) have been estimated to be approximately 10% more than the ADF based on typical guideline values used for well-installed and well-maintained small diameter/pressure reticulation systems, where new continuous pipework will be laid throughout the scheme including from the existing gully traps to the new grinder pump chambers for each household. The 10% figure also assumes (as was also used at Maketu WWTP) that WDC or its agents will ensure that all existing and new gully traps will be surveyed for level and raised as necessary to minimise stormwater ingress into the new wastewater system.

Table 5-2: Present and Project Wastewater Volumes and Flows

Sources	Present based on 2006 Population		Projection in 2056	
	ADF (m ³ /day)	AWWF (m ³ /day)	ADF (m ³ /day)	AWWF (m ³ /day)
Residential	161	177	331	364
Camp ground	40	44	80	88
Primary school	6	6	12	12
Others including Maraes, local business, fire station and council toilets etc. ¹	62	--	126	--
Total²	269	296	549 (allow for 550)	604 (allow for 605)

Notes:

1: Other allowances include maraes, local businesses, fire station, council toilets, etc., based on Maketu WWTP flow estimates.

2: Total Matatā wastewater flow was based on typical domestic wastewater design flow allowance and peak occupancy of the camping ground. It is understood that there are no private residential geothermal bores with spa pools in the community as these can significantly increase water and wastewater volumes.

As indicated in Table 5-2 the future AWWF for the Matatā WWTP is estimated to be 605 m³/day, assuming the wet weather event occurs at the same time as peak occupancy. This is considered a reasonable assumption, as cyclones with high rainfall do occur during peak holiday seasons in this area.

According to WDC's water supply record, the average monthly water demand at Matatā is currently 8,500 m³/month (winter) or 11,000 m³/month (summer). This is broadly equivalent to a daily wastewater production of 213 m³/day (winter) or 275 m³/day (summer), assuming that wastewater is approximately 75% of water usage. This is relatively consistent with the estimated current summer daily average flow of 269 m³/day (shown in Table 5-2), which assumes 100% occupancy at the camp ground; and the estimated current winter daily average flow of 228 m³/day (data not shown in Table 5-2), which assumes 0% occupancy at the camp ground.

5.3.2 Typical Wastewater Contaminant Mass Loads

In the absence of any raw wastewater sampling data for Matatā, the recently collected raw wastewater data from Maketu WWTP is considered representative of what is to be expected at Matatā. This is because the Maketu WWTP services a similar community as Matatā in terms of community size and water usage, treats primarily domestic wastewater and has a grinder pump system similar to what is proposed at Matatā. The main difference between the two communities is that Maketu has some tradewaste discharges to the reticulation system, whilst Matatā has very little.

Table 5-3 lists the sampling results of the raw domestic wastewater from Maketu WWTP from 2012 to 2013, and the adopted raw wastewater concentration and mass load for Matatā. The typical constituents shown include carbonaceous Biological Oxygen Demand (cBOD₅), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Ammoniacal Nitrogen (NH₄-N), Organic Nitrogen (Org-N), Total Kjeldahl Nitrogen (TKN), Total Nitrogen (TN), Dissolved Reactive Phosphorous (DRP), Total Phosphorous (TP) and Oil & Grease (O&G).

Table 5-3: Typical Wastewater Mass Load

Typical Constituent	Maketu WWTP Raw Wastewater Concentration (mg/L)			Adopted Matatā Wastewater Concentration ¹ (mg/L)	Matatā Wastewater Mass Load – ADF (2056) (kg/day)
	Minimum	Median	Maximum		
cBOD ₅	71	374	707	375	206
COD	134	658	1701	660	363
TSS	76	320	1533	320	176
NH ₄ -N	5.0	57	90	60	33
Org-N	6.0	17	33	17	9
TKN	16	75	123	75	41
TN	16	75	123	75	41
DRP	1.3	7.5	14	7.5	4
TP	3.0	9.5	19	9.5	5
O&G	11	60	230	60	33

Notes: 1. Median values are presented here as a preliminary indication of the likely strength of the raw wastewater for Matatā WWTP. Actual sizing of process units shall be based on maximum daily mass loading based on the population equivalent in year 2056.

5.4 Scheme Concept and Layout

The Proposed Scheme consists of the following three main components:

1. Low Pressure Wastewater System including:
 - a. Low Pressure Grinder Pump System within individual properties;
 - b. Wastewater Reticulation System from individual property boundaries to WWTP.
2. WWTP and Conveyance to Land Application Field
3. Treated Wastewater Land Application Field

These components and their inter-linkages are illustrated in the generalised schematic in Figure 5-1 below.

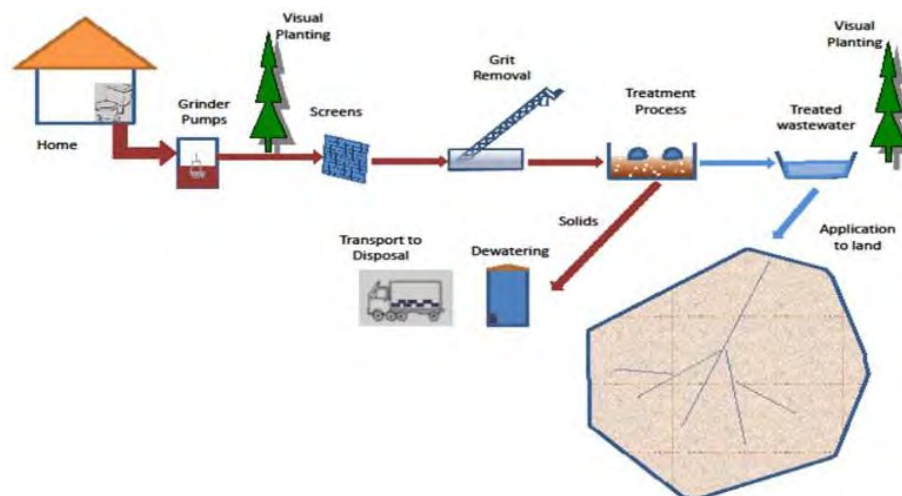


Figure 5-1: Generalised Schematic of the Proposed Wastewater Scheme

A Proposed Wastewater Scheme concept and layout plan is demonstrated in Figure 5-2 below. The proposed WWTP will be located near to Thornton Road within a site denoted as site G during the site selection process (see Section 6). Site G is hereafter referred to as the WWTP site.

Raw wastewater collected from the Matatā township and DoC Campsite within the pressure sewer and grinder pump collection catchment (marked with green boundary) is delivered via the pressure sewer conveyance system (marked in red) to the WWTP site for treatment. The WWTP site is located just about 200m from the wastewater catchment boundary.

The treated wastewater is then conveyed via a 4 km pipeline (marked in yellow) to the Land Application Field of approximately 4ha, situated within the Western Recreation Reserve. The Western Recreation Reserve, denoted as site 8 at the site selection process (see Section 6), is owned and managed by WDC.

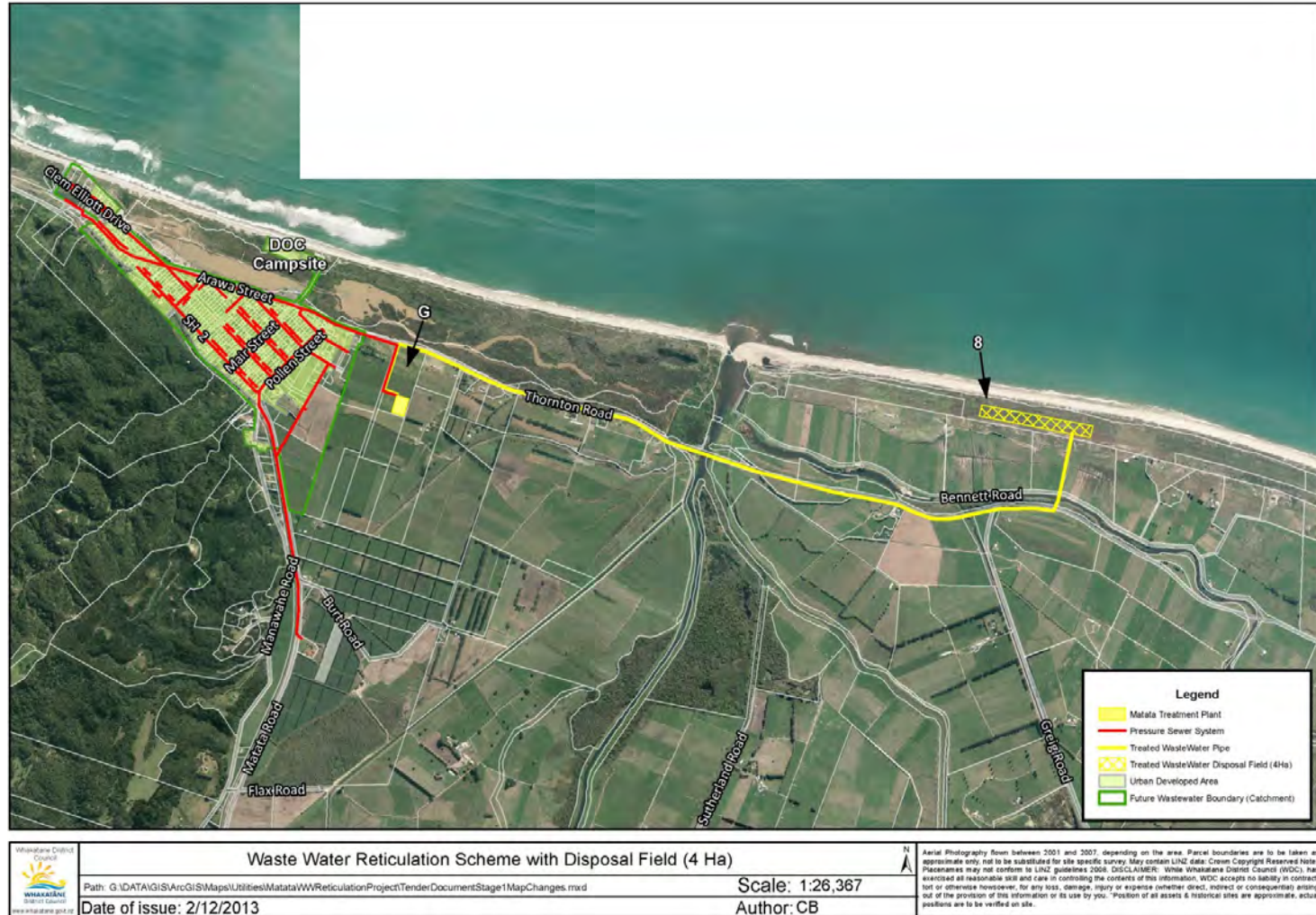


Figure 5-2: The Proposed Wastewater Scheme Concept and Layout Plan

5.5 Scheme Components

5.5.1 Low Pressure Wastewater System

5.5.1.1 Low Pressure Grinder Pump System within Individual Properties

Low Pressure Grinder Pump (LPGP) systems are used to collect and convey wastewater from properties that generate relatively low flows and convey (pump) these flows to a discharge location some distance away from the source of the wastewater. They are used as an alternative to the conventional gravity type drainage systems or wastewater disposal system that retain septic tanks on individual properties.

The LPGP system consists of a polyethylene or fibreglass chamber into which a single electric grinder pump is installed, as shown in Photos A and C of Figure 5-3. The system essentially comprises of five main elements:

- A boundary valve assembly to prevent backflow (Photo D of Figure 5-3);
- A collection tank (Photo A) and grinder pump (Photo C of Figure 5-3);
- A pump discharge line, that goes from the tank to the street main;
- The electrical power controls and alarm located on the outside of the house (Photo E of Figure 5-3); and
- The house service line to the grinder pump/collection tank.

The grinder pump has the function of grinding up any solids entering the pump, with resulting liquid slurry being pumped into WDC's wastewater network through the pressure main which can be reduced to a small diameter. The chamber is typically about 2m in height, all of which is buried underground except for the access lid. The access lid protrudes typically up to 100mm above ground level, is typically 700mm in diameter and green in colour (Photo B). Although the access lid will protrude above ground, the edges can be covered with bark where situated within gardens, or have non-permanent structures placed over them e.g. rocks, garden furniture.

WDC's policy is to cover the construction, maintenance and operation of the system, and have decided that:

- The construction of systems on individual properties will be included as part of the whole wastewater scheme for the particular area.
- Maintenance of the systems to be undertaken by WDC and the cost recovered through annual rates.
- Operation (power cost) to be paid for by the property owner as part of their domestic power bill.
- WDC will own the grinder pump chambers and valve assembly and pipework for the grinder pump stations.

The low pressure grinder pump systems will have no discernible odour, as the pumps will operate once wastewater enters into the system, and triggers the pumping level control and pumps it out into the main line.

The low pressure grinder pump collection tank system alarm will need to be monitored by the property owner and/or neighbours. The collection tank has a minimum capacity of at least 24 hours storage.



Figure 5-3: Photographs (A – E) showing a typical Low Pressure Grinder Pump System

5.5.1.2 Wastewater Reticulation System from Individual Property Boundaries to Wastewater Treatment Plant

The wastewater reticulation system will consist of welded small diameter polyethylene (PE) pipes (typically 50 – 100 mm diameter). The pipe network will include all reticulation pipes from the boundary assembly units of the serviced lots up to the boundary of access road to the WWTP site. All existing lots with houses or other buildings within the wastewater boundary will be provided with a connection. The pipe diameters will be determined taking into account the full potential future development within the wastewater boundary.

The network currently is being designed (design contract awarded to Harrison & Grierson), but it is expected, that a booster pump station will not be required as the individual pumps should generate enough head to overcome the hydraulic losses between the catchment and WWTP.

5.5.2 Wastewater Treatment Plant and Conveyance to Land Application Field

The WWTP and land application will be designed and constructed using a Design-Build-Operate (DBO) contract. Details of the selection and implementation procedures for the DBO contract are discussed in Section 5.7. The key advantage of DBO contract is for WDC to have access to advanced technology often available in proprietary equipment through competitive tendering process. However, for the same

reason, the actual design/process/size of the WWTP is unknown at this consenting stage. Such a process has been successfully used in other wastewater consenting processes providing the envelope of environmental effects is appropriately identified and the effects assessment appropriately undertaken.

Key components of the WWTP design are available from the Employer's Requirement Technical Specification 402 Design Criteria. At the time of preparing this AEE, the Employer's Requirement Technical Specification is at 75% final stage and is to be released to shortlisted tenderers. However the information still provides a high level understanding of the key treatment components required by the DBO contract.

The key treatment components associated with the WWTP site and the conveyance pipelines to the Land Application Field include the following. This information is taken from the Employer's Requirement Technical Specification.

1. *"The preferred treatment shall be by using a biological process capable of biological nutrient removal and being staged to allow for flexibility, growth and to minimise operational and maintenance costs. Provide flexibility in the design to manage more stringent nutrient removal in the future if required.*
2. *Inlet works including screening and if necessary an inlet holding tank to manage flows into the wastewater treatment plant at Thornton Road.*
3. *Storage of wastewater after biological treatment/filtering, and prior to land treatment and disposal, to balance flows to the land application field.*
4. *Mechanical equipment to provide air to the system(s) and pumps to distribute wastewater between the treatment processes.*
5. *A facility is required to either readily connect standby generators to the Works.*
6. *Storage of raw sewage for periods in excess of two hours at the Thornton Road site shall be avoided.*
7. *Wastewater treatment processes that could produce odour are to be covered and odorous air extracted and treated to meet consent requirements.*
8. *Provide sludge dewatering facility including covered holding bins.*
9. *Sludge consolidation and storage of dewatered sludge in holding tanks prior to removal off site.*
10. *Pipelines and ducts between the wastewater treatment plant and land application field in a common trench line to include the treatment wastewater transfer main to the land application field, flushing return main from the land application field duct housing power and communications cabling.*
11. *Electrical control and instrumentation including provision for telemetry."*

The footprint of the WWTP site, taken into account for providing maximum flexibility and allowance for expansion to accommodate future growth in Matatā, has been established to be approximately 45m x 120m. An environmental protection buffer will extend 20m from the treatment plant boundary, thereby giving a buffered footprint of 85m x 160m. The environmental buffer is designed primarily for odour and noise control purposes, such that no objectionable odour or noise will be expected beyond the zone boundary.

Access to the WWTP will be via a proposed access road to the Thornton Road.

A plan view of the WWTP site, access road to the site and NoR designation is shown in Figure 5-4.



Figure 5-4: Layout of NoR Designation of WWTP Site and Access Road

A 3-D visualisation of the WWTP site and buffer zone footprint and the proposed access road is shown in Figure 5-5 below.

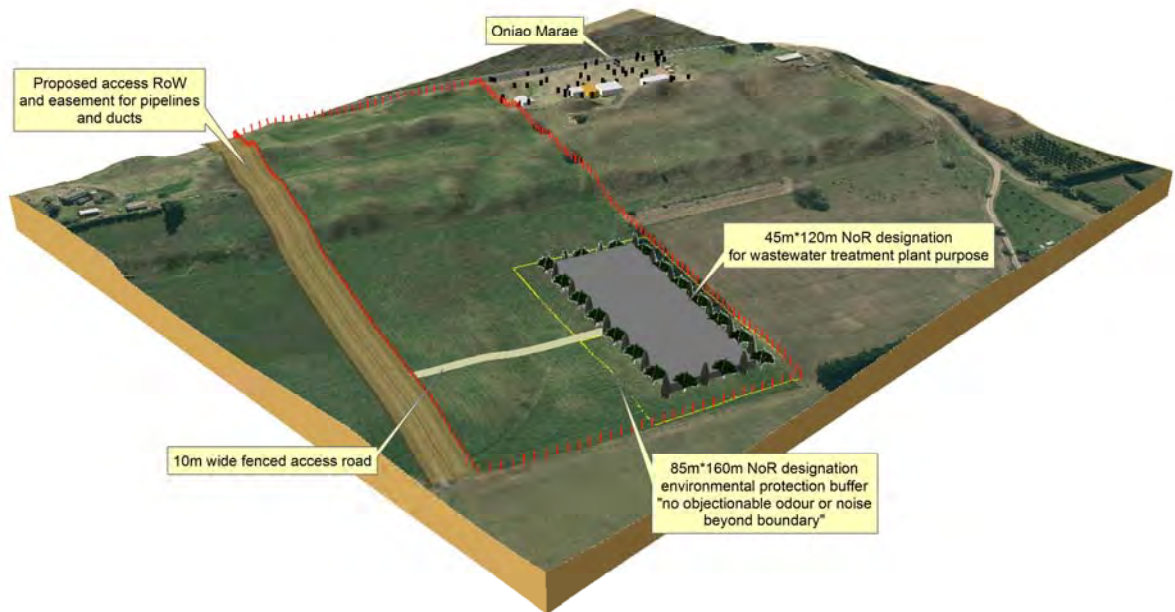


Figure 5-5: 3-D Visualisation of the WWTP Site

A proposed layout plan of the WWTP is also included in Figure 5-6 below.

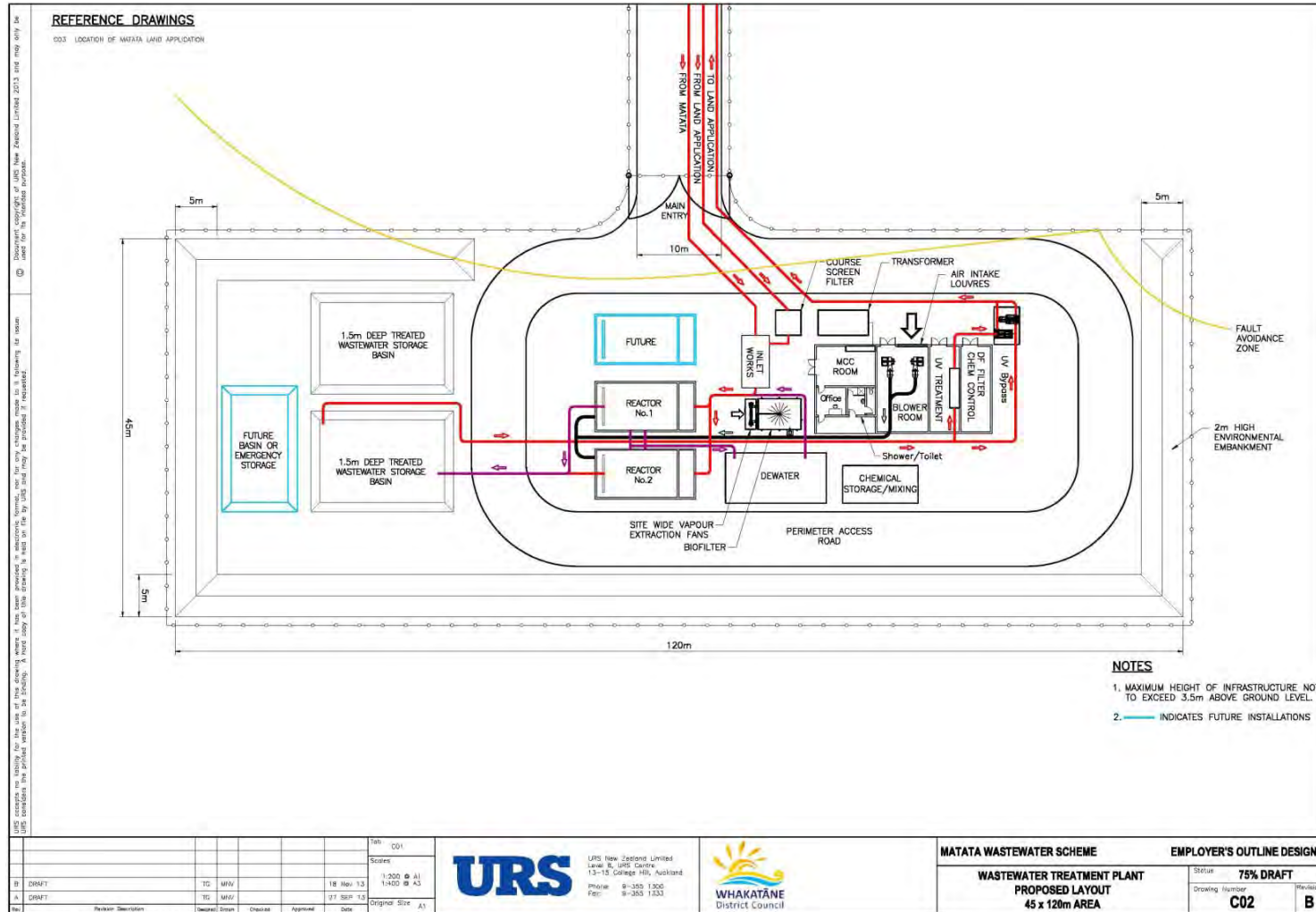


Figure 5-6: Proposed Layout Plan of the WWTTP

The quality of treated wastewater proposed to be discharged to the Land Application Field is outlined in Table 5-4. The proposed values are taken from the reports prepared by URS, *Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment* (refer Support Document 5), and *Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment* (refer Support Document 6). It is noted in the above referenced URS reports that:

“The targeted wastewater constituents’ levels are developed based on experience obtained from wastewater treatment plants treating sewage generated by a similar community size with similar unit processes. These figures provide indicative levels for key constituents that the proposed WWTP effluent may be obliged to comply with, based on consent conditions issued by local authorities for similar WWTPs.”

Table 5-4: Proposed Treated Wastewater Quality

Performance Parameter	Unit	Proposed 10 out of 12 Samples Compliance Limit
cBOD ₅	g/m ³	30
NH ₃ -N	g/m ³	5
NO ₃ -N	g/m ³	10
TN	g/m ³	15
TP	g/m ³	10
Suspended solids	g/m ³	30
pH	SU	6.5 – 7.5 (outside of range)

5.5.3 Treated Wastewater Land Application Field

The proposed treated wastewater Land Application Field is located within the Western Recreation Reserve. Figure 5-7 below shows photographs of the Reserve.



A: Inland Boundary on Sandy Ridge



B: Grazed Inland Area



C: Native Vegetation on Seaward Side of Grazed Area

Figure 5-7: Photographs (A – C) showing the Western Recreation Reserve

The Land Application Field is designed to have an area of approximately 4.6 hectares. Figure 5-8 is a plan view of the NoR designation of the Land Application Field and its proposed access road.

The location and sizing of the proposed Land Application Field relative to the Western Recreation Reserve is illustrated in Figure 5-9 below. The Land Application Field will be installed by a mole plough pipe laying method or similar method to minimise surface disturbance of the dunes as far as possible. No vegetation clearance is planned. Details of the associated earthworks are described in the following section.



Figure 5-8: Layout of NoR Designation of Land Application Field and Access Road

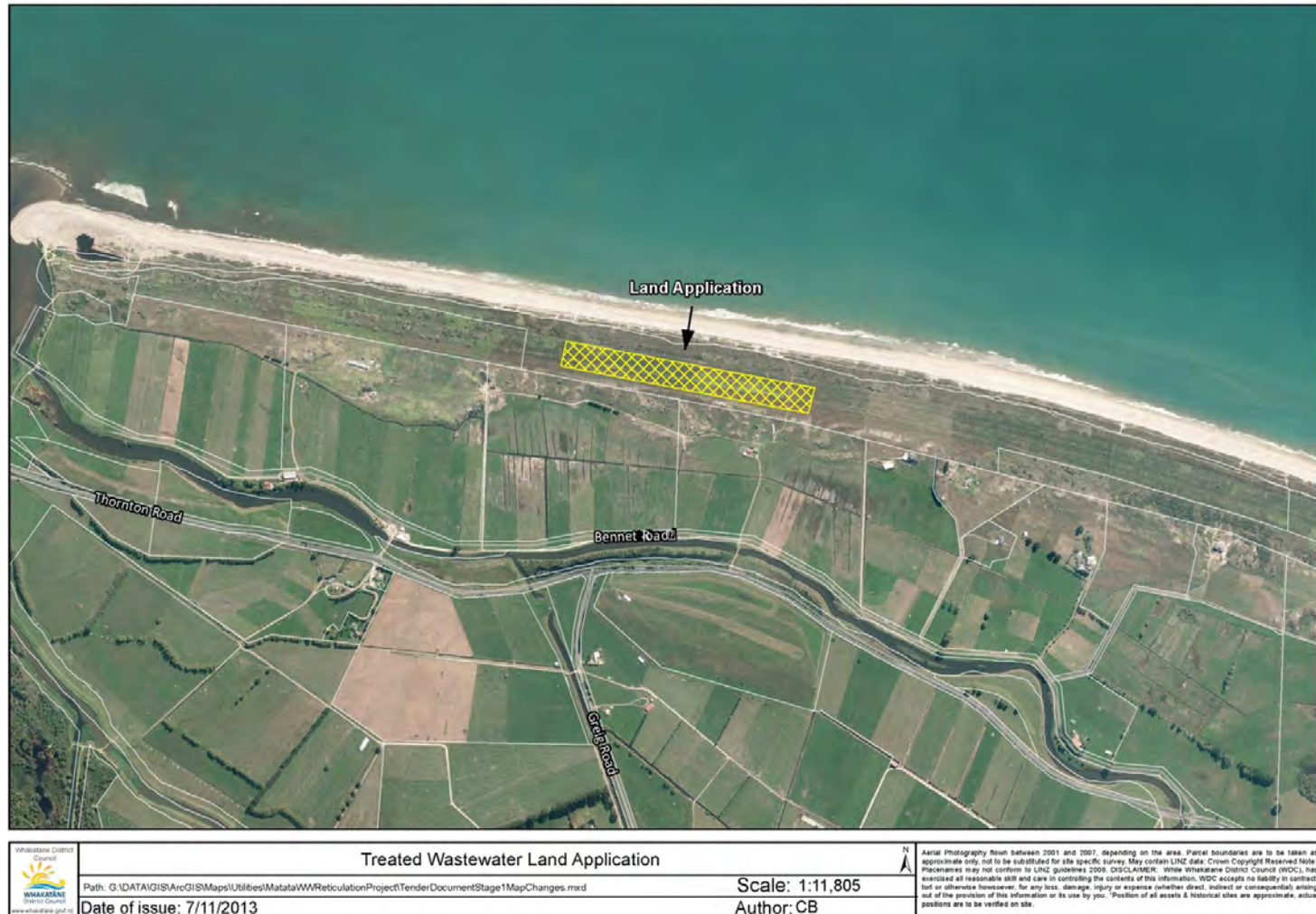


Figure 5-9: Illustration of the Proposed Land Application Field within the Western Recreation Reserve

The land application system will use a sub-surface drip system. However the design and construction of the land application system, as discussed in Section 5.5.2, like the WWTP will follow a DBO contract approach. The actual design of the sub-surface drip system is therefore unknown at this stage.

The key components of the land application system, based on the draft Employer's Requirement Technical Specification, may include:

1. *"Disposal of the treated effluent via sub-surface ground soakage to a land application field.*
2. *Provision of a sub-surface drip disposal land application field and associated filters, control valves, flushing return pump station, security and communications.*
3. *Treated effluent pump station and associated rising main to the land application field including all power and communications conduits.*
4. *Return pressure main to the treatment plant from the flushing pump station."*

Based on the investigations of local geological and hydrogeological conditions, as taken from the report *Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment* (refer Support Document 5), dune sands at the Land Application Field are considered to be consistent with a Soil Category 2-3 (AS/NZS 1547:2012²) soil type. Where high rate sub-surface drip (SRI) irrigation is proposed, a long term loading rate in the order of 30mm/day is considered to be appropriate. The same report further explains the proposed land application regime as follows:

"The proposed application rate has an upper bound of 605m³/day, allowing for continued growth in the Matatā Township. At the adopted soil acceptance rate of 30mm/day, approximately 2ha of dunes is required to be available for land application at any point in time.

A total land area of approximately 4ha is available for land application of treated wastewater. On the basis that only 2ha is required to achieve application of the maximum proposed rate (605 m³/day), the excess land provides capacity to rest the disposal fields. Doing so allows for maintenance of soakage efficiency of soils and mitigation of significant increases in groundwater level. Two application fields of 2ha each (east and west fields) are proposed to be operated in a nominal 7 day cycle of application (7 days on, 7 days off). It is envisaged that optimisation of the field cycling regime would be carried out as part of detailed design and during the initial stages operation."

5.6 Earthworks

Earthworks and vegetation clearance will be required to construct the various components of the Wastewater Scheme as outlined below.

Wastewater Treatment Plant and Access:

Approximately 10,000m³ of earthworks will be required to construct the WWTP and the access road from Thornton Road to the WWTP site. These works will include general undercutting and foundations for the WWTP footprint, excavation for the storage basins and construction of the embankment. The resource consents for these earthworks will be sought at a later date.

Land Application Field Designation Area:

The Land Application Field will be installed utilising methods to protect the groundcover of the dunes as far as possible. During construction of the Land Application Field WDC require contractor to:

1. Ensure that no stripping of grass sward or topsoil is to occur;
2. Protect the groundcover of the dunes as far as possible;
3. Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar; and
4. Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.

The earthworks components at the Land Application Field include:

² Standards Australia Limited/Standards New Zealand, 2012, On-site domestic wastewater management.

- Approximately 4km of sub-surface dripper pipe and associated components of the land application system will be placed within an area of approximately 4 hectares. Up to 300mm of surface material may need to be disturbed along the pipeline vents over the 4 hectare Land Application Field, depending upon the installation method for the piping (mole plough or similar is requested).
- Other components of the land application system include trenching to install mains, submains and flushing pipelines (0.5m deep x 0.25m width), together with a small partially buried pump station (total size 1.8m x 1.8m x 1.8m) and various small chambers. The estimated total volume for these works is up to 550m³.
- A 6m wide access road, which will run along the southern boundary of the Land Application Field to connect with the access road on the adjoining property (see below), will need to be constructed for a length of approximately 600m. The volume of earthworks for the access is approximately 1125m³.

The total volume of earthworks at the Land Application Field is 4,900m³. All of these earthworks occur within the Erosion Hazard Zone as identified in the BoPRC Regional Water and Land Plan.

Access to Land Application Field over adjoining property at 1432B Bennett Road, Matatā:

Approximately 600m³ of earthworks will be required to create the access road to the Land Application Field over the existing vehicle access route (farm track) to the south of the site. Proposed works will include stormwater swales and a pipeline trench together with access lengthening and possibly upgrade over the full length. It is expected approximately 200m of the existing farm access track will need to be reconstructed and/or widened to a 6m width and approximately 140m of new 6m wide access road constructed. These earthworks will occur outside of the Erosion Hazard Zone.

The total volume of earthworks for the Land Application Field and access roads is 5,500m³. Of this 4,900 m³ is within the Erosion Hazard Zone.

5.7 Infrastructure Implementation Procedures

The WDC assessed various design and construction delivery options for the implementation of the proposed Matatā Wastewater Scheme.

The WDC was decided to have several separate contracts to provide WDC with greater control over implementation, while providing compliance with deadlines imposed by MoH subsidy. The key deadlines are:

- 31 December 2013 WDC to request tenders for the construction of the Proposed Wastewater Scheme
- 30 June 2014 WDC to confirm construction of a full reticulation scheme is underway

As previously set out, the Proposed Wastewater Scheme has been divided into three main parts: wastewater reticulation, grinder pump sets procurement and wastewater treatment plant with land application.

While waiting for granting of resource consents, it is necessary to progress with tenders for WWTP, separate tenders for reticulation and grinder pump sets to be carried out, thus providing compliance with MoH subsidy condition.

To save time on calling and evaluating separate tenders for design and construction of WWTP and land application, WDC decided to proceed with DBO contract. In this form of contract the design and construction / installation and testing of plant is completed by a single entity and then handed to the Principal as proven working system. In order to do this the contracting authority (including designer and contractor) will need to meet pre-defined key performance indicators (KPI) that are used to evaluate the success of the project. The key advantage of Design/Build contract is for WDC to have access to advanced technology often available in proprietary equipment through competitive tendering process. The mechanism also allows the opportunity for a number of risks (including design and process performance aspects) to be transferred from Principal to the Contractor.

The addition of an operational period to design/build contract will help with ensuring a more favourable long term outcome. Building in an operational component typically provides greater value to the

Principal in terms of equipment quality and whole life costs as the Contractor is responsible for both proving the process performance on start up as well as its operation over medium term

Key contracts:

- Design of wastewater reticulation and grinder pump sets;
- Construction of reticulation and installation of grinder pump sets;
- Supply of grinder pump and boundary sets;
- DBO contract for WWTP and Land Application.

Key milestones:

- 16 September 2013 – request for tenders for design of wastewater reticulation and grinder pump sets;
- 23 September 2013 – request for Expression of Interest for DBO contract for WWTP and Land Application,
- 14 October 2013 – selecting reticulation design consultant
- 2 December 2013 – lodgement of Resource Consents and Notice of Requirements application;
- 2 December 2013 – Issue of 75% Tender Document for Design-Build-Operate contract for WWTP and Land Application Area to shortlisted Tenderers;
- 16 December 2013 – tenders for reticulation works and installation of grinder pump sets
- 16 December 2013 – tenders for provision of grinder pump sets;
- 15 April 2014 – Start of construction of wastewater reticulation and on site grinder pump sets installation, subject to Resource Consents; and
- 15 June 2014 – Start of WWTP construction, subject to Resource Consents.

5.8 Estimated Cost and Financial Planning

Total estimated capital cost of the Proposed Wastewater Scheme is \$10.85 million, excluding GST. This capital cost comprises of three main cost components (all excluding GST), as follows:

- | | |
|---|-------------------------|
| • Local network | \$7.16 million |
| • Conveyance to treatment plant/disposal site | \$1.126 million |
| • Treatment plant and disposal site | \$2.564 million |
| • Estimate Total | \$10.850 million |

This capital cost does not include camp ground connection, which is estimated to be approximately \$0.8 million additional to the total capital cost.

Capital cost subsidy contribution from the MoH SWSS is \$6.7 million and the BoPRC regional grant is \$1.88 million.

Annual operating cost is estimated at approximately \$150,000, which will be spread across all households connected to a WDC wastewater scheme, except Murupara. Annual pressure system electricity cost per household is between \$25 to \$37, which individual house owners/occupiers pay as part of their electricity account. Estimated annual wastewater rate per household is \$340, from 2015/16.

5.9 Scheme Operation and Asset Management

5.9.1 Asset Management

The Whakatāne District Council has an Asset Management Plan (AMP) for wastewater covering all existing wastewater schemes. The AMP is reviewed and updated every 3 years before the preparation of WDC's Long Term Plan (LTP). Some of the key sections included in the wastewater AMP are:

- Strategic Environment – outlines vision, goals and objectives, community outcomes and how the wastewater activity contributes to those outcomes;
- Levels of Service (LoS) - links LoS to community outcomes and identification of current and future LoS and core values;
- Growth and Demand – identifies key drivers influencing future demand and the management options to address the impacts of growth;
- Environmental Stewardship – describes the environment and legislative requirements for compliance and significant negative effects;
- Risk Management – states the wastewater activity risks, descriptor, management options and monitoring;
- Sustainability – sets out WDC’s sustainability objectives and outlines the WDC’s social, economic, cultural and environment elements;
- Life Cycle Management - Identifies key issues, provides asset life cycle overview, identifies maintenance, renewals and new capital works;
- Projects and Financial Forecasts – identifies 20 year projects and financial forecasts, key assumptions and funding policies

When the Matatā Wastewater Scheme is completed, the wastewater AMP will be reviewed and updated to include the new Matatā Wastewater Scheme.

5.9.2 Operations and Maintenance

The Whakatāne District Council’s wastewater assets are operated and maintained by Operations Business Unit (OBU) of the Council. WDC’s Three Waters Manager has an internal Service Level Agreement (SLA) with the Manager Operations in OBU to maintain and operate water, wastewater and stormwater assets to an agreed LoS. Key Performance Indicators (KPIs) have been set to monitor and report the LoS.

In the current SLA under wastewater following operations and maintenance works have been identified:

Routine works, which include:

- Treatment plant operations and maintenance
- Effluent and water sampling and testing
- Manhole inspection
- Valve inspection and servicing
- Pump station inspection and servicing
- Pump inspection and servicing

Non-routine works, which include:

- Treatment plant emergency works
- Reticulation repairs
- Attending to blockages
- Flushing wastewater pipes
- Attending to overflows
- Pump station repairs and emergency works
- Pump repairs and emergency works
- Attending to service line repairs
- Odour control (investigations and dosing)

The WDC also keep a stock of spare parts for critical assets to ensure continuity of services. The SLA will be updated to suit the new situation before completion of Matatā Wastewater Scheme. This will include but not limited to:

Routine works, which include:

- Monitoring and servicing of grinder pumping units periodically in private properties
- Inspection and servicing of boundary valve assembly units periodically
- Monitoring Wastewater Treatment Plant daily operation
- Monitoring quality of treated wastewater
- Regular removal of sludge from the treatment plant
- Flushing of pipes in the disposal field
- Non-routine-works, which include:
 - Responding to alarms from grinder pumping units
 - Responding alarms from the treatment plant

5.10 Risk Considerations

A GIS-based constraints risk analysis has been undertaken for the proposed WWTP and Land Application Field sites, together with other alternative potential sites. The findings are reported in the URS Memorandum Reports – GIS Constraints Analysis for WWTP and Disposal Field and Additional Risk Assessment Analysis in Support Document 2 to this AEE. Summary of the report findings has been presented in Section 6.6.

The following categories of risk have been considered:

- Site ownership & archaeological consideration;
- Environmental hazards including tsunami, landslides, earthquake, debris flows, coastal erosion, inundation and so on;
- Technical risks only for the Land Application Field site including soil permeability, land area requirement, site topography and so on;
- Site accessibility;
- Constructability;
- Operability; and
- Cost

The proposed WWTP and Land Application Field sites have attained the lowest risk level ratings in this analysis, as compared to other short-listed sites, based on the information available at the time of preparing the risk assessment analysis.

5.11 Rationale for the Proposed Wastewater Scheme

In determining the Proposed Wastewater Scheme for Matatā, it is important that the scheme meets the Project Vision and Objectives, as set out in Section 2.1.5.

The Proposed Wastewater Scheme has been formulated after extensive technical investigations, consultation, tāngata whenua consideration, environmental effects studies together with an overall long-term integrated approach to sustainable wastewater management.

A planning horizon and RMA effects assessment extending 35 years from now has been used in assessing the Proposed Wastewater Scheme treatment requirements and the effects on the environment in order that 35 year resource consents can be considered. Table 5-5 provides an assessment of the project rationale of the Proposed Wastewater Scheme for meeting the project objectives.

Table 5-5: Assessment of Project Rationale Against Project Objectives

Project Objectives	Project Rationale for Meeting Objective
Overall Objective	
<p><i>To work in partnership with the community and tāngata whenua to achieve a sustainable, long term solution for the collection, treatment and disposal of Matata's wastewater. The solution shall achieve a high level of public health protection, safeguard the life supporting capacity of natural resources, be the best practicable option and meet the following objectives.</i></p>	<p>The Proposed Wastewater Scheme has been developed in partnership with the community, other key stakeholders and tāngata whenua. Extensive consultation has been undertaken to develop the Proposed Wastewater Scheme and three CIA's have been undertaken (provided as Companion Documents to this AEE). As a result of consultation with tāngata whenua all three marae in Matatā and surrounding areas will be connected to the scheme.</p> <p>The effects assessment and assessment of alternatives have been based on a comprehensive analysis of future population projections. A range of alternatives for treatment options/disposal/reuse have been assessed and evaluated. The Proposed Wastewater Scheme of a compact WWTP (capable of being expanded to cater for future growth) and sub-surface disposal of treated wastewater along with the suite of suggested resource consent and designation conditions provide a range of measures to avoid, remedy or mitigate the potential adverse effects of the Proposed Wastewater Scheme.</p> <p>Taking all of these matters into consideration, the Proposed Wastewater Scheme can be considered the BPO for Matatā's future wastewater management.</p>
Environmental Objectives	
<ul style="list-style-type: none"> <i>To protect the natural character, indigenous biodiversity and visual amenity of the coastal environment.</i> 	<p>The proposed WWTP is located in a rural area and will not adversely affect the natural character of the coast. The Land Application Field will be developed considering the natural character of the Western Recreational Reserve. A range of measures are proposed to avoid or mitigate potential adverse effects on natural character including removing grazing from the Reserve, minimising re-contouring of the dunes and ecological restoration of the Land Application Field to be guided through a Restoration Plan.</p>
<ul style="list-style-type: none"> <i>To ensure that the water quality of the Tarawera River is not degraded.</i> <i>To enable the appropriate disposal of treated wastewater by land application rather than discharge to coastal waters.</i> 	<p>The proposed treated wastewater standard and sub-surface drip application of treated wastewater standard has been developed to ensure that the water quality of the Tarawera River is not significantly degraded from its current state. However, a detailed review of existing information has shown the water quality of the lower Tarawera River (and the Bennett Rd Stream) is currently degraded as a</p>

Project Objectives	Project Rationale for Meeting Objective
	<p>result of the combination of upstream discharges and agricultural land uses.</p> <p>Monitoring of the ecological status of the Bennett Rd Stream has confirmed the degraded nature of the stream in terms of ecological values and the overwhelming effects of tidal influence. Although a slight increase in nutrients is predicted in the Bennett Rd Stream related to the discharge of treated wastewater at the Land Application Field, this should be considered to have no more than minor effects on the current status of the Bennett Rd Stream.</p>
<ul style="list-style-type: none"> <i>To ensure that the visual impact on the environment of the Wastewater Treatment Plant and Land Application Field is minimised.</i> 	<p>The WWTP site preferred location has been selected from an extensive assessment of site options. The preferred site location will not be visible from the main road, whilst landscape planting and an earth bund is proposed to mitigate potential adverse visual effects on adjacent landowners.</p>
<ul style="list-style-type: none"> <i>To ensure a high level of compliance with National, Regional and District Resource Management requirements and relevant Guidelines.</i> 	<p>The Proposed Wastewater Scheme has been developed to ensure compliance with the various Planning Instruments and Guidelines.</p>
<ul style="list-style-type: none"> <i>To promote the efficient use and development of natural and physical resources, and if appropriate the sustainable reuse of wastewater products.</i> <i>To avoid, remedy or mitigate significant adverse effects on natural and physical environments including communities within those environments.</i> 	<p>The Proposed Wastewater Scheme sets out a more sustainable wastewater system for Matatā that will be developed to ensure compliance with the Resource Consents and Designations sought whilst also contributing towards meeting the requirements of the Local Government Act.</p>
<p>Social Objectives</p>	
<ul style="list-style-type: none"> <i>To ensure that the Matatā Wastewater Scheme achieves the greatest practicable protection of public health.</i> 	<p>The Proposed Wastewater Scheme will have positive effects though the provision of a waterborne wastewater reticulation system and will remove the current public health and environmental risk related to poorly performing and maintained on-site septic tanks.</p> <p>Hydrogeological and environmental effects assessments undertaken as part of this Project have shown that the shortest travel time for groundwater from the Land Application Field to the surface drainage network was estimated to be approximately one year. This is significantly longer than the estimated time for complete microbial inactivation of faecal coliforms or E. coli. Therefore the public health risks associated directly with the Proposed Wastewater Scheme may be considered no more than minor.</p>
<ul style="list-style-type: none"> <i>To ensure the Matatā Wastewater Treatment</i> 	<p>The effects assessment and assessment of alternatives have been based on a</p>

Project Objectives	Project Rationale for Meeting Objective
<p><i>Scheme supports development and growth while continuing to meet the needs of existing residents and wider community including their recreation activities in the area.</i></p>	<p>comprehensive analysis of future population projections that will support future development and growth of the Matatā township.</p> <p>The Proposed Wastewater Scheme has been developed with appropriate consideration of the WDC Western Reserve Management Plan.</p>
<ul style="list-style-type: none"> <i>To work in partnership with the community, Project Control Group and key stakeholders to achieve a good understanding of the Matatā Wastewater Consents Project, so as to enable genuine and effective consultation.</i> 	<p>The community, tāngata whenua and key stakeholders have had significant involvement in the development of the Proposed Wastewater Scheme.</p>
<ul style="list-style-type: none"> <i>To achieve more sustainable wastewater management for the Matatā community.</i> 	<p>The Proposed Wastewater Scheme sets out a sustainable wastewater system for Matatā that will be developed to ensure compliance with the Resource Consents and Designations sought whilst also contributing towards meeting the requirements of the Local Government Act.</p>
<p>Economic Objectives</p>	
<ul style="list-style-type: none"> <i>To maximise the cost effective use of the Ministry of Health subsidy and BoPRC grant.</i> <i>To provide an economically sustainable future Wastewater Scheme which will match the anticipated growth in the area, - i.e. affordable for both the existing and growth communities and businesses now and in the future.</i> <i>To promote outcomes that ensure sufficient flexibility to adopt appropriate technology and more sustainable solutions in the future, including treated wastewater reuse, where they provide more effective solutions.</i> <i>To apply appropriate technology that will protect public health and meet environmental standards and tangata whenua and community aspirations while achieving lowest whole of life costs.</i> <i>To meet the current and future needs of the community in a way that is most cost effective for households and businesses, as required by the LGA.</i> 	<p>The Proposed Wastewater Scheme is considered to represent an economically sustainable solution over the long-term, whilst meeting the requirements of various Planning Instruments and addressing the various issues that have arisen during the public, stakeholder and tāngata whenua consultation and participation during the Project.</p>
<p>Tāngata Whenua Cultural Objectives</p>	
<ul style="list-style-type: none"> <i>To recognise and provide for tangata whenua as kaitiaki.</i> <i>To work in partnership with tangata whenua to share knowledge and achieve a good understanding of this Project, so as to enable genuine and effective consultation, engagement and participation.</i> 	<p>These matters are considered in the three CIA Companion Documents to this AEE.</p>

Project Objectives

Project Rationale for Meeting Objective

Technical Objectives

- *To promote outcomes that ensure sufficient flexibility to adopt new appropriate technology and more sustainable solutions in the future, including treated wastewater reuse where that provides more effective solutions.*
- *To provide a Scheme that can be maintained and efficiently operated to best practice standards*

The Proposed Wastewater Scheme is intended to be constructed by DBO tender that will maximise the opportunities for the market to respond with new appropriate technologies to meet the resource consent and designation requirements.

6 Alternatives/Options Considered

6.1 Introduction

This section of the AEE is a summary of an extensive amount of information on the alternative assessments for the Matatā Wastewater Scheme since 2003. Support Document 4 includes some of the key alternative assessment reports referenced below.

In the RMA, the terminology used is alternatives. In this Project the term ‘options’ is also used as the synonymous term for ‘alternatives’. Section 105 and the Fourth Schedule of the RMA require that alternatives/options of treatment methods and locations to be considered. The alternative assessment is also required to satisfy one of the BoPRC funding approval condition that robust analysis has been undertaken “to determine that the final option selected is the most cost-effective solution”.

Over the years in developing the proposed Matatā Wastewater Scheme different options for reticulation and wastewater treatment were considered. These previous investigations and reports and their key outcomes are presented in the following section. Figure 6-1 below maps out the recent journey that WDC has been through with the alternatives/options assessment to identify the Proposed Wastewater Scheme option and site location.

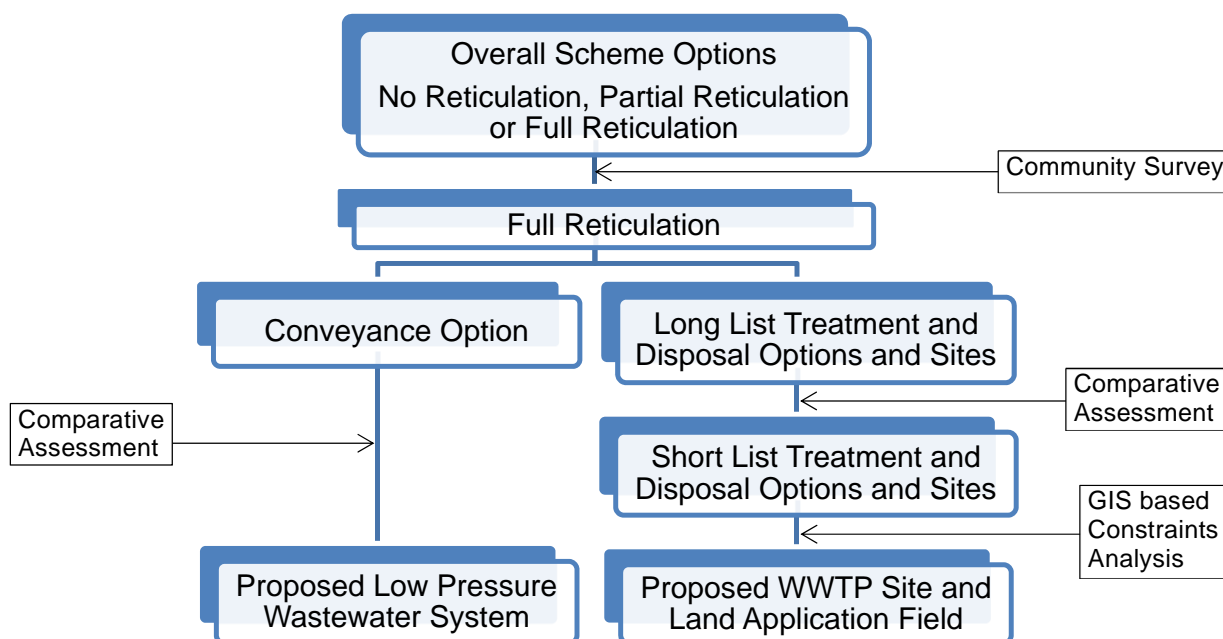


Figure 6-1: The Alternatives/Options Assessment Process

6.2 Previous Reports and Alternatives/Options Considered

As indicated above there has been a progressive but periodic investigation into possible wastewater schemes either partial or full reticulation since 2003. The following Table 6-1 summarises the key investigations and reports in chronological order, and also highlights the key outcomes from each of these investigations and reports. A completed list of WDC’s decisions and reports over the last ten years concerning the development of the Matatā Wastewater Scheme is contained in Support Document 4.

Table 6-1: Summary of Previous Reports and Alternatives/Options Considered

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
1.	Matatā Wastewater Scheme Health Impact Assessment	Opus 2004	---	Contamination issues - various Table of effluent issues/seepage Table of Infectious Disease Data
2.	Matatā Community Options for Wastewater Treatment and Disposal 2004	Opus, 2004	Advanced on site systems – not considered to be appropriate solution. Gravity reticulation considered appropriate. Treatment options: <ul style="list-style-type: none"> • Oxidation pond treatment with River discharge • Oxidation pond system with irrigation or soakage of effluent • Package plant and soakage of effluent to dunes • Options including pumping effluent to other locations have not been considered as too costly and giving rise to septicity problems. 	Recommended for SWSS funding was: Package plant and soakage of effluent to dunes even though more costly. Option with oxidation ponds, financially more attractive doesn't allow for easy future expansion and could be hard to implement due to the shortage of obvious site for pond location.
3.	Matatā Community Options for Wastewater Treatment and Disposal 2008 update	Opus, 2008	Updated the cost estimates for options considered in 2004 report.	Recommended actions: Undertake final design for reticulation Initiate further consultation with community & Iwi Prep and lodge RC application for discharge of treated effluent to dune area. Carry out further microbiological testing in the Waitepuru and Waimea streams in support of the

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
				HIA.
4.	Wastewater Scheme for the Towns of Edgecumbe, Matatā and Te Teko. Options Report	Harrison & Grierson, Sep 2009	<p>Undertook a philosophical review of historical reports (up to 2004), prepared by other consultants, on a first time wastewater scheme for the town of Matatā and to investigate other options not previously considered.</p> <ol style="list-style-type: none"> 1. Localised treatment and disposal 2. Centralised treatment and disposal at Edgecumbe 3. Centralised treatment and disposal in new location 4. Centralised treatment for Edgecumbe and Te Teko at Edgecumbe and localised treatment for Matatā 5. Centralised treatment for Edgecumbe and Matatā at Edgecumbe and a deferred upgrade for Te Teko 	<p>Report recommended a first time wastewater scheme for Matatā would “<i>comprise a vacuum collection system for all lots, and the raw sewage would be conveyed from a central pumping station to the existing treatment plant at Edgecumbe for treatment and disposal</i>”.</p> <p>The report also noted the Edgecumbe treatment plant would need upgrading and the discharge would be through an existing discharge structure to the Omeheu Canal, a tributary of the Tarawera River.</p> <p>But report pointed as well that this option, connecting Matatā to an upgraded plant at Edgecumbe will present some challenges as increased discharges from the Edgecumbe system are not currently provided for in the Tarawera River Catchment Plan.</p>
6.	First Time Sewerage for the Community of Matatā – Preliminary Design Report	Harrison & Grierson, Dec 2009	This report was prepared based on the Harrison Grierson September 2009 report to support an amendment to the Provisional Approval granted to Whakatāne District Council by the MoH under the SWSS.	The report is based on the outcome of the Harrison Grierson September 2009 report of a vacuum collection system and conveying raw sewage to Edgecumbe for treatment and discharge.
7.	Matatā Wastewater Treatment and Disposal Options	Harrison & Grierson, Oct 2011	<p>Two options being considered</p> <ul style="list-style-type: none"> • To pipe wastewater from Matatā to existing Edgecumbe treatment facility 	Conclusion – that raw wastewater flows from Matatā could be discharged to Whakatāne WWTP without the need for further engineering

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
			<ul style="list-style-type: none"> To pipe from Matatā to the existing Whakatāne treatment facility 	works, possible variation to existing consent (Non-notified).
8.	Matatā Wastewater Treatment – Alternative Technology Review	AWT Water, Oct 2011	<p>The Report considered</p> <ul style="list-style-type: none"> Three effluent reuse options: waterway reuse, ocean outfall, and land based reuse. Three conveyance systems: on- site, decentralised and centralised with reuse away from the Matatā surrounds as the only feasible solution for this project. For this reason the treatment and reuse at existing wastewater treatment plants in neighbouring towns was investigated as part of options assessment to date. Treatment systems: mechanical, aquatic, terrestrial and combination of these. Due to the topographical and groundwater conditions that make transport of wastewater to a neighbouring area necessary, and because utilisation of an existing WWTP is therefore viable, no further consideration of alternative treatment process is necessary. 	Of the 3 options for effluent reuse the only land based reuse option worthy of pursuing was subsurface drip irrigation in the sand dunes. Limitations on land availability forced various consultants to conclude that transport to another location for treatment and disposal is the most feasible solution.
9.	Matatā Wastewater Scheme – Project Delivery Model Assessment Oct 2011	AWT Water, Oct 2011	Comparing conventional Engineering Contract to the Design-Build & Operate	Adopt a conventional engineering contract (Design, Tender, Construct/commission) enabling WDC to manage risks most effectively, Ensuring design and consenting of scheme commences on time.

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
10.	Matatā Wastewater Servicing Peer Review of Matatā Wastewater Treatment and Disposal Options by H&G 2011	AWT Water, Oct 2011	As per H&G Report	Based on AWT's review of H&G 2011 updated options assessment it is recommended that the option to service Matatā by a Septic Tank Effluent Pumping (STEP) system with treatment at the Whakatāne WWTP is adopted by WDC.
11.	Matatā Wastewater Treatment Scheme Review	CPG Nov 2011	Review of recommendations contained within previous reports, providing timeline programme comparison of various treatment scheme and procurement options.	<p>All reports to date indicated that collection, treatment and disposal of wastewater in the vicinity of Matatā would be the least cost option.</p> <p>The recommendation to pump to Whakatāne as preferred option appears to be based more on time frame and ease of consenting rather than overall "value"</p> <p>Ranking of options on whole life costing – "value basis" can be ranked:</p> <ol style="list-style-type: none"> 1. Local treatment in Matatā, 2. Pumping and treatment in Edgecumbe, 3. Pumping and treatment in Whakatāne.
12.	Matatā Wastewater Assessment – Investigations Summary; and Public Health Risk Assessment	CH2M Beca ESR, July 2012	<p>Assessment of wastewater options for Matatā broken into two streams:</p> <ul style="list-style-type: none"> • Summary of previous wastewater reticulation options and comments on further options worth looking at that have not been considered previously; • Public Health Risk Assessment to examine previous health assessments and review the need to reticulate wastewater in Matatā 	<p>Beca have highlighted that one of the biggest factors in selecting a recommended option has to be the risk of not obtaining the required consents in time to meet the timescale for funding set by the MoH. They advise that any solution that does not involve discharge from the Whakatāne WWTP is unlikely to meet the required timescale to complete works by June 2014.</p> <p>The conclusion from the ESR PHRA report was:</p>

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
			from public health perspective.	<p><i>There is not a compelling case for the introduction of a reticulated sewage disposal system in Matatā on the basis of risk to human health.</i></p> <p>However the report highlighted that some onsite septic systems in Matatā are not functioning adequately and that the installation of a reticulated system would have benefits (and costs). The report also recommends a series of actions if the Council decides not to reticulate or if reticulation is to be significantly delayed.</p>
13.	Matatā Proposed Local Wastewater Treatment & Disposal Concept Design & Costing	AWT, April 2013	<p>A concept design and costing for Matatā wastewater reticulation, treatment plant and disposal scheme:</p> <p>Scenarios were developed for Low Pressure Wastewater system with standalone WWTP (SAF system) and Land Application (drippers) located near Matatā and covered different scheme sizes for cost calculations.</p>	
14.	Matatā Sewerage Scheme Options Deliberation and Decision – Report 20.14.1 prepared for Extraordinary Council Meeting	WDC, 20 May 2013	<p>This key report was prepared to assist WDC in its decision making on whether to proceed with a partial or full Sewerage Scheme for Matatā. WDC at that meeting unanimously resolved to proceed with a full reticulated Sewerage Scheme and informed the Ministry of Health accordingly in terms of the subsidy provisions.</p>	<p>The report provided sufficient information for WDC to make a decision. That information included the investigations to-date, information on alternatives land application sites and other options, including conveyance options.</p>

No	Report Title	Author/Date	Alternatives/Options Considered	Comments/Conclusions
			<p>The report set out the three scheme options, the conveyance options and the long list of treatment and disposal/discharge options. These later options involve three options conveying to other treatment plants (Edgecumbe, Whakatāne, Kawerau), five land application locations and two water discharge options (Tarawera River and offshore ocean outfall).</p>	
15.	Wastewater Treatment and Management Options for Edgecumbe and Matatā	OPUS, 15 July 2013	<p>This report was sought by WDC as part of this current Matatā wastewater project. Its purpose was to examine options for combining treatment for disposal at various locations, to determine the most cost effective long term solution. It was a high level study that draws heavily on previous works, as referenced above.</p> <p>The options included various combination of raw sewage conveyance from one community to another.</p>	<p>The assessment of cost factor as net present values and non-cost factors concluded that:</p> <ul style="list-style-type: none"> • The current proposed strategy to provide stand-alone treatment for Matatā is supported; • Edgecumbe wastewater treatment is best maintained on the existing site, but the effluent could in future be pumped to Matatā for disposal with the new scheme there; • Pumping wastewater from Matatā and Edgecumbe to Kawerau is a high cost option with substantial future cost risk. • Pumping wastewater from Matatā and Edgecumbe to Whakatāne is comparable to standalone plants on cost grounds but carries substantial downside risk on consenting and long term cost risk.

6.3 Overall Scheme Options

Three main overall scheme options, including No Reticulation Scheme, Partial Reticulation Scheme or Full Reticulation Scheme, have been investigated by WDC for Matatā in March 2013. These three options are as follows:

- **Option 1 - No reticulation** – relying on private on-site effluent treatment systems and a BoPRC imposed Maintenance Zone to address issues in targeted areas.

This option is the lowest cost for the Council but could end up being very costly for specific members of the community. This option relies on the community undertaking works on their own properties to address the public health risk.

- **Option 2 - Partial Reticulation** – providing a reticulation system for the “hotspot” zone within Matatā and local land disposal.

This option will specifically target the public health issues that are currently apparent and provide a cheaper solution for addressing the immediate hazard. This option is the most affordable for the community in the short term; however it does not cater for future growth and is not considered to be a long term sustainable solution for the future of Matatā.

- **Option 3 - Full reticulation (preferred option)** – including the reticulation of all residential and commercial properties within the Matatā Township and disposal of the sewage in a manner that will be determined at a later date.

This option will address the public health concerns in Matatā currently and in the future. It will remove an obstacle for growth in the Matatā community in the future. Installing a fully reticulated scheme will also remove the need for a Maintenance Zone to be imposed on the Matatā community and therefore reduce potentially large upgrade costs for specific households.

Other options such as waterless toilet scheme were not considered feasible at this stage for the Matatā community. These are discussed briefly in Section 6.4.

Table 6-2: Scheme Options – Summary of Comparative Assessment

OPTIONS as per WDC's Community Consultation and survey	ASSESSMENT CRITERIA* ¹						Community Survey Results* ²		Key Council Considerations	Council Decisions May 2013
	Individual Household Property – Potential Costs / Savings for Increased Land Use Flexibility* ³			Potential for increased land 'use' flexibility	Effectiveness Reducing Contamination – Improved Public Health Protection and Sanitation	Meets Needs of Future Generation	88 Matatā Residents	13 District Residents		
	Matatā Costs pa	Matatā Savings pa* ⁴	Wider District pa* ⁵							
Option 1: NO RETICULATION	\$500 every 3 years A new system up to \$25,000 for each property owner	Nil	Nil	Nil	Low	Low	11%	23%	<ul style="list-style-type: none"> Public health and environmental conditions Probably limitations on future growth of Matatā BoPRC future on-site sewage Maintenance Zones and likely implication of these to individual property owner 	Not to proceed
Option 2: PARTIAL RETICULATION for 'Hot Spot' areas	\$283 for connected As above for not connected	\$100	\$12	Yes for hot spot area – reticulated otherwise no	Medium	Medium	5%	8%	<ul style="list-style-type: none"> Implication and practicalities of a partial scheme in an urban community area The considerations of Option 3 full reticulation but only apply to the 'hot spot' area serviced by the partial scheme and potential wider Matatā Probably limitations on future growth of Matatā 	Not to proceed
Option 3: FULL RETICULATION	\$312	\$100	\$45	Yes	High	High	84%	69%	<ul style="list-style-type: none"> Existing sewage position Public health protection Safe sanitation Environmental protection/enhancement Costs to community/rate payers Future development Scheme type Community survey results MoH subsidy and BoPRC Grant 	Proceed

Note:

1. First four criteria are taken from WDC Public Consultation Brochure
2. Community survey closed 5th May 2013 along with LTP submissions.
3. Costs appropriate only – refer WDC Brochures
4. Savings in not having on site system
5. Cost to other WDC residents on Wastewater Schemes

6.4 Conveyance Options

In the past WDC has considered a number of conveyance options for a partial and full reticulation scheme. These options are as follows:

- Conventional gravity system;
- Pressure sewers with household grinder pumps;
- Septic tank effluent pumping/septic tank effluent gravity system (STEP/STEG system);
- Vacuum system; and
- Waterless Toilets and Grey Water System.

Each of these options has its own advantages and disadvantages. These are highlighted in Table 6-3 below. Following a comparative analysis of advantages and disadvantages of these systems, the proposed option is pressure sewers with household grinder pumps system.

The proposed option provides the best value for investment, relatively low risk of failure in seismic events, minimum inflow and infiltration issues, a relatively high degree of engineering resilience, and less risk of overflows due to power outages. This system has proven successful in many other small communities in New Zealand. A number of these communities have implemented this option under the MoH's SWSS scheme.

Table 6-3: Reticulation and Collection Options – Summary of Comparative Assessment

Reticulation / Collection Options	Overview	Assessment Criteria			Previous Considerations
		Benefits	Complications / Disadvantages	Cost Profile	
Conventional Gravity System	<ul style="list-style-type: none"> conventionally used in wastewater schemes, particularly larger schemes nowadays pressure sewers with household grinder pumps and other systems are also being used for new small community schemes where the circumstances are appropriate 	<ul style="list-style-type: none"> less / little pumping proven high level of service (no facilities on property other than (gravity) sewer connection) 	<ul style="list-style-type: none"> question of resilience in earthquakes and land movement higher wet weather flows than other options higher costs when sewers are deep and / or below water table 	<ul style="list-style-type: none"> higher capital costs lower operating costs (normally) 	<ul style="list-style-type: none"> previously considered in scheme investigations.
PREFERRED OPTION - Pressure Sewers with Household Grinder Pumps	<ul style="list-style-type: none"> becoming more common place in small community new schemes a number of new (Government subsidy) schemes have adopted this approach 	<ul style="list-style-type: none"> lower costs higher engineering resilience to earthquakes low wet weather flow increases storage of wastewater site for power outages 	<ul style="list-style-type: none"> householder to meet electricity pumping units on private property. 	<ul style="list-style-type: none"> relatively low – probably lowest costs. \$7,160,000 for full reticulation including grinder pump units for existing houses 	<ul style="list-style-type: none"> previously considered now used for estimated costs of scheme is the preferred option against which (any) alternatives could be compared
Septic Tank Effluent Pumping / Septic Tank Effluent Gravity (STEP / STEG)	<ul style="list-style-type: none"> not generally favoured and little use in New Zealand retains septic tank on the households property still requires desludging of septic tank 	<ul style="list-style-type: none"> maximises use of existing septic tanks can be an economic / low cost solution but on operational issues pressure sewers in a STEP scheme have resilience to earthquake and land movement 	<ul style="list-style-type: none"> retains septic tank on householder property desludging needed of septic tanks to ensure effluent quality acceptable for subsequent treatment septic tank effluent is anaerobic therefore (potential) odour and corrosion issues in collection and treatment/disposal system due to retention of carbon source in septic tanks does not favor nutrient removal 	<ul style="list-style-type: none"> likely to be lowest capital costs, but need to take into account the on-going maintenance and replacement of septic tanks and the septic tank cleaning and the on-going costs of this 	<ul style="list-style-type: none"> previously considered in scheme investigation and discounted could still be an alternative if detailed considerations indicated this option to have some significant advantages

Reticulation / Collection Options	Overview	Assessment Criteria			Previous Considerations
		Benefits	Complications / Disadvantages	Cost Profile	
			treatment process at WWTP		
Vacuum System	<ul style="list-style-type: none"> one community system in New Zealand at Kawakawa (Watercare) has / is been considered elsewhere for small communities 	<ul style="list-style-type: none"> keeps sewers shallow low wet weather flows vacuum pits (one for 3 - 6 lots) provides minimum 8 hours storage 	<ul style="list-style-type: none"> with the shallow grade question of engineering resilience in earthquakes and other land requirements need operational experience specialised vacuum station(s) needed in the collection area 	<ul style="list-style-type: none"> probably similar or (slightly) less than a Pressure Sewers – test through competitive tendering 	<ul style="list-style-type: none"> previous investigations favored this option could be an option to preferred pressure sewer and grinder pump system if economic or other factors so favored on balance
Waterless Toilets and Grey Water System	<ul style="list-style-type: none"> not normally appropriate in community residential areas especially where ground conditions are not favorable to soakage as still have grey water 	<ul style="list-style-type: none"> provides a waterless wastewater system does not require human waste leaving the individual property can assist/meet Maori cultural concerns 	<ul style="list-style-type: none"> if a composting system then needs periodic collection of compost material unless this can be safely and in an approved way disposed of on the individual property site. still requires grey water (which is polluting in its own right) to be disposed of on site 	<ul style="list-style-type: none"> unknown but almost definitely more expensive than a full community reticulation scheme that has attracted Ministry of Health subsidy 	<ul style="list-style-type: none"> has not been considered as not appropriate nor likely to be approved by Health authorities / Ministry of Health.

6.5 Treatment and Disposal Options – Long List

The long-list options considered for treatment and disposal are as follows:

1. Treatment in the existing oxidation ponds in Edgecumbe and discharge into Omehu Canal via existing outfall. If this option is pursued, upgrading of the existing treatment system is required.
2. Treatment in the existing Whakatāne oxidation ponds and discharge into sea via existing sea outfall. If this option is pursued, upgrading of existing oxidation ponds is not required.
3. Treatment in the Kawerau District Council's WWTP and discharge into Tarawera River. If this option is pursued, upgrading of the existing WWTP is not required.
4. Treatment in a packaged treatment plant and disposal to land in a location close to Matatā.
5. Treatment in a packaged treatment plant and discharge into sea via a sea outfall pipe.
6. Treatment in a packaged treatment plant and discharge into Tarawera River closer to the river mouth.

A desktop study was carried out using GIS information to prepare a long list of possible local land disposal sites, as shown in Figure 6-2. The criteria used to identify these sites were the slope of the site, ground elevation and size of the site. Following the GIS analysis, the red hatched sites are the sites selected for further evaluation for treatment and disposal locations.



Figure 6-2: A Long List of Options Being Investigated

The treatment types and disposal methods/sites were evaluated with the assistance of a decision matrix table which considered a long list of possible disposal methods/sites. This long list options assessment table is given in Table 6-4 below.

Table 6-4: Long List Options Assessment – Treated Wastewater Disposal/Discharge Options and Associated Wastewater Treatment Options for a Full Reticulated Scheme

ASSESSMENT CRITERIA	LONG LIST OPTIONS									
	LAND APPLICATION / LAND DISPOSAL					TARAWERA RIVER DISCHARGE	OFFSHORE OCEAN OUTFALL	CONVEYANCE OF RAW WASTEWATER TO OTHER WWTP'S		
	A Western Coastal	8 Western Recreation Reserve	C	W	X Caverhill Road			Edgecumbe	Whakatāne	Kawerau
Whakatāne District Council and Ministry of Health Key Considerations										
• Affordability, Sustainability and Responsibility as per LTP 2012-2022	Probably	considered affordable	Probably	Probably	Probably	probably most affordable	higher capital cost so less affordable	less affordable	less affordable	less affordable
• Meeting the new Purpose of the Local Government Act – efficient and effective infrastructure at lowest cost	likely to reasonably meet	likely to reasonably meet	Probably	Probably	Probably	likely to be best cost	higher cost	unlikely	unlikely	unlikely
• Accommodating WDC's planning / growth projections	Yes	Yes	Unlikely to	Unlikely to	Probably	Yes	Yes	Probably	Probably	Probably
• Ministry of Health's Sustainable and Safe Scheme Gaining Subsidy	Likely	Likely	Probably	Probably	Probably	Likely/maybe	Maybe	Less likely / unlikely	Less likely / unlikely	Less likely / unlikely
Land Location / Land Use / Soil Type for Land Application / Disposal Area and Treatment Plant Site in that Area										
• Near/in Residential Area	No	No	Yes	Yes	No	NA	NA	NA	NA	NA
• Near Rural Dwellings	No	Yes	Yes	Yes	Yes	NA	NA	NA	NA	NA
• On Productive Land	No	No	Yes	Yes	Yes	NA	NA	NA	NA	NA
• On Coastal Reserve Land	Yes	Yes	No	No	No	NA	NA	NA	NA	NA
• Soil Type/Profile	Well sorted fine to medium sands – possible debris flow areas	Well sorted fine to medium sands	Unknown	Medium to coarse sands – a clay lease identified	alternating sands and organic silts	NA	NA	NA	NA	NA
• Groundwater Depth Below Ground Level	at least 3m-4m	at least 3m-4m	Unknown	1m to 2m	0.8m to 1.8m	NA	NA	NA	NA	NA

ASSESSMENT CRITERIA	LONG LIST OPTIONS									
	LAND APPLICATION / LAND DISPOSAL					TARAWERA RIVER DISCHARGE	OFFSHORE OCEAN OUTFALL	CONVEYANCE OF RAW WASTEWATER TO OTHER WWTP'S		
	A Western Coastal	8 Western Recreation Reserve	C	W	X Caverhill Road			Edgecumbe	Whakatāne	Kawerau
• Drainage Characteristics	good to high unless debris flow material in the area	good to high drainage	Unknown	potential iron (clay)pans would limit drainage	low permeability silts likely to limit drainage	NA	NA	NA	NA	NA
• Possible Groundwater Mounding	potential flow to river and sea – further investigation needed.	expected to be towards sea	some likely	some likely	most likely	NA	NA	NA	NA	NA
• Land Topography	Flat coastal sandy area	Flat slight undulations	Flat	Flat	Flat with drainage channels	NA	NA	NA	NA	NA
Public Health										
• Recreation considerations	Yes	Yes	NA	NA	NA	Yes	Yes	Generally, as per existing scheme		
• Shellfish considerations	Yes	Yes	NA	NA	NA	Yes	Yes			
• Kaimoana / traditional foods considerations	Yes	Yes	NA	NA		Yes	Yes			
• Possible Water bore contamination	Probably no	Probably no	Yes	Yes	Yes	No	No			
• Odour potential (disposal/discharge)	Minimal	Minimal	Possibly	Possibly	Possibly	No	No			
• Future (growth) wellbeing	Good	Good	Definitely limited	Possibly limited	Possibly limited	High	High			
Effects on Natural Environment:										
• Native flora and fauna	Considerable could well enhance biodiversity replace eucalyptus	Considerable could well enhance biodiversity	None too minimal	None too minimal	Minimal to low	Low	Minimal	Similar to existing scheme		
• Land/soil contamination	Some potential	Some potential	More potential	More potential	More potential	NA	NA			

ASSESSMENT CRITERIA	LONG LIST OPTIONS									
	LAND APPLICATION / LAND DISPOSAL					TARAWERA RIVER DISCHARGE	OFFSHORE OCEAN OUTFALL	CONVEYANCE OF RAW WASTEWATER TO OTHER WWTP'S		
	A Western Coastal	8 Western Recreation Reserve	C	W	X Caverhill Road			Edgecumbe	Whakatāne	Kawerau
<ul style="list-style-type: none"> Groundwater – contamination - bores 	Limited potential	Limited potential	Some potential	Some potential	Some potential	Very low / minimal potential	NA			
<ul style="list-style-type: none"> Surface water – fresh - contamination 	Nil to limited	Limited	Some potential	Some potential	Some potential	Some	NA			
<ul style="list-style-type: none"> Marine (coastal) waters - contamination 	Limited	Limited	NA	NA	NA	Yes	Yes			
Maori Cultural – Tangata Whenua:										
Part 2 of the RMA matters plus local considerations. A generic consideration here, with details to be determined by Maori in Cultural Impact Assessment – Tangata Whenua working with WDC – will / could include: <ul style="list-style-type: none"> Traditional foods - kaimoana Waahi tapu Discharge to water Ancestral lands (including battle grounds) Taonga Other cultural impact matters 	Discharge to land is Ngāti Rangitihī iwi's preferred method as outlined in the Iwi Management Plan; Details to be further developed from cultural impact assessment					Unlikely to be the preferred method as per the Iwi Management Plan	Unlikely to be the preferred method as per the Iwi Management Plan	Increases the discharge to water from these WWTPs, therefore unlikely to be the preferred method as outlined in the Ngāti Rangitihī Iwi Management Plan		
Technical Considerations / Future Proofing:										
Collection System <ul style="list-style-type: none"> Proven future flexibility for growth 	Probably	Most probably	Most unlikely	Limited	Probably but some limitations	Yes	Yes	Depends on the capacity of the scheme receiving the raw wastewater and sizing of conveyance system.		
Treatment <ul style="list-style-type: none"> Proven and robust Low/medium/high technology Operating requirements Future flexibility 	Appropriate treatment systems including proprietary systems are readily available.									

ASSESSMENT CRITERIA	LONG LIST OPTIONS									
	LAND APPLICATION / LAND DISPOSAL					TARAWERA RIVER DISCHARGE	OFFSHORE OCEAN OUTFALL	CONVEYANCE OF RAW WASTEWATER TO OTHER WWTP'S		
	A Western Coastal	8 Western Recreation Reserve	C	W	X Caverhill Road			Edgecumbe	Whakatāne	Kawerau
<ul style="list-style-type: none"> Sludge management Odour management 										
Disposal / Discharge <ul style="list-style-type: none"> Proven system Future flexibility Land application options <ul style="list-style-type: none"> Spray drift aerosol effect Odour 	Proven and acceptable physical treated wastewater distribution arrangements are available for all options. Land application options will consider both (low) pressure spray irrigation such as K Lines and similar and also surface and subsurface (drip) irrigation. Estimates are based on sub-surface irrigation.									
Natural Hazards / Risk Profile:										
<ul style="list-style-type: none"> Natural hazard risks 										
<ul style="list-style-type: none"> Land slide 	Low to some hazard	No to very low hazard	Low to very low hazard	Potentially affected as near steep slopes	Low to very low hazard	Low to very low hazard	NA	As for existing scheme plus conveyance pipeline locational considerations.		
<ul style="list-style-type: none"> Debris flow 	Significant issue	NA to most unlikely	Unlikely	Possible moderate hazard	Possible moderate hazard	NA	NA			
<ul style="list-style-type: none"> Flooding 	Potential issue	Not expected to be an issue	Unlikely	Unlikely	Possible issue	NA - providing outfall structure integrity retained	NA			
<ul style="list-style-type: none"> Tsunami considerations 	Yes	Yes	NA	NA	NA	Outfall integrity considerations	Outfall integrity considerations	NA	NA	NA
<ul style="list-style-type: none"> Earthquake (treatment and disposal / discharge) 	Some	Some	Some depends on soil type	Some depends on soil type	Some depends on soil type	Lower	Lower	Existing Scheme plus conveyance pipelines		
<ul style="list-style-type: none"> Climate change risks 										
<ul style="list-style-type: none"> Sea level rise 	consideration ground water	consideration ground water flow	NA	NA	NA	Outfall and dilution	Outfall and dilution	NA	NA	NA

ASSESSMENT CRITERIA	LONG LIST OPTIONS									
	LAND APPLICATION / LAND DISPOSAL					TARAWERA RIVER DISCHARGE	OFFSHORE OCEAN OUTFALL	CONVEYANCE OF RAW WASTEWATER TO OTHER WWTP'S		
	A Western Coastal	8 Western Recreation Reserve	C	W	X Caverhill Road			Edgecumbe	Whakatāne	Kawerau
	flow drainage	drainage				consideration	consideration			
o Prolonged wetter periods	Larger land area	Larger land area	consideration	consideration	consideration	Smaller consideration				
Planning Instruments										
• Resource Management Act (RMA) 1991	Applicable to all options									
• NZ Coastal Policy Statement (NZCPS)- 2010	Some relevance	Some relevance	NA	NA	NA	Very relevant	Very relevant	NA	NA	NA
• Operative and Proposed Regional Policy Statements (RPS)	Applicable to all options									
• Bay of Plenty Regional Air Plan	Applicable to all options									
• Tarawera River Catchment Management Plan	NA	Relevant	NA	Relevant	Relevant	Very relevant	NA	Very relevant	NA	NA
• Bay of Plenty Regional Water and Land Plan	Applicable to all options									
• Bay of Plenty Regional Coastal Environment Plan	Relevant	Relevant	NA	NA		Relevant	Relevant	NA	NA	NA
• Other Plans such as District Plans, Iwi Management Plans	Applicable to all options									

Further to the comparative assessment, a preliminary capital cost estimate of the options of transferring raw wastewater to other WWTPs for treatment has been prepared and compared against the option of local treatment and land disposal. The cost estimates are summarised in Table 6-5 below.

Table 6-5: Preliminary Capital Cost Estimate of Options

	Disposal in Edgecumbe	Disposal in Wakatane	Disposal in Kawerau	Local land disposal
Local network	7,160,000	7,160,000	7,160,000	7,160,000
Conveyance to treatment plant/disposal site	3,200,000	6,000,000	8,800,000	1,126,000
Treatment plant and disposal site	2,900,000	Nil	Nil	2,564,000
Total cost	\$13,260,000	\$13,160,000	\$15,960,000	\$10,850,000

The estimate for local network capital cost for all four options is based on pressure sewers with household grinder pumps system. This estimate was prepared by AWT Consultants in March 2013 (report included in Support Document 4). The cost estimate for local land disposal is based on a land application field and a WWTP located in the western recreational reserve in Thornton.

These cost estimates exclude the camp ground in Matatā. If the camp ground is to be connected for treatment, these estimates are expected to be increased by approximately \$800,000. Whakatāne District Council are currently discussing the potential connection of the camp ground and the potential for Department of Conservation contribution to the Proposed Scheme.

A standalone WWTP in Matatā with local land disposal option, as based on the above capital cost estimates, is shown to be more economically affordable than conveying raw wastewater to other WWTPs for treatment and disposal.

6.6 GIS-based Constraints Analysis of Shortlisted Options

Following the assessment of the long list options in Section 6.5 above, the following sites were short listed for further consideration. These are:

- Five potential sites for a WWTP – Sites A, G, W, X or the Western Reserve (denoted site 8);
- Four potential sites for the Land Application Field – Sites A, W, X, and the Western Reserve (denoted site 8).

The locations of these sites are shown in Figure 6-3 below. Site G has not been included for assessment as a Land Application Field in this AEE because it does not have sufficient land area for the application of the treated wastewater.

A GIS based constraints analysis was carried out for these short-listed sites. The latest findings were reported in the URS Memorandum Report – Additional Risk Assessment Analysis. It is included in Support Document 2.

The GIS constraints analysis was developed into two separate risk registers, one each for the WWTP and Land Application Field sites. The criteria considered included: natural hazard risks, technical, constructability, operability and cost risk.

The analysis did not consider the actual location of the WWTP and Land Application Field within the short-listed sites.



Figure 6-3: Parcels Identified for GIS Constraints Analysis

The scoring system adopted in the GIS-based constraints analysis follows a typical likelihood/consequence matrix, based on the AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines. Details can be found in the Support Document 2.

The scoring system produces different risk levels, as presented in Table 6-6. It uses the product of the likelihood of an event, either looking at the occurring circumstances or the level of information or confidence, and the consequence to the event.

Table 6-6: Risk Level Ratings

Risk Level	Score
Extreme	350 to 500
Very High	200 to 300
High	70 to 150
Moderate	30 to 50
Low or Negligible	1 to 20

The draft analysis was reviewed at a workshop on 25 July 2013, involving representatives from URS, WDC and MWH. The individual risk scores were discussed and final scoring agreed by consensus. Following agreement on individual risk scores a weighting was then applied to the risk criteria categories, based on WDC's assessment of the importance or criticality of the criteria on the project.

A summary of the total average score for each site is included in Table 6-7 and Table 6-8 for the WWTP site and for the Land Application Field, respectively. The tables show both the individual risk score with a common weighting of 1 (un-weighted) and weighted risk criteria category score.

Table 6-7: Total Average Score for each WWTP Site

Site	Individual Risk Score (common weighting)	Weighted Criteria Category Risk Score
A	96	335
G	69	243
W	105	407
X	90	323
8	86	250

Table 6-8: Total Average Score for each Land Application Field Site

Site	Individual Risk Score (common weighting)	Weighted Criteria Category Risk Score
A	85	309
W	111	430
X	91	332
8	76	228

Based on the results of the latest constraints analysis, Site G would appear better than other sites for a WWTP and Site 8 (i.e. the Western Reserve) for a Land Application Field. Therefore Site G has been referred to as the WWTP site and Site 8 the Land Application Field in this AEE.

7 Description of the Environment

7.1 Matatā and Bay of Plenty Wider Area

Matatā is a small coastal township located in the Whakatāne District within the Bay of Plenty region. It is approximately 24 kilometres to the north-west of Whakatāne.

Matatā is situated on a sloping terrace at the base of the Manawahe Hills, as shown on the location map in Figure 7-1. The hills are steep and bush covered, rising to 300m. The Matatā town itself slopes from 20m above sea level at the railway to 3m above sea level at Arawa Street. Part of the town at the western end is built on low lying coastal dune land.

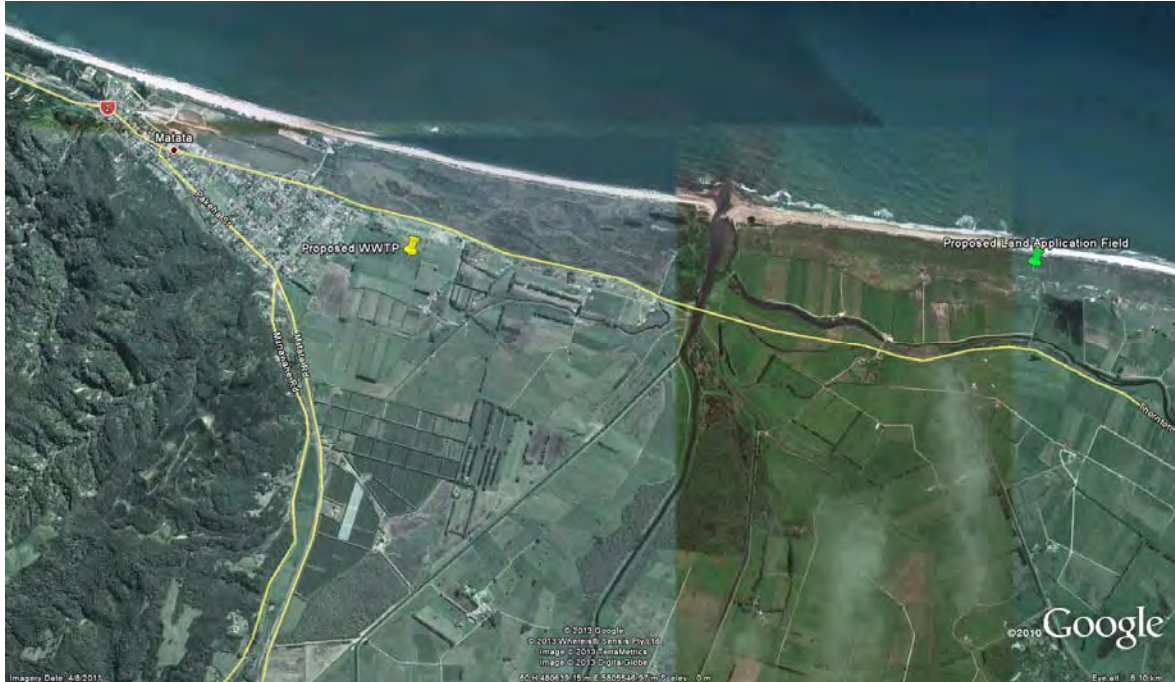


Figure 7-1: Location Map of Matatā (Source: Google Earth Pro)

7.1.1 Land Use and Development

The Matatā town comprises predominantly residential dwellings. There are 243 occupied residential dwellings recorded in the 2006 Census. In addition Matatā has 2 primary schools, a general store, a pub and a rugby ground.

Between the settlement and the sea lies a lagoon which drains to the Tarawera River, and a narrow strip of coastal dune land. The sand dunes extend to the west to the motor camp and to the east to the Tarawera River mouth.

To the east of the Matatā are the low lying and fertile dairy lands of the Rangitaiki Plains.

There are two campgrounds in Matatā. One is run by the Department of Conservation and is located across the lagoon, and another which is on land leased from the WDC is located 3km to the west of Matatā. Only Department of Conservation campsite is included in the scheme.

7.1.2 Social and Economic Environment

The Matatā township presently has approximately 640 residents (2006 Census) which is about 0.2% of Bay of Plenty Region's population. This is a slight decrease of 24 people, or 3.6%, since the 2001 Census. With the current regeneration programme for Matatā, there is expected to be stabilisation and a modest increase in population over time given the desirable coastal location. While coastal in location, Matatā does not experience the large fluctuations at holiday times of some coastal communities.

Based on the 2006 Census data, about 56% of the Matatā population is Māori and 52% European³. Compared with Bay of Plenty Region, over 67% of the region's population is European and Māori population is about 27%.

The majority of the population in Matatā are employed in the larger centres of Whakatāne and Kawerau or are retired.

The Ministry of Health published the NZDep2006 Index of Deprivation, developed based on the 2006 Census data. The index scale ranges from 1 to 10, where 1 represents the areas with the least deprived scores and 10 the areas with the most deprived scores. The NZDep2006 has classed Matatā with deprivation index of 9.

7.1.3 Environment and Ecology

The Matatā lagoon is a wildlife refuge, with extensive wetlands. It is not generally used for swimming. The coastal dunes to the east of the town contain a number of small ponds and wetland areas formed by the old course of the Tarawera River.

Three small streams drain from the Manawhahe Hills and run through the town to the Matatā lagoon.

7.1.4 Geology

The following information of the geology of the Matatā area is taken from the Quantitative Landslide Risk Assessment – Matatā Escarpment report (Tonkin & Taylor, 2013).

The geology of the Matatā area reflects its position between the Bay of Plenty coastlines to the north, the Okataina Volcanic Centre to the south and the Whakatāne Graben located immediately to the east. The published geology for the area indicates that Matatā and the coastal region are underlain by Holocene-aged shallow marine, estuarine, alluvial and beach deposits. Alluvial and debris (talus) fan deposits have formed along the base of the escarpment.

The Manawhahe Hills located to the south of Matatā are formed from early Quaternary-aged sediments of the Tauranga Group. These older sediments are formed from interbedded alluvial, estuarine and marine sediments with occasional volcanic airfall deposits. This sequence is capped further south by the Matahina Ignimbrite and younger volcanic deposits.

7.1.5 Climate

Whakatāne District has moderate temperatures year round and records some of New Zealand's highest sunshine hours. The average annual temperature recorded from the last 30 years (1981 – 2010) is 14°C, with summer average of 19°C in February and winter average temperature of 9°C in July. The records are obtained from the National Climate Database managed by NIWA

The average monthly rainfall and evapo-transpiration rates from the last 20 years (1994 – 2013) are also sourced from the National Climate Database. This is shown in Figure 7-2.

³ Sourced directly from www.statistics.govt.nz

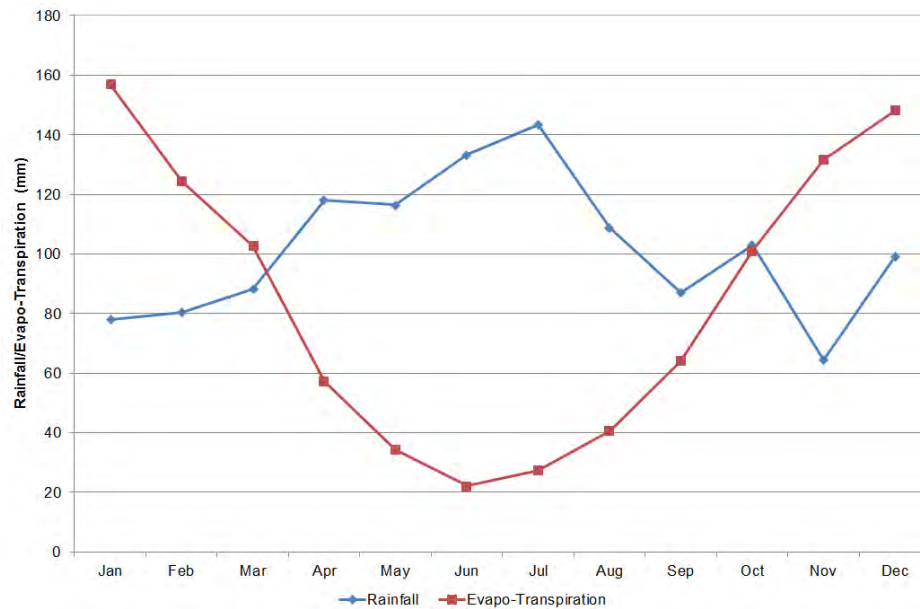


Figure 7-2: Rainfall and Evapo-Transpiration Rates in Whakatāne District

7.1.6 Natural Hazards

The Matatā area, including the proposed WWTP site and Land Application Field, is located within an area that is sensitive to coastal hazards. Matatā is known to be located within the active Taupo Volcanic Zone and has also recently been impacted by several large debris flows and significant landslides. A natural hazards analysis in and around the Matatā area has been carried out by various consultants and the findings are presented in the following listed reports.

This section provides a summary of some general information from the hazards analysis reports and the areas within Matatā that are susceptible to these natural hazards. The summary information is sourced from the following reports, which have been included in the AEE as Support Document 2.

- Quantitative Landslide Risk Assessment – Matatā Escarpment, prepared by Tonkin & Taylor, 2013;
- Whakatāne DC Matatā WWTP – Tsunami Effects on WWTP and Associated Disposal Fields, prepared by URS, May 2013;
- Whakatāne DC Matatā WWTP – GIS Constraints Analysis for WWTP and Disposal Field, prepared by URS, June 2013;
- Whakatāne DC Matatā WWTP – Additional Risk Assessment Analysis, prepared by URS, September 2013;
- Whakatāne DC Matatā WWTP – Site G Geotechnical Investigation, prepared by URS, September 2013;
- Matatā Wastewater Treatment Plant: Matatā Fault Location at 1715 Thornton Road, prepared by URS, September 2013; and
- Seismic Design Spectra for Matatā Wastewater Treatment Plant, GNS Science Consultancy Report 2013/249, October 2013.

7.1.6.1 Landslide

Some 70 landslides are represented on the Matatā landslide inventory. The majority of these (approximately 50) occurred within the past decade, predominantly in the 2004, 2005 and 2010-2011 storm events. These include the 2005 landslide event which was triggered by a series of high rainfall weather events. A further 25 presumably much older landslides have been recognised from geomorphological considerations. A clear pattern exists in the distribution and intensity of landsliding on the Matatā Escarpment. These are:

- The greatest density of landslides occurs on the steep and tall escarpment west of Awatarariki Stream;
- Almost all of the large landslides that travelled a significant distance from the base of the escarpment occurred west of the Awatarariki Stream;
- There are significantly fewer mapped landslides on the escarpment located behind the township. The majority of these features occur on the slopes located between the Awatarariki Stream and Clarke Street;
- South of Clarke Street, landslides are relatively rare and small in size. This section of escarpment is typically lower in both elevation and gradient than those with more landslides.

A landslide initiation and inundation hazard map has been prepared for Matatā. It is presented as Figure E1 to E3 in Appendix E of the Quantitative Landslide Risk Assessment – Matatā Escarpment report (Tonkin & Taylor, 2013). A review of the hazard map shows that the proposed WWTP site has low to very low landslide hazard, and the proposed Land Application Field is not within the hazard study area.

The GIS Constraints Analysis for WWTP and Disposal Field, prepared by URS, June 2013 identifies a risk level of 0 with respect to landslides for the Land Application Field site.

7.1.6.2 Debris Flow

A prerequisite for a debris flow to occur is high rainfall event. During the 2005 debris flows, the Matatā town was severely damaged by several large debris flows generated by intense rainfall within the adjacent hill country. The largest and most destructive of these debris flows originated within the catchment of the Awatarariki Stream, although significant damage also occurred to properties to the east as a result of debris flows exiting the Waitepuru Stream.

Between May 2010 and June 2011, a series of high intensity rainfall events passed over the eastern Bay of Plenty, triggering numerous landslides on the Matatā Escarpment, although no debris flows were generated.

The rainfall event that triggered the 2005 debris flows has been estimated to be in the order of 200 to 500 years. Debris flows are expected to be less frequent than potentially damaging earthquakes and many times less frequent than potentially damaging rainstorms.

A debris flows hazard map has been prepared for Matatā. It is presented as Figure F1 – F3 in Appendix F of the Quantitative Landslide Risk Assessment – Matatā Escarpment report (Tonkin & Taylor, 2013). A review of the hazard map shows that the proposed WWTP site is not within the debris flows hazard zones, indicating that the site is not susceptible to debris flows hazard. The proposed Land Application Field is not within the hazard study area.

A combined hazard map representing total inundation hazard caused by landslide and debris flow has also been developed. It is presented as Figure G1-G3 in Appendix G of the Quantitative Landslide Risk Assessment – Matatā Escarpment report (Tonkin & Taylor, 2013). The proposed WWTP site has been rated as having no credible combined instability hazard.

The GIS Constraints Analysis for WWTP and Disposal Field, prepared by URS, June 2013 identifies a risk level of 0 with respect to debris flow for the Land Application Field site.

7.1.6.3 Earthquake

The Eastern Bay of Plenty is a seismically active region being part of the Taupo Volcanic Zone. Several damaging earthquakes have occurred within the Bay of Plenty region over the past century, with the last large event being the 1987 Edgecumbe Earthquake.

Matatā is located within the Taupo Volcanic Zone and on the western edge of the Whakatāne Graben. There are a significant number of faults in and around Matatā and its immediate vicinity. The most significant of these is the Matatā Fault which, rather than being a single structure, is a complex series of related fault traces that strike SW-NE through the escarpment and township. Matatā was affected by several swarms of earthquakes between 2004 and 2007, although these were typically measured on Moment Magnitude (M_w) 4 or less.

A fault line (strand) has been mapped running diagonally across the proposed WWTP site and has been confirmed as an active fault line (refer to Matatā Wastewater Treatment Plant: Matatā Fault Location at 1715 Thornton Road, prepared by URS dated September 2013 included as support document 2). Based on the Ministry for the Environment guidelines a fault avoidance (setback) zone has been determined of 20m and the WWTP sited to the east of this zone within the property. The transfer pipelines and duct connections to and from the wastewater treatment plant will also be required to traverse the fault line.

7.1.6.4 Tsunami

The open coast between Matatā and Torere has been assessed to be one of the areas that have the highest vulnerability to distant or regional source tsunami. Matatā, including the proposed WWTP site and Land Application Field is within the BoPRC's Tsunami Risk Zone.

A desktop analysis of the tsunami effects on WWTP and associated disposal field has been reported in the previously referenced report - Tsunami Effects on WWTP and Associated Disposal Fields. Similar tsunami risk assessment has also been included in the GIS-based constraints analysis. The results of these analyses suggest that:

- In a tsunami event with 3m wave, inundation zone is predicted to crest along Thornton Road. The proposed WWTP site will not be inundated, but the land application site will have inundation of 22% of the land;
- In a tsunami event with 1 in 610 year return period, the proposed WWTP and Land Application Field would be completely inundated and destroyed by the 6 – 11m deep water flowing at 3-10m/s. It is noted however that the 1 in 610 year event is a worst-case scenario event triggered by a submarine landslide in the Kermadec Trench; and during this event, the majority of the Matatā town would also be likely to be inundated and destroyed.

7.1.6.5 Erosion

An erosion risk map has been prepared by URS for the Matatā area, as part of the GIS-based constraints risk analysis. The map is included as Figure 5 in Appendix A2 of the GIS Constraints Analysis for WWTP and Disposal Field Report. The map identifies that in general the coastal land in Matatā is at risk of erosion, both now and in the next 100 years.

The proposed Land Application Field has been positioned to be clear of the 100 year erosion risk zone identified in Figure 5, however it is within the Erosion Hazard Zone as identified in the Bay of Plenty Regional Water and Land Plan, refer to Section 12 of the AEE.

The proposed WWTP site is not located within any potential erosion risk zones as identified in Figure 5 of the report.

7.1.6.6 Flooding

A potential flooding risk map has also been prepared by URS for the Matatā area, based on the proximity to the Tarawera River and the flood extent recorded in 2004. The map is included as Figure 5 in Appendix A2 of the GIS Constraints Analysis for WWTP and Disposal Field Report.

Both the WWTP site and Land Application Field are not located within any flood risk zones.

7.1.7 Climate Change

In 2011, BoPRC requested NIWA to update its earlier 2003 climate change report for the Bay of Plenty region. A wealth of information on how climate change will impact on the region is presented in the report – *An Updated Climate Change Assessment for the Bay of Plenty* (NIWA, 2011). This section presents a summary of the information, taken from the BoPRC website for the wider Bay of Plenty region as well as Whakatāne.

1. Temperature

Temperature across the region is predicted to rise over the rest of this century. By 2040, the average annual temperature will be 1.2°C warmer than it was in 1990. By 2090, it will be between 2.7°C (mid-emission scenarios) and 3.6°C warmer (high emissions scenario). Autumn and winter are projected to warm slightly more than summer and spring.

In Whakatāne, there will be about 47 hot days (25°C or more) a year by 2040 and 80 days a year by 2090. These are significantly more than the current hot days of about 22 days a year.

2. Rain

Rain is likely to fall more heavily in the future. The region will get roughly the same average annual rainfall in 2090 as it does now, but rain may fall at different times. For instance, winters are expected to get drier as the century unfolds; by 2090, coastal and south-eastern areas may receive 10% less rain than they do now. On the other hand, summer rainfall is projected to increase – particularly inland – and to become more variable. We may see a sharp year-to-year contrast of either very dry summers, or very wet ones.

What is considered to be a 1-in-50-year event (150mm rainfall in 24 hours) in Whakatāne now is estimated to become a 1-in-29-year event by 2040 and a 1-in-16-year event by 2090.

3. Wind

There will be more easterly winds during summer and more westerlies during winter. Extreme winds may be less frequent during future summers, but more common during winters.

4. Frosts

By 2090, frosts will be a rare thing in the Bay of Plenty.

5. Sea Level Rise

Sea levels may rise between 50cm and 80cm by 2090. However, scientists can't rule out the increase in sea-level could be more than a metre by 2100, which should at least be considered in planning and development.

7.1.8 Recreation and Tourism

The recreational opportunities available in the Golf Links Road - Otamarakau coastal recreational reserves are part of a larger spectrum of opportunities available in the district and the region.

Recreational surveys were undertaken in 1986 and 2001 under Western Whakatāne Coastal Recreation Reserves Management Plan to provide information on patterns and intensity of recreational use of the reserves⁴. A minimum of two random visits were made each month to a series of sites along the coastline. These 10 sites were identified on the basis of road or easy walking access to the coast. In addition to information on camping patterns, the type of recreation and number of people undertaking it were noted at each site. Recreational use was separated into three main groups. These were:

- Swimming
- Fishing (including netting)
- Walking, picnicking and sunbathing

A summary of results from the 1986 and 2001 surveys is presented below:

- Overall recreational activity has been relatively static or declined slightly between 1986 and 2001.
- Activities have become more concentrated at three main sites (Rangitaiki River Mouth (west), Matatā Recreation Reserve, and Pikowai Recreation Reserve). These sites comprised 58% of all activity on the coast in 1986 and 68.6% in 2001.
- Camping facilities are available at these three sites and this activity together with associated recreational activities may have contributed to increased pressure on the reserves adjacent to these areas.
- Swimming activities were concentrated in four main sites (Golf Links Road, Rangitaiki River Mouth (east and west) and the Matatā Recreation Reserve).
- A small amount of surfing occurred at the domain, and this pattern has continued in 2001.

⁴ It should be noted that these surveys were informal, and so provide indicative numbers only. It is also important to note that the survey did not sample game bird hunters, who use the reserves extensively during the winter months, usually in areas away from the reserve users identified in the two surveys.

- Fishing is concentrated at the Rangitaiki River Mouth (west), although surfcasters use the entire shoreline, including the eastern side of the Rangitāiki River and the north of the Tarawera River.
- Walking, picnicking and sunbathing activities occur mainly at Golf Links Rd., Rangitaiki River Mouth (east and west), Matatā Recreation Reserve, and Pikowai.

Furthermore, as shown in Map 11 Charter and Recreational Boating of the BoPRC's Coastal Use and Value Maps (BoPRC, 2006), the coast at and around Matatā has a recreational boating density ranging from 201 to 1000 per year, indicating a medium level of use. This data is based on the recorded number of calls to the coastguard from recreational vessels from defined locations, hence has limitation on its accuracy. Nevertheless it provides a qualitative comparison, against other sites in the Bay of Plenty Region that the Matatā coast has a medium level of use by recreational boats for recreational fishing.

7.1.9 Commercial Fishing and Shellfish Collection

The Bay of Plenty region has significant commercial fisheries within the Bay. Bay of Plenty Regional Council's Coastal Use and Value Maps (BoPRC, 2006) provide information on fisheries resources and commercial fishing sites. A review of the maps shows that coastal areas at and around Matatā:

- Do not contain any commercial fishing "hot spots" areas that most intensively used by commercial fisherman;
- Do not contain any commercial scallop dredging areas;
- Are not in close proximity to any marine farms;
- Are sites of cultural significance where no marine farming should be allowed.

As noted in previous section, the coastal areas have a medium level of use by recreational boats for recreational fishing. Snapper and kahawai are known to be the two main finfish species targeted by the recreational line fishers. Crayfish diving is also popular in some areas.

The Cultural Impact Assessment prepared for Ngāti Awa (refer to the Companion Document) has also identified that the Matatā beaches are shellfish including tuatua gathering sites.

7.1.10 Customary Marine Title Area

Recently on 21 May 2013, an application for protected customary rights and customary marine title for the marine and coastal area in the vicinity of Matatā has been lodged with the Ministry for Treaty of Waitangi Negotiations. The applicant is Tangihia Hapu of Ngāti Rangitihī, represented by Ngāti Rangitihī Raupatu Trust Inc. The landward boundary in the application extends from the mouth of the Waitahanui Stream, Otamarakau to Otara-o-muturangi.

7.1.11 Archaeological Features

The Bay of Plenty Region has long history of human habitation. The New Zealand Archaeological Association Site Recording Scheme file for the Bay of Plenty contains the records of approximately 8,000 archaeological sites. This represents only a portion of the archaeological resource, as many sites are buried and have no visible surface features.

Coastal dune environments formed a significant part of the pattern of pre-European settlement in the Bay of Plenty region. Archaeological investigation of coastal dunes in other parts of the region, such as Papamoa, has revealed extensive use of the dunes for shellfish and fish processing, gardening and habitation over a period of several hundred years.

Archaeological sites on sand dunes can also be difficult to locate, due to lack of surface features. Many sites on coastal sands are only located when exposed by erosion processes. There are three recorded archaeological sites in close proximity to the reserve boundaries, being V15/737 (oven stones), V15/1192 (midden), and V15/1201 (midden), however there are no recorded archaeological sites within the Western Whakatāne Coastal Recreation Reserves. There are also no recorded sites at the location of the proposed Wastewater Treatment Plant.

7.1.12 Tangata Whenua Context and Cultural Values

The tāngata whenua context and cultural values have been set out in the three CIA's, provided as Companion Documents to this AEE.

7.2 Site Description

The sites for the Wastewater Treatment Plant and Land Application Field are described in below.

Table 7-1: Wastewater Treatment Plant and Land Application Field Description

Site	Address	Legal Description	Owner
Wastewater Treatment Plant	1715 Thornton Road, Matatā	Allot 6A Matatā Parish (ML 9665)	Anthony Olsen and Robert Tukehu Gardiner
Land Application Field	1186Z Thornton Road, Matatā	Pt Allot 273 Rangitaiki Parish (SO 332912)	Whakatāne District Council
Access to Land Application Field	1432B Bennett Road, Matatā	Allot 107 Rangitaiki Parish (SO 21226)	Sheryl Margaret Robinson Shayne Aaron Robinson Whakatāne Trustee Services Ltd

7.2.1 Wastewater Treatment Plant Site

The WWTP was previously referred to as 'Site G' and is located on the southern side of Thornton Road just east of the Matatā township. The site is located within a rural area and is presently in pasture and used for grazing of farm animals. It is rectangular in shape and does not contain any buildings or other structures. Low rise dunes traverse the site in an east-west direction. Topography is generally flat.

There are 2 residential dwellings located within 200 metres of the site towards the north-west and south-east. The Oniao marae adjoins the site to the east.

Access to the Plant will be from the adjoining road west of the site. The road is presently a 'paper road' but is to be formed as part of the overall construction works.

7.2.2 Land Application Field Site

The Land Application Field site was previously referred to as 'Site 8' and is located approximately 1.4km east of the Tarawera River mouth adjacent to the a 51km long beach – Te-Awa-a-te-Atua – which extends from Pukehina to Whakatāne. It forms part of the wider coastal and dune system along this stretch of coastline.

Three major rivers cross the Rangitaiki Plains to exit along this beach: Tarawera, Rangitāiki, and Whakatāne. The site is situated between the Tarawera and Rangitaiki Rivers. Both of these rivers meander through the Rangitaiki Plains, with the Tarawera originating from and draining Lake Tarawera, and the Rangitaiki originating in the central North Island near the Napier-Taupo Highway.

There are other significant water bodies associated with these rivers and coastline in the locality. Coastal waterways and wetlands in the locality include:

- The Matatā wetlands; a large wildlife management reserve with notable habitat and birdlife.
- The old Rangitaiki River channel (pumped into the Tarawera River near the site).
- The Awakaponga and Awaiti canals feed into the Tarawera River upstream of Thornton Road.
- Various dune lagoons near the river mouth.
- The Rangitaiki River mouth wetland (east of the river mouth).

The white sand beach, Te Awa-a-te-Atua, rises steeply from the coast into the dunes. The coastal dunes are some 200-300 m deep and run in a series of dune ridges and hollow strips parallel with the beach. The highest dunes are just over RL 10 m above MHWs, these being to the rear, nearest Thornton Road. The dune landform has a generally elevated area (RL 6 m+) that is over 100 m deep between the foredune and foredune plain (as defined in Hesp 2000⁵). Behind the dune landform extensive coastal flats extend inland across the Rangitaiki Plains at close to sea level (RL 1 m).

The shape of the site is slightly irregular, with a wide middle portion which tapers off to the west and east along the coastline. The middle portion is the site for the proposed Land Application Field.

⁵ Hesp P.A. 2000: Coastal sand dunes - form and function. CDVN Technical Bulletin No. 4. Forest Research, Rotorua. 29 pp.

The site is vested in WDC as Recreation Reserve subject to the Reserves Act 1977 and is part of the wider Western Whakatāne Coastal Recreation Reserves. Section 7.1.8 provides further information on the recreational use of the site.

The site is part of the Te Teko Ecological District which contains a suite of threatened indigenous species and habitats although the site itself is dominated by exotic grassland species and is presently used for grazing of farm animals. The vegetation is described fully in the Wildland Consultants Contract Report No. 3228: "Ecological Assessments of Proposed Sites for the Matatā Waste Water Treatment Plant and Disposal Field", dated August 2013, attached in Support Document 7. Much of the indigenous vegetation in the vicinity of the site has been cleared which has altered the natural character of the District.

To the west of the site is land owned by Ngāti Awa iwi and beyond on the upper river bank is the Otaramuturangi urupa which is the burial site of Te Tawera hapu. East of the site is land owned by Ngāti Tuwharetoa.

Access to the site is presently along informal 4WD tracks located along the dunes and accessed from the western end of Bennett Road or from Walker Road in the east. Proposed access will be over the adjoining property to the south, which is farm land.

Some residential dwellings occur in the general area with the two closest houses being Robinson's 150 m and Knight's 240 m.

8 Statutory Framework

8.1 Introduction

This section outlines the statutory framework for the proposal in accordance with the RMA.

8.2 Resource Consents Sought and Activity Status

Table 8-1 below sets out the resource consents sought for the proposed Matatā Wastewater Scheme, the relevant plan and rule that applies in determining the status of the activity.

Table 8-1: Resource Consents Sought

Consent No.	Activity to Be Consented	Rule/Plan Reference	Activity Status
1	A Discharge Permit for discharge of contaminants (odour) for the following components of the scheme: <ul style="list-style-type: none"> Wastewater Treatment Plant Pump station at Land Application Field 	Rule 19(w)(i) of the Bay of Plenty Regional Air Plan	Discretionary Activity
2	A Discharge Permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant into land at the Land Application Field in circumstances that may result in the treated wastewater entering water (maximum discharge of up to 605m ³ per day)	Rule 37 of the Bay of Plenty Regional Water and Land Plan Rule 16.8.5(a) of the Bay of Plenty Tarawera River Catchment Plan	Discretionary Activity
3	Land Use Consent for the following works: <ul style="list-style-type: none"> Approximately 5,550m³ of earthworks on land (partly within the Erosion Hazard Zone) at the Land Application Field Disturbance of land and soil resulting from approximately 4.6 hectares of vegetation clearance on land within the Erosion Hazard Zone at the Land Application Field 	Rule 1C of the Bay of Plenty Regional Water and Land Plan Rule 2C of the Bay of Plenty Regional Water and Land Plan	Discretionary Activity

8.3 Notices of Requirement

Table 8-2 below sets out the Notices of Requirement in relation to the Designations sought for the proposed Matatā Wastewater Scheme.

Table 8-2: Notices of Requirement

Requirement No.	Purpose	Site	Requiring Authority
1	The construction, operation, maintenance and upgrading of the Matatā Wastewater Treatment Plant and associated facilities	Allot 6A Matatā Parish (ML 9665)	Whakatāne District Council
2	Environmental Protection Buffer for the Matatā Wastewater Treatment Plant and associated facilities	Allot 6A Matatā Parish (ML 9665)	Whakatāne District Council

Requirement No.	Purpose	Site	Requiring Authority
3	Access to the Wastewater Treatment Plant site	Allot 6A Matatā Parish (ML 9665)	Whakatāne District Council
4	Installation, operation, maintenance and upgrading of the treated wastewater Land Application Field and associated facilities	Pt Allot 273 Rangaiki Parish (SO 332912)	Whakatāne District Council

8.4 Other Resource Consents Required

Table 8-3 sets out the other resource consents that may be required for the proposed Matatā Wastewater Scheme. These consents will be applied for prior to commencement of the activity, once detailed design has been undertaken, but do not form part of this application.

Table 8-3: Other Resource Consents Required

Consent No.	Activity to Be Consented	Rule/Plan Reference	Activity Status
1	Land Use Consent for earthworks, approximately 10,000m ³ volume, land slope 0 to 15° and less than 2 hectares in area (Wastewater Treatment Plant site and access)	Rule 1A of the Bay of Plenty Regional Water and Land Plan	Controlled Activity
2	Land Use Consent for more than 200m ³ of earthworks (access to Land Application Field)	Rule 11.2.1.1 of the Proposed Whakatāne District Plan	Restricted Discretionary Activity
	Land Use Consent for more than 400m ³ of earthworks (access to Land Application Field)	Rule 17.2.1.1 of the Proposed Whakatāne District Plan	Discretionary Activity

8.5 Permitted Activities

Other proposed activities will be undertaken as permitted activities. These include the following:

- Construction of the reticulation pipes forming the conveyance system within the road reserve as a permitted activity in accordance with Rule 1 (Earthworks) of the Bay of Plenty Regional Water and Land Plan.
- Construction of the main treated wastewater transfer pipeline running between the Wastewater Treatment Plant and the Land Application Field within the road reserve as a permitted activity in accordance with Rule 1 (Earthworks) of the Bay of Plenty Regional Water and Land Plan.
- Discharge of stormwater to surface water associated with the construction of the new access road to the Land Application Field on site Allot 107 Rangitaiki Parish (SO 21226) as a permitted activity in accordance with Rule 30 (Discharge of Stormwater to Surface Water) of the Bay of Plenty Regional Water and Land Plan.
- Construction of a new access bridge to the Land Application Field on site Allot 107 Rangitaiki Parish (SO 21226) to be constructed as a permitted activity in accordance with Rule 60B (Single Span Bridges) of the Bay of Plenty Regional Water and Land Plan.

- Occasional release of treated wastewater from the air valves on the main transfer pipe between the Wastewater Treatment Plant and Land Application Field as an aerosol mist which is considered to be a fugitive emission with de minimis effects (no consent required).

8.6 Statutory Tests

The following statutory tests apply to the consideration of these applications.

8.6.1 RMA Part 6 – Resource Consents

Section 104 of the RMA sets out the matters a consent authority must, subject to Part 2 – Purpose and Principles of the Act, have regard to when considering resource consent applications. The matters that are relevant in considering these applications are as follows:

- a) Any actual and potential effects of allowing the activity (s.104(1)(a)) (Refer Sections 10, 11, 12 and 14 of the AEE); and
- b) Any relevant provisions of a National Policy Statement (NPS) (s.104(1)(b)(iii)) (Refer Section 8.7 of the AEE)
- c) Any relevant provisions of the New Zealand Coastal Policy Statement (NZCPS) (s.104(1)(b)(iv)) (Refer Section 8.8 of the AEE); and
- d) Any relevant provisions of the Bay of Plenty Regional Policy Statement (RPS) and Bay of Plenty Proposed Regional Policy Statement (PRPS) (s.104(1)(b)(v)) (Refer Sections 8.9 and 8.10 of the AEE); and
- e) Any relevant provisions of a plan or proposed plan (s.104(1)(b)(vi)), these include:
 - Bay of Plenty Regional Air Plan (Refer Section 8.11 of the AEE)
 - Bay of Plenty Regional Water and Land Plan (Refer Section 8.12 of the AEE)
 - Bay of Plenty Regional Plan for the Tarawera River Catchment (Refer Section 8.13 of the AEE)
 - Bay of Plenty Regional Coastal Environment Plan (Refer Section 8.14 of the AEE)
 - Operative Whakatāne District Plan (Refer Section 8.15 of the AEE)
 - Proposed Whakatāne District Plan (Refer Section 8.16 of the AEE); and
- f) Any other matters the consent authority considers relevant and reasonably necessary to determine these applications (s.104(1)(c)) (Refer Section 8.18 of the AEE); and

Because some of the applications are for discharge permits, section 105 of the RMA requires the consent authority to consider the following additional matters:

- a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects (Refer Sections 10 and 11 of the AEE); and
- b) the applicant's reasons for the proposed choice (Refer Sections 5 and 6 of the AEE); and
- c) any possible alternative methods of discharge, including discharge into any other receiving environment (Refer Section 6 of the AEE)

Section 107 of the RMA restricts a consent authority from granting a consent to discharge contaminants to water or to land in circumstances which may result in that contaminant entering water if, after reasonable mixing, the contaminant is likely to give rise to all or any of the following effects in the receiving waters:

- a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials (Refer Section 11 of the AEE); and
- b) any conspicuous change in the colour or visual clarity (Refer Section 11 of the AEE); and
- c) any emission of objectionable odour (Refer Sections 10 and 11 of the AEE);

- d) the rendering of fresh water unsuitable for consumption by farm animals (Refer Section 11 of the AEE); and
- e) any significant adverse effects on aquatic life (Refer Section 11 of the AEE).

8.6.2 RMA Part 8 - Designations

Section 168A of the RMA applies if a territorial authority decides to issue a notice of requirement for a designation –

- a) For a public work within its district and for which it has financial responsibility (s.168A(1)(a)) (Refer Section 5 of the AEE); or
- b) In respect of any land, water, subsoil, or airspace where a restriction is necessary for the safe or efficient functioning or operation of a public work (s.168A(1)(b)) (Refer Sections 16 and 17 of the AEE).

Section 168A of the RMA sets out the matters a consent authority must, subject to Part 2 – Purpose and Principles of the Act, have regard to when considering a requirement. The matters that are relevant in considering the notices of requirement are as follows:

- a) Any relevant provisions of a National Policy Statement (NPS) (s.168A(3)(a)) (Refer Section 8.7 of the AEE)
- b) Any relevant provisions of the New Zealand Coastal Policy Statement (NZCPS) (s.168A(3)(a)(ii)) (Refer Section 8.8 of the AEE); and
- c) Any relevant provisions of the Bay of Plenty Regional Policy Statement (RPS) and Bay of Plenty Proposed Regional Policy Statement (PRPS) (s.168A(3)(a)(iii)) (Refer Sections 8.9 and 8.10 of the AEE); and
- d) Any relevant provisions of a plan or proposed plan (s.168A(3)(a)(iv)), these include:
 - a. Bay of Plenty Regional Air Plan (Refer Section 8.11 of the AEE)
 - b. Bay of Plenty Regional Water and Land Plan (Refer Section 8.12 of the AEE)
 - c. Bay of Plenty Regional Plan for the Tarawera River Catchment (Refer Sections 8.9 and 8.10 of the AEE)
 - d. Bay of Plenty Regional Coastal Environment Plan (Refer Section 8.14 of the AEE)
 - e. Operative Whakatāne District Plan (Refer Section 8.15 of the AEE)
 - f. Proposed Whakatāne District Plan (Refer Section 8.16 of the AEE); and
- e) 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 (s.168A(3)(b)) (Refer to Section 6 of the AEE); and
- f) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought (s.168A(3)(c)) (Refer to Section 8.17 of the AEE); and
- g) any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement (s.168A(3)(d)) (Refer to Section 8.18 of the AEE).

8.7 National Policy Statement for Freshwater Management 2011

The National Policy Statement for Freshwater Management 2011 (NPS) sets out the objectives and policies for freshwater management (including groundwater) under the RMA. This NPS is relevant to the water discharge permit sought for the Land Application Field.

Decision makers on resource consent applications must have regard to any relevant provisions of the NPS as required by section 104(1)(b)(iii) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the NPS as required by section 168A(3)(a)(i) of the RMA. Local authorities must also give effect to relevant provisions of the NPS in planning documents. The Bay of Plenty Regional Council has amended its Regional Water and Land Plan to give effect to the relevant policies in the NPS.

Table 8-4 below identifies key policy themes of the NPS relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-4: Summary of Key Policy Themes of the National Policy Statement for Freshwater Management 2011

Policy Themes	AEE Section Reference
Water Quality – safeguarding ecosystems in sustainably managing the use and development of land and discharges of contaminants. Maintenance or improvement of water quality. (Objectives A1 and A2)	11, 16.6, 17.7
Integrated Management – Improvement of the integrated management of fresh water and the use and development of land in catchments. (Objective C1)	6, 10, 11, 12, 13, 14, 16, 17
Tāngata Whenua Roles and Interests – To provide for the involvement of iwi and hapu, and to ensure that tāngata whenua values and interests are identified and reflected in the management of fresh water including associated ecosystems. (Objective D1)	9, 13

8.8 New Zealand Coastal Policy Statement 2010

The purpose of the New Zealand Coastal Policy Statement 2010 (NZCPS) is to state policies in order to achieve the purpose of the Resource Management Act 1991 in relation to the coastal environment of New Zealand. Decision makers on resource consent applications must have regard to any relevant provisions of the NZCPS as required by section 104(1)(b)(iv) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the NZCPS as required by section 168A(3)(a)(ii) of the RMA. Local authorities must also give effect to relevant provisions of the NZCPS in planning documents and Bay of Plenty Regional Council has amended its Operative and Proposed Regional Policy Statements to give effect to the NZCPS.

In determining where the NZCPS applies, Policy 1 provides direction on the extent and characteristics of the coastal environment. Policy 1 states that the NZCPS applies to the coastal marine area, areas where there are coastal processes and their margins, coastal vegetation and habitat, elements and features that contribute to the natural character, landscape, visual qualities or amenity values, and items of cultural and historic heritage in the coastal marine area or on the coast.

The NZCPS is relevant to the resource consent applications and notice of requirement for the Land Application Field.

Table 8-5 below identifies key policy themes of the NZCPS relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-5: Summary of Key Policy Themes of the New Zealand Coastal Policy Statement 2010

Policy Themes	AEE Section Reference
Safeguarding the coastal environment – maintaining and enhancing natural biological processes, protecting representative or significant natural ecosystems, maintaining water quality, enhancing water quality where it has deteriorated. (Objective 1)	11, 12, 14.6, 17.6, 17.7
Preserving the natural character of the coastal environment – recognising characteristics and qualities that contribute to natural character, features and landscape values of the coastal environment. (Objective 2, Policies 6 and 13)	12.4, 12.5, 12.6, 17.5, 17.6, 17.16.1
Tāngata Whenua – recognising the role of tāngata whenua as kaitiaki, recognising that tāngata whenua have traditional and cultural relationships with the coastal environment, incorporating mātauranga Māori in consent processes. (Objective 3, Policy 2)	9, 12.7, 13, 17.16.2
Public Open Space – maintain and enhance public open space qualities	14.4

Policy Themes	AEE Section Reference
and recreation opportunities of the coastal environment, recognise the need for public open space within and adjacent to the coastal marine area including active and passive recreation. (Objective 4, Policy 18)	
Coastal Hazards – To ensure that coastal hazard risks taking account of climate change are managed by locating new development away from areas prone to such risk. (Objective 5)	7.1.6, 17.11, 17.12
Providing for people and communities four well-beings – is intended to enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, (in the coastal marine area). (Objective 6, Policy 6)	14, 17.13, 17.14
Biodiversity – avoiding significant adverse effects on areas of predominantly indigenous vegetation, habitats of indigenous species, habitats important to migratory species, ecological corridors. (Policy 11)	17.6
Discharge of contaminants – having regard to sensitivity of the receiving environment, the nature of the contaminants, capacity of the receiving environment to assimilate the contaminants, avoid significant adverse effects on ecosystems and habitats after reasonable mixing, use the smallest mixing zone necessary to achieve the required water quality, minimise adverse effects on the life-supporting capacity of water within a mixing zone. (Policy 23)	11
Human sewage – not allow the discharge of human sewage directly to coastal waters without treatment, not allow the discharge of human sewage to coastal waters unless there has been adequate consideration of alternative methods, sites and routes for undertaking the discharge and informed by an understanding of tāngata whenua values and the effects on them. (Policy 23)	6

8.9 Bay of Plenty Operative Regional Policy Statement

The Bay of Plenty Operative Regional Policy Statement (RPS) sets the direction for the future management of the Bay of Plenty Region's significant resource management issues. All regional and district plans must be consistent with regional policy statements. Decision makers on resource consent applications must have regard to the relevant provisions of the Regional Policy Statement as required by section 104(1)(b)(v) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Regional Policy Statement as required by section 168A(3)(a)(iii) of the RMA.

The RPS is relevant to the resource consent applications and notices of requirement for both sites.

Table 8-6 below identifies key policy themes of the RPS relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-6: Summary of Key Policy Themes of the Bay of Plenty Operative Regional Policy Statement

Policy Themes	AEE Section Reference
Tāngata Whenua – To recognise the principles of the Treaty of Waitangi, the rights of tāngata whenua and individual iwi, provision for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. (Objectives 5.3.1(a) and 5.3.2(a), Policies 5.3.1(b)(i), 5.3.1(b)(iv), 5.3.1(b)(v), 5.3.2(b)(i) and 5.3.2(b)(v))	9, 13, 12.7, 16.15.2, 17.16.2
Well-being - To avoid remedy or mitigate adverse effects on social, economic and cultural well-being and to manage the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety. (Objective 5.3.6(a), Policies 5.3.6(b)(i), 5.3.6(b)(ii), 6.3.1(b)(viii) and 8.3.1(b)(i))	14
Land - The adoption of sustainable land use and management practices, to sustain the potential of land resources to meet the reasonably	11, 12, 16, 17

Policy Themes	AEE Section Reference
foreseeable needs of current and future generations, to safeguard the life-supporting capacity of the soil and associated ecosystems, particularly indigenous ecosystems, and to protect soil from degradation, to avoid, remedy or mitigate adverse effects on the environment associated with the inappropriate use and development of land, to enable land use practices that are consistent with established water quality standards, to recognise that, subject to appropriate controls, the discharge of contaminants onto or into soil may be an appropriate method of industrial, agricultural and other waste disposal, to protect water quality from the adverse effects of land use. (Objective 6.3.1(a), Policies 6.3.1(b)(i), 6.3.1(b)(ii), 6.3.1(b)(iii), 6.3.1(b)(v), 6.3.1(b)(xiii) and 6.3.1(b)(xiv))	
Air Emissions - No significant adverse effects on people and the environment result from discharges of chemical, odorous and particulate contaminants into the air, to provide for the discharge of contaminants to air with no significant adverse effects on air quality. (Objective 7.3.2(a), Policies 7.3.2(b)(i), 7.3.2(b)(ii) and 7.3.2(b)(iii))	10
Water Quality – To maintain/enhance water quality to a level sufficient to safeguard aquatic life, to sustain the potential of water resources to be used and developed to meet existing and reasonably foreseeable future needs, and to provide for the protection of aesthetic or cultural values associated with water. To improve the quality of the region's water resources by avoiding, remedying or mitigating the adverse effects of diffuse and point source discharges of contaminants onto or into land or into water, to maintain/enhance the quality of the region's groundwater resources by avoiding, remedying or mitigating the adverse effects of diffuse and point source discharges of contaminants onto or into land or into water, to avoid, remedy or mitigate the potential adverse effects on water quality due to the inappropriate location and management of activities. (Objective 8.3.1(a), Policies 8.3.1(b)(ii), 8.3.1(b)(iii) and 8.3.1(b)(v))	11
Coastal Environment – Recognition and provision for natural character, outstanding natural features/landscapes, and significant vegetation and habitats in the coastal environment, maintain water quality and allow for public access to the coastal marine area. (Objectives 9.3.1(a), 9.3.2(a), 9.3.3(a), Policies 9.3.1(b)(i), 9.3.1(b)(ii), 9.3.1(b)(iii) and 9.3.2(b)(i))	11, 12.4, 12.5, 12.6, 17.5, 17.6, 17.16.1
Natural Hazards – The vulnerability to natural hazards of the regions physical resources is avoided or mitigated. (Objective 11.3.1(a))	7.1.6, 16.10, 17.11
Waste Management – Waste production is minimised and residual wastes are disposed of with no significant adverse effects on the environment (Objective 12.3.3(a), Policy 12.3.3(b)(i))	10, 11, 12, 13, 14, 16, 17
Built Environment - A built environment that enables efficient use, development and protection of natural and physical resources while avoiding, remedying and mitigating adverse effects on the environment, to promote the efficient use and development of existing and future infrastructure and utility networks. (Objective 13.3.1(a), Policy 13.3.1(b)(v))	14
Natural Character – Preservation of the natural character of the region, including the protection of significant indigenous habitats and ecosystems, having particular regard to intrinsic values of ecosystems, to recognise indigenous marine habitats and ecosystems as being underrepresented in the reserves network of the Bay of Plenty Region. (Objective 16.3.1(a), Policies 16.3.1(b)(v) and 16.3.1.(b)(vi))	12.4, 12.5, 12.6, 16.4, 16.5, 17.5, 17.6, 17.16.2

8.10 Bay of Plenty Proposed Regional Policy Statement

The Proposed Regional Policy Statement (PRPS) was publicly notified in November 2010. There are still a number of outstanding appeals to the PRPS. The PRPS has been amended through Variation 1 (Coastal Policy). Decision makers on resource consent applications must have regard to the relevant provisions of the Proposed Regional Policy Statement as required by section 104(1)(b)(v) of the RMA.

When considering a requirement, territorial authorities must have regard to any relevant provisions of the Proposed Regional Policy Statement as required by section 168A(3)(a)(iii) of the RMA.

The PRPS is relevant to the resource consent applications and notices of requirement for both sites.

The PRPS identifies the site of the Land Application Field as an area of high natural character (Thornton Dunes). The area is valued because it has a unique species of manuka known as “Thornton Manuka” which is a dominant vegetation cover. There are applicable objectives and policies concerning the preservation of natural character and protection of indigenous biodiversity as outlined below.

Both sites are within the Tarawera River catchment which is identified as being one of the “at risk” catchments where the PRPS seeks to control contaminant discharges. A catchment includes the total area from which a receiving water body collects its surface or groundwater runoff (policy WL 2B). Catchments at risk are the subject of several subsequent policies directing regional plan provisions to require the establishment of contaminant discharge limits, that resource consent be obtained where land use change increases contaminant discharges, allocation of allowable nutrient discharges among land use activities and managed reduction of contaminants in excess of any limits.

Table 8-7 below identifies key policy themes of the PRPS relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-7: Summary of Key Policy Themes of the Bay of Plenty Proposed Regional Policy Statement

Policy Themes	AEE Section Reference
Air Quality – People and the environment are protected from the adverse effects of odours, chemical emissions and particulates, managing adverse effects from the discharge of odours. Objective 1, Policy AQ 2A)	10
Coastal Environment – Preservation and enhancement of the natural character and ecological functioning of the coastal environment, managing adverse effects on high natural character, protecting indigenous biodiversity, ensuring use and development avoids adverse effects on the natural character of the coastal environment, enable use and development of the coastal environment in appropriate locations, safeguarding life-supporting capacity of ecosystems. (Objectives 2 and 4, Policies CE 2A, CE 5A, CE 6A, CE 7B and CE 8B)	12.4, 12.5, 12.6, 17.5, 17.6
Iwi Resource Management – Recognise and take into account the principles of the Treaty of Waitangi, regard to be had to iwi resource management planning documents, the mauri of water, land, air is sustained or improved. (Objectives 13, 15, 17, Policies IW 3B, IR 4B, IW 4B and IW5B)	8.17.6, 8.17.7, 9, 13
Matters of National Importance – Preservation of the natural character of the region; maintenance, restoration and rehabilitation of natural communities and habitats of significant indigenous flora, fauna and ecosystems; recognition and provision for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga (Objectives 19, 20 and 21, Policies MN 1B, MN 2B, MN 8B, IW 2B, IW 5B and MN 8B)	12.4, 12.5, 12.6, 12.7, 16.4, 16.5, 16.6, 16.15.2
Natural Hazards – Communities achieve acceptable levels of risk from natural hazards, avoiding new development that would result in unacceptable natural hazard risk, providing for sea level rise due to climate change. (Objective 23, Policies NH 2B and NH 6B)	7.1.6, 16.10, 16.11, 17.11, 17.12
Urban Form and Growth Management – Co-ordinating new urban development with infrastructure (Policy UF 9B)	14.5
Water Quality and Land Use – the quality of water in the region is maintained and where necessary enhanced to meet the identified values associated with its required use and protection, enhance water quality in catchments at risk, land use is within the capability of the land to support the use, integrated with the wider environmental values of its surroundings and within the capacity of its receiving water to assimilate and discharge, effects of earthworks and vegetation disturbance are minimised. (Objectives 27, 28 and 29, Policies WL 1B, WL 2B, WL 3B, WI 4B, WL5B and WL 7B)	11, 12, 16.15.1, 16.6, 17.16.1, 17.7

8.11 Bay of Plenty Regional Air Plan

The Bay of Plenty Regional Air Plan provides for the control of discharges of contaminants into air, including odour, for the whole of the Bay of Plenty region. Decision makers on resource consent applications must have regard to the relevant provisions of the Bay of Plenty Regional Air Plan as required by section 104 (1)(b)(vi) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Bay of Plenty Regional Air Plan as required by section 168A(3)(a)(iv) of the RMA. District plans must be consistent with regional plans.

The Regional Air Plan is relevant to the air discharge permit application.

The discharge of contaminants to air (including odour) from municipal wastewater plants is a **discretionary activity** pursuant to Rule 19 of the plan. Given the ambiguity of this rule with regard to sewage pumping stations (whether all are excluded or just those permitted under the On-site Effluent Treatment Regional Plan), it was determined that a precautionary approach would be taken and the proposed pump station at the disposal field would be included in the discharge permit application.

Rule 19 Discretionary Activity – Specified Activities

The discharge of contaminants into air from the following activities is a discretionary activity:

- (w) (i) municipal sewage treatment plants but excluding sewage pumping stations and on-site effluent treatment systems permitted under the On-site Effluent Treatment Regional Plan;
- (ii) treatment or disposal of waste, but excluding sewage pumping stations and on-site effluent treatment systems permitted under the On-site Effluent Treatment Regional Plan;
- (z) Any activity that cannot comply with the conditions set out in Permitted Activity Rules 1-17 and which is not a controlled activity or a prohibited activity

Table 8-8 below identifies key policy themes of the Regional Air Plan relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-8: Summary of Key Policy Themes of the Bay of Plenty Regional Air Plan

Policy Theme	AEE Section Reference
Air Quality – Maintain and protect high air quality in the Bay of Plenty region including requiring that the disposal and storage of waste be undertaken in a manner that avoids, remedies or mitigates adverse effects on air quality. (Objective 1, Policy 6)	10

8.12 Bay of Plenty Regional Water and Land Plan

The purpose of the Regional Water and Land Plan is to promote the sustainable and integrated management of land and water resources within the Bay of Plenty Region and includes matters relating to discharges to land. Decision makers on resource consent applications must have regard to the relevant provisions of the Bay of Plenty Regional Water and Land Plan as required by section 104(1)(b)(vi) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Bay of Plenty Regional Water and Land Plan as required by section 168A(3)(a)(iv) of the RMA.

The Regional Water and Land Plan is relevant to the water discharge permit and land use consent applications.

Discharges of contaminants onto or into land which may result in that contaminant entering water, and discharges of contaminants to land from industrial or trade premises (which includes any premises used for the storage, transfer, treatment, or disposal of waste materials) are discretionary activities pursuant to Rule 37 of the plan. This rule is therefore applicable to the discharge of treated wastewater at the Land Application Field.

Rule 37 Discretionary - Discharges to Water or Land

Any:

1 Discharge of a contaminant to water.

2 Discharge of water to water.

3 Discharge of a contaminant onto or into land in circumstances which may result in the contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water.

4 Discharge of a contaminant from any industrial or trade premises onto or into land. That is not:

- (a) Permitted by a rule in this regional plan.
- (b) Permitted by a rule in any other Bay of Plenty regional plan.
- (c) Prohibited by a rule in this regional plan.
- (d) Restricted discretionary status by a rule in this regional plan.
- (e) Controlled status by a rule in this regional plan.

Is a discretionary activity.

This activity is also subject to the requirements of the rules in section 9.4.

The following definitions are relevant to Rule 37

Contaminant – Includes any substance (including gases, liquids, solids, and micro-organisms) or energy

(excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat -

(a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or

(b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

Industrial or trade premises – Means -

(a) Any premises used for any industrial or trade purposes; or

(b) Any premises used for the storage, transfer, treatment, or disposal of waste materials or for other waste-management purposes, or used for composting organic materials; or

(c) Any other premises from which a contaminant is discharged in connection with any industrial or trade process

- but does not include any production land.

Resource consent is also required for earthworks and vegetation removal within the Erosion Hazard Zone pursuant to Rule 1C as a **discretionary activity** and Rule 2B as a **restricted discretionary activity** respectively. The Land Application Field and part of the access road are located less than 150 metres from the Coastal Marine Area.

Rule 1C Discretionary – Earthworks and Quarries

The disturbance of land and soil as a result of earthworks or a quarry, where the activity:

1 Is not permitted by a rule in this regional plan; and

2 Is not a controlled activity under a rule in this regional plan, and

3 Is not a restricted discretionary activity under a rule in this regional plan;

Is a discretionary activity.

Rule 2C Discretionary - Land and Soil Disturbance by Vegetation Clearance

The disturbance of land and soil resulting from vegetation clearance, where the activity:

1 Is not permitted by a rule in this regional plan, and

2 Is not a controlled activity under a rule in this regional plan, and

3 Is not a restricted discretionary activity under a rule in this regional plan;

Is a discretionary activity.

The Erosion Hazard Zone is defined as:

Erosion Hazard Zone – Land that has very severe to extreme erosion hazards. For the purposes of rules

in section 9.2 of this regional plan, the Erosion Hazard Zone is:

(a) Any Sand Dune Country; excluding sand dune country within urban areas or already developed subdivisions that are on land between 50-150 metres from the Coastal Marine Area.

(b) Any land in the upper Rangitaiki River catchment above the confluence of the Otangimoana Stream and Rangitaiki River, including the Otamatea River catchment, in the following areas:

(i) On the margins of erosion susceptible permanent streams and rivers; or

(ii) In the beds and margins of ephemeral flowpaths; or

(iii) On steep terrace edges;

as shown in Environment Bay of Plenty Plan Series M1009¹.

Sand Dune Country – coastal dune systems with sand soils, which are characterised by low amounts of organic matter and low cohesiveness. Includes areas with Land Use Capability of VIIe and VIIIe, and Land Management Suite of LMS 3 or LMS 4. For the purposes of the rules in section 9.2 of this regional plan, it is coastal land measured horizontally from the Coastal Marine Area to either

- (i) 150 metres landward of the Coastal Marine Area; or
- (ii) the point where land changes from sand dune country to another soil type; whichever is the lesser distance.

Table 8-9 below identifies key policy themes and relevant rules of the Regional Water and Land Plan relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-9: Summary of Key Policy Themes of the Bay of Plenty Regional Water and Land Plan

Policy Themes	AEE Section Reference
<p>Kaitiakitanga – principles of the Treaty of Waitangi are taken into account, water and land concerns of tāngata whenua are taken into account and addressed, regard to be had to iwi resource management planning documents, maintenance of mauri of water and land, particular regard to kaitiakitanga, appropriate consultation with tangata whenua, avoid, remedy or mitigate adverse effects on water, land, or sites of spiritual cultural or historical significance to tangata whenua where these resources and sites have been identified by tangata whenua (Objectives 1, 4, 5, 6, Policies 2, 5, 9, 11, 14, 15, 17, 18 and 20)</p>	<p>8.17.6, 8.17.7, 9, 12.7, 13, 16.15.2, 17.16.1</p>
<p>Integrated Management of Land and Water – land use and management practices are appropriate to the environmental characteristics and limitations of the site; maintenance of cultural, ecological, amenity, natural character and landscape values, maintenance of high quality groundwater and health of the regions soils; management of riparian margins to protect and enhance soil conservation, water quality and heritage values; protection of vulnerable areas from erosion; maintain and improve the protective function of coastal sand dunes; allowance of resource use and development where there are beneficial effects on the social, cultural and economic wellbeing of people and communities and adverse effects on the environment are avoided, remedied or mitigated. (Objectives 8, 9, 10, 15, 17, 19, 20, 21 Policies 21 and 32).</p>	<p>10, 11, 12, 13, 14, 16, 17</p>
<p>Discharges to Water and Land – Management of discharges of contaminants to land with respect to the treatment capacity of the soil, run off to surface water, adverse effects on groundwater. Appropriate management of stormwater. Early and on-going consultation with tāngata whenua during consideration of wastewater treatment systems, encouragement of discharge of contaminants to land based treatment and disposal (rather than to water) where appropriate and environmentally sustainable including disposal of sewage by passage through land, soil or wetlands. Consideration of contamination of fresh water and ecosystems when considering applications for discharge consent onto land, requirement for appropriate management of discharges of contaminants to land where it may enter water, encouragement of discharge activities to comply with current best engineering practice and best practicable options to avoid or mitigate adverse effects. (Objectives 26, 31, 32 and 34, Policies 41, 42, 43A, 44, 48 51 and 54)</p>	<p>9, 11, 13, 17</p>

8.13 Bay of Plenty Regional Plan for the Tarawera River Catchment

The purpose of the Bay of Plenty Regional Plan for the Tarawera River Catchment is to assist Environment Bay of Plenty to promote the sustainable management of natural and physical resources within the Tarawera River catchment. Decision makers on resource consent applications must have regard to the relevant provisions of the Bay of Plenty Regional Plan for the Tarawera River Catchment as required by section 104(1)(b)(vi) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Bay of Plenty Regional Plan for the Tarawera River Catchment as required by section 168A(3)(a)(iv) of the RMA.

Both sites are within the Tarawera River catchment which is described below.

In the catchment of the Lower Reach of the Tarawera River the eastern margin of the regional plan area is the western bank of the Rangitaiki River. The western margin of the regional plan is the watershed of the Manawahe hills and includes the Matatā Lagoon and its catchment.

This regional plan extends to the landward edge of the line of mean high water springs. In the Lower Reach of the Tarawera River the line of mean high water springs is the Thornton Road Bridge just east of the settlement of Matatā.

The Regional Plan for the Tarawera River Catchment is relevant to the water discharge permit application.

In accordance with Rule 16.8.5(a), any discharge of waste onto or into land in a way or at a rate that may result in the percolation or movement of contaminants into groundwater is a **discretionary** activity.

Table 8-10 below identifies key policy themes and relevant rules of the Regional Plan for the Tarawera River Catchment relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-10: Summary of Key Policy Themes of the Bay of Plenty Regional Plan for the Tarawera River Catchment

Policy Theme	AEE Section Reference
Land Use – Mitigation, remediation and avoidance of erosion and the discharge of nutrients and sediment, and of adverse effects on water quality and quantity arising from inappropriate land uses and land use practices (Objective 11.8.2). Consent authorities need to recognise and provide for the national significance of the catchment (Policy 11.8.3(e)).	10, 12.4, 16.6, 16.15.1, 17.7, 17.16.1
Groundwater – Protect the quality and quantity of groundwater resources of the Tarawera River catchment, promote the use of land based contaminant disposal systems over areas sufficient and appropriate to the long-term treatment capacity of substrata; encourage land based contaminant disposal systems that involve effective nutrient uptake; ensure effective monitoring of the effects that land based contaminant disposal systems may have on both ground and surface water resources; to provide, following an initial operation and monitoring period, for long-term discharge consents for land based contaminant disposal systems that effectively dispose waste without significantly affecting water resources. (Objective 16.8.2, Policies 16.8.3(h), 16.8.3(i), 16.8.3(j) and 16.8.3(k))	10, 17

8.14 Bay of Plenty Regional Coastal Environment Plan

The coastal marine area is defined in the RMA and takes in the foreshore, seabed and coastal water up to the line of mean high water springs. The Regional Coastal Environmental Plan manages the coastal marine area together with the wider coastal environment including the land areas of the coast, in the interest of the integrated management of the coastal marine area and related parts of the coastal environment which impact upon it. Refer to sections 2.1.2 and 2.1.3 of the Regional Coastal Environmental Plan.

Decision makers on resource consent applications must have regard to the relevant provisions of the Bay of Plenty Regional Coastal Environment Plan as required by section 104(1)(b)(vi) of the RMA. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Bay of Plenty Regional Coastal Environment Plan as required by section 168A(3)(a)(iv) of the RMA.

The Regional Coastal Environment Plan is relevant to the resource consent applications and notice of requirement for the Land Application Field. As stated in the Regional Coastal Environment Plan (page 20), because this area is outside the coastal marine area, there are no applicable rules and it is up to the district council to control effects on such sites. As such, there are no resource consents required under the Coastal Plan, however in recognition of the need for an integrated approach to the coastal environment, the relevant policies have been assessed. Applicable objectives and policies for significant areas of flora and fauna are outlined in table 8-11 below.

The site for the Land Application Field is within the “Coastal Management Zone”. The purpose of this zone is to manage activities within it based on a case by case approach having regard to the values of

the site and to allow developments to be considered in accordance with their actual and potential effects on the environment.

The Land Application Field site is also shown as a “site of significance” because of significant indigenous vegetation including pingao and adjoining kanuka forest for which it provides a buffer (refer to the Seventh Schedule Significant Indigenous Vegetation Areas).

In addition the Land Application Field site is identified as being within an Area which is Sensitive to Coastal Hazards (ASCH). Policy 11.2.3(e) states that applications for new development within this area should be supported by a coastal hazards analysis. However pursuant to Policy 11.2.3(c), this policy does not apply where the district council has commissioned research to identify a coastal hazard area and has identified it in a district plan. Research is to be undertaken in accordance with Policy 11.2.3(f). WDC commissioned Tonkin and Taylor in 2001 to carry out a coastal hazard analysis for the District’s coastline as part of Variation 6 to the Operative District Plan, and the content of Variation 6 has been rolled over into the Proposed District Plan. The analysis included coastal hazards associated with coastal erosion and inundation. The purpose of the study was to refine the ASCH line and the study applied the criteria in the Coastal Environment Plan. Policy 11.2.3(e) is not therefore applicable.

Table 8-11 below identifies key policy themes and relevant rules of the Regional Coastal Environment Plan relating to the proposal and identifies where these matters have been addressed in the AEE.

Table 8-11: Summary of Key Policy Themes of the Bay of Plenty Regional Coastal Environment Plan

Policy Themes	AEE Section Reference
Natural Character – The preservation of the natural character of the coastal environment and its protection from inappropriate subdivision, use and development. Recognition of natural character and sites of ecological significance, the contribution that all remaining areas of indigenous vegetation and habitats in the coastal environment have to the overall natural character, the importance of ecological interconnections, new use and development should be located in areas already modified by development and should minimise further loss of remaining natural character. (Objective 4.2.2, Policies 4.2.3(b), 4.2.3(c), 4.2.3(d) and 4.2.3(f)).	12.4, 12.5, 12.6, 17.5, 17.6, 17.16.1
Significant Areas of Flora and Fauna – The protection of areas of significant indigenous vegetation within the coastal environment, to avoid or remedy adverse effects on the values of the sites and areas of significance in the Coastal Management Zone, to promote and encourage the appropriate protection and management of all sites of significance on land within the coastal environment. (Objective 6.2.2, Policies 6.2.3(b), 6.2.3(c))	17.6
Tāngata Whenua Interests – the involvement of tāngata whenua in the management of the coastal environment, the protection of the characteristics of the coastal environment of special spiritual, cultural and historical significance to tāngata whenua, sustaining the mauri of coastal resources. (Objectives 8.2.2(a), 8.2.2(b) and 8.2.2(c))	9, 13, 17.16.2
Coastal Hazards – No increase in the total risk from coastal hazards. To protect natural features and values that provide a natural hazard protection and avoid lowering of foredunes. (Objective 11.2.2, Policies 11.2.3(j) and 11.2.3(k))	7.1.6, 12.4, 12.6, 17.11

8.15 Operative Whakatāne District Plan

The District Plan assists the Whakatāne District Council to carry out its functions under the Resource Management Act 1991 in order to achieve the purpose of the Act to promote the sustainable management of natural and physical resources. Pursuant to section 176 of the RMA, once a designation is included in a district plan, the works do not require further consents from the District Council. When considering a requirement, territorial authorities must have regard to any relevant provisions of the Operative Whakatāne District Plan as required by section 168A(3)(a)(iv) of the RMA.

The Operative District Plan is relevant to the notices of requirement for both sites.

Both sites are zoned “Rural 3 (Coastal)” in the Operative District Plan. The purpose of this zone is to manage resource issues in these areas including natural hazards to the environment from coastal processes, sensitivity of indigenous vegetation and foredunes to development and conservation of natural character and landscape values. Within this zone, sewage and wastewater treatment plants and treated wastewater disposal sites are **discretionary activities** (see section 4.6.1 Works and Network Utilities).

The site for the Land Application Field is also identified as being within a Coastal Inundation Risk Zone and an Erosion Risk Zone however the Land Application Field itself is outside of this zone.

Table 8-12 below identifies the key relevant objectives and policies of the Operative Whakatāne District Plan and identifies where these matters have been addressed in the AEE.

Table 8-12: Summary of Key Policy Themes of the Operative Whakatāne District Plan

Policy Themes	AEE Section Reference
Land Resource and Subdivision – To sustain the life supporting capacity of soil and to avoid, remedy or mitigate the adverse effects of activities on the life-supporting capacity of the soil and soil characteristics (Objective LRS3, Policy 1). To promote residential growth of urban areas by continued infill housing and enable subdivision and residential development where it can be serviced to a standard compatible with existing residential areas, infill housing to be able to dispose of sewage and wastewater to avoid, remedy or mitigate potential adverse effects on the environment (Objective LRS7, Policies 1 and 2).	12.5, 14.5, 16.5, 17.6
Built Environment – The maintenance and enhancement of health and safety of people and communities from nuisance including noise, odour (Objective BE2, Policy 1). To prevent uncontrolled or unauthorised disposal of stormwater, wastewater and sewage into the environment (Objective BE8, Policy 1).	10, 12.9, 16.8, 16.9, 17.9, 17.10
Natural Hazards – To manage development so as to avoid or mitigate the adverse effects of natural hazards on the life and well-being of people and significant environmental values (Objective 1).	7.1.6, 16.10, 17.11
Landscape – To maintain the character and diversity of rural and urban landscapes (Objective LS2).	16.4
Works and Network Utilities – To facilitate the development, operation and maintenance of works and network utilities throughout the district, while avoiding, remedying or mitigating adverse effects on the environment, to consider the benefits derived from works and network utilities and any technical requirements to enable efficient operation, to avoid, remedy or mitigate adverse visual effects or works and network utilities, to ensure adverse effects on the environment from construction, operation and maintenance are avoided, remedied or mitigated (Objective WNU1, Policies 1, 2 and 3).	14, 16, 17
Coastal Environment – To preserve the natural character of the coastal environment and protect it from inappropriate use and development, and ensure that modifications preserve natural character which includes indigenous coastal habitats in particular river mouth system, kanuka stands and wetlands, to maintain and enhance the natural ecology of the coastal environment (Objective CE1, Policies 1 and 3).	10, 12, 17

8.16 Proposed Whakatāne District Plan

When considering a requirement, territorial authorities must have regard to any relevant provisions of the Proposed Whakatāne District Plan as required by section 168A(3)(a)(iv) of the RMA. The Proposed District Plan is relevant to the notices of requirement for both sites.

The Proposed Whakatāne District Plan (PWDP) was publicly notified on the 28 June 2013 and the period for public submissions has now closed. In accordance with section 86A(2) of the RMA the objectives and policies in the plan now have legal effect. In accordance with section 86B(1), a rule in a proposed plan has legal effect only once a decision on submissions relating to the rule is made and publicly notified, with some exceptions, including that some rules such as those relating to significant indigenous vegetation have immediate legal effect in accordance with section 86B(3). Whakatāne

District Council is currently undertaking the analysis of the submissions to determine the weighting of objectives and policies and the plan's operative parts, however at this time such information is currently unavailable. For the purposes of the Notice of Requirement the relevant objectives and policies contained within the Plan are outlined below.

Within the Proposed District Plan, both sites are zoned "Rural Coastal". Part of the Land Application Field site adjacent to the coast has a "Coastal Protection" zoning, however the subject area of this proposal is outside of this zone. The purpose of the Rural Coastal Zone is to manage important coastal values in coastal areas between Whakatāne and Matatā. Activities within the zone are controlled in response to natural hazards from coastal processes, the sensitivity of coastal wetlands, indigenous vegetation and foredunes to subdivision, use and development, and the conservation of the existing natural character, particularly its landscape value. Within this zone, sewage and wastewater treatment plants, and treated wastewater disposal sites are discretionary activities. In addition the Land Application Field site is shown as being within a "Significant Amenity Landscape" and is identified as a "Significant Indigenous Biodiversity Site" (Thornton Road Dunes). The Land Application Field site is also shown as being subject to coastal hazards including erosion risk and inundation however the Land Application Field itself is outside of this area.

Table 8-13 below identifies the key relevant objectives and policies of the Proposed Whakatāne District Plan and identifies where these matters have been addressed in the AEE.

Table 8-13: Summary of Key Policy Themes of the Proposed Whakatāne District Plan

Policy Themes	AEE Section Reference
<p>Rural Coastal Zone – To maintain and enhance the visual open, vegetated character of rural environs, avoid remedy or mitigate the adverse effects of structures in terms of location, size, height, bulk and materials (Objective Rur2, policy 1); To ensure that development is located and operated to enable people and communities to provide for their social, economic and cultural well-being and for their health and safety, while ensuring adverse effects including cumulative effects on the rural environment are avoided and to maintain and enhance rural amenity values including buffers to boundaries within and around dwellings (Objective Rur3, policy 3).</p>	<p>14, 16.4</p>
<p>Health and Safety – Maintain and enhance the health and safety of people and communities from nuisance effects and adverse effects on the environment, avoid, remedy or mitigate the adverse effects of intrusive noise, odour, glare or vibration, to suppress dust and control erosion, sediment and stormwater created by building construction/demolition projects and earthworks (Objective Gen1, Policies 1 and 3); to avoid, remedy or mitigate the adverse effects of incompatible use and development of natural and physical resources (Objective Gen4).</p>	<p>12.4, 14, 16.8, 16.9, 16.12, 16.13, 16.15, 17.9, 17.10, 17.13, 17.14, 17.16</p>
<p>Indigenous Biodiversity (Site 8) – Maintenance and enhancement of the full range of the District's indigenous habitats and ecosystems, promote and encourage the protection, restoration and enhancement of indigenous biodiversity using a range of methods including protection of lots and ecological corridors whilst giving priority to areas identified as being significant, to require the restoration and rehabilitation of ecosystems and habitats where the avoidance of adverse effects from the "reasonable use" of land is not possible (Objective IB1, Policies 1 and 2).</p>	<p>16.5, 17.6</p>
<p>Landscape and Coastal Environment (Site 8) – The existing visual quality and natural character of Significant Amenity landscapes (SAL) and Coastal Environments are maintained, and the processes, values and associations that underpin the landscape are sustained, to ensure the uniqueness and representative nature of scheduled outstanding landscapes including the aesthetic, intrinsic and cultural values are protected, the scale, location, orientation, design, materials and colour of buildings, structures and activities in scheduled SALs and within the Rural Coastal Zone that adjoins the CPS shall protect or enhance the natural and physical processes which contribute to the site's natural character and landscape values, not detract from amenity values, avoid, remedy or mitigate adverse environmental effects on the values and functions of natural habitats and ecosystems and provide measures to mitigate</p>	<p>14.4, 16.4, 16.5, 17.5, 17.6</p>

Policy Themes	AEE Section Reference
<p>adverse effects on the amenity of residential accommodation, to have particular regard to the sensitivity of areas of high natural character and landscape qualities to the adverse visual effects from land and vegetation disturbance, indigenous coastal habitats in particular kanuka stands and wetlands and areas subject to coastal erosion (Objective LS1, policies 2, 3 and 4); To maintain the character and diversity of rural landscapes, to maintain the open-space and vegetated characteristics of the rural landscape (Objective LS2, Policy 2); maintain the open-space and vegetated characteristics of the rural landscape (Objective LS2, Policy 2); to preserve the natural character of the coastal environment including all its natural and physical resources and to protect it from inappropriate use and development, to require restoration or rehabilitation of the natural character of the coastal environment where the adverse effects of the development warrant such a response, to ensure development of public reserves adjacent to the coastal marine area is compatible with the natural character values of the location and provides for public walking access and appropriate vehicle access (Objective LS4, policies 1 and 2).</p>	
<p>Natural Hazards – Manage the subdivision, use and development and protection of land so as to avoid or mitigate the adverse effects of natural hazards on the life and wellbeing of people and significant environmental values, avoid or mitigate the adverse effects of development which is or likely to be subject to damage or accelerate or worsen damage by erosion, falling debris, subsidence, slippage or inundation from any source, to take into account the extent and nature of seismic hazards to avoid, remedy or mitigate adverse effects on activities in suspected earthquake areas, encourage the retention of natural areas and landforms such as dunes which play an important role in hazard mitigation, to provide for continuous operation, maintenance and upgrading of infrastructure that provides an essential service for people and communities (Objective Haz1, Policies 3, 4, 5, 6 and 10).</p>	<p>7.16.6, 16.10, 17.11</p>
<p>Works and Utilities – to facilitate the development, operation and maintenance of works and network utilities while avoiding, remedying or mitigating adverse effects on the environment particularly the health and safety of communities, and to recognise the effects of natural hazards on works and utilities, to consider the benefits derived from works and network utilities and any technical requirements, to avoid, remedy or mitigate adverse visual effects of works and network utilities where technically feasible, and more efficient land use by co-location of equipment and/or placing services underground and landscaping, to ensure that adverse effects on the environment and human health from the construction, operation and maintenance of a work or network utilities are avoided, remedied or mitigated (Objective WNU1 Policies 1, 2 and 3); integrate the design of new services into the existing network to reduce the risk of failure of the service, new and replaced service assets shall be of sufficient size and capacity to accommodate known future capacity requirements for up and downstream catchments (Objective WNU3 Policy 2).</p>	<p>5.2, 14, 16, 17</p>

8.17 Necessity of Project for Achieving Objectives

As set out in Section 8.6.2 above, section 168A(3)(c) of the RMA requires a territorial authority when assessing a Notice of Requirement for a designation to consider the effects on the environment of allowing the Requirement, having particular regard to whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.

Table 8-14 below sets out why the proposed works and designations (WWTP, access to the WWTP, Environmental Protection Buffer and the Land Application Field) are reasonably necessary for achieving the project objectives which are set out in Section 2.1.5.1. Only the project objectives relevant to this assessment have been considered.

Table 8-14: Assessment of the Necessity of Works and Designations for Achieving Objectives

Relevant Project Objectives	Assessment
<p>Overall Objective</p> <p><i>To work in partnership with the community and tangata whenua to achieve a sustainable, long term solution for the collection, treatment and disposal of Matatā's wastewater. The solution shall achieve a high level of public health protection, safeguard the life supporting capacity of natural resources, be the best practicable option and meet the following objectives.</i></p>	<p>The designations will provide for the construction, operation, maintenance and upgrading of the WWTP and Land Application Field.</p> <p>The WWTP and Land Application Field are essential works for the future treatment and disposal of Matatā's wastewater. The works associated with the access designation will protect the access to the WWTP and the designation for the Environmental Protection Buffer will ensure that the WWTP is well separated from adjoining properties to minimise any adverse effects.</p> <p>The works for the WWTP and Land Application Field are essential for achieving a high level of public health protection for the Matatā community as they will remove the current public health and environmental risks related to existing poorly performing and maintained on-site septic tanks. The proposed works have been designed to safeguard the life supporting capacity of land, air and water and to be the Best Practicable Option (BPO) for Matatā's future wastewater management.</p> <p>The Proposed Wastewater Scheme has been developed in partnership with the community, and tāngata whenua. Extensive consultation has been undertaken to develop the Proposed Wastewater Scheme and three CIA's have been prepared (provided as Companion Documents to this AEE).</p> <p>The designations are necessary to protect the land from possible inappropriate use that may prevent or hinder the proposed works associated with the WWTP and Land Application Field.</p> <p>The designation process enables the land to be secured for the proposed work without the need to undertake detailed design as would generally be required to obtain a resource consent.</p> <p>The designations will provide certainty to the public as to the location of the works as the designations will be included within the Whakatāne District Plan.</p>
<p>Environmental Objectives</p> <ul style="list-style-type: none"> <i>To enable the appropriate disposal of treated wastewater by land application rather than discharge to coastal waters.</i> 	<p>The designation for the Land Application Field will:</p> <ul style="list-style-type: none"> provide for the works necessary to enable

Relevant Project Objectives	Assessment
<ul style="list-style-type: none"> <i>To protect the natural character, indigenous biodiversity and visual amenity of the coastal environment.</i> <i>To ensure that the water quality of the Tarawera River is not degraded.</i> <i>To ensure that the visual impact on the environment of the Wastewater Treatment Plant and Land Application Field is minimised.</i> <i>To ensure a high level of compliance with National, Regional and District Resource Management requirements and relevant Guidelines.</i> <i>To avoid, remedy or mitigate significant adverse effects on natural and physical environments including communities within those environments.</i> 	<p>the disposal of treated wastewater by land application.</p> <ul style="list-style-type: none"> facilitate the replanting of the area with suitable ecosourced indigenous species. <p>The designations for the WWTP and Land Application Field will provide for works that have been designed to ensure the standard of the proposed treated wastewater and the sub-surface drip application:</p> <ul style="list-style-type: none"> will not degrade water quality of the Tarawera River from its current state, and will be in compliance with National, Regional and District Resource Management requirements and relevant Guidelines. <p>The proposed works provided for the requirements and associated proposed designation conditions have been designed to avoid, remedy or mitigate significant adverse effects on natural and physical environments including communities within those environments.</p>
Social Objectives	
<ul style="list-style-type: none"> <i>To ensure that the Matatā Wastewater Scheme achieves the greatest practicable protection of public health.</i> <i>To achieve more sustainable wastewater management for the Matatā community.</i> <i>To ensure the Matatā Wastewater Treatment Scheme supports development and growth while continuing to meet the needs of existing residents and wider community including their recreation activities in the area.</i> 	<p>The designations provide for works for the treatment and disposal of Matatā's wastewater. These works will remove the current public health and environmental risks related to poorly performing and maintained on-site septic tanks and enable the development of a sustainable solution to the management of Matatā's wastewater.</p> <p>The proposed works and designations that provide for them have been designed to facilitate the planned growth of Matatā for the next 35 years</p>
Economic Objectives	
<ul style="list-style-type: none"> <i>To provide an economically sustainable future Wastewater Scheme which will match the anticipated growth in the area, - i.e. affordable for both the existing and growth communities and businesses now and in the future.</i> <i>To apply appropriate technology that will protect public health and meet environmental standards and tangata whenua and community aspirations while achieving lowest whole of life costs.</i> <i>To promote outcomes that ensure sufficient flexibility to adopt appropriate technology and more sustainable solutions in the future, including treated wastewater reuse, where they provide</i> 	<p>The proposed works provided for by the designations have been designed to provide an affordable, long term solution for the community in managing the wastewater of Matatā.</p> <p>The designations will provide for works involving technologies that will protect public health, safeguard the environment and will be the BPO.</p> <p>The designations will provide the flexibility to adopt new technologies involving more sustainable solutions where such solutions relate to the WWTP or the Land Application</p>

Relevant Project Objectives	Assessment
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more effective solutions.

Field.

Tāngata Whenua Cultural Objectives

<ul style="list-style-type: none"> <i>To recognise and provide for tangata whenua as kaitiaki.</i> <i>To work in partnership with tangata whenua to share knowledge and achieve a good understanding of this Project, so as to enable genuine and effective consultation, engagement and participation.</i> 	<p>The designation for the Land Application Field will enable the disposal of treated wastewater by land application rather than discharge to coastal water which is understood to be preferred by tangata whenua. The Land Application Field has been designed to ensure there will be no adverse effects on the Tarawera River.</p> <p>The Proposed Wastewater Scheme has been developed in partnership with the community, and tāngata whenua. Extensive consultation has been undertaken to develop the Proposed Wastewater Scheme and three CIA's have been prepared (provided as Companion Documents to this AEE).</p>
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Technical Objectives

<ul style="list-style-type: none"> <i>To promote outcomes that ensure sufficient flexibility to adopt new appropriate technology and more sustainable solutions in the future, including treated wastewater reuse where that provides more effective solutions.</i> <i>To provide a Scheme that can be maintained and efficiently operated to best practice standards</i> 	<p>The designations will provide the flexibility to adopt new technologies involving more sustainable solutions where such solutions relate to the WWTP or the Land Application Field.</p> <p>The designations for the WWTP and Land Application Field will provide for works that have been designed to ensure the standard of the proposed treated wastewater and the sub-surface drip application will be in compliance with relevant RMA plans and industry guidelines.</p>
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8.18 Other Matters

Decision makers on resource consent applications must have regard to any other matter considered relevant and reasonably necessary to determine the application, as required by Section 104(1)(c) of the RMA. When considering a requirement, the territorial authority must have regard to any other matter the territorial authority considered reasonably necessary in order to make a decision on the requirement as required by section 168A(3)(d). The following sections outline the other matters that are considered relevant to the resource consent applications and notices of requirement.

8.18.1 Local Government Act 2002

The Council is required to give effect to the purpose of local government as prescribed by Section 10 of the Local Government Act 2002 which states:

10 Purpose of local government

(1) *The purpose of local government is—*

(a) to enable democratic local decision-making and action by, and on behalf of, communities; and

(b) to meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses.

*(2) In this Act, **good-quality**, in relation to local infrastructure, local public services, and performance of regulatory functions, means infrastructure, services, and performance that are—*

(a) efficient; and

(b) effective; and

(c) appropriate to present and anticipated future circumstances.

The Proposed Wastewater Scheme is considered to be in accordance with the purpose of local government, as stipulated in section 10, and outlined throughout this report.

8.18.2 Reserves Act 1977

The site for the Land Application Field is vested in Whakatāne District Council as a Recreation Reserve pursuant to the Reserves Act 1977. The relevant sections of the Reserves Act are as follows:

Section 17 Recreation Reserves sets out the purpose of recreation reserves and the requirements for their administration, which include:

17(1) "...purpose of providing areas for the recreation and sporting activities and the physical welfare and enjoyment of the public, and for the protection of the natural environment and beauty of the countryside, with emphasis on the retention of open spaces and on outdoor recreational activities, including recreational tracks in the countryside."

17(2) (a) The public shall have freedom of entry and access to the reserve, subject to the specific powers conferred on the administering body by sections 53 and 54....and to such conditions and restrictions as the administering body considers to be necessary for the protection and general well-being of the reserve and for the protection and control of the public using it:

(b) Where scenic, historic, archaeological, biological, geological, or other scientific features or indigenous flora or fauna or wildlife are present on the reserve, those features or that flora or fauna or wildlife shall be managed to the extent compatible with the principal or primary purpose of the reserve:

(c) Those qualities of the reserve which contribute to the pleasantness, harmony and cohesion of the natural environment and to the better use and enjoyment of the reserve shall be conserved:

(d) To the extent compatible with the principal or primary purpose of the reserve, its value as a soil, water and forest conservation area shall be maintained.

Section 40 covers the functions of the Whakatāne District Council as the administering body, which include administering, managing and controlling the reserve under its control and management in accordance with the appropriate provisions of the Act so as to ensure the use, enjoyment, development, maintenance, protection, and preservation, as the case may require, of the reserve for the purpose for which it is classified.

Section 41 requires the administering body of the reserve to prepare a management plan which is to be kept under continuous review. Refer to section 8.17.3 below.

Section 53 outlines the powers of administering bodies (other than leasing) in respect of recreation reserves. Section 53 enables the administering body, in the exercise of its functions under section 40 and to the extent necessary to give effect to the principles in section 17, to enclose the reserve to lay down or renew in grass or to plant or improve, to farm or graze or afforest as part of a development, improvement or management programme and to prohibit from time to time the public from entering or encroaching on any part of the reserve so laid down, renewed in grass, planted improved, grazed, farmed or afforested.

The recreation reserve forms part of a regionally significant ecosystem, recognised for having high natural character, a unique species of manuka (Thornton Manuka), pingao and providing a buffer to adjoining kanuka (see Bay of Plenty Proposed Regional Policy Statement, Bay of Plenty Regional Coastal Environment Plan and Proposed Whakatāne District Plan). The proposal site itself however has been leased for grazing for many years, which has been detrimental to the ecological integrity of the wider ecosystem. Whakatāne District Council as the administering body of the reserve intends to undertake a staged process of regenerating the decimated coastal vegetation caused by grazing. In accordance with sections 17 and 53 of the Reserves Act, the Land Application Field is to be planted with suitable ecosourced indigenous species in accordance with an ecological restoration plan. Public access will be excluded whilst the works are underway and the planting becomes established in accordance with section 53. Once established it is anticipated that the planting will enhance the recreational qualities of the reserve whilst at the same time contributing positively to the rehabilitation of the wider ecosystem and associated vegetation and coastal habitat. Users of the reserve will be otherwise unaffected by the disposal area as the treated wastewater will be discharged underground by sub-surface piping.

8.18.3 Western Whakatāne Coastal Recreation Reserves Management Plan

The site for the Land Application Field is a Recreation Reserve vested in the Whakatāne District Council and is subject to the Western Whakatāne Coastal Recreation Reserves Management Plan pursuant to section 41 of the Reserves Act 1977 (see previous section). The Reserve Management Plan was adopted by Whakatāne District Council in 2004 and outlines the policy and planning framework for the management of the 385.7 hectares of recreation reserves between Otamarākau and Golf Links Road which are administered by the Council. Key primary objectives of the Reserve Management Plan include:

- To protect the natural values, natural character and historic values of the reserves in accordance with their classification.
- To permit freedom of entry and access to the reserves for the public, subject to any conditions or restrictions necessary for the protection and general wellbeing of the reserve and for the protection and control of the public using it.
- To provide for the effective maintenance and management of reserve land and the control of undesirable elements (e.g. plant pests) while protecting and preserving the natural values.
- To permit research which has no permanent detrimental impact of the reserves and to encourage studies that will assist in the management of the reserves.

Key management objectives and policies of the Reserve Management Plan include:

- To allow for the widest possible recreational use of the reserves in keeping with their classification, without diminishing public access or the natural, cultural, historic and landscape values of the reserves.
- To manage and where appropriate enhance the natural values of the recreation reserves and to provide stronger legal protection for the kanuka forest on recreation reserve land at Thornton.
- Significant habitats within the reserves will be identified and protected from human or other disturbance.
- To permit to be provided buildings, facilities and structures for the management and use of the recreation reserves without diminishing or damaging the natural, cultural, historic, landscape or open space values of the reserves.
- To ensure that reserve development or management practice does not detract from the natural, cultural, historic or landscape values of the reserves.

The Reserve Management Plan identifies the area as a site of national significance with significant ecological sequence of vegetation between the coast and kanuka forest. The Plan specifies that the current practice of grazing is an issue in that it reduces available habitat for terrestrial game birds and is not in accordance with the use of the reserve for recreation purposes. The Plan also states that reserves require active management to improve habitat quality by restoring and actively managing the habitat, and protecting fauna habitat from grazing, pests and human activities.

It is considered that the proposal is in keeping with the objectives and policies of the Western Whakatāne Coastal Recreation Reserves Management Plan. The reserve is currently used for grazing which has had a detrimental impact to the native vegetation and fauna habitat. Removal of grazing and restoration of the reserve through the planting of native vegetation will enhance the natural values of the reserve, improve the ecological integrity of a recognised vegetative sequence and provide for fauna habitat. Public access will only be restricted on a temporary basis and overall public access will be improved given the area is currently fenced. There will be no new structures at the site with the possible exception of a small pump station (maximum of 1.8m x 1.8m x 1.8m) which would be visually non-intrusive and suitably integrated into the environment through construction and materials.

8.18.4 Ngāti Awa Claims Settlement Act 2005

Pursuant to the Ngāti Awa Claims Settlement Act 2005 there is an applicable Statutory Acknowledgement. The Statutory Acknowledgement acknowledges the cultural, spiritual, historical and traditional association of Ngāti Awa Iwi to the Tarawera River.

The purpose of the statutory acknowledgement is outlined in section 41:

41 Purposes of statutory acknowledgements

(1) The only purposes of the statutory acknowledgements are—

(a) to require relevant consent authorities, the Environment Court, and the Historic Places Trust to have regard to the statutory acknowledgements, as provided for in sections 42 to 44; and

(b) to require relevant consent authorities to forward summaries of resource consent applications to the Ngāti Awa governance entity, as provided for in section 46; and

(c) to enable the Ngāti Awa governance entity and a member of Ngāti Awa to cite the statutory acknowledgements as evidence of the association of Ngāti Awa with the relevant statutory areas, as provided for in section 47; and

(d) to provide a statement by Ngāti Awa, for inclusion in a deed of recognition, of the association of Ngāti Awa with a statutory area.

(2) This section does not limit the operation of sections 54 to 57.

8.18.5 Ngāti Tuwharetoa (Bay of Plenty) Claims Settlement Act 2005

Pursuant to the Ngāti Tuwharetoa (Bay of Plenty) Claims Settlement Act 2005 there is an applicable Statutory Acknowledgement. The Statutory Acknowledgement acknowledges the cultural, spiritual, historical and traditional association of Ngāti Tuwharetoa Iwi to the Tarawera River.

The purpose of the statutory acknowledgement is outlined in section 38 of the Act. The purpose and requirements are as for the Ngāti Awa Claims Settlement Act 2005 above.

8.18.6 Ngāti Rangitahi Iwi Environmental Management Plan

The Ngāti Rangitahi Iwi Environmental Management Plan assists the iwi with managing natural and cultural resources of importance to Ngāti Rangitahi Iwi. The Environmental Management Plan outlines a number of issues, objectives, policies and methods relating to matters of importance to Ngāti Rangitahi, together with principles for consultation and engagement. Objectives include the restoration of the Tarawera River; to restore, maintain and protect the mauri of freshwater resources; to maintain water quality in water bodies and coastal waters which have good water quality, and to enhance water quality which is degraded; avoid water as a medium for transporting waste; wastewater is treated and discharged to land (Papatuanuku); avoid, remedy or mitigate adverse effects of natural hazards on human life, property and the environment and avoid permanent and long-term sources of air pollution. It should also be noted that the Ngāti Rangitahi have applied for Customary Marine Title as described in Section 7.1.10.

The proposal involves discharging the treated wastewater into land via a sub-surface drip irrigation system, which is the Ngāti Rangitihī iwi's preferred method as outlined in the Iwi Management Plan. The discharge area will be located more than a kilometre away from the Tarawera River, and there will be minimal effect on the water quality of the River. Other water bodies such as the Bennett Road stream (which is already significantly degraded) will not be significantly adversely affected by the proposal. See Section 11 of the AEE for further information on discharges. The proposal will not be significantly affected by natural hazards as the Wastewater Treatment Plant will be sited away from the fault line on this site, and the Land Application Field will be outside of erosion and inundation hazard areas, see Sections 7.1.6, 16.10 and 17.11 for further information on natural hazards. Air pollution will be minimal as outlined in Section 10 of this AEE.

Section 9 of the AEE outlines the consultation with Ngāti Rangitihī Iwi that has been undertaken as part of this proposal. Ngāti Rangitihī representatives have also provided a Cultural Impact Assessment (CIA) which is included as a companion document to this AEE. Section 13 of this AEE outlines how the recommendations in the CIA are to be addressed by the WDC. In addition it is proposed that protocols for any accidental archaeological or kōiwi discoveries, as advised by the relevant iwi groups, be included as conditions on resource consents and designations where appropriate.

8.18.7 Ngāti Umutahi Whenua Management Plan

The Ngāti Umutahi Whenua Management Plan outlines the traditional Māori Environmental Management Systems of Ngāti Umutahi Iwi and issues of concern which include kaitiakitanga, mauri, te whenua (land), moana (the sea), waitai (salt water) Waiora a tane (god of light), pollution, water quality, waste, waahi tapu and heritage.

As outlined above and more comprehensively in Parts B and C of this AEE the proposal is for the appropriate treatment and disposal of waste, and there will be minimal impacts to the environment with suitable mitigation measures in place. The proposal will not degrade water bodies or cause other significant pollution. It is proposed that protocols for any accidental archaeological or kōiwi discoveries, as advised by the relevant iwi groups, be included as conditions on resource consents and designations where appropriate.

Section 9 of the AEE outlines the consultation with Ngāti Umutahi Iwi that has been undertaken as part of this proposal.

8.18.8 Guidelines

8.18.8.1 Ministry for the Environment and Ministry for Health – Microbiological Water Quality Guidelines for Marine and Freshwater Recreation Areas (MfE 2003)

These guidelines, updated in June 2003 are intended to assist control the public health risk from microbiological contamination in freshwater bathing water. Section 3 sets out microbiological guidelines for freshwater and gives the microbiological categories (MAC) definitions. Definitions are categories A, B, C, D which provide interim indicator E.Coli levels. In this respect the WRP sets limits that will not exceed 126 per 100mls in the bathing season.

8.18.8.2 Australian and New Zealand Guidelines for Freshwater and Marine Water Quality (ANZECC 2000)

These guidelines have been developed "to provide an authoritative guide for setting water quality objectives required to sustain current or likely future environmental values for natural and semi-natural water resources in Australia and New Zealand." It is intended that the ANZECC guidelines will provide a set of tools to enable the assessment and management of ambient water quality in a wide range of water resource types, and according to designated environmental values.

8.18.8.3 New Zealand Municipal Wastewater Monitoring Guidelines (NZWERF 2002)

The Wastewater Monitoring Guidelines provide guidance to developing programmes for municipal wastewater discharged. The resource consent application and assessment of environmental effects will set out suggested resource consent conditions which will take these guidelines into account.

8.18.8.4 Ministry of Health Guidelines for Safe Use of Sewerage Effluent and Sewage Sludge on Land (Department of Health, 1992)

These guidelines include information on pathogens of public health significance in wastewater effluent and wastewater sludge that are applied to land. They give guidelines for the irrigation to the treated

effluent. The guidelines suggest for category 3 irrigation of fodder crops and pastures such as a “cut to carry” operation proposed in this project, to be less than 10,000 faecal coliforms per 100ml. There are restrictions on grazing and harvesting and suggested treatment requirements from a microbiological quality view point. For spray irrigation suggested buffer zones and distances to the nearest residential zones are also set out.

9 Consultation

9.1 Consultation Strategy and Approaches

A Consultation Strategy for the Proposed Matatā Wastewater Scheme has been developed by WDC. A copy of the Consultation Strategy is included in Support Document 1.

Whakatāne District Council has committed to following a robust and transparent process for the development of a wastewater treatment scheme for Matatā as well as for the preparation of the resource consent application. An integral part of this process has been consultation with tāngata whenua, key stakeholders and the wider Matatā community.

The Consultation Strategy for the Project sets out the purpose and statutory obligations for the consultation process, establishes the objectives for the Project, identifies key stakeholders, affected parties and community groups to be consulted with, sets out a draft programme for consultation activities and identifies the expected outcomes of these consultation activities.

The Consultation Strategy was developed to ensure that consultation is carried out effectively, in accordance with all statutory requirements and most importantly to ensure that all persons potentially affected by or interested in the Proposed Wastewater Scheme have an opportunity to become actively and effectively involved in the process.

9.2 Consultation Activities

As described in Section 3.3 WDC has been consulting with the Matatā community about a reticulated system since 2003 and some targeted consultation has occurred during that time.

Consultation prior to 20 May 2013, when WDC made the decision to proceed with full reticulation scheme in Matatā included:

1. Consultations under 2009-19 LTCCP and the 2012-2022 LTP and 2014 Annual Plan;
2. Resident surveys (June 2012, April 2013);
3. Community updates – newsletters send by post;
4. Webpage;
5. Community meetings;
6. Meetings with individual property owners;
7. Hui with local iwi; and
8. Meetings with key stakeholders.

Consultation since 20 May 2013, when WDC made decision to proceed with full reticulation scheme in Matatā included:

1. Meetings with individual owners of properties neighbouring WWTP and Land Application sites;
2. Hui with local iwi;
3. Community updates – newsletters send by post;
4. Community meeting;
5. Meetings with key stakeholders;
6. Providing information by email to key stakeholders, property owners and iwi.

Table 9-1 provides a summary of the consultation activities undertaken since 20 May 2013.

Table 9-1: Summary of Consultation Activities

Item No	Who?	When?	How?
1.	Matatā Community	Consultation before 20/05/2013	Community meetings, webpage, community survey, meetings with key stakeholders, iwi, property owners

Item No	Who?	When?	How?
2.	Te Rūnanga O Ngāti Awa (TRONA): Roy Thompson – Portfolio Manager Environment, Jessica Wiseman, Environmental Manager	9/05/2013	Meeting at TRONA office, follow by letter from TRONA
3.	Sheryl, Paul, Shayne Robinson – owners of land neighbouring the Western Reserve - proposed Site 8	8/07/2013	Meeting at the Western Recreational Reserve and Visit to Maketū WWTP and Land Application Field.
4.	Dwayne McKay - Consents Team Leader, BoPRC; Jo Noble - Senior Planner, BoPRC	10/07/2013	Meeting at BoPRC concerning Bay of Plenty Regional Coastal Environmental Plan and any other planning issues relevant to the WDC application for resource consent for Matatā WWTP and disposal site.
5.	Paul Knight, Louw Olivier – owners of land neighbouring the Western Reserve - proposed site 8	12/07/2013	Meeting at the Western Recreational Reserve and Visit to Maketū WWTP and Land Application Field
6.	Sheryl and Shayne Robinson – owners of land neighbouring the Western Reserve - proposed Site 8	15/07/2013	Meeting with WDC mayor Tony Bonne
7.	Ngāti Rangitahi CEO – Anthony Olsen	16/07/2013	Meeting at WDC office
8.	Ngāti Rangitahi Tangihia Hapu representatives: David Potter and Andre Patterson	17/07/2013	Meeting at WDC office
9.	Ngāti Tūwharetoa Trust Manager - Elaine August	23/07/2013	Meeting at Ngāti Tūwharetoa (BOP) Settlement Trust office
10.	Forest & Bird Mark Fort	30/07/2013	Telephone conversation with Mark Fort
11.	Te Rūnanga O Ngāti Awa Chief Executive Enid Ratahi-Pryor, Ray Thompson - Portfolio Manager – Environmental	30/07/2013	Meeting in Te Rūnanga O Ngāti office
12.	Ngāti Tūwharetoa Trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC Project Information; Robbie Gardiner – Chair, Anthony Olsen, Tomai Fox	1/08/2013	Meeting in WDC office
13.	Dwayne McKay - Consents Team Leader, BoPRC; Jo Noble - Senior Planner, BoPRC, Yves Denicourt, Senior Consents Officer	2/08/2013	Meeting in the BoPRC offices

Item No	Who?	When?	How?
14.	Ngāti Tūwharetoa trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC's Project Information; Robbie Gardiner – Chair, Anthony Olsen, Tomai Fox, Paroa Hunia	5/08/2013	Hui at the site proposed for WWTP
15.	Henry Burt, owner of land neighbouring Parcel 6A - site G	5/08/2013	Meeting at the site proposed for WWTP location
16.	Ngāti Umutahi Anthony Olsen	6/08/2013	Information sent by e-mail addressed to person named for contacts under the RMA
17.	Ngāti Mākino Pia Bennet	6/08/2013	Information sent by e-mail addressed to person named for contacts under the RMA
18.	Te Rūnanga O Ngāti Awa (TRONA) Chief Executive Enid Ratahi-Pryor, Ray Thompson - Portfolio Manager - Environmental	8/08/2013	Meeting in the WDC office
19.	Bay of Plenty District Health Board (Public Health Department, Jim Miller Medical Officer of Health/Environmental Health Manager and Anaka Davis	13/08/2013	Meeting in the District Health Board office, Rotorua
20.	Department of Conservation Chris Staite	14/08/2013	Email contact and telephone conversation
21.	BoPRC, Envir Simon Stokes	14/08/2013	Meeting at WDC office
22.	Residents of Matatā and neighbours of the planned WWTP a Land Application sites	16/08/2013	Newsletter posted
23.	Ngāti Awa, Ngāti Rangitihī, Ngāti Tūwharetoa, Ngāti Mākino executives	19/08/2013	Newsletter provided electronically
24.	Ngāti Tūwharetoa trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC's Project Information; Robbie Gardiner, Anthony Olsen, Responsible Trustees	21/08/2013	Hui on WWTP site with owners and trustees
25.	Matatā Community meeting	21/08/2013	Matatā Rugby Clubrooms
26.	Harry and Gay Burt	28/08/2013	Meeting at the WWTP site
27.	Bay of Plenty District Health Board (Public Health Department, Jim Miller Medical Officer of Health/Environmental Health Manager and Anaka Davis	28/08/2013	Email
28.	Fish & Game, John Meikle	29/08/2013	Email with current information about the Project with scheme maps
29.	Ray Thompson - Portfolio Manager – Environmental, Te Rūnanga O Ngāti	6/09/2013	Meeting at "The Bean"

Item No	Who?	When?	How?
	Awa (TRONA)		
30.	Ngati Rangitihī Tangihia Hapu representatives: David Potter and Andrew Patterson	10/09/2013	Meeting at WDC office
31.	Department of Conservation Mike Johnson, Chris Staite, John Sutton	11/09/2013	Meeting at WDC office
32.	Fish & Game, John Meikle, Matt McDougall	12/09/2013	Meeting at Fish & Game Rotorua office
33.	Bay of Plenty District Health Board (Public Health Department), Anaka Davis	12/09/2013	Email from Annaka Davis
34.	Ngāti Tūwharetoa Trust Manager - Elaine August and Jessica Wisemen	18/09/2013	Meeting at Ngāti Tūwharetoa Trust office
35.	Te Mana o Ngāti Rangitihī Trust, Chris Clark and Anthony Olsen	30/09/2013	Hui in TMonRT office
36.	Elaine August - (General Manager, Tuwharetoa BOP Settlement Trust)' Jessica Wiseman (Environmental Manager, Ngati Tuwharetoa Holdings Ltd), Mrs Whaiora Brown - (Kaumatua, Oniao Marae), Grant 'Skippy' Savage (Chairman, Oniao Marae Trustees), Merehira Savage - (Member of Oniao Marae community) Miss Savage, Beverley Hughes (Independent Consultant)	9/10/2013	WWTP and Land Application Sites visit
37.	Harry and Gay Burt	22/10/2013	Meeting at the WWTP site and visit to Maketū WWTP
38.	Te Mana o Ngāti Rangitihī, Te Runanga o Ngāti Awa, Ngāti Tūwharetoa (BOP) Settlement Trust representatives, Ōniao marae trustees, Jim Rota – Umutahi marae trustee, Rangitihī marae representatives	6 September – 2 December 2013	Meetings and hui at different venues to discuss issues concerning Cultural Impact Assessment and Accidental Discoveries Protocol including meetings at marae sites to assess connection of marae to wastewater scheme. Refer CIA.
39.	Harry and Gay Burt	7/11/2013, 14/11/2013	Meeting at WWTP site in Matatā

9.3 Issues and Responses

Table 9-2 draws out the key issues raised from the consultation activities and WDC's response to these issues.

Table 9-2: Matters Raised during Consultation and WDC's Response

Item No	Matters raised	By Who?	WDC's Response
1.	Concerns regarding shortlisted sites proposed for land application and WWTP location, because of cultural significance of the area between Manawahe and Matatā Roads, and along dunes west of	Te Rūnanga O Ngāti Awa (TRONA) Ngāti Tūwharetoa	WDC has considered the cultural constraints in the Multiple Criteria Analysis and GIS Risk Assessment Report and further throughout the Project until Proposed Wastewater

Item No	Matters raised	By Who?	WDC's Response
	<p>Tarawera River.</p> <ul style="list-style-type: none"> • Site A was outright rejected due to its cultural and historic values. Site C is located close to Matatā township with Ngāti Awa Wahi Tapu sites Waitepuru and Awatarerehika in close proximity. • Site W is immediately to the west of the Ōnīao Marae. Ngāti Awa Wahi Tapu sites. Tiepatua and Kopuatahiti are located in close proximity. • Site X has no identified Ngāti Awa Wahi Tapu sites here (with regard to being scheduled to the Whakatāne District Plan) it is where Te Toki stream is located. This area was traditionally used for cultivation and food gathering. • Site 8 is immediately to the east of Ngāti Awa land and for this reason TRONA may not approve operation on neighbouring land. 	Ngāti Rangitihī	<p>Scheme was developed. Site A was not considered in the GIS Risk Assessment Report because it's high cultural value.</p> <p>The Western Recreational Reserve which is the proposed site for land application field was considered preferable, from GIS Risk Assessment and cultural perspective.</p>
2.	<p>TRONA expressed doubt, that they would support option of wetland treatment in the Te Awa a Te Atua Wildlife Refuge Reserve (Site B) and final discharge to the mouth of the Tarawera River. A portion of the Wildlife Reserve located at the river mouth is identified as Nohoanga Entitlement for Ngāti Awa.</p> <p>Ngāti Awa representatives expressed preference on behalf of the Iwi, for land application rather than ocean outfall, explaining that the shore around the Reserve and the river mouth is the traditional food gathering area for local Iwi.</p>	Te Rūnanga O Ngāti Awa	The Matatā Wastewater Scheme will dispose of high quality treated wastewater by land application into dunes. The Land Application Field will be sited within the Reserve to provide a buffer zone from the neighbouring lots.
3.	<p>Concerns and objections to siting WWTP at the Reserve. Land Application is of lesser concern.</p> <p>Objections to the pipe with untreated wastewater running in front of the property, as well as concern about drop in the land value, once a treatment plant site is bordering with the property.</p>	Owners of land neighbouring the Western Reserve - proposed Site 8	WDC secured another site for WWTP (refer to Appendix A for owner's consent letter) and only Land Application will be sited at the Reserve. The pipes going long and across the farm will carry treated wastewater only.
4.	Concern regarding affordability of house owners to pay for connection to the Wastewater Scheme.	Ngāti Rangitihī CEO – Anthony Olsen	WDC will carry cost of connections made at the time of the Project implementation and all the necessary installations and covering septic tanks under the Project costs. Cost of later connection will have to be covered by house owners.
5.	Concern regarding quality of treated wastewater realised to environment, water mounding, and direction of flow on dunes from Land Application, the impact of treated wastewater on ground water, Tarawera River catchment and the shore.	BoPRC, DoC, iwi representatives, Bay of Plenty District Health Board (Public Health Department), Fish	WDC will request implementation of WWTP with high level wastewater treatment. If required, additional treatment with UV lamps will remove pathogens. With additional treatment nitrogen can significantly be removed as well.

Item No	Matters raised	By Who?	WDC's Response
		<p>& Game, farm owners</p>	<p>The WWTP will be designed to ensure that the receiving water quality is not deteriorated due to treated wastewater from the land application facility.</p> <p>Groundwater Assessment Report and Receiving Environment, Ecology and Public Health Risk Assessment Report was provided to all three iwi on 4th November. Hui to discuss findings of the report with Ngāti Awa and Ngāti Rangitahi representatives was held on 8th November and hui with Ngāti Tūwharetoa and Ōnīao Marae trustees on 11th November. Both above report provided to BoPRC, Bay of Plenty District Health Board (Public Health Department), Fish & Game, farm owners</p> <p>WDC has commissioned hydrogeological and public health risk assessment reports to research retention time, flow direction and impact on ground water and surface water quality.</p> <p>Hydrogeological report will be made available to all interested stakeholders when finished.</p> <p>Monitoring of water quality.</p>
6.	<p>Concerns relating to visual impact of the treatment plant, open untreated wastewater tanks or ponds would not be culturally acceptable. Concerns in relation to incoming to the site pipe with untreated wastewater due to human waste considered tapu in Māori culture.</p> <p>Trustees would be interested to have sewer pipe and water connected to the marae and neighbours of the WWTP site - Mr&Mrs Burt to their house.</p>	<p>Trustees of Matatā 6A Trust, owners of site G in WDC Project Information;</p> <p>Ngāti Tūwharetoa Settlement Trust;</p> <p>H&G Burt</p>	<p>Plant considered for this site will have screened or covered tanks. Intention of the WDC is to request that WWTP will be a compact plant with screened/covered tanks. WWTP will be screened from view by embankment along the plant fence planted with native plants for additional cover.</p> <p>Along the western side of the Parcel 6A runs paper road and wastewater pipe will be buried along this road.</p> <p>WDC will provide sewer and water services to the marae and to H&G Burt house.</p>
7.	<p>General complain about missing on Council services, being just outside of residential area.</p>	<p>H. Burt - Owner of land neighbouring Parcel 6A - site G</p>	<p>WDC may provide water and sewer connection to the house.</p>
8.	<p>Providing sustainability of Land Application operation.</p> <p>Concern over protection of kanuka, other native plants and natural character and landscape of dunes.</p> <p>Concern expressed regarding Reserve</p>	<p>Fish & Game Department of Conservation, BoPRC, Environment</p>	<p>WDC intends to use the locating of Land Application within the grazing area of the Recreation Reserve as the opportunity to implement management of the Reserve and promote biodiversity within the Reserve, planting native plants. To</p>

Item No	Matters raised	By Who?	WDC's Response
	management and possible access restrictions to the Reserve for hunters. Concerns regarding possible rise of nutrient count in the stream along Bennett Rd.		<p>minimise restricting access to the Land Application area, underground disposal lines will be used.</p> <p>Sustainable management will include removal of grazing from the Reserve, using nutrients from the treated wastewater released in dunes for planting native plants including Thornton kanuka and restoring natural character to the Reserve area.</p> <p>WDC commissioned Wildlands Consultants to prepare Environmental assessment Report and Landscape and visual Assessment Report as well as comprehensive Restoration Plan.</p> <p>Any activity within dunes should be in accordance with the Reserve Management Plan.</p>
9.	Odour and risk of contamination	Mr & Mrs Burt, Anthony Olsen	The WWTP site will be screened by embankment which will contain any spillage, however unlikely such event, within the WWTP perimeter. There will be strict odour control and monitoring measures imposed to comply with the condition of no objectionable odour at the environmental buffer boundary.
10.	Connecting the wastewater scheme to all three marae	Ngāti Rangitihī, Ngāti Tūwharetoa, Umutahi marae trustees, Ōnīao marae trustees	Council will provide connection to the Rangitihī marae located within the Matatā residential zone and to the Ōnīao marae and Umutahi marae outside Matatā residential zone.
11.	Open ponds within the treatment plant on site G	Ngāti Rangitihī, Ngāti Tūwharetoa, Umutahi marae trustees, Ōnīao marae trustees, Matatā 6A trustees	Council will screen the WWTP from view by means of 2m high embankment and planting. Treated wastewater basins may be further screened by the use of light roof cover.
12.	Accidental Discovery of koiwi and taonga	Ngāti Rangitihī, Ngāti Tūwharetoa, Ngāti Awa, Umutahi marae trustees, Ōnīao marae trustees,	WDC will adopt Pantribal Accidental Discovery Protocol. Earthworks will be overseen by iwi cultural monitor. Digger operators will be trained in Accidental Discovery Protocol and recognising koiwi and taonga.

Part B Resource Consents – Effects Assessment

10 Assessment of Effects of Discharge to Air for the Wastewater Treatment Plant and Associated Components

10.1 Introduction

This section of the AEE provides a qualitative air and odour discharge assessment, in accordance with the Ministry for the Environment's *Good Practice Guide for Assessing and Managing Odour in New Zealand*, to identify all potential discharges to air from the proposed operation of the WWTP and the land application of treated wastewater by sub-surface drip irrigation. This section also identifies appropriate management measures for the long term duration of the proposed consents.

As agreed with the Consent Officer from BoPRC (email dated 2 August 2013), air dispersion modelling has not been undertaken for this assessment.

The qualitative assessment of air emissions includes:

- Description of local meteorology and terrain environment;
- Discussion of the sensitivity of the receiving environment at and around the proposed WWTP site;
- Identify sources of potential air emission from the proposed operation of the WWTP;
- Assessment of the potential effects of air discharge; and
- Identify appropriate management measures to avoid, remedy or mitigate any potential adverse effects from air emissions.

10.2 Nature of Air Discharge

Potential emissions to air from a WWTP site, including the Land Application Field, include:

- Odour from various treatment process and site activities; and
- Combustion discharges from a standby generator (should one be installed at the proposed WWTP) that to provide power for key treatment process units in the event of electricity outage.

Odour is by far the most significant of these emissions and the latter type of emission is relatively minor in terms of discharge volume, duration and overall environmental impacts. Thus this section focuses on odour discharges from the proposed WWTP operation and the treated wastewater Land Application Field.

10.2.1 WWTP Site

The WWTP will be built and initially operated following a BDO process; as such the final treatment facility will be determined by the successful contractor. The key components of the treatment facility, as described in the final Employer's Requirement Technical Specification (URS, 2013), has been used to identify the potential sources of odour from the WWTP site.

Table 10-1 below presents the key process units that may be elements of the final treatment facility, their odour emission potential and the odour treatment requirement specified in the 75% Final Employer's Requirement Technical Specification.

Table 10-1: Key Process Units at the WWTP Site and Proposed Treatment for Odour

Process Unit	Odour Emission Potential	Proposed Treatment	Odour Emission Potential after Treatment
Inlet Works	High	Covered and air vented to a biofilter(s) (or similar) for treatment	Low
Anoxic or Anaerobic Zones of the Reactor	High	Covered and air vented to a biofilter(s) (or similar) for	Low

Process Unit	Odour Emission Potential	Proposed Treatment	Odour Emission Potential after Treatment
Tank(s)		treatment	
Biological Treatment Tank(s)	Low	Aeration to maintain required dissolved oxygen level	Low
Storage Facility for Treated Wastewater	Low	Not required	Low
Treated Wastewater Pump Station	Low	Not required	Low
Sludge Consolidation/ Dewatering Facility	High	Covered and air vented to a biofilter(s) (or similar) for treatment	Low
Dewatered Sludge Holding Tank	High	Covered and air vented to a biofilter(s) (or similar) for treatment	Low

The wastewater treatment processes that could produce odour emissions, as described above, will be covered and the odorous air extracted and treated using a biofilter(s) or similar. The biological treatment unit, as long as it is provided with sufficient aeration, generally has low potential to generate odour. It is also noted that any treatment facility that would otherwise have open surface of wastewater, regardless of the stage of treatment will be covered.

It is also proposed to plant dense vegetation area around the perimeter of the WWTP footprint, and there will be a 20m buffer from this planting. A schematic of the WWTP footprint and the environmental protection buffer area is included in Figure 5-5 in Section 5.

Overall there is low potential for odour emissions from the WWTP site, provided that the specified odour treatment processes are in place.

10.2.2 Land Application Field

As described in the above section, due to the relatively low level of odorous contaminants in the treated wastewater and its aerobic nature and the relatively short travel distance to the Land Application Field, septicity is unlikely to be an issue when the treated wastewater arrives at the Land Application Field.

More importantly, the treated wastewater will be applied into the Land Application Field using subsurface drip. The subsurface drip lines will be buried between 200mm- 300mm below ground surface, and vegetation will be planted at the surface. This means there will be no direct odour emission from the drip line into the air. Furthermore, the 200mm - 300mm layer of soil together with the vegetation can be expected to act as natural biofilter that will help minimise odour (if any) emission.

Also described in Section 5.5, a flushing return pump station will be constructed at the Land Application Field. The pump station returns flushing water from the Land Application Field to the WWTP for treatment. The 75% Employer's Requirement Technical Specification states that odour from these flushing and cleaning systems will need to be controlled at a minimum, using a biofilter(s) or similar.

10.2.3 Summary of Sources of Potential Odour Emissions

Based on the above description, Table 10-2 below is a summary of the sources and their potential for odour emissions.

Table 10-2: Summary of Potential Odour Emissions

Odour Sources/ Location	Potential of Odour Emission	Supporting Reasons
WWTP Site	Low	Odour sources will be covered and air vented to a biofilter(s) (or similar) for treatment before releasing into the environment
Treated Wastewater Land application field	Minimal	<p>Treated wastewater generally has low odour emission potential</p> <p>Relatively short travel time required, and thus little likelihood of anaerobic conditions developing</p> <p>Subsurface drip application will be used for the disposal and so there will be no direct odour emission into the air</p> <p>Odour from flushing pump station is required to be treated at a minimum, using a biofilter(s) or similar.</p>

10.3 Local Meteorology and Terrain

Local meteorology conditions, particularly the wind conditions, could have a profound effect on odour transport and dispersion. Wind rose plots are normally used to understand wind speed and direction.

There is no weather station located in Matatā. The Whakatāne Aero Aws surface station (agent number 1673) is located approximately 13 km south-east of the proposed WWTP site. It is the closest station to Matatā and is surrounded by terrain similar to Matatā, as shown in Figure 10-1. As such the meteorological data from the Whakatāne Aero Aws station is considered a good representation of the proposed WWTP site's meteorological conditions.

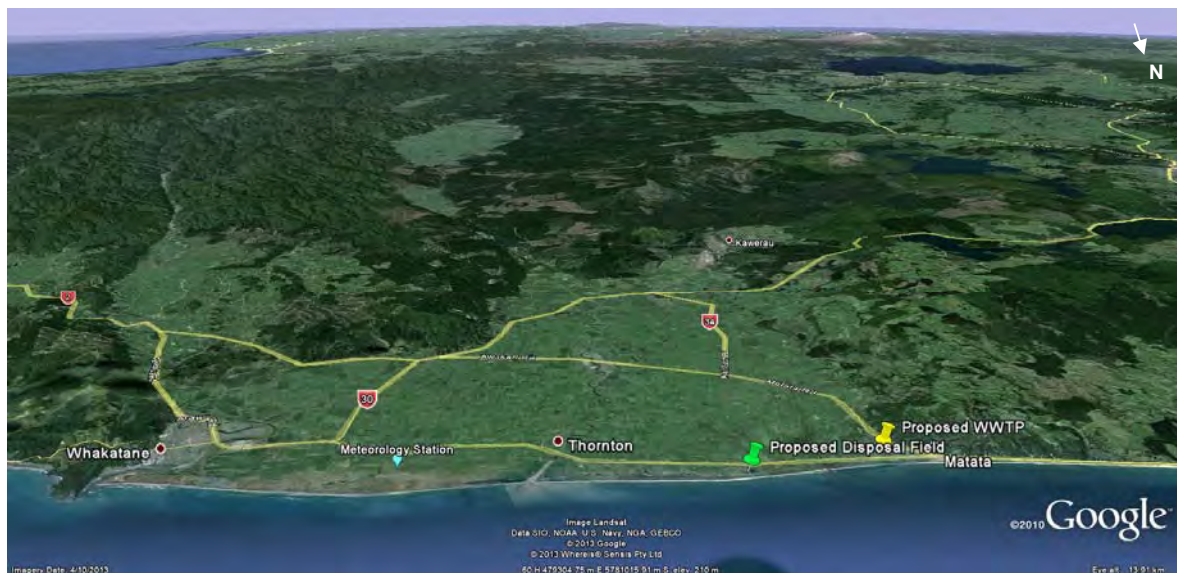


Figure 10-1: Aerial View of Local Terrain (looking south) in the Matatā and Surrounding Area (sourced from Google Earth Pro)

Wind data recorded from 2003 to 2013 from the Whakatāne Aero station are portrayed as a wind rose in Figure 10-2 below. The wind rose shows the frequency and magnitude of winds blowing FROM a particular direction over the recorded period.

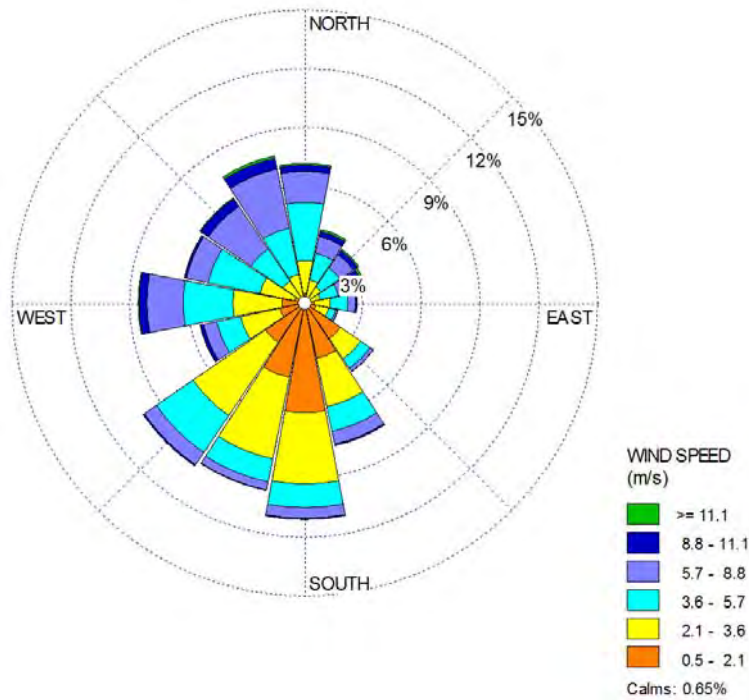
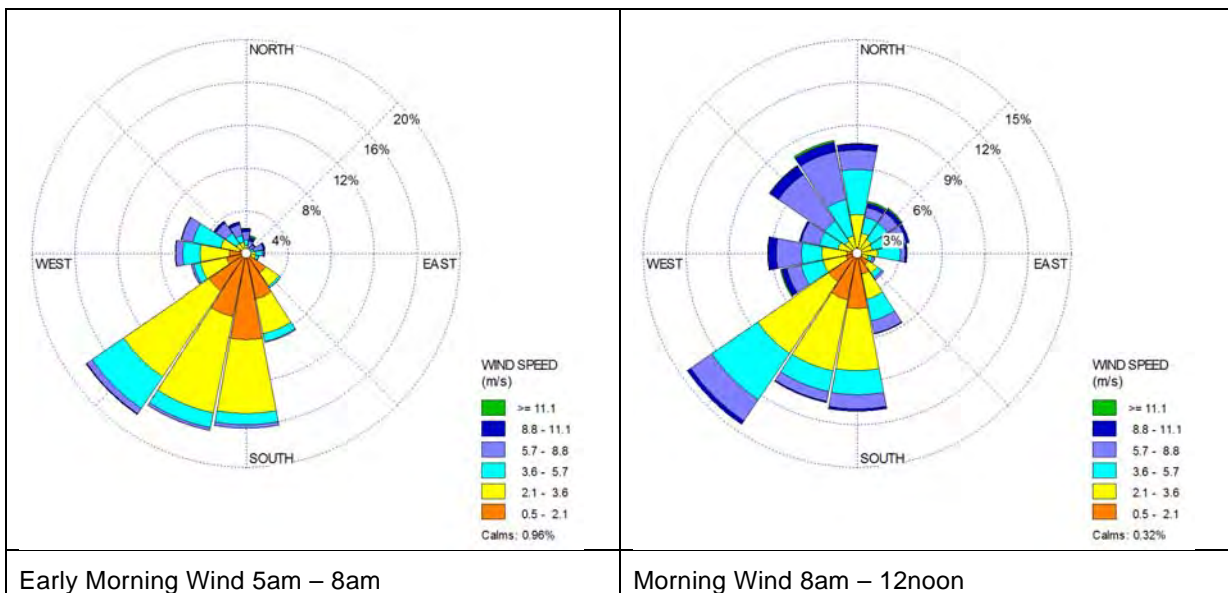


Figure 10-2: Wind Rose showing All Year Wind Strength and Direction, showing where winds blow FROM

This shows that the predominant wind directions are from the south-east and south-west quadrant, and to a lesser extent from the north-west. Wind speeds were generally moderate to strong, in the range of 2.1 to >11.1 m/s.

Further analysis of the wind data shows the daily variation in predominant winds, both in direction and strength. These are shown in Figure 10-3 below. All wind rose plots show the direction where the winds blow from.



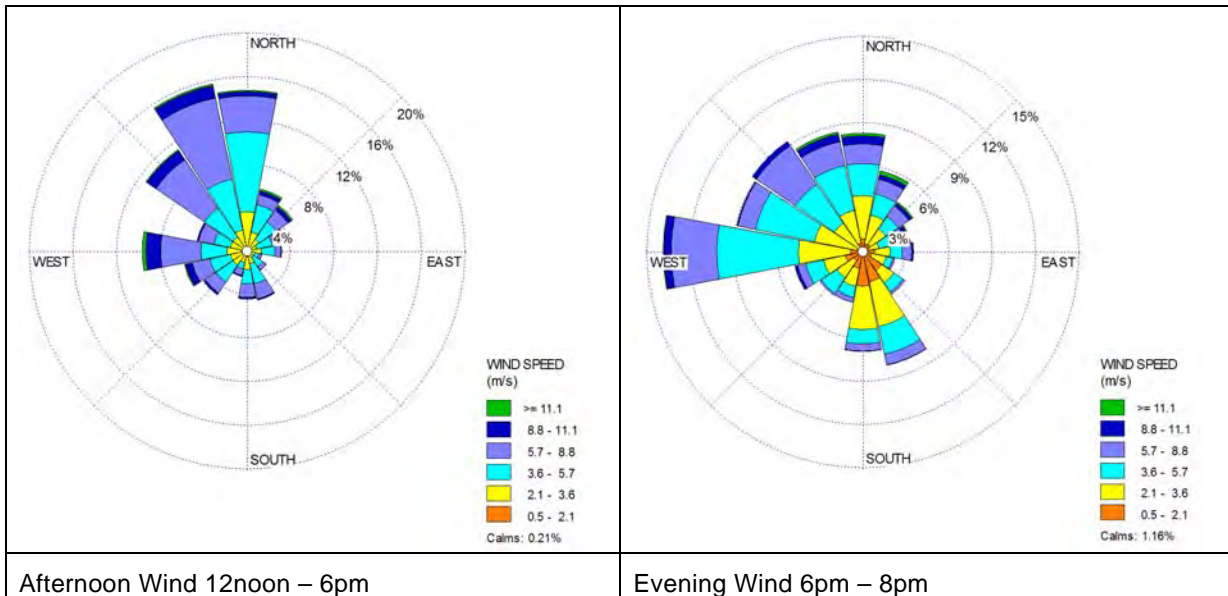


Figure 10-3: Wind Rose showing Daily Variation in Wind Strength and Direction, showing where the winds blow FROM

The daily variation is typical in a coastal environment, and this is summarised in Figure 10-3 below.

Table 10-3: Summary of Daily Variation

Time	Predominant Direction	Strength
Early Morning 5am – 8am	Dominated by south-west, off-shore winds	Mild to moderate
Morning 8am – 12noon	Dominated by south-west, off-shore winds To a lesser extend north-west, on-shore winds	Mild to moderate off-shore winds Moderate to strong on-shore winds
Afternoon 12noon – 6pm	Dominated by north-west, on-shore winds	Moderate to strong on-shore winds
Evening 6pm – 8pm	Dominated by north-west, on-shore winds To a lesser extend some south-east, off-shore winds	Moderate to strong on-shore winds Mild to moderate off-shore winds

Windy conditions are generally effective in diluting and dispersing any evolved odour from the proposed site, but the winds can also carry odour from the site towards downwind receptors. Figure 10-4 and Figure 10-5 show the location of residential dwellings and the Oniao Marae in the vicinity of the proposed WWTP site and treated wastewater Land Application Field, respectively.

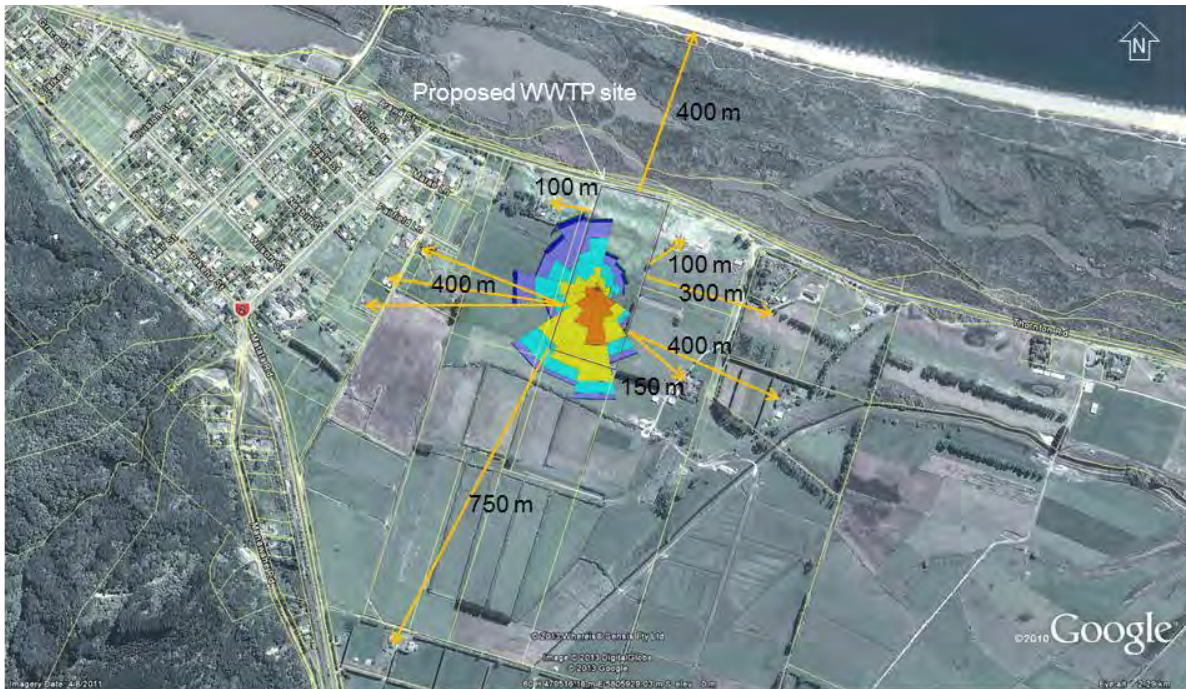


Figure 10-4: Separation Distance of Potential Odour Receptors from the WWTP Site⁶

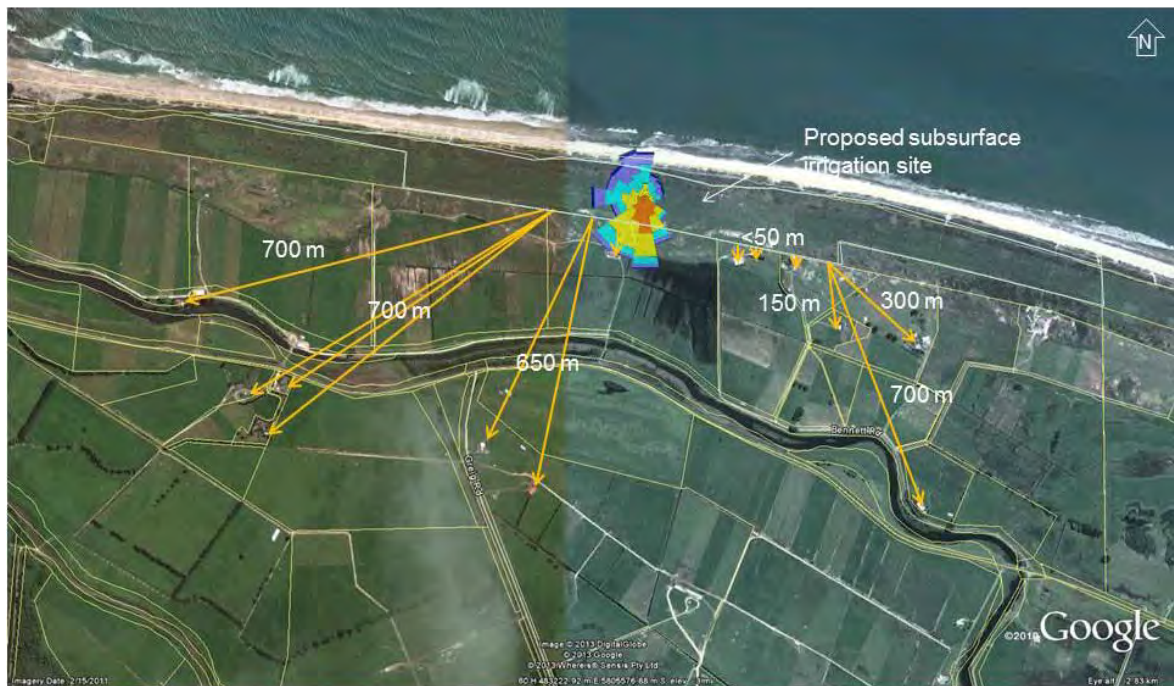


Figure 10-5: Separation Distance of Potential Odour Receptors from the Land Application Field Site

Review of the wind rose and terrain information suggests that the morning south-west prevailing winds may carry odours from the proposed WWTP site to the Oniao Marae and residential house downwind of the site. The afternoon prevailing winds have the potential to carry any odour to the residential property located south-east to the WWTP site. The Matatā township is approximately 800 m west of the WWTP

⁶ Distances taken from property boundary

site, and is thus not located in the general downwind direction from the WWTP site under most meteorological conditions. Also the odour intensity is likely to be reduced with distance travelled from the site due to continued mixing and dilution. The Awaateatua Beach (known as Te Awa a Te Atua Beach) is also located downwind of the WWTP site, for the prevailing morning winds.

At the Land Application Field, the rural residential dwellings located south-east from the site are downwind of the prevailing afternoon winds. The prevailing morning winds blow towards the Awaateatua Beach. There are a few rural residential properties located in close proximity (50 m to 100 m) to the boundary of the proposed Land Application Field. In instances of low wind speed, where local dispersion and dilution are limited, there is potential for odours to reach the residential dwelling at the boundary of the proposed site.

10.4 Sensitivity of the Receiving Environment

Different land use types have different sensitivities to odour, and these are classified based on the Ministry for the Environment's Good Practice Guide for Assessing and Managing Odour in New Zealand (2003). The land use types around the WWTP site and the treated wastewater Land Application Field include rural, rural residential and residential living.

The sensitivity of the land use types and their approximate locations are described in Table 10-4 below.

Table 10-4: Sensitivity of the Receiving Environment

Land Use Type	Sensitivity	Comments
Rural	Generally low	Low sensitivity due to low population density which results in less opportunity for exposure to odour. However it is noted that some farmers and farm workers can be sensitive to non-rural-type odour.
Rural Residential	Generally low	Low sensitivity due to low population density which results in less opportunity for exposure to odour. However it is noted that some residents can be sensitive to non-rural-type odour.
Residential/Living	High	People of high sensitivity to odour can be exposed. People can be present at all times of day and night, both indoors and outdoors. Visitors to the area are likely to be sensitive to odour.
Conservation/Marae	High	Generally have high environmental and spiritual value and a low tolerance to exposure to odours.
Open Space/ Recreational	High	People tend to be more aware of air quality when undertaking outdoor activities and exercise, and sensitivity is heightened.

The assessment shows that the residential dwellings, Oniao Marae and the Awaateatua Beach are considered to be highly sensitive towards odour emissions.

It was noted during a site visit on 9 September 2013 that there was a silage production site located about 500 m south-west to the treated wastewater Land Application Field. Silage making can also produce odour, and this will contribute to the background odour level, as can some other possible farming activities.

10.5 Assessment of Potential Adverse Effects

Any significant odour discharges which may occur at the WWTP site have the potential to cause both long term and short term potential and/or actual adverse environmental effects that could be considered 'objectionable' beyond the site boundaries. Effects that have been reported by people in relation to odour exposure include nausea, headaches, retching, difficulty breathing, frustration, annoyance, stress and embarrassment⁷.

⁷ Ministry for the Environment, Good Practice Guide for Assessing and Managing Odour in New Zealand, June 2003.

The previous sections describe the potential for odour emissions, the receptors and their sensitivity around the source of odours. Adverse odour effects are most likely to impact on the nearest sensitive receptors to the sources of odour. Due to the presence of a number of potential odour sources, the assessment is summarised in Table 10-5 below.

Table 10-5: Summary of Odour Assessment

Location	Nearby Sensitive Receptors	Management Measures	Odour Emission Potential	Potential Effects
WWTP site	Residential dwellings Oniao Marae	Design, build and operate the WWTP to the Employer's Requirement Technical Specification Maintain the operation of the WWTP to the required standards Maintain the operation and effectiveness of the biofilter(s) or similar for odour treatment Ensure that appropriate odour management and mitigation measures are included in the WWTP's Odour Management Plan (OMP) to be included as part of the Operation and Management Plan. The provision of an OMP is included in WDC's suggested resource consent condition.	Low	Minor
Treated wastewater Land Application Field	Residential dwellings Beach	Maintain the operation of the WWTP to the required standards; this will ensure a consistent treated wastewater quality at the Land Application Field Maintain the performance of the subsurface drip application system, e.g. with regular flushing and cleaning of the system	Minimal	Minor

The significance of any potential effect will often depend on the management practices employed on the WWTP site. Many odour emissions are found to be strongly related to site operation procedures and process management. Adverse effects from odour emissions are more likely to occur if good design and management are not in place⁸.

This is a new treatment and disposal facility. The proposed wastewater treatment and disposal system includes provision for odour treatment to minimise the potential release of odours from the WWTP, the transfer pipeline and Land Application Field. Provided that these requirements are followed and the operation of the plant is well managed and maintained to the required standard, the risk of odour exposure to the receptors beyond the site boundaries is expected to be very low and any potential adverse effects are considered to be minor.

⁸ Ministry for the Environment, Good Practice Guide for Assessing and Managing Odour in New Zealand, June 2003.

10.6 Odour Management Plan

The proposed Odour Management Plan (OMP) could provide WDC and the WWTP and Land Application Field operators with specific instructions and procedures for managing potential odour effects, such as instances when the treatment process could turn anaerobic and the conditions to give rise to odorous emissions are thus created.

The OMP should clearly describe the systems required to ensure the reliable operation of treatment processes and operations to minimise odour, and the frequency and extent of performance monitoring and reporting. The matters proposed to be included in the WWTP OMP include, but not limited to, the following:

- A description of discharges to air authorized by the resource consent;
- A description of methods undertaken to prevent odours being generated from site activities;
- A description of the site management structure and responsibilities;
- Emergency procedure in the event of a breakdown;
- Emergency after hours contact names and numbers;
- Procedures for responding to odour complaints received;
- Mitigation measures that may be employed to minimise odour emissions; and
- Assignment and responsibility for implementing and updating the OMP.

Developing and implementing an OMP cannot itself ensure that adverse odour effects from the site will not occur. Actual odour events can arise from factors outside of WDC's immediate control, such as influent characteristics, septicity, domestic loads and local meteorology at the time of operation. The OMP will ensure WDC is undertaking widely accepted operating procedures to prevent and/or minimise odour effects.

10.7 Summary of Potential Effects and Proposed Mitigation Measures

The potential effects and the proposed mitigation measures are summarised in Table 10-6 below.

Table 10-6: Summary of Potential Effects and Proposed Mitigation Measures

Potential Effect	Magnitude	Proposed Mitigation Measures
Odour from WWTP site	Minor	Design and construct the WWTP to the Employer's Requirement Technical Specification; Appropriate resource consent conditions, including WDC's suggested resource condition that the WWTP shall not result in any objectionable odours at or beyond the designated boundary of the WWTP environmental protection buffer; and Odour management plan that ensures the reliable operation of treatment processes and operations to minimise odour will be submitted to BoPRC.
Odour from Land Application Field	Minor	Design and construct the sub-surface land application system to the Employer's Requirement Technical Specification; Appropriate resource consent conditions, including WDC's suggested resource condition that the Land Application Field shall not result in any objectionable odours at or beyond the designated boundary of the Land Application Field; and Odour management plan that ensures the reliable operation of treatment and land application processes and operations to minimise odour will be submitted to BoPRC.

11 Assessment of Effects of the Discharge of Treated Wastewater to the Land Application Field

11.1 Introduction

This section presents an assessment of effects of the discharge of treated wastewater to the Land Application Field. WDC engaged URS to undertake site investigations to characterise local geological, hydrogeological and hydrological conditions at the Land Application Field, and to carry out the assessment of environmental effects to groundwater, surface water and soil associated with the application of treated wastewater.

The findings of the investigation and assessment are presented in the following two reports, prepared by URS:

- Matatā Wastewater Scheme – Waste Water Land Application Groundwater Assessment, included as Support Document 5 to this AEE.
- Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment, included as Support Document 6 to this AEE.

This section presents a summary of the assessment conclusions taken directly from the above-mentioned support documents. Full details of the approach, methodology and discussion in terms of the effects assessment is contained within these documents.

It is important to note that the assessment of effects has been developed based on a 50 year population projection. Therefore for a 35 year consent duration that WDC is seeking, the effects assessment will be conservative.

11.2 Description of the Receiving Environment

11.2.1 Land Application Field and Groundwater

The proposed Land Application Field is located on coastal dunes, immediately north of the Bennett Road Stream. Farmland, reclaimed from swamp with excavated dune sand, is located immediately south of the dunes. A drainage network extends across the farm paddocks suppressing groundwater levels across the farm.

Dune sands extend approximately 6.5 – 7.5m within the coastal dunes and approximately 0.5 – 1.5m over the farmland. Coarse gravel sand of the Tauranga Group are present beneath these, with Tauranga Group sediments interpreted to be alluvial deposits associated with the former river channel and/or beach deposits.

Current groundwater levels in the vicinity of the land treatment area are in the range of 0.1 – 0.6m Above Mean Sea Level (AMSL), with these greatest at the coast, where wave action results in groundwater levels in excess of mean sea level. The drainage network excavated across the farmland suppresses groundwater levels, with the drain water controlled at an elevation of -0.1 to 0.0 AMSL.

Discharge from the drains is to Bennett Road Stream south of the farmland, with this the former channel of the Rangitaiki River prior to diversion.

Saline influence is evident in groundwater across the area, with the farm drains allowing flow from the coast inland. Groundwater reporting on the drains is approximately 70% seawater (based on salinity), with drainage water comprising approximately 60% seawater at the time of measurement. Both groundwater and drain water demonstrate the influence of farming activities, evidenced as elevated nutrient levels (nitrogen and phosphorous) and pathogens (faecal coliforms and E.coli).

11.2.2 Bennett Road Stream

The sand dune is perched approximately 5 – 6m above sea level, with the groundwater gradient sloping towards the surface drain network, which is pumped into the Bennett Road Stream. This makes the Bennett Road Stream the ultimate receiving aquatic environment.

The limited site investigation conducted to date showed similar poor water quality within the surface drainage network and the Bennett Road Stream. Levels of total nitrogen (TN) and total phosphorus (TP) within the Bennett Road Stream were found to be in the order of 1.5 – 2.0 mg/L and 0.05 – 0.2 mg/L,

respectively. These levels are above the ANZECC (2000) default trigger values for TN and TP for lowland rivers, slightly disturbed ecosystem in New Zealand. This is consistent with previous investigation results for other sites within the Lower Tarawera River catchment, reflecting the high nutrient load caused by the heavy agricultural land use in the area. The pathogen levels within the surface drainage network and Bennett Road Stream are also reasonably high (e.g. up to over 300 cfu/100ml of E.coli were found in both the surface drainage network and the Bennett Road Stream), showing the degraded status of water quality due to the farm land runoff within the wider catchment.

Monitoring results from the initial benthic macroinvertebrate survey within the Bennett Road Stream, prior to wastewater application, show a good agreement between the upstream and downstream locations. Taxa diversity and abundance was reasonably consistent between the upstream and downstream locations. The community composition results between the upstream and downstream sites are very similar, with the crustacea species Tanaidacea dominating all of the sites. This indicates that all of the monitored sites are influenced by the saline environment and the majority of the species present are typically found in abundance within highly degraded, nutrient rich streams and for some of the species, locations with prolific algae.

Results from the biological indices also show strong consistency between the upstream and downstream sites. In general, the reported biological index results from the Bennett Road Stream are typical of highly modified low lying streams within the region draining predominantly agricultural catchments.

Overall the investigation reflects that the stream is highly impacted by the modified surrounding agricultural land use and also has a strong saline influence.

11.3 Assessment of Effects

The proposed land application of treated wastewater has the potential to influence the soil and water quality. In doing so, there is potential for adverse effects to the environment, and human health where there is direct contact with contaminated soil and/or water.

Where subsurface irrigation is considered, exposure pathways associated with aerosols and runoff are effectively mitigated. The remaining risk pathways for adverse effects relate to the percolation of treated wastewater to groundwater, and subsequent discharge to surface water. Table 11-1 outlines the typical risk pathways for land application contaminant exposure.

Table 11-1: Potential Exposure Pathways for Effects from Land Application

Receptor	Potential Effect	Contaminants	Risk Driver
Groundwater	Human Health	Pathogens	Dermal/Ingestion
Surface water	Human Health	Pathogens	Dermal/Ingestion
	Environmental	Nutrients	Ecological
Soil	Human Health	Pathogens	Dermal/Ingestion

The groundwater flow regime may also be influenced by wastewater application, as a consequence of locally increased groundwater levels. This can result in the flow of groundwater reporting to each of the surface water receptors identified (drainage channels and sea) being altered.

11.3.1 Effects on Soil

Exposure of potential contaminants and pathogens in soils is considered to be limited to maintenance workers. Effects to human health can be effectively mitigated through implementation of an Operation and Management Plan that outlines the appropriate steps to reduce exposure.

Effects to soil quality are considered to be less than minor, on the basis that effects can be adequately mitigated through the Operation and Management Plan.

11.3.2 Effects on Groundwater

The proposed land application is expected to locally elevate groundwater levels and flow to the drains. A significant thickness of unsaturated soils is present beneath the proposed land application area, with relatively high permeability of the dune sands and underlying materials mitigating significant increase in

groundwater levels with wastewater application. The predicted increase in groundwater levels are not expected to change the current groundwater flow regime, with flow from the coast to the drains maintained.

Groundwater flow to the drains is predicted to increase by approximately 400m³/day. However in the context of the current total flow to the drains, this increase of approximately 10 – 15% is unlikely to have any noticeable influence on drain levels or suppression of groundwater levels across the farm. As such, it is considered that effects to groundwater levels and flow are no more than minor.

Groundwater quality beneath the land application area and at the point of discharge is predicted to have increased nutrient loads resulting from the land application. However, the salinity of the water is predicted to decrease to some extent. The farm sources water for stock and potable use from off-site, with groundwater currently beneath the dunes and that reporting to the drains considered to be unusable for potable supply owing to salinity and existing pathogen load. On this basis, effects to groundwater quality are considered to be minor.

11.3.3 Effects on Surface Water Flow, Water Quality and Aquatic Ecology

The farm drains receive the majority of their flow from the dune area, resulting in saline intrusion into the unconfined aquifer. In addition to high salinity, the drain water also demonstrates the influence of farming activities, with an existing and elevated pathogen load. Groundwater discharging from the land application area is predicted to report to the drains. The increase flow is considered to be minor in the context of the current flow in the drains.

Based on the hydrogeological model conducted by URS (included in Support Document 5 of this AEE), the likely levels of TN and TP within the surface drainage network may be in the magnitude of 2.5 – 3.5 mg/L and 1.5 – 2.0 mg/L, respectively. These estimates do not allow for nutrient uptake or retention as the wastewater trickles through the sand column, which should be considered as conservative. These levels of nutrients represent a considerable increase compared to the current levels within the surface drain, especially for TP. This elevated nutrient load is to be further attenuated as the water flows through the surface drainage network and diluted significantly as the water gets pumped into the Bennett Road Stream. It is possible that a slight increase in nutrient levels may exist, locally, at the point of discharge should stream flow be slowed when influenced by tidal cycle.

The water quality and ecological value of the Bennett Road Stream and the surface drainage network are currently not considered by Bay of Plenty Regional Council, due to their pure agricultural purposes and current degraded status. Monitoring of the ecological status and sensitivity of the Bennett Road Stream also confirms the degraded nature of the stream in terms of ecological values and overwhelming effects of tidal influence. The slight likelihood of nutrient increase within the Bennett Road Stream as a result of the wastewater land application at the Land Application Field should be considered to have no more than minor effects on the current status of the water body.

11.3.4 Microbiological Risk Assessment and Public Health Assessment

The public health risk issues of the Bennett Road Stream were assessed qualitatively based on the current pathogen load within the stream from surrounding land use. A comparison of the current pathogen levels against MfE's "Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas" microbial assessment categories indicated that the Bennett Road Stream is currently in breach of Action/Red mode for freshwater, therefore representing a significant risk for public health, should the public be in direct contact with the aquatic environment.

The shortest travel time for the groundwater from the land application site to the surface drainage network was estimated to be approximately one year. This is significantly longer than the estimated time for complete microbial inactivation of faecal coliforms or E.coli, with or without UV disinfection. A conservative microbial die-off rate was applied in the public health assessment, the results of which indicate that an increase in pathogen load in the receiving environment due to the irrigated wastewater should be considered very unlikely.

Due to the limited public access to the Bennett Road Stream, and essentially minimal pathogen input into the receiving aquatic environment, the public health risks associated directly with the proposed wastewater land application discharge may be considered no more than minor; provided that the proposed land application process is properly maintained and Operation and Management Plan is implemented to reduce direct public exposure.

11.3.5 Effects on Recreational Activities

The aesthetic appearance of the Bennett Road Stream makes recreational activities within the stream very unlikely. No swimming or recreational boating activities have been reported in this stream. Direct contact of local population with the surface drainage network is currently unknown and hard to quantify.

As mentioned in Section 11.2.1, the groundwater gradient slopes from the coastal dune back towards the surface drainage network. Therefore beach activities such as recreational water use or shellfish collection are not considered to be impacted by the treated wastewater land application.

12 Assessment of Effects of Earthworks and Land and Soil Disturbance by Vegetation Clearance for the Land Application Field

12.1 Introduction

In accordance with Rules 1C and 2B of the Bay of Plenty Regional Water and Land Plan, a land use resource consent is required for the proposed earthworks and vegetation removal (clearance) of exotic grass species within the Erosion Hazard Zone on the site of the Land Application Field.

Whilst no stripping of grass or topsoil is proposed to occur and excavation for drainage lines is required to be minimal through the use of a mole plough pipe laying method or similar, a small amount of grass vegetation will be disturbed.

The proposed earthworks are listed as a discretionary activity and the vegetation clearance (grass removal) as a restricted discretionary activity. For the purposes of this resource consent application, it is proposed that these works are considered together within a single application with an overall activity status as a discretionary activity.

The definition of Erosion Hazard Zone includes any Sand Dune Country. Sand Dune Country is defined as:

Sand Dune Country – coastal dune systems with sand soils, which are characterised by low amounts of organic matter and low cohesiveness. Includes areas with Land Use Capability of VIIe and VIIIe, and Land Management Suite of LMS 3 or LMS 4. For the purposes of the rules in section 9.2 of this regional plan, it is coastal land measured horizontally from the Coastal Marine Area to either

- (i) 150 metres landward of the Coastal Marine Area; or
- (ii) the point where land changes from sand dune country to another soil type; whichever is the lesser distance.

The coastal marine area is defined as:

Coastal Marine Area – Means the foreshore, seabed, and coastal water, and the air space above the water -

- (a) Of which the seaward boundary is the outer limits of the territorial sea;
- (b) Of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of—
 - (i) One kilometre upstream from the mouth of the river; or
 - (ii) The point upstream that is calculated by multiplying the width of the river mouth by 5:

In the Bay of Plenty region the river mouths have been defined by agreement between the Minister of Conservation, Environment Bay of Plenty, and the appropriate city and district councils, in accordance with section 2(1) of the Act. Grid references of the river mouths have been scheduled in the Regional Coastal Environment Plan. In addition, Environment Bay of Plenty has detailed maps and descriptions of the agreed river mouths and consequent landward edge of the Coastal Marine Area within the rivers of the region. These maps and descriptions can be viewed at the Whakatāne office of Environment Bay of Plenty.

The Land Application Field and part of the proposed access route to the Field are within 150 metres of the line of mean high water springs, and the soils in this general location consist of massive, well-sorted fine to medium sand consistent with dune sand⁹. The site of the proposed works is therefore within Sand Dune Country which is part of the Erosion Hazard Zone. Accordingly this application is for vegetation clearance and earthworks for both the access route and the Land Application Field.

As required by Section 88 of the RMA and in accordance with Schedule 4, this section of the AEE provides an assessment of the actual and potential effects on the environment as a result of the proposed vegetation removal and earthworks, and outlines the proposed mitigation measures to manage any potential adverse effects.

⁹ Source: URS – Whakatāne DC Matatā WWTP – Geoscience Assessment of proposal WWTP and Disposal field Sites PRELIMINARY FINDINGS Reference 42790250-R002 RevA dated 17 May 2013

12.2 Description of the Proposal

As part of the overall construction of the Proposed Wastewater Scheme, earthworks and vegetation clearance will be required to construct the Land Application Field and the private road access to the Field over the adjoining property to the south. As the Proposed Wastewater Scheme is to be constructed using a DBO process, final volumes for earthworks cannot yet be confirmed. The total volume of earthworks with respect to the resource consent is 5,500m³ which comprises the following works outlined below.

The overall design and construction period for the Proposed Wastewater Scheme will be a total of 12 – 15 months from June 2014. Of this timeframe, the period of vegetation clearance and earthworks and that is the subject of this application is expected to occur over approximately 8 weeks.

For an overall description of the site and the Proposed Wastewater Scheme, refer to Part A of this document, specifically Sections 5 and 7.

12.2.1 Land Application Field:

The Land Application Field will be installed utilising methods to protect the groundcover of the dunes as far as possible. During construction of the Land Application Field WDC require contractor to:

1. Ensure that no stripping of grass sward or topsoil is to occur;
2. Protect the groundcover of the dunes as far as possible;
3. Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar; and
4. Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.

The earthworks components at the Land Application Field include:

1. Approximately 4km of sub-surface dripper pipe and associated components of the land application system will be placed within an area of approximately 4 hectares. Up to 300mm of surface material may need to be disturbed along the pipeline vents over the 4.6 hectare Land Application Field, depending upon the installation method for the piping (mole plough or similar is required).
2. Other components of the land application system include trenching to install mains, submains and flushing pipelines (0.5m deep x 0.25m width), together with a small partially buried pump station (total size 1.8m x 1.8m x 1.8m) and various small chambers. The estimated total volume for these works is up to 550m³.
3. A 6m wide access road, which will run along the southern boundary of the Land Application Field to connect with the access road on the adjoining property (see below), will need to be constructed for a length of approximately 600m. The volume of earthworks for the access is approximately 1125m³.

The total volume of earthworks at the Land Application Field is 4,900m³.

12.2.2 Access Road:

Approximately 600m³ of earthworks will be required to create the access road to the Land Application Field over the existing vehicle access route (farm track) to the south of the site at 1432B Bennett Road, Matatā. Proposed works will include stormwater swales and a pipeline trench together with access lengthening and possibly upgrade over the full length. It is expected approximately 200m of the existing farm access track will need to be reconstructed and/or widened to a 6m width and approximately 140m of new 6m wide access road constructed.

The existing farm track is on land owned by the Robinson family and the final location of the access has been determined in consultation with them. Affected persons consent for the access road and its associated construction effects is contained in Appendix A. An easement for access is to be registered on the certificate of title.

12.3 Positive Effects including Social and Cultural Effects

The proposed earthworks are a prerequisite for the development of the overall Proposed Wastewater Scheme for which there are a number of positive effects, including positive social and cultural effects. Please refer to Section 14 for a discussion of the positive effects of the wider proposal.

12.4 Erosion and Sedimentation Effects

The site of the Land Application Field is identified as being subject to coastal erosion in the Whakatāne Operative and District Plans (see section 8 of this report), however the area for the Land Application Field itself is outside of this area.

It is proposed that a condition of consent be included requiring that a Site Management Plan that identifies how sediment, stormwater and erosion will be controlled and contained, be submitted to BoPRC for approval prior to commencement of the works. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". All erosion and sediment controls and devices will be installed prior to the commencement of earthworks and will be subject to weekly monitoring with additional monitoring within 24 hours after each rainstorm event. The controls will be maintained in an effective capacity at all times and any accumulated sediment in sedimentation devices shall be removed and placed in a stable position before sediment levels reach 25% of that device's volume.

The Site Management Plan will include methods to ensure the Bennett Road Stream located adjacent to the access road will not be adversely affected by sediment contaminated stormwater. Any discharge of stormwater to the canal will be in accordance with permitted activity requirements for the discharge of stormwater to surface water as outlined in Rule 30 of the Bay of Plenty Regional Water and Land Plan.

Once works are completed the Land Application Field is to be replanted with suitable indigenous species which will have a stabilising effect on the land surface and minimise future erosion. Replanting of the site will occur in the first available planting season (Autumn through to Winter/early Spring). In the event of a time lag between completion of works and the available planting season the area will be protected with weed matting or similar. The access road to the land application site shall be at least a metalled pavement construction.

With appropriate mitigation in place, the sedimentation and erosion effects as a result of the proposed earthworks are considered to be minor.

12.5 Ecological Effects

An ecological assessment for the Proposed Wastewater Scheme prepared by Wildlands dated August 2013 is contained as Support Document 7.

The site is part of the Te Teko Ecological District which contains a suite of threatened indigenous species and habitats and is recognised as having regional and national ecological significance. The site is identified as having high ecological value in the following statutory documents in Table 12-1:

Table 12-1: Statutory Documents – Ecological Value

Statutory Document	Ecological Value
Bay of Plenty Proposed Regional Policy Statement	Area of high natural character (Thornton Dunes) – unique species of manuka (Thornton manuka) which is dominant vegetation cover ¹⁰ .
Bay of Plenty Regional Coastal Environment Plan	Site of Significance – significant indigenous vegetation including pingao and buffer to adjoining kanuka forest.
Proposed Whakatāne District Plan	Significant Indigenous Biodiversity Site (Thornton Road Dunes)

¹⁰ The PRPS refers to manuka, the Bay of Plenty Regional Coastal Environment Plan and Wildlands report Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field August 2013 refer to kanuka.

The vegetation on the area for the Land Application Field is predominantly exotic grassland species, with some coastal mahoe, but is managed as a protective buffer to the nationally significant population of Thornton kanuka (classified as Threatened – Nationally Vulnerable) and nationally significant coastal dune systems with which it is contiguous. The site is presently used for animal grazing and is considered to be of low ecological value with low quality habitat for both introduced and indigenous bird species. The proposed access route is also of low ecological value as it follows an existing vehicle route.

It is proposed that the Land Application Field will be constructed to protect the cover of the dunes as far as possible. Once the works are complete the whole site containing the Land Application Field will be re-planted with suitable ecosourced indigenous species, as part of an Ecological Restoration Plan, which will include appropriate weed and pest (rabbits and hares) control measures. In addition weed and pest control will be undertaken on adjacent dunes. Whakatāne District Council has a long term goal of rehabilitating native vegetation over the entire Western Reserve network, with the Land Application Field site seen as a catalyst for this work. Replacement of the exotic vegetation with suitable native species will improve the ecological integrity of the wider ecosystem and associated vegetative sequence and coastal habitat. Replanting of the site will occur in the first available planting season (Autumn through to Winter/early Spring). In the event of a time lag between completion of works and the available planting season the area will be protected with weed matting or similar.

To ensure that the adjacent stands of Thornton kanuka and other native coastal vegetation are not affected during works, suitable best practice site practices will be deployed. A 5m buffer will be left undisturbed adjacent to these areas, within which there will be no vegetation clearance or vehicular access, and no soil dumping or stockpiling.

The treated wastewater to be discharged into the land application area may increase the nutrient levels within the soils, which could result in the colonisation of nutrient-tolerant exotic species. It is expected that some grass or weed species may remain on the site however a robust on-going weed eradication programme will ensure that weeds are kept to a minimum.

The potential ecological effects of the vegetation removal and earthworks are therefore considered to be minor, and the overall outcome for the site as a result of the proposed works is considered to be positive given the current grazing use will cease, exotic grass species will be removed and replaced with indigenous species, and the site will be rehabilitated in accordance with a suitable restoration plan. The Draft Restoration Plan is listed as Support Document 9 to this AEE.

12.6 Landscape and Visual Effects

The site of the Land Application Field is part of a wider area which is recognised for its high natural character which includes its existing visual characteristics and qualities. The site is identified in the Proposed Regional Policy Statement as an area of high natural character (Thornton Dunes). The New Zealand Coastal Policy Statement and the Bay of Plenty Regional Coastal Environment Plan also seek to preserve the natural character of the coastal environment.

An Assessment of Landscape and Visual Effects prepared by Wildlands dated August 2013 has been prepared for the proposal and is included in Support Document 8.

The assessment found that the viewing audience for the site is small and is generally limited to travellers on SH2, Thornton Road and two neighbouring properties. In addition there are occasional users both pedestrian and vehicular on the dune top 4 wheel drive tracks. As such the proposed earthworks will largely be hidden from public view and will be somewhat screened from neighbours and SH2 by the higher rear dunes.

In terms of soil disturbance within the Land Application Field, the method of laying the pipes will be by mole plough or similar, and they will occur over a 4 hectare area therefore changes to the existing landform will be minimal. The proposed works will avoid disturbance to the naturally undulating landforms of the dunes and existing contours will not be altered. Earthworks to create the proposed access will follow an existing vehicle route.

The site is presently dominated by exotic grass species and is being used for animal grazing. It is proposed that this area will be rehabilitated with locally representative native vegetation (see comments in section 12.5 above).

It is considered that the landscape and visual effects of the proposed earthworks will be minor in the short term, and overall will have positive benefits to the site given the area is to undergo rehabilitation as outlined above.

12.7 Archaeological Effects

The Operative and Proposed Whakatāne District Plans do not include any archaeological sites for the Western Whakatāne Coastal Recreation Reserve or near the proposed access way. In addition the site is not included in the Historic Places Trust Register. The proposed access route is to be approximately 1.5km from the urupa (Maori burial ground) located to the west of the access road. It is not therefore expected that proposed earthworks are likely to uncover any archaeological remains, however in the event of an accidental discovery works are to cease and the relevant authorities notified. It is proposed that a condition of consent to this effect be included (accidental discovery protocol). This condition was also requested in the various Cultural Impact Assessments for the proposal, attached to the AEE as Companion Documents.

12.8 Dust Effects

To control the effects of airborne dust the site will be regularly sprayed with water and a water truck will be on site for this purpose. The management of dust is to form part of the Construction Management Plan for the site. A condition of consent is proposed requiring that a Construction Management Plan be submitted for BoPRC for approval prior to commencement of the works.

12.9 Noise Effects

The effects of construction noise does have the potential to affect users of the wider recreation reserves and the beach, therefore it is proposed that a condition of consent be included requiring that construction noise is to be measured, assessed and comply with NZS 6803:1999 Acoustics – Construction Noise. The management of construction noise is to form part of the Construction Management Plan for the site. A condition of consent is proposed requiring that a Construction Management Plan be submitted to BoPRC for approval prior to commencement of the works.

12.10 Traffic Effects

The earthworks material is to be re-used on site which will minimise the number of truck movements going to and from the site. It is expected that there would be no more than a total of 6 truck movements per day, on and off the site, with a total of 36 movements per week. It is considered that the existing road network has sufficient capacity to manage these truck movements. The management of truck movements during construction will be included in the Construction Management Plan for the site. A condition of consent is proposed requiring that a Construction Management Plan be submitted to BoPRC for approval prior to commencement of the works.

12.11 Tangata Whenua Considerations

Consultation has been undertaken with the following iwi groups and three Cultural Impact Assessments have been prepared.

- Ngāti Rangitihī with Ngāti Umutahi
- Ngāti Awa
- Ngāti Tuwharetoa with input from Ōnīao marae trustees.

Section 13 of this document outlines the recommendations provided in the Cultural Impact Assessments and the response of WDC. The Cultural Impact Assessments are attached to the AEE as Companion Documents.

12.12 Summary of Potential Effects and Proposed Mitigation Measures

The potential effects and the proposed mitigation measures are summarised in Table 12-2 below.

Table 12-2: Summary of Potential Effects and Proposed Mitigation Measures (Construction Phase)

Potential Effect	Magnitude	Proposed Mitigation Measures
Social and Cultural Effects	Positive	None specifically proposed as effects are generally positive (during operational phase).
Erosion and Sedimentation	Minor	Site Management Plan that identifies how sediment, stormwater and erosion will be controlled and contained to be submitted to Council for approval. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". Sediment controls to be subject to regular monitoring and maintenance.
Ecological	Minor	Removing grazing from the reserve and replanting of site with suitable indigenous species. Protection of adjoining kanuka stands. Draft Restoration Plan is provided as Support Document 9.
Landscape and Visual	Minor	Retention of existing landform and contours, replanting of site with suitable indigenous species.
Archaeological	Minor	Accidental discovery protocols.
Dust	Minor	Spraying of site with water from on-site water truck. Construction Management Plan to be submitted for approval.
Noise	Minor	Noise to be within NZS 6803:1999 Acoustics – Construction Noise. Construction Management Plan to be submitted for approval.
Traffic	Minor	Truck movements to be minimal. Construction Management Plan to be submitted for approval.
Tāngata Whenua	Minor	The majority of recommendations requested have been agreed to by WDC as outlined in Section 13 of this AEE. WDC will provide wastewater connections to all three marae.

13 Assessment of Effects on Tāngata Whenua

This section outlines the recommendations contained within the three Cultural Impact Assessments (CIA) and the response of the WDC on these recommendations. Where some recommendations are wider than the brief of engagement, appropriate comment is made about where they may fit in the wider management protocols and procedures of WDC. The following sections provide a summary of the findings and indicative comments from WDC in response to the CIA findings. For a full statement of the CIA findings please refer to the CIA reports in the Companion Document.

Whakatane District Council is currently in the process of finalising the three CIAs. At this stage the three initial versions of the CIAs are included in this AEE as Companion Documents. Once the final CIAs are completed these will be made available.

13.1 Te Mana o Ngāti Rangitihī Trust Cultural Impact Assessment.

Te Mana o Ngāti Rangitihī Trust (TMoNRT) has provided a CIA and recommendations on behalf of Ngāti Rangitihī iwi. The CIA recommendations and response from WDC on the recommendation are summarised in Table 13-1 below. For the full recommendations contained within the CIA, please refer to the complete CIA documents included as companion documents to this report.

Table 13-1: Summary Table of Te Mana o Ngāti Rangitihī Trust initial CIA Recommendation and WDC Response

Item	CIA Recommendation	WDC Response
1	Impose by way of conditions the Accidental Discovery Protocol for Koiwi and Taonga Tuturu as a means of providing for their accidental discovery during earthworks.	It is proposed that a condition relating to accidental discovery in accordance with section 13.4 of this document be included. Section 15 of this AEE includes the relevant suggested condition/s.
2	Employ a cultural monitor that can be present during all earthworks activities and thereby able to initiate the giving effect to the Accidental Discovery Protocol, collecting of Koiwi or artefacts and storing them in an appropriate location until such time as iwi can discuss and agree their re-interment, custody or long term ownership for which confirmation through processes required by the Protected Objects Act (2006) will be applied.	WDC will employ cultural monitor accepted by all iwi. It is proposed that the cultural monitor will be present during earthworks at the sites of the WWTP and the Land Application Field. WDC does not expect accidental discoveries during: <ul style="list-style-type: none"> • Pipework construction in Matatā. Trenching will be carried in shallow trenches – 600-800mm within the road reserve along other existing services, • Trenching along Thornton Rd. This will be carried within road reserve, along other existing services. • Construction of Land Application Field. Pull through (mole-plough) method or similar will be used, with pipes pulled 200 – 300 mm below the ground level. Nevertheless during these works a cultural monitor will be available to attend to any accidental discovery if required.
3	Use flexible pipe materials resilient in earthquakes events	Seismic issues will be addressed in the requirements for the Contractor.
4	Use double pipes crossing water-bodies are located on bridges where they are least likely to be affected by river flooding effects or tidal surge events	WDC requires the Contractor to provide a separate encasing pipe crossing rivers and streams secured to bridges on the downstream side.
5	Ensure odour issues are mitigated, particularly where there is potential for odours to affect Oniao, Rangiaohia and	It is expected that any odour effects from the proposal will be minimal as outlined in sections 10, 16.9 and 17.10. It is also proposed that an

Item	CIA Recommendation	WDC Response
	<p>Umutahi Marae by:</p> <ul style="list-style-type: none"> • Refraining from use of open ponds at site 'G', or by minimising the size of open ponds • Locating the solids treatment site within a buffer that provides screening for ponds and all structures at site 'G' using native planting that will minimise adverse visual effects • Joining all three marae to the reticulated system 	<p>Operations and Maintenance Management Plan, and the Odour Management Plan, that includes methods for monitoring of odour, be submitted to the Regional Council as a resource consent condition.</p> <ul style="list-style-type: none"> • Ponds will be screened from view • Site will be screened with earth mounding and planting • Sludge will be removed from site in covered containers • WDC will provide a wastewater connection to Rangiaohia marae located within wastewater boundary and to Oniao marae located on site neighboring treatment plant. WDC will consider connecting Umutahi marae located approx. 1.5 km outside of the wastewater boundary on the basis of impact of this connection on the cost of the Wastewater Scheme and operation of WWTP.
6	<p>That the Wahieroa settlement blocks SO 331003 and SO 332912 being owned by Ngāti Awa and Ngāti Tuwharetoa respectively be protected visually from the Land Application Field through planting of a buffer strip with coastal kanuka or relevant species adapted to coastal conditions</p>	<p>As the full extent of the Land Application Field site is to be planted with kanuka or other similar indigenous vegetation, planted buffer strips are not considered necessary.</p>
7	<p>Provide appropriate roading access to all parts of the proposed treatment system including to the beach proper</p>	<p>WDC will provide access to all parts of treatment system. Informal road access to the beach is already provided to the west and east of the Land Application site. WDC will consider proposed access within submissions to the District Plan.</p>
8	<p>Protect Otaramuturangi urupa from any actual or potential adverse effects from the proposed activity by fencing the access way, which veers from the eastern side of the Tarawera River towards the Land Application Field, on either side for security purposes and privacy.</p>	<p>This comment relates to a different access route that was previously considered but is no longer proposed. The proposed access is approximately 1.5km from the urupa.</p>
9	<p>Note that TMoNRT wishes to discuss any opportunities for employment that might arise at times when planting of the Wastewater Treatment Plant and Land Application Field sites is required, or for on-going maintenance of the system, should that work become available to local contractors</p>	<p>WDC will discuss employment opportunities that might arise at times when planting is required, or for on-going maintenance of the system with TMoNRT and other iwi bodies.</p>
10	<p>That TMoNRT shall be allowed full unprohibited access to either of the sites for monitoring purposes</p>	<p>WDC can grant access for monitoring purpose after agreeing the procedure and nominating an authorised person for conducting such activity.</p>
11	<p>That monitoring of the pipeline which carries the wastewater from the Treatment Plant to the Land Application Field is monitored for any leakage on a monthly basis.</p>	<p>The Contractor will be required to monitor the pipeline on monthly basis during the DBO contract duration. Thereafter WDC will monitor the pipeline.</p>
12	<p>TMoNRT advise that hydrogeological examinations be carried out four (4) times</p>	<p>WDC will be conducting tests according to resource consent requirements and reporting to</p>

Item	CIA Recommendation	WDC Response
	during the year on pre-determined areas, and reports to be directed to TMONRT in the first instance	Regional Council. Reports can be made available to TMONRT as well.
13	That seasonal variations be taken into consideration i.e. the effects of permeation especially after long dry periods and extreme wet spells, when hydrological testing is to be conducted	This issue will be taken into consideration at the design stage of the Land Application Field.
14	If contamination of our coastal waters is detected through hydrogeological examinations operations will cease immediately	The Contractor will be obligated to comply with any resource consent conditions regarding the quality of wastewater released to the environment.
15	That the coastal area is of significance for the gathering of tuatua (<i>Paphies subtriangulata</i>) and that contamination of this resource is unacceptable	The public health risk assessment has determined that as the groundwater at the Land Application Field flows from the coastal dune beach towards the inland surface drainage network. Therefore beach activities are not considered to be impacted by the discharge of treated wastewater.

13.2 Te Runanga o Ngāti Awa

Te Runanga o Ngāti Awa has provided an initial CIA and recommendations. The CIA recommendations and response from WDC on the recommendation are summarised in Table 13-2 below. For the full recommendations contained within the CIA, please refer to the complete CIA documents included as companion documents to this report.

Table 13-2: Summary Table of Te Runanga o Ngāti Awa initial CIA Recommendation and WDC Response

Item	CIA Recommendation	WDC Response
1	Provide access to landlocked Ngāti Awa land	Council is open to discussion on how to achieve access to Ngāti Awa landlocked land and proposes to discuss this issue within the District Plan process.
2	Recognise and provide for various Ngāti Awa Wahi Tapu sites.	WDC has records of Wahi Tapu sites. The Proposed Scheme will avoid disturbance of known locations of Wahi Tapu sites but to further protect any accidental discovery, WDC will employ a cultural monitor to oversee excavations in areas of significant cultural values or interest and will provide training to digger operators on accidental discoveries so as to be vigilant while proceeding with earthworks.
3	Adopt Accidental Discovery Protocol	WDC will adopt pan-tribal Accidental Discovery Protocol as agreed between Te Rūnanga o Ngāti Awa, Te Mana o Ngāti Rangitahi Trust and Ngāti Tūwharetoa Settlement Trust.
4	Assurance that WDC provide adequate information on containment and ongoing management of the collection system and transfer pipeline to establish the risk of breach or failure is minimal and that responses to possible breach or failure are appropriate and effective.	WDC is planning to provide information to iwi and the Matatā community regarding the scheme on regular basis as the project development progresses.
5	Assurance that WDC provide adequate	WDC has completed the Hydrogeological Report and Receiving Environment/ Public Health

Item	CIA Recommendation	WDC Response
	information on the proposed level of treatment wastewater and the effectiveness of proposed land disposal and ongoing monitoring to establish that there will be no risk of contamination of ground and surface water or the open coast.	Assessment Report and provided them to TRONA. In addition, during the hui findings of the reports were explained to all participating iwi members. WDC will monitor soil, ground water and surface water on an ongoing basis.
6	That Regional Council completes a detailed peer review of all technical information and reports provided by WDC for the proposal and provide a copy of the findings of that peer review to TRONA.	Regional Council will review all technical information provided by WDC as part of the resource consents application, but this will not be on peer review basis. The outcome of the technical review will be considered in the Regional Council decision making process.
7	TRONA requests the opportunity to conduct karakia prior to the commencement of works for the Matatā wastewater scheme.	WDC would like the karakia to be conducted prior to the commencement of works for the Matatā wastewater scheme in a procedure accepted by all iwi.

13.3 Ngāti Tuwharetoa

Ngāti Tuwharetoa (BOP) Settlement Trust has provided an initial CIA and recommendations. The CIA recommendations and response from WDC on the recommendation are summarised in Table 13-3 below. For the full recommendations contained within the CIA, please refer to the complete CIA documents included as companion documents to this report.

Table 13-3: Summary Table of Ngāti Tuwharetoa initial CIA Recommendation and WDC Response

Item	CIA Recommendation	WDC Response
1	Full response can be provided after WDC provides the hydrogeological report.	The Hydrogeological Report and Receiving Environment Assessment/Public Health Risk Report was provided to all iwi on 4 November and findings presentation provided during hui with Ngāti Tūwharetoa representatives and Ōnīao marae and Umutahi marae trustees on 18 November.
2	To provide information regarding outcomes of consultation with Ōnīao marae and Umutahi marae	Ōnīao marae and Umutahi marae trustees were consulted and requested that both marae will be connected to wastewater scheme.
3	The information was requested regarding the changed route to the Land Application field from the access along Urupa to the farm track through Robinson's farm.	The map of amended access route (through Robinson's farm) was provided in the email sent 23 October as immediate WDC response to the Ngāti Tūwharetoa (BOP) Settlement Trust request and as well during the hui on 18 November.
4	Information was requested regarding small aeration ponds.	Further detailed information regarding ponds was provided in an email sent on 8 November. The possible ponds in Matatā would be storage basins holding highly treated wastewater before pumping to the disposal field. Another basin is empty during normal plant operation. It is a contingency basin, which may be used during contingency, if there is problem within the plant. The treatment technology will be very efficient and will produce very high quality treated odourless wastewater. In addition WDC shall require contractor to use high degree of odour control.
5	Waahi Tapu and Waahi Taonga	WDC will adopt Accidental Discovery Protocol

Item	CIA Recommendation	WDC Response
		agreed between iwi.

13.4 Accidental Discovery Protocol

13.4.1 Introduction

The Pan-Tribal Protocol for Accidental Discovery of Kōiwi or other Taonga specifically relates to earthwork activities undertaken in the construction of the Matatā Wastewater Scheme as outlined in consents sought by WDC (refer Appendix B for the full protocol).

The Protocol has been agreed by Te Mana o Ngati Rangitahi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the WDC to be imposed by consent condition on any consent granted. Subsequently, WDC have included the Protocol in their suggested resource consent conditions.

This Protocol is collaboratively designed by iwi to enable their exercise of kaitiakitanga in respect to waahi tapu and waahi taonga. In it iwi identify actions to be given effect in the event of disturbance or discovery of known or unknown sites of cultural significance. In developing this Protocol Te Mana o Ngati Rangitahi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa have considered the following:

1. The Protected Objects Act 1975 requirements for found objects or taonga tuturu;
2. Historic Places Act 1993 requirements for damage, destruction and modification of historic sites (whether known or unknown);
3. Protocols with the Ministry for Culture and Heritage contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005;
4. Protocols with the Historic Places Trust contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005; and
5. Section 6(e) of the Resource Management Act 1991 Matters of national importance as identified in iwi management plans and recognised in regional and district planning instruments relevant to the proposed consents.

13.4.2 Purpose

The purpose of the Protocol is:

1. To manage and protect the integrity of 'known' and 'unknown' waahi tapu, waahi taonga, archaeological and historic sites from unmitigated damage, destruction and modification;
2. To maximise the opportunity to retrieve physical and archaeological evidence from disturbed sites;
3. To obtain evidence of the lives, activities, food and resource use, trails and sites of pre-European Maori occupancy where such sites are disturbed or discovered during the proposed works;
4. To enable study of sites and found items to enrich iwi and New Zealanders understanding of our country's historic heritage; and
5. To ensure that the management of any Kōiwi or other Taonga discovered is appropriate and undertaken in adherence with the actions identified here by Te Mana o Ngāti Rangitahi Trust, Tuwharetoa BOP Settlement Trust and Te Runanga o Ngati Awa.

13.4.3 Recognising and Providing for Waahi Tapu and Taonga Tuturu

Iwi proposed and WDC have agreed to:

1. Adopt this Protocol as a condition of consents granted;
2. Employ a Taonga Tuturu Monitor; and
3. Require earth-workers to be trained how to recognise a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery.

13.4.4 Three hour Training Workshop for Earth Workers

A three hour Training Workshop will be conducted by persons recommended by iwi and an experienced and qualified archaeologist. Persons required to participate in the workshop include:

1. Taonga Tuturu Monitor; and
2. Earth-workers, pipeline trench workers and site managers.

Others to be invited to participate in the workshop are:

1. An archaeologist from the Historic Places Trust (who may wish to provide the archaeological training component);
2. Kaumatua and pukenga invited by Ngati Rangitahi, Ngati Tuwharetoa BOP Settlement Trust, and Ngati Awa;
3. NZ Police;
4. Curator Whakatāne Museum; and
5. Maori Liaison staff from WDC and the Bay of Plenty Regional Council.

The focus of training will be recognition of a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery. Practical application of the Protocol is the key focus for training.

13.4.5 Taonga Tuturu Monitor

A Taonga Tuturu Monitor shall be employed by WDC to monitor, act in accord with the Protocol and report any discoveries during earthworks.

The Taonga Tuturu Monitor shall be present during earthworks relating specifically to:

1. The access-way to the proposed treatment plant at 1715 Thornton Road, title SA275/265 being Lot 6A Parish of Matata;
2. Site preparations for the proposed treatment plant site at 1715 Thornton Road, title SA275/265 being Lot 6A Parish of Matata;
3. The access-way to the proposed disposal site at 1432C Bennett Rd, being Allotment 107 Rangitaiki PSH; and
4. Site preparations and installation of dispersal drippers at the proposed disposal site 1186Z Thornton Rd, being Part Allotment 273 Rangitaiki PSH.

The Taonga Tuturu Monitor will liaise with and support earth-workers and site managers in the giving effect of procedures identified in this Protocol.

Key Tasks for the Taonga Tuturu Monitor include:

1. Being present and available to give effect to this protocol during earthworks at sites specified above;
2. Being on-call and available to provide a rapid response that gives effect to this protocol in the event that pipeline trench workers discover a potential site; and
3. Carrying out the activities identified in this Protocol in close cooperation with site managers, and where necessary or appropriate with kaumatua, pukenga, NZ Police (where koiwi are discovered) and archaeologists.

14 Positive Effects

Positive effects are included within the meaning of “effects” in the Resource Management Act 1991 (RMA). Accordingly it is appropriate these are considered in the overall effects assessment and in taking a balanced approach to the proposal. In this regard, there are definite tangible positive benefits to the Matatā community that would result from the installation of the Proposed Wastewater Scheme. These are outlined as follows:

14.1 Proposed Wastewater Scheme

The Proposed Wastewater Scheme is in accordance with Objective WNU1 and Policies 1 and 2 of the Operative Whakatāne District Plan, which aim to facilitate the development, operation and maintenance of network utilities throughout the district, and to consider their benefits, while avoiding, remedying or mitigating adverse effects on the environment.

Policies 41 and 42 of the Bay of Plenty Regional Water and Land Plan encourage the discharge of contaminants to land based treatment and disposal of contaminants (rather than to water), where this is appropriate and environmentally sustainable, and socially, technically and economically feasible. This includes the disposal of sewage by passage through land, soil or wetlands

Policies 16.8.3(h) and 16.8.3(i) of the Bay of Plenty Regional Plan for the Tarawera River Catchment promote the use of land based contaminant disposal systems over areas sufficient and appropriate to the long-term treatment capacity of substrata, and encourage land based contaminant disposal systems that involve effective nutrient uptake.

The proposed scheme, being a land-based scheme, is also in accordance with the above-mentioned policies of the Bay of Plenty Regional Council Plans.

14.2 Provision of a Safe Public Health and Sanitation System

The single most positive effect of the Proposed Wastewater Scheme is the provision of a safe and reliable public health sanitation system. This key positive effect should be ‘kept to the fore’ in assessing the balance of all effects as defined under the RMA, and also in the determination of a BPO scheme for treatment and discharge such as this. The BPO aspects of the scheme are discussed further in section 5.7 of this report.

14.3 Environmental and Public Health

As outlined in Section 3.2 of this document, there are some public health and environmental issues associated with the continued, and potentially increased, use of on-site septic tank disposal systems. In addition if existing septic tanks and disposal systems are not maintained properly and/or the ground water situation changes unfavourably, the possibility of failing septic tank disposal systems is high in the long term. Septic tank failure will lead to environmental contamination and possible public health issues.

The Proposed Wastewater Scheme will deliver an environmentally sustainable solution that addresses these concerns, and includes measures to avoid, remedy and mitigate any potential environmental effects.

14.4 Social and Economic Effects

The Proposed Wastewater Scheme will have positive social and cultural benefits for the Matatā community, in that it will allow the community to upgrade their existing system of aging individual septic tanks and ground disposal systems to a modern fully reticulated scheme.

Inclusion of Matatā in the Regional Council’s Maintenance Zone within the On-Site Effluent Treatment Plan for on-site effluent disposal may force some residences to install new septic tanks and/or more advanced on site treatment systems at considerable cost per household.

The Proposed Wastewater Scheme will provide a cost efficient system that upgrades the system of wastewater treatment across the entire community. The Proposed Wastewater Scheme is affordable to residential and business communities, whilst also meeting WDC’s other requirements including the need to produce a high standard of treated wastewater quality.

The site of the Land Application Field is also part of the Western Whakatāne Coastal Recreation Reserves and is therefore technically publicly accessible, although at present it is fenced and used for

animal grazing. Once works are complete the site will be returned to a natural vegetative state and will only be fenced whilst vegetation becomes established. Development of the site for the proposed Land Application Field is considered to be compatible with the natural character values of the location and will ultimately retain public walking access and vehicle access on the nearby 4WD track. Future users of the reserve will be otherwise unaffected by the proposed Land Application Field as the treated wastewater will be discharged underground via sub-surface pipes, and noise and odour will be minimal as noted above. The proposal is considered to be in accordance with the Western Whakatāne Coastal Recreation Reserves Management Plan as discussed in section 8.17.3 of this document. The overall outcome for the Reserve is considered to be positive, particularly in the context of its existing state and use.

Community consultation has occurred throughout the process and the community has been largely supportive of the proposal. The consultation methods and outcomes are described in Sections 3.3 and 9 of this AEE.

14.5 Facilitating Growth

The Matatā community currently comprises approximately 260 residential dwellings. With the new wastewater scheme in place, the ability to subdivide sections to smaller lot sizes may be realised (planning procedures permitting). This will enable residential growth of the community through intensification and is in line with Objective LRS7 of the Whakatāne Operative District Plan which seeks to promote the residential growth of urban areas by continued infill housing within existing urban areas, and into identified urban growth areas where adverse environmental effects can be avoided, remedied or mitigated.

14.6 Environmental Improvement

As described elsewhere in this document, the proposal involves the removal of grazing in the Western Whakatāne Coastal Recreation Reserve at the Land Application Site, and rehabilitation of the site with appropriate indigenous vegetation in accordance with an approved Ecological Restoration Plan. This work is likely to become a catalyst for further restorative works throughout the wider Reserve area. Regeneration of the site and the wider area is a positive effect as it will enhance the natural values of the reserve, improve the ecological integrity of a recognised vegetative sequence, and provide for fauna habitat.

15 Suggested Resource Consent Conditions

15.1 Suggested Consent Conditions

This Section is intended to assist the reader by setting out the suggested resource consent conditions that WDC envisages being placed on the new resource consents, should they be issued. These would formalise WDC's undertaking in accordance with the RMA to avoid, remedy or mitigate any adverse effects associated with the Proposed Wastewater Scheme.

Purpose

1. For the purpose of discharging treated wastewater (TWW) by way of sub-surface irrigation from a wastewater treatment plant (WWTP) to the land application field.
2. For the purpose of discharging contaminants to air from the WWTP and land application field.
3. For the purpose of authorising earthworks associated with the construction of the land application field and access road.

Location

4. Wastewater Treatment Plant and Land Application Field located at Thornton Road, Matatā.

Quantity and Rate of Wastewater

5. The daily quantity of TWW discharged to the sub-surface irrigation shall be no more than 605 cubic metres per day, at an average application depth no greater than 30 millimetres per day, averaged over a period of one calendar month.

Volume of Earthworks

6. Earthworks under this consent shall not exceed either a total cut and fill volume of 5,500 cubic metres.

Earthworks Location

7. To land as shown on plan number C03.

Map Reference

8. Discharge of TWW at or about map reference NZMS 260 V15: 2845, 6365.
9. Discharge of contaminants to air at or about map reference NZMS 260 V15: 2841, 6361 and NZMS 260 V15: 2845, 6365.

Legal Description

10. WWTP site: Allotment 6A Matata Parish
11. Land application field: Pt Allotment 273 Rangitaiki Parish Recreation Reserve

Earthworks - Notifying the Regional Council

12. No less than ten working days prior to undertaking any earthworks as permitted under this consent, the consent holder shall submit a Site Management Plan to the Chief Executive of the Regional Council (or delegate) for approval. This management plan will include, but not be limited to:
 - a. How sediment, stormwater and erosion will be controlled and contained.
 - b. How the groundcover of the dunes will be protected as far as possible.
 - c. Site Plan.
 - d. Drainage Plan.
 - e. Areas to be cut and filled.
 - f. Total works area expected to be disturbed.
13. No less than five working days prior to the overall start of works under this consent, the consent holder shall request (in writing) a site meeting between the principal site contractor and the Chief Executive of the Regional Council (or delegate). Notification at this time shall include details of who is to be responsible for site management and compliance with consent conditions.

14. No less than five working days prior to the first TWW discharge from the WWTP under this consent, the consent holder shall request (in writing) a site meeting between the principal site manager and the Chief Executive of the Regional Council (or delegate). Notification at this time shall include details of who is to be responsible for site management and compliance with consent conditions.
15. The consent holder shall notify the Chief Executive of the Regional Council (or delegate) in writing no less than five working days before the completion of Earthworks under this consent, prior to the removal of erosion and sediment controls.

Written Approvals

16. The following conditions requiring written approvals from the Chief Executive of the Regional Council (or delegate) shall be obtained before any works or discharges commence:
 - a. Condition 12 relating to earthworks;
 - b. Conditions 22, relating to discharges of TWW.

Wastewater Treatment Plant and Land Application Field

17. The location of the WWTP and land application field shall be as shown on plan number A02.
18. There shall be no above ground discharge or spray irrigation of wastewater, treated or untreated, from the WWTP or within the land application field.
19. Treated wastewater discharge to land shall be by way of sub-surface drip lines placed at a minimum depth of 200mm and maximum depth of 300mm below the ground surface.
20. The consent holder shall ensure practicable steps are taken to divert stormwater and surface runoff away from the land application field to ensure that the performance of the system is not impeded.
21. The consent holder shall ensure there is no activity undertaken on top of the land application field that may cause damage to the disposal system (e.g. stock grazing, deep rooting trees or vehicle parking etc.).

Operation and Management Plan

22. The consent holder shall submit a Draft Operations and Management Plan for WWTP and land application field to the Chief Executive of the Regional Council (or delegate), no less than one month prior to the installation of the system, for approval by the Chief Executive of the Regional Council. The Plan shall include as a minimum the following details:
 - a. Location and Design of WWTP and TWW land application field:
 - i. Plans detailing the key components and location of the WWTP;
 - ii. Detailed design drawings; including depth and length of the land application field, layout of the land application field and reticulation within it;
 - iii. Methodology for calculation and verification of the land application field's loading rate;
 - iv. An explanation of the operation of the land application field, including field resting;
 - v. Wastewater Treatment Plant process flow diagram;
 - vi. Location and specification of groundwater monitoring wells, including depth; and
 - vii. Maintenance specifications for both the WWTP and land application field.
 - b. Soil monitoring within the land application field:
 - i. Details of the monitoring methodology of the land application field soils, including:
 1. Five yearly soil quality monitoring; and
 2. Location, depth, frequency of sampling, dates and constituents as required in Condition 44.
 - c. Operation of WWTP and land application field:
 - i. Onsite responsibilities, including names and contact telephone numbers for operational staff and a 24 hour contact telephone number;

- ii. Protocols for sampling, sample handling and analysis;
 - iii. Protocols for cycling land application fields;
 - iv. Maintenance schedules for all components of the WWTP and land application field;
 - v. Contingency measures, including spill and breakdown response plans;
 - vi. Storage and handling procedures for any chemicals to be stored on-site as part of the WWTP process; and
 - vii. Timelines for any reviews associated with the operation of the WWTP and discharge field.
- d. Odour Management Plan for the WWTP and land application field:
- i. A description of the routine inspection, monitoring and maintenance procedures to be undertaken to ensure effective WWTP operation and compliance with resource consent conditions;
 - ii. Details of contingency plans and procedures to address power or equipment failure at the WWTP and land application field; and
 - iii. Details of the odour complaints procedure, record keeping and response procedure.
23. The final Operations and Management Plan shall be submitted to the Chief Executive of the Regional Council (or delegate) for approval within three months of the completion of the initial sampling period as described in condition 31. The Operations and Management Plan shall be reviewed by the consent holder at least every three years and if revised shall be submitted to the Chief Executive of the Regional Council (or delegate).

Baseline Receiving Water Monitoring

24. At least one month before any discharge of TWW from the WWTP the consent holder shall supply the Chief Executive of the Regional Council (or delegate) no less than 12 months' worth of monthly water quality monitoring results from surface water bodies likely to receive resurfacing discharged TWW. These sampling locations shall be located generally as detailed in the Plan number C03.
25. Surface water monitoring results as required under Condition 24 shall be sampled and tested for:
- i. cBOD₅ (g/m³)
 - ii. Electrical conductivity
 - iii. pH
 - iv. Chloride (g/m³)
 - v. Total nitrogen (g/m³)
 - vi. Nitrite and nitrate nitrogen (g/m³)
 - vii. Total ammoniacal nitrogen (g/m³)
 - viii. Total phosphorous (g/m³)
 - ix. Dissolved reactive phosphorous (g/m³)
 - x. E. coli (cfu/100mL)
26. At least one month before any discharge of TWW from the WWTP, the consent holder shall supply the Chief Executive of the Regional Council (or delegate) no less than 12 months' worth of quarterly groundwater quality monitoring results from the groundwater bodies likely to receive discharged TWW. These sampling locations shall be located generally as detailed in the Plan number C03.
27. Groundwater monitoring results as required under Condition 26 shall be sampled and tested for:
- i. Groundwater level (metres below ground level)
 - ii. Water temperature
 - iii. cBOD₅ (g/m³)
 - iv. Electrical conductivity

- v. pH
 - vi. Chloride (g/m^3)
 - vii. Total nitrogen (g/m^3)
 - viii. Nitrite and nitrate nitrogen (g/m^3)
 - ix. Total ammoniacal nitrogen (g/m^3)
 - x. Total phosphorous (g/m^3)
 - xi. Dissolved reactive phosphorous (g/m^3)
 - xii. E. coli (cfu/100mL)
28. The installation of monitoring bores in Condition 26 shall be undertaken in consultation with a suitably qualified and experienced hydrogeologist to ensure correct specification relative to the depth and construction of the well.
29. Results from Conditions 25 and 27 shall be submitted in writing to the Chief Executive of the Regional Council (or delegate) and the consent holder must obtain written receipt from the Chief Executive of the Regional Council (or delegate).

Initial Sampling of Treated Wastewater

30. For no less than four weeks immediately following the commencement of the TWW discharge from the WWTP, results from samples taken from the WWTP (after all treatment processes and prior to discharge to the land application field) shall be taken twice weekly, measured as a 24 hour flow proportioned composite TWW sample, for the parameters set out below:
- i. Total nitrogen (g/m^3)
 - ii. Total ammoniacal nitrogen (g/m^3)
 - iii. Nitrite and nitrate nitrogen (g/m^3)
 - iv. Total phosphorous (g/m^3)
 - v. Total suspended solids (g/m^3)
 - vi. cBOD₅ (g/m^3)
 - vii. pH
 - viii. Faecal coliform (cfu/100mL)
 - ix. E. coli (cfu/100mL)
31. On receipt of three weeks consecutive results verifying the TWW to be within the parameters defined in Table A of Condition 34, the initial sampling period will be considered over and operational sampling of TWW shall commence. Should this condition not be achieved within six months following the commencement of the TWW discharge from the WWTP, the Regional Council may undertake a review as described in Condition 90.

Operational Sampling of Treated Wastewater

32. Following completion of the initial sampling period for the WWTP as provided in Condition 30, the consent holder shall take samples of the TWW from the WWTP (after all treatment processes prior to discharge to the land application field) once per week. Samples shall be measured using a 24 hour flow proportioned composite TWW sample and shall be analysed by laboratory analysis for the following:
- i. Total nitrogen (g/m^3)
 - ii. Total ammoniacal nitrogen (g/m^3)
 - iii. Nitrite and nitrate nitrogen (g/m^3)
 - iv. Total phosphorous (g/m^3)
 - v. Total suspended solids (g/m^3)
 - vi. cBOD₅ (g/m^3)

- vii. pH
 - viii. Faecal coliform (cfu/100mL)
 - ix. E. coli (cfu/100mL)
33. The total daily volume from the WWTP to the land application field shall also be recorded on a daily basis taken at approximately the same time each day.
34. Following completion of the initial sampling period for the WWTP as provided in Condition 30, the TWW discharged into the sub-surface discharge system shall not exceed the limits specified in Table A when determined as setout in condition 32 for the ten out of twelve consecutive samples, taken weekly and measured as 24 hour flow proportioned composite TWW samples;

Table A – TWW Limits

Process Performance Parameter	Unit	10 out of 12 Consecutive Samples Compliance Limit
cBOD ₅	g/m ³	30
NH ₃ -N	g/m ³	5
NO ₂ -N + NO ₃ -N	g/m ³	10
TN	g/m ³	15
TP	g/m ³	10
Suspended Solids	g/m ³	30
pH	SU	6.5 - 7.5 (outside of range)

35. If the concentration of E.coli measured under Condition 32 exceeds 100,000 cfu/100ml the consent holder shall, within 7 days, commence weekly monitoring of the groundwater bores for E.coli levels, in order to confirm compliance with trigger levels set out under of Condition 45. If compliance with the trigger levels set in Condition 45 is demonstrated for 3 consecutive weeks the consent holder shall revert to groundwater monitoring at the frequencies set out in the Sampling Plan provided under Condition 45.
36. Laboratory analyses as required under conditions 25, 27, 30, and 32 shall be carried out as set out in the latest edition of "Standard Methods for the Examination of Water and Wastewater" - APHA - AWWA - WPCF or such other method as may be approved by the Chief Executive of the Regional Council (or delegate).
37. If under Condition 34 sample results exceed one of the specifications listed in Table A (as measured in accordance with Condition 32 and 36) the consent holder shall recommence sampling as required under Condition 30 to again satisfy Condition 31. In the event that Condition 31 cannot be satisfied following such an event, the Chief Executive of the Regional Council (or delegate) may trigger a review of the monitoring conditions in accordance with Condition 90.
38. The consent holder shall keep records verifying conditions 31, 33, 34, 35 and 36. These records shall be made available immediately upon request to the Chief Executive of the Regional Council (or delegate).

Soil Monitoring

39. At least one month before the first discharge of TWW to the land application field the consent holder shall submit to the Regional Council soil sample results for parameters as defined in Condition 44.
40. Samples taken for Condition 44 shall be taken at a depth below where the discharge drip lines will be situated and shall consist of random composite samples from no less than one sample per hectare or part thereof within the discharge field.
41. As part of the Operations and Management Plan to be submitted by the consent holder in accordance with Condition 22, the consent holder shall submit a Soil Monitoring Plan to the Chief Executive of the Regional Council (or delegate) for approval. The plan shall include how five-yearly soil analysis results for the parameters defined in Condition 44 shall be obtained and any associated methodologies.

42. Soil sampling shall be conducted once every five years in accordance with the soil monitoring as required under Condition 22.
43. Results from Condition 44 are to be submitted in writing to the Chief Executive of the Regional Council (or delegate) and the consent holder must obtain written receipt from the Chief Executive of the Regional Council (or delegate).
44. Soil sampling shall involve the following parameters:
 - i. Nitrate nitrogen
 - ii. Ammoniacal nitrogen
 - iii. Total nitrogen
 - iv. Total organic carbon
 - v. Organic matter
 - vi. Phosphorus
 - vii. Total Sodium
 - viii. Calcium
 - ix. Potassium
 - x. Soluble salts
 - xi. Cation exchange capacity

Receiving Water Sampling

45. Following the completion of the baseline monitoring in accordance with Conditions 25 and 27, all monitoring results shall be forwarded to the Regional Council and a Sampling Plan shall be submitted to the Chief Executive of the Regional Council (or delegate) for approval. This Sampling Plan shall determine the sampling frequency and methodology used to ensure that any groundwater body and surface water body likely to receive discharged TWW is monitored for the duration of this consent, and for the provision of monitoring results to the Regional Council. The Sampling Plan shall specify the location of a minimum of four monitoring bores which are to be provided with at least one upgradient and one downgradient of the land application field, as shown generally in the Plan number C03. The Sampling Plan shall also provide trigger levels for the monitored parameters as specified in Condition 47, to be approved by the Chief Executive of the Regional Council (or delegate).
46. Surface water samples required under the Sampling Plan required by Condition 45 shall be tested for:
 - i. Dissolved Oxygen (g/m^3)
 - ii. Electrical conductivity
 - iii. pH
 - iv. Total Nitrogen (g/m^3)
 - v. Nitrate and nitrite nitrogen (g/m^3)
 - vi. Ammoniacal Nitrogen (g/m^3)
 - vii. Total Phosphorus (g/m^3)
 - viii. Dissolved reactive phosphorus (g/m^3)
 - ix. E.coli cfu/100ml
47. Groundwater samples required under the Sampling Plan required by Condition 45 shall be tested for:
 - i. Electrical conductivity
 - ii. pH
 - iii. Chloride (g/m^3)
 - iv. Total Nitrogen (g/m^3)
 - v. Nitrate and nitrite nitrogen (g/m^3)

- vi. Ammoniacal Nitrogen (g/m^3)
 - vii. Total Phosphorus (g/m^3)
 - viii. Dissolved reactive phosphorus (g/m^3)
 - ix. E.coli cfu/100ml
48. Groundwater samples required by Condition 45 shall be sampled for the parameters listed in Condition 47 and shall be targeted to not exceed the groundwater quality trigger values established in Condition 45.
49. In the event that a single sample of the deep groundwater exceeds the trigger levels as established in Condition 45, the consent holder shall:
- i. Immediately notify the Chief Executive of the Regional Council (or delegate) in writing; and
 - ii. Resample the groundwater immediately
50. In the event that three consecutive samples of the groundwater exceed the trigger levels as established in Condition 45, the consent holder shall formulate a Remediation Plan. The Remediation Plan shall:
- i. Address the exceedances; and
 - ii. Initiate an investigation into reasons for the exceedances and include remedial actions which may include, but not be limited to, alternative or upgraded treatment methods, changes to the management and operation of the treatment plant and ultraviolet disinfection system, changes to the alarming and monitoring of key process units, and/or improvements to the designated land application field.
- The Remediation Plan shall be submitted to the Chief Executive of the Regional Council (or delegate) within 6 weeks of the first exceedance occurring.
51. In addition to the specific requirements of Condition 50, if the groundwater monitoring required under Condition 45 demonstrates any exceedance of the trigger levels for three consecutive results, the consent holder shall commence weekly monitoring of flowing surface water in the receiving streams for the parameters set out in Condition 46.
52. If any solution specified in the Remediation Plan does not result in the groundwater quality complying with the trigger levels set out in Condition 45 within 12 months after the Remediation Plan being submitted to the Regional Council, the Regional Council may then trigger a review of the consent conditions in accordance with Condition 90.

Wastewater Treatment Plant and Land Application Field Maintenance

53. The WWTP and land application field shall be operated and maintained generally in accordance with the Operations and Management Plan required under Conditions 22 and 23 at all times, to the satisfaction of the Chief Executive of the Regional Council (or delegate), provided such requirements or "satisfaction" does not affect the consent holder's ability to meet the conditions of this consent.

Reporting

54. All sampling and monitoring results and records as required by the Operations and Management Plan and consent conditions from 1 July to 30 June of each year shall be compiled into an annual report. The annual report shall discuss sampling and monitoring results and trends, exceedances and actions taken, site management, complaints and how these have been addressed, and any areas where improvement is required. The annual report shall be submitted (in writing) to the Chief Executive of the Regional Council (or delegate) before the 31 of July of each year.

Earthworks

55. Construction and earthworks shall be carried out in accordance with the information submitted with the Site Management Plan as required under Condition 12.
56. During the construction of the land application field the consent holder shall:
- a. Ensure that no stripping of grass sward or topsoil is to occur on the land application field;

- b. Protect the groundcover of the dunes as far as possible within the land application field;
 - c. Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar;
 - d. Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.
57. The consent holder shall ensure that only cleanfill is deposited on site. For the purposes of this consent, the definition of cleanfill shall include only materials such as clay, soil, rock; or concrete, and brick.
58. The consent holder shall ensure that the works authorised under this consent are completed within a period of no longer than 12 months following their commencement.
59. The consent holder shall ensure that all exposed areas of earth resulting from works associated with this consent are effectively stabilised against erosion, by vegetative cover or other methods, as soon as practicable following the completion of works, to the satisfaction of the Chief Executive of the Regional Council (or delegate)..
60. Notwithstanding the requirements of Condition 56, the consent holder shall ensure that all exposed areas of earth resulting from works associated with this consent are effectively stabilised using the following methods by their respective dates:
- i. Topsoiling and grassing within the duration of the consent;
 - ii. Using hay or straw mulching (or by use of a comparably effective method) to prevent excessive soil erosion.

Erosion and Sediment Control

61. Erosion and sediment controls shall be constructed in accordance with:
- i. Information submitted with the Site Management Plan as required under condition 12; and
 - ii. Environment Bay of Plenty Guideline No. 2010/01 – “Erosion and Sediment Control Guidelines for Land Disturbing Activities” or its successor.
62. All erosion and sediment controls shall be installed prior to the commencement of earthworks.
63. The consent holder shall ensure that all practicable measures are taken to the satisfaction of the Chief Executive of the Regional Council (or delegate) to ensure that no material is tracked off site.
64. The consent holder shall divert uncontaminated catchment runoff away from the area of earthworks.
65. The consent holder shall ensure that where runoff controls (such as diversion channels, bunds, contour drains etc.), have slopes greater than 2%, then the runoff controls shall be protected from erosion by the use of geotextile materials, rock or other suitable materials.

Dust Control

66. The consent holder shall adopt a proactive strategy for dust control, specifically by complying with the principles of dust management as set out in section 3.4 of Environment Bay of Plenty Guideline No. 2010/01 – “Erosion and Sediment Control Guidelines for Land Disturbing Activities” or its successor, so as to prevent a dust nuisance from occurring beyond the property boundary.
67. The consent holder shall ensure that an adequate supply of water for dust control and an effective means for applying that quantity of water, is available on site at all times during construction and until such time as the site is fully stabilised.
68. The consent holder shall ensure that soil moisture levels are monitored at all times when earthworks are being carried out, and at the end of every working day.
69. The consent holder shall ensure that, at all times, the soil moisture level of exposed areas is sufficient, under prevailing wind conditions, to prevent dust generated by normal earthmoving operations from remaining airborne beyond the boundary of the work site.
70. The consent holder shall ensure that, at the end of every working day until such time as the site is fully stabilised, the soil moisture level of exposed areas is sufficient to prevent a dust nuisance occurring beyond the boundary of the works site.

71. The consent holder shall ensure that, outside of normal working hours, staff are available on-call to operate the water application system for dust suppression.
72. In the event that wind conditions render dust control impracticable, the consent holder shall ensure that any machinery generating airborne dust ceases to operate until such time as effective dust control can be re-established.
73. Notwithstanding conditions 66 to 72 above, the consent holder shall undertake additional or alternative dust control measures to the satisfaction of the Chief Executive of the Regional Council (or delegate), as directed; following substantiated public complaints.

Erosion and Sediment Control Maintenance

74. The consent holder shall ensure that the erosion and sediment controls, spillways and associated erosion protection devices and dust controls are inspected and maintained in an effective capacity at all times during works and until the site is stabilised in accordance with condition 60 of this consent.
75. The consent holder shall ensure that, as far as practicable, any necessary maintenance of erosion and sediment controls identified by inspection under condition 74 or by Regional Council staff is completed within 24 hours.
76. Accumulated sediment shall be removed from the sediment retention devices before sediment levels reach 25% of that device's volume.
77. The consent holder shall ensure that sediment removed from the sediment retention device is placed in a stable position where it cannot re-enter the device or enter any water body.
78. The consent holder shall ensure that all-weather machinery access is maintained to any sediment retention pond.

Erosion and Sediment Control Monitoring and Reporting

79. The consent holder shall ensure that the erosion and sediment controls are inspected:
 - a. at least weekly during the duration of construction works; and
 - b. within 24 hours of each rainstorm event which is likely to impair the function or performance of the erosion and sediment controls.
80. The consent holder shall maintain records of:
 - a. the date and time of every inspection of erosion and sediment controls on the site; and
 - b. the date, time and description of any maintenance work carried out.
81. The consent holder shall forward a copy of records required by condition 80 to the Chief Executive of the Regional Council (or delegate) within 48 hours of the Chief Executive of the Regional Council (or delegate's) request.

Reinstatement and Restoration

82. The consent holder shall ensure that the ground surface within the land application field following earthworks is left in a standard of reinstatement similar to that of the adjacent undisturbed areas of the site.
83. No later than thirty (30) working days prior to the commencement of the discharge of TWW from the WWTP the consent holder shall submit a Restoration Plan to the Chief Executive of the Regional Council (or delegate) for approval. The Restoration Plan shall include the following details:
 - a. Recommended replanting with eco sourced indigenous species;
 - b. Weed control measures;
 - c. Any temporary fencing requirements;
 - d. Animal pest management measures; and
 - e. Monitoring procedures.
84. The consent holder shall ensure that the land application field is managed in accordance with the requirements of the Restoration Plan.

Air Quality

85. The consent holder shall operate, manage and maintain the WWTP in a manner that shall not result in any objectionable odours at or beyond the designated boundary of the wastewater treatment plant environmental protection buffer as set out in the Whakatāne District Plan.
86. The consent holder shall operate, manage and maintain the land application field in a manner that shall not result in any objectionable odours at or beyond the boundary of the designated boundary of the land application field as set out in the Whakatāne District Plan.
87. The consent holder shall maintain and keep a Complaints Register for all complaints made about the treatment and discharge operations that relate to air discharges received by the consent holder. The Register shall record:
- The date, time and duration of the event/incident that has resulted in the complaint;
 - The name and address of the complainant;
 - The location of the complainant when the event/incident was detected;
 - The possible cause of the incident;
 - The weather conditions and wind direction at the site when the incident allegedly occurred, if significant to the complaint;
 - Any corrective action undertaken by the consent holder in response to the complaint.
88. The Complaints Register shall be made available to the Chief Executive of the Regional Council (or delegate) at all reasonable times. Complaints which may indicate non-compliance with the conditions of this resource consent shall be forwarded to the Chief Executive of the Regional Council (or delegate) within 5 working days of the complaint being received.
89. The consent holder shall notify the Chief Executive of the Regional Council (or delegate) of any incident, including power, mechanical or process failure, leading to a significant emission of odour from the plant, within 24 hours of the incident being brought to the attention of the consent holder, or the next working day. A written report shall be forwarded to the Chief Executive of the Regional Council (or delegate) within seven working days of the event occurring describing the incident, the reasons for it occurring, its consequences (including the nature of any complaints), the measures taken to remedy or mitigate its effects, and any measures taken to prevent a recurrence of the event, including any changes proposed to the Operation and Management Plan.

Review of Conditions

90. The Regional Council may:
- on the anniversary of the commencement of the consent; or
 - within six months of receipt of any report submitted to the Regional Council under any condition of this consent or any report required as a result of compliance monitoring by Council; or
 - where condition 31 cannot be satisfied as set out in condition 34; or
 - in the circumstances contemplated by condition 52.
- serve notice on the consent holder of its intention to review the conditions of this consent, under s128 of the Resource Management Act 1991.
91. The purposes of this review may include:
- To modify any required monitoring/reporting and/or specify additional monitoring/reporting and/or change the monitoring/reporting frequency required to address any identified adverse effects;
 - To assess, and if necessary to address, any identified adverse effects of any of the discharged treated wastewater on ground or surface waters;
 - To assess and if necessary to review current discharge limits and controls;
 - To require the consent holder to adopt the best practicable option in accordance with section 128(1)(a)(ii) of the Resource Management Act 1991;

- e. To ensure that management practices at the site are consistent with any provisions or restrictions that are required to be implemented by the Regional Council for any National Environmental Standards (NES); and
- f. To require further works to be carried out on the WWTP or land application field, or to require further treatment components within the WWTP or land application field. The requirement would be after six months of a Remediation Plan being triggered under condition 50 or no solution has been reached which enables the operation of the WWTP and land application field in full compliance with consent conditions.

Accidental Discovery Protocol

92. A Taonga Tuturu Monitor shall be employed by Whakatāne District Council to monitor, act in accord with the Accidental Discovery Protocol (attachment A to this consent) and report any discoveries during earthworks.
93. The following procedures will be adopted in the event that kōiwi or taonga are unearthed or are reasonably suspected to have been unearthed during the course of construction.
- a. Immediately it becomes apparent or is suspected by workers at the site that kōiwi or taonga have been uncovered, all activity in the immediate area will cease.
 - b. The construction plant operator will act with caution by shutting down all machinery or activity in the immediate area to ensure that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Site Construction Manager or the on-site supervisor.
 - c. The Site Construction Manager or on-site Supervisor shall take immediate steps to secure the area in a way that ensures that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Taonga Tuturu Monitor.
94. The Taonga Tuturu Monitor will:
- a. Seek advice from kaumātua from Ngati Rangitahi, Ngati Tuwharetoa BOP and Ngati Awa to guide and advise Site Managers and any other parties as to the appropriate course of action to be taken and the identity of persons to involve as appropriate to the circumstances.
 - b. Upon the advice of iwi contacts from kaumātua from Ngati Rangitahi, Ngati Tuwharetoa BOP and Ngati Awa and an archaeologist from the Historic Places Trust providing a description of the find and seeking their advice as to whether they consider it necessary to immediately request kaumātua, Pukenga, an archaeologist and/or the NZ Police attendance at the scene.
 - c. Ensure the find area is secure and available for inspection by Kaumātua, Pukenga, an archaeologist and/or the NZ Police and for photographic recording by the archaeologist should a decision be reached to request attendance at the scene.
 - d. In the event it is considered by the Taonga Tuturu Monitor and archaeologist unnecessary for kaumātua, Pukenga and the NZ Police to attend the scene, the Taonga tuturu Monitor and archaeologist will:
 - i. Record, photograph and report the potential findspot including reasons why attendance was not required.
 - ii. Take photographs of the find site to share with iwi and others and ensure the archaeologist and site manager have recorded GPS co-ordinates for the site should it be confirmed by the archaeologist the site is a newly discovered site.
 - iii. Take photographic records of any taonga tuturu and the find spot.
 - iv. Collect and retain custody of any koiwi in a suitable receptacle to be located at until the completion of the works upon which time iwi will hui to deliberate on the appropriate place for re-interment of koiwi.
 - e. Upon the discovery of taonga tuturu the Taonga Tuturu Monitor and archaeologist shall:
 - i. Photograph the taonga and findspot and record the circumstances of the find.
 - ii. In compliance with the Protected Objects Act 2007, register the taonga tuturu with the Senior Advisor Heritage Operations at the Ministry for Culture and Heritage, and

with each iwi. The Archaeologist will seek from the Ministry for Culture and Heritage approval to place the taonga tuturu into the interim custody of the Whakatāne Museum in order to enable subsequent claims for custodianship and ownership to be lodged by iwi with the Ministry of Culture & Heritage (in compliance with Taonga Tuturu Protocols between settled iwi and the Ministry) while also providing for the enablement of processes under the Protected Objects Act 2007 that require decisions from the Maori Land Court as to custody and ownership in perpetuity.

95. In the event of a significant find and consequential attendance at the scene the Site Construction Manager shall ensure that kaumātua, Pukenga, the archaeologist and Taonga Tuturu Monitor are given the opportunity to undertake karakia (prayer) and any such other cultural ceremonies and activities at the site and affected workers, in accordance with tikanga Māori.
96. Activity in the immediate area will remain halted until kaumātua, the Police and Historic Places Trust (as the case may be) have given approval for operation in that area to recommence. In the event that rua (caves), pits or other archaeological features are discovered, a comprehensive report, inclusive of photographs are to be taken and labelled by an archaeologist with copies sent to Te Mana o Ngāti Rangitahi Trust, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Historic Places Trust, NZ Archaeological Association File-keeper and the Heritage Co-ordinator at the Bay of Plenty Regional Council.
97. At the conclusion of the proposed works a Hui-A- Iwi will be convened by the Taonga Tuturu Monitor at the expense of the Whakatāne District Council at which reports on any discovery of koiwi and or taonga tuturu will be provided including the location of protected objects held in the interim custody of the Whakatāne Museum and for koiwi held in the interim custody of [to be confirmed]. The purpose of the hui will be to:
 - a. Provide for the Taonga tuturu monitor to request iwi deliberation, decision-making and implementation for the re-interment of koiwi.
 - b. Be informed of the process required by the Protected Objects Act 2007 administered by the Ministry for Culture and Heritage and determined by the Maori Land Court to enable iwi to make claims for ownership and custodianship in perpetuity for taonga tuturu.
98. The Whakatāne District Council will cover all expenses relating to the implementation of the Accidental Discovery Protocol including those incurred by kaumātua, Pukenga, the archaeologist and iwi attendees.

Term of Consent

99. This consent shall expire 35 years from the date that this consent was granted.

Resource Management Charges

100. The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to times by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

Advice Notes

1. *The Regional Council is able to provide contact details for the relevant iwi authority.*
2. *Unless otherwise stated all notification and reporting required by this consent shall be directed (in writing) to the Pollution Prevention Manager, the Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 368 329 or email notify@envbop.govt.nz, this notification shall include the consent number 65977.*
3. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*

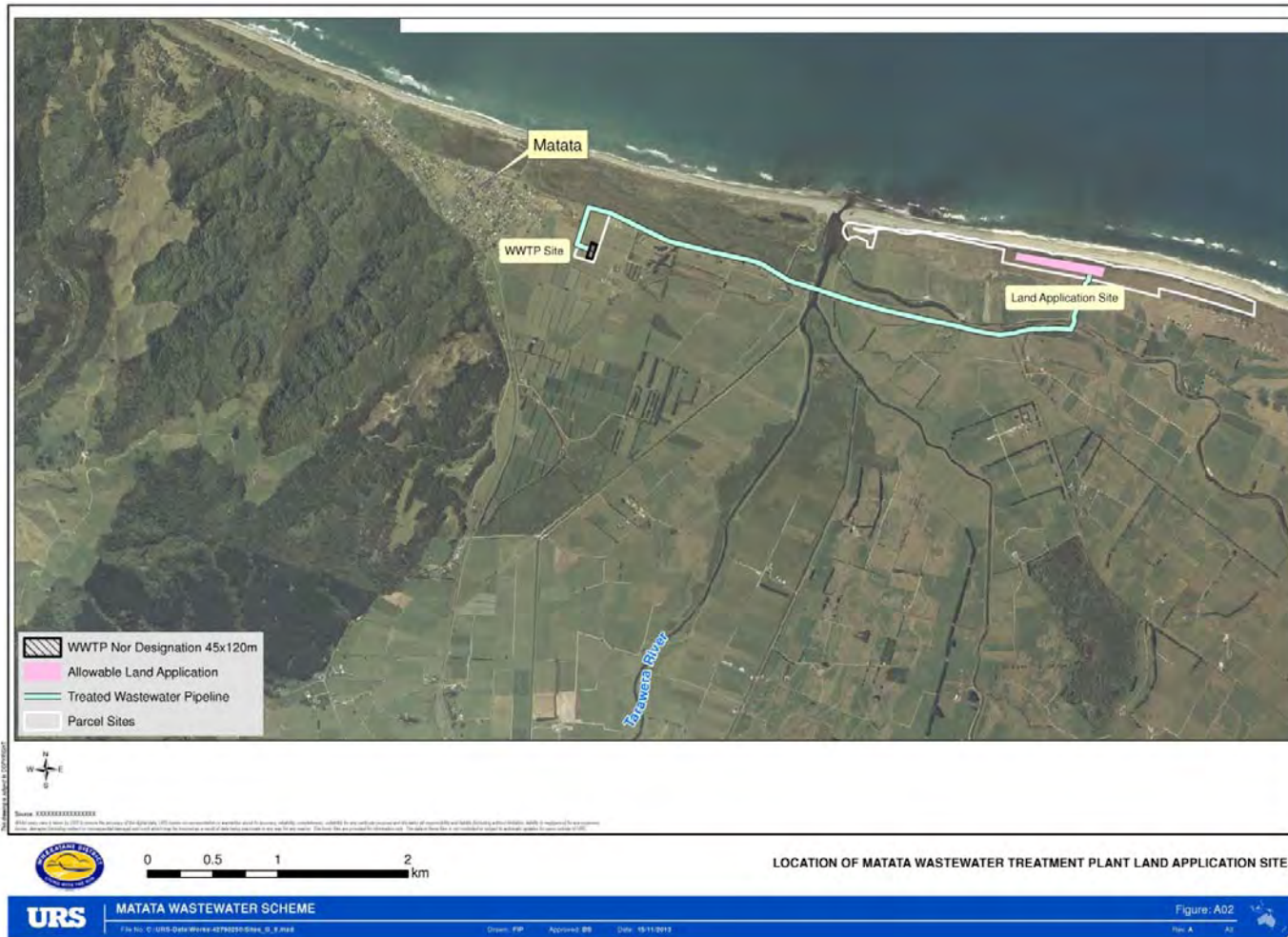


Figure 15-1: Plan A02 – Location of Matatā Wastewater Treatment Plant Land Application Sites

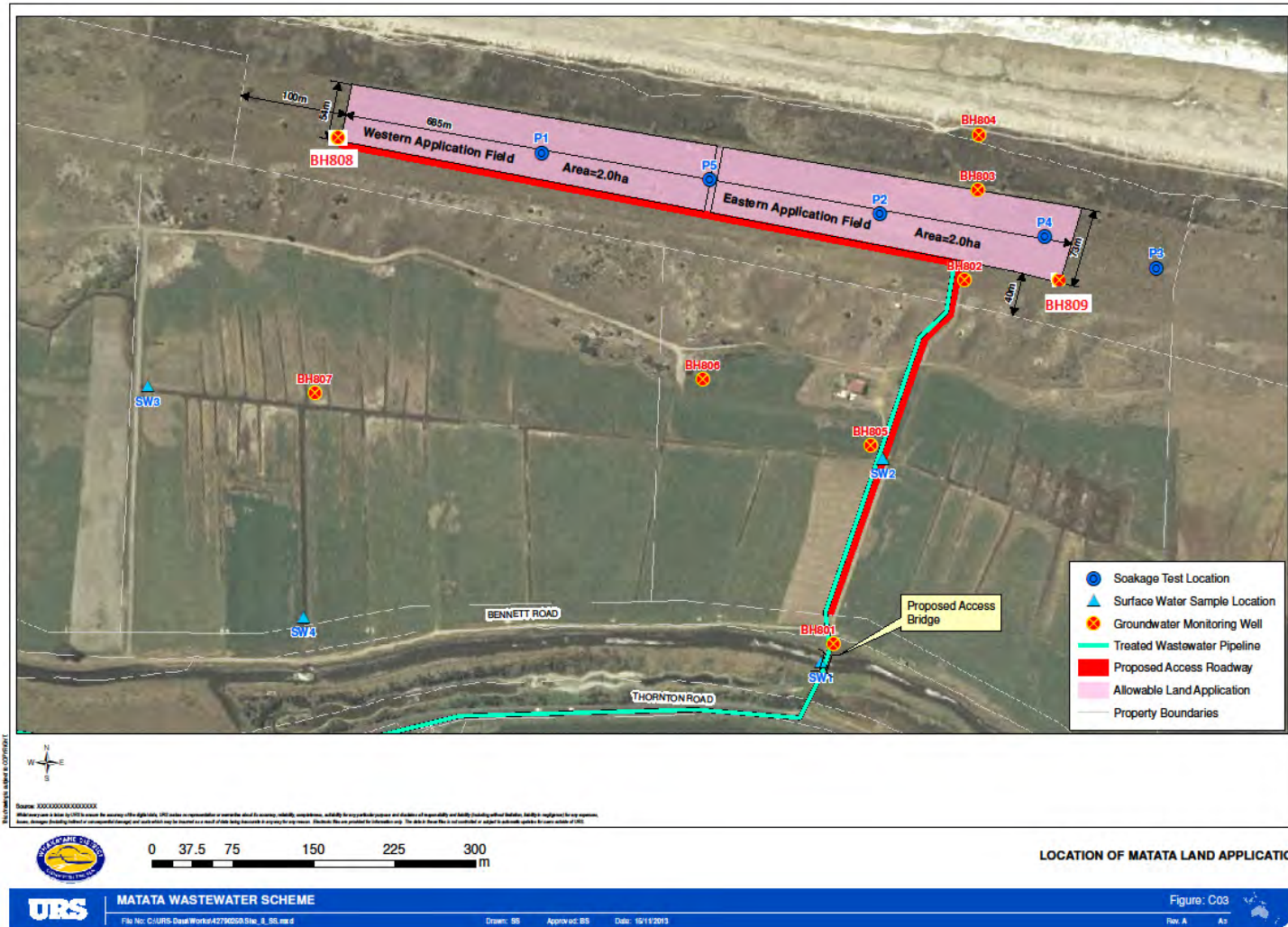


Figure 15-2: Plan C03 – Location of Matatā Land Application Field

Part C Notices of Requirement – Effects Assessments

16 Assessment of Effects of Designations for Wastewater Treatment Plant Site

16.1 The Proposal – As Part of the Proposed Wastewater Scheme

This Notice of Requirement is submitted by Whakatāne District Council as a requiring authority for three designations which make up the WWTP component of the overall Matatā Wastewater Scheme.

The three designations include the WWTP, the WWTP Environmental Protection Buffer and the WWTP Access.

Part A of this document, in particular Sections 5 and 7, outline the description of the site, the proposed Plant and the associated construction activities for which the designation is being sought.

A designation plan of the Proposed WWTP site is shown in Figure 16-1 below. A 3-D view of the site is contained in Section 5, Part A of this AEE.

A separate designation is being sought for the Land Application Field, the purpose of which is to provide for the discharge of the treated wastewater from the WWTP to land. The Land Application Field proposal is described in Section 17 of this document.

In accordance with the requirements of the Resource Management Regulations 2003 (Form 20), this section of the AEE provides an assessment of the effects that the proposed works will have on the environment and the ways in which any adverse effects will be mitigated.

16.2 Requirements

The three required designations are outlined in the Table 16-1 below.

Table 16-1: Designation Requirements

Designation Purpose	Site	Land Area (approximately)
Wastewater Treatment Plant	Allot 6A Matatā Parish (ML 9665)	5,400m ² (120m x 45m)
Wastewater Treatment Plant Environmental Protection Buffer	Allot 6A Matatā Parish (ML 9665)	8,200m ² (20m wide around perimeter of Wastewater Treatment Plant)
Wastewater Treatment Plant Access	Allot 6A Matatā Parish (ML 9665)	980m ² (98m long x 10m wide)

The WWTP designation will provide for the treatment plant itself which comprises tanks for storage and treatment including storage of treated wastewater and solids, and a pump station.

The purpose of the 20 metre wide Environmental Protection Buffer designation around the perimeter of the WWTP designation is to ensure land surrounding the treatment plant that may be mildly affected by noise and/or odour is suitably protected as part of the overall Proposed Wastewater Scheme. It forms a separate designation to provide assurance to adjoining properties that the plant itself will be retained within the 120m by 45m area that comprises the treatment plant designation.

The Access designation is to provide access to the plant from the adjoining road reserve. The adjoining road is presently a 'paper road' but is to be formed as part of the overall construction works for the scheme to provide access to the Plant. The Access designation passes through the Environmental Protection Buffer to connect with the Treatment Plant designation.



Figure 16-1: Plan View of NoR Designation of WWTW Site and Access Road

16.3 Positive Effects including Social and Cultural Effects

The Proposed Wastewater Scheme has positive benefits for the Matatā community. For a description of the positive effects including the social and cultural effects, please refer to Part B, Section 14 of this document.

16.4 Landscape and Visual Effects

The site of the Proposed WWTP is within a rural area and is zoned Rural 3 (Coastal) in the Whakatāne Operative District Plan. The Whakatāne Operative District Plan seeks to maintain the character and diversity of rural and urban landscapes (Objective LS2).

There are 2 residential dwellings within 200 metres of the WWTP site, located towards the north-west and south-east. The Oniao Marae is located on the northerly section of the adjoining property to the east.

The proposed WWTP is to be sited towards the southern end of the property behind the low rise dunes that are located in the middle of the site in an east-west direction. The WWTP has been sited to enable the dunes to provide visual relief from properties towards the north, north-west and north-east and from Thornton Road. It also takes into account a fault line running diagonally across the property, and allows for a 20 metre buffer between the fault line and the WWTP. Section 16.10 provides further information on the fault line.

As the Proposed Wastewater Scheme is to be constructed using a Design-Build-Operate process (refer to Section 5.7 of this document), the final design of the WWTP structures has not yet been confirmed. It is considered that the scale of structures will not be substantial and that the WWTP is likely to comply with the Whakatāne Operative District Plan standards for height (being approximately 3.5 metres in height), setbacks and site coverage for buildings within the Rural 3 (Coastal) zone. The final design details can be submitted to WDC as an outline plan pursuant to section 176A of the RMA if necessary.

The WWTP will be surrounded on 3 sides (excluding the western side containing the access) by an embankment with a height of approximately 2 metres and a width of 5 metres. It is proposed that this embankment is planted with vegetation to a width of 5m and height of 5m once fully established. It is proposed that a condition on the designation be included, requiring that a Landscape and Visual Effects Management Plan be submitted to Council for certification. This will specify the detailed measures to implement the embankment and landscape planting.

No specific site lighting is proposed.

The access is to be formed in accordance with WDC standard access road requirements.

The proposed works will be suitably integrated into the existing landscape and will maintain the rural character and amenity values of the area. It is considered that the landscape and visual effects of the proposal will be minor.

16.5 Ecological Effects

An Ecological Assessment for the Proposed Wastewater Scheme prepared by Wildlands dated August 2013 is contained within Support Document 7.

The site is within a rural setting and is currently in pasture and used for grazing. The ecological value of the site is of low, and the proposal does not involve the discharge of any contaminants to the site. As such any ecological effects as a result of the proposed WWTP will be minor.

16.6 Effects on the Tarawera River

The site is within the Tarawera River catchment as described in the Bay of Plenty Regional Plan for the Tarawera River Catchment. The proposal does not involve the discharge of any contaminants from the site. Wastewater is to be pumped to the Land Application Field and waste solids (screenings and sludge) are to be removed from the site by tanker truck. Stormwater from the site will be disposed of to ground as there is no reticulated stormwater system at the site. The proposal will not therefore result in any adverse effects to the water quality of the Tarawera River.

16.7 Operation and Servicing

The WWTP is to be designed to enable it to be operated with an operator attendance of at least one visit per week.

The sludge storage tanks for waste solids have yet to be designed however they will be of a sufficient capacity to hold at least 4 days of sludge at full production before requiring removal off-site by tanker truck. Tanker visits are therefore expected to occur approximately twice per week.

As outlined above stormwater from the site will be disposed of to ground as there is no reticulated stormwater system at the site.

It is proposed that an Operations and Management Plan, which specifies the on-going maintenance schedule, be submitted for certification as a condition on the designation.

16.8 Noise Effects

The WWTP will be designed to ensure noise levels are kept to a minimum level. In addition the proposed landscaped embankment and Environmental Protection Buffer will assist to ensure that noise levels measured at the outer extent of the Buffer will comply with the noise standards within the Whakatāne Operative and Proposed District Plans. It is proposed that a condition on the designation be included requiring that the activity is within the relevant noise levels subject to the applicable New Zealand standards as contained within WDC's Proposed District Plan.

It is proposed that an Operations and Management Plan, that includes methods for on-going noise monitoring, be submitted for certification as a condition on the designation.

16.9 Odour Effects

The wastewater treatment processes that could produce nuisance odour emissions include the following:

- Inlet Works;
- Anoxic or Anaerobic Zones of the Reactor Tank(s);
- Biological Treatment Tanks;
- Storage Facility for Treated Wastewater;
- Treated Wastewater Pump Station;
- Sludge Consolidation/ Dewatering Facility; and
- Dewatered Sludge Holding Tank.

These components will be covered and the odorous air extracted and treated using a biofilter(s) or similar. The biological treatment unit, provided with sufficient aeration, generally has low potential to generate odour. Aeration may be supplied with natural processes or mechanical aerator, depending on the final design.

Overall there is low potential of odour emissions from the WWTP site, provided that the specified odour treatment processes are in place.

It is therefore expected that any odour effects from the proposal will be minor. Notwithstanding this, it is proposed that an Odour Management Plan (as part of the Operation and Management Plan) be submitted for approval as a condition of a resource consent.

16.10 Natural Hazards

A fault line (strand) has been mapped running diagonally across the WWTP site and has been confirmed as an active fault line. Based on the Ministry for the Environment guidelines, a 20 metre fault avoidance (setback) zone has been determined, and the WWTP has been sited to the east of this zone within the subject property (note however the perimeter access road will encroach the 20 metre fault avoidance zone by 5 metres). The transfer pipelines and duct connections to and from the WWTP will also be required to traverse the fault line.

The site is not subject to landslide or debris flow as identified in the Tonkin and Taylor report – “Quantitative Landslide Risk Assessment” dated 2013, inserted as Support Document 2.

The site is also not at risk of flooding as per the GIS Constraints Analysis for WWTP and Land application field prepared by URS, dated June 2013. It is not located near any significant water bodies, and the Treatment Plant area is shielded to an extent by the dunes on the site.

The effects of natural hazards are therefore considered to be the risk from earthquake as a result of the fault line and the Plant has been sited to minimise this risk. It is therefore considered that the effects of natural hazards on the proposed WWTP site are minor.

16.11 Climate Change

The effects of climate change on the Proposed Wastewater Scheme are required to be had particular regard to pursuant to Part 2, section 7(i) of the RMA. In this respect, the most recent Intergovernmental Panel on Climate Change (IPCC) advice to policy makers, along with the NIWA predictions for the Bay of Plenty Region (see section 7.1.7 of this report), indicate that predicted climate change may have consequences on wastewater systems. The following are considered relevant to the proposed Wastewater Scheme generally:

Sea Level Rise

Considerations of predicted sea level rise have been taken account on this project as follows:

- For the location of infrastructure and particularly the Land Application Field and conveyance pipelines.
- Coastal erosion was also considered in this respect.

Increased Intensity and/or Duration of Rainstorm Events

In conventional gravity type wastewater collection systems, increased intensity and/or duration of rainstorm events would be likely to result in higher instantaneous peak wet weather flows of wastewater. As the Proposed Wastewater Scheme is a sealed pressure sewer collection system, the wet weather flows are very much reduced compared to gravity based systems and accordingly there is expected to be some, but a relatively small increase in wet weather flow rates and volumes with intense rainstorm events and/or prolonged wet periods. Attention to house connections and gully traps at the time of installation including rigorous inspections should also ensure the minimisation of increased wet weather flows at periods of intense and/or prolonged rainfall.

Higher Ambient Air Temperature at Times

Higher ambient air temperature would aid the biological treatment processes in that the micro-organisms are temperature dependant and more efficiently undertake their metabolic processes at higher temperatures, providing these are within their natural range. High temperatures (treatment) however can result in increased odour release from raw wastewater. The design and operation of the wastewater collection system including the operation of the individual household (property) grinder pumps along with the inlet facilities at the WWTP and the pumping station at the Land Application Field will be undertaken in such a way to minimise any odour release from the various components of the Proposed Wastewater Scheme.

16.12 Risk Management

The proposed WWTP has been sited to ensure it is at least 20 metres away from the fault line on the property as described in section 16.10 above. It is not therefore expected that there is significant or elevated risk to the Plant from the effects of land movement.

The WWTP will be designed to ensure there are no non-compliant wastewater discharges to the environment. This will include using gravity overflow to the treated wastewater storage basins or storage tank and an allowance of at least 150mm between maximum operating level and overflow point. Overflows will be of a sufficient size to carry a flow in excess of the maximum likely influent flows to any basin. In addition the earth bund which is on the northern, southern and eastern sides of the plant is likely to contain any unexpected spillage.

The Plant will be securely fenced to ensure there is no authorised access.

The site will have on-going visits and monitoring by appropriate personnel in accordance with the Operations and Management Plan. It is proposed that the Operations and Management Plan be submitted for certification as a condition on the designation.

It is therefore considered that any environmental or health risks associated with the proposal will be suitably managed.

16.13 Hazardous Substance Risk

There is a potential biological and health hazard associated with the collection of untreated wastewater.

The Operations and Management Plan for the site will outline methods to safely manage the risks associated with untreated wastewater and to ensure compliance with all Hazardous Substances and New Organisms (HSNO) Act requirements. Similarly, WDC's other operating procedures such as the Wastewater Asset Management Plan covers these matters. This will include identification of hazardous zones and a description of materials and equipment suitable for use within the respective hazardous area. It is proposed that the Operations and Management Plan be submitted for certification as a condition on the designation.

It is therefore considered that the potential risk from hazardous substances will be suitably managed.

16.14 Tāngata Whenua Considerations

Consultation has been undertaken with the following iwi groups, and their representatives have prepared Cultural Impact Assessments which are contained in the Companion Document to this AEE.

- Ngāti Rangitahi with input from Ngāti Umutahi;
- Ngāti Awa; and
- Ngāti Tuwharetoa with input from Ōnīao marae trustees.

Section 13 of this document outlines the recommendations provided in the Cultural Impact Assessments and the response of the WDC.

16.15 Construction Effects

The overall design and construction period for the overall wastewater scheme will be a total of 12 – 15 months from March 2014. The effects associated with the construction activities of the WWTP are outlined below.

16.15.1 Earthworks

As the wastewater scheme is to be constructed using a Design-Build-Operate process, final volumes for earthworks cannot be confirmed. It is estimated that 10,000m³ of earthworks will be required to construct the WWTP and the access road from Thornton Road to the WWTP site. These works will include general undercutting and foundations for the WWTP footprint, excavation for the storage basins and construction of the embankment. A resource consent from the BoPRC is to be applied for at a later date as outlined in Section 8 of this report.

It is proposed that a condition of on the designation be included requiring that a Construction Management Plan that identifies how sediment, stormwater and erosion will be controlled and contained, be submitted to Council for certification prior to commencement of the works. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". All erosion and sediment controls will be installed prior to the commencement of earthworks and will be subject to weekly monitoring with additional monitoring within 24 hours after each rainstorm event. The controls will be maintained in an effective capacity at all times and any accumulated sediment in sedimentation devices shall be removed and placed in a stable position before sediment levels reach 25% of that device's volume.

The overall effects of the proposed earthworks are considered to be minor.

16.15.2 Archaeological

The Operative and Proposed Whakatāne District Plans do not include any archaeological sites within the site. In addition the site is not included in the Historic Places Trust Register. Consultation with Ngati Awa iwi has revealed that the sacred talisman Matatāketake o Ngati Awa may be buried on the site.

The recommendation from iwi is for the adoption of accidental discovery protocol and the presence of a cultural monitor during excavations. It is proposed that conditions to this effect be included on the designation.

16.15.3 Dust

To control the effects of airborne dust the site will be regularly sprayed with water and a water truck will be on site for this purpose. The management of dust is to form part of the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan is to be submitted to WDC for certification prior to commencement of the works.

16.15.4 Noise

It is proposed that a condition on the designation be included requiring that construction noise is to be measured, assessed and comply with NZS 6803:1999 Acoustics – Construction Noise. The management of construction noise is to form part of the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan be submitted to WDC for certification prior to commencement of the works.

16.15.5 Traffic

It is proposed that the earthworks material will be re-used on site which will minimise the number of truck movements going to and from the site. It is expected that there would be no more than a total of 6 truck movements per day with a total of 36 movements per week. It is considered that the existing road network will easily be able to absorb these truck movements. The management of truck movements during construction will be included in the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan be submitted to WDC for certification prior to commencement of the works.

16.16 Summary of Potential Effects and Proposed Mitigation Measures

The potential effects and the proposed mitigation measures are summarised in Table 16-2 below.

Table 16-2: Summary of Potential Effects and Proposed Mitigation Measures

Potential Effect	Magnitude	Proposed Mitigation Measures
Social and Cultural	Positive	Connect all three Marae to the Proposed Scheme.
Landscape and Visual	Minor	Siting of the WWTP behind dunes, landscaping to provide visual screening.
Ecological	Minor – potentially positive	No mitigation proposed. Positive ecological effects expected as a result of proposed landscaping.
Tarawera River	Minor	No discharge of contaminants to site.
Operation and Servicing	Minor	Operations and Management Plan to be submitted for approval.
Noise	Minor	Condition on designation requiring that noise levels measured at the outer extent of the Environmental Protection Buffer to be within the Proposed District Plan noise levels. Operations and Management Plan outlining methods for on-going noise monitoring to be submitted for certification.
Odour	Minor	Appropriate structures and other facilities are to be covered and odorous air extracted and treated using biofilter(s) (or similar). Aeration of biological treatment unit.
Natural Hazards	Minor	Wastewater Treatment Plant is to be sited at least 20m from the active fault line.
Climate Change	Minor	Attention to house connections and gully traps at

Potential Effect	Magnitude	Proposed Mitigation Measures
		the time of installation.
Risk Management	Minor	Wastewater Treatment Plant is to be sited at least 20m from the active fault line. Tank design to contain overflows. Fencing of site. Operations and Management Plan to be submitted for approval.
Hazardous Substances	Minor	Operations and Management Plan for the site that will outline methods to safely manage the risks to be submitted for approval.
Tāngata Whenua	Minor	The majority of recommendations requested have been agreed to by WDC as outlined in section 13.
Construction - Earthworks	Minor	Construction Management Plan to be submitted for certification that identifies how sediment, stormwater and erosion will be controlled and contained. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". Sediment controls to be subject to regular monitoring and maintenance.
Construction - Archaeological	Minor	Accidental discovery protocol as a condition on the designation.
Construction - Dust	Minor	Spraying of site with water from on-site water truck. Construction Management Plan to be submitted for approval.
Construction - Noise		Noise to be within NZS 6803:1999 Acoustics – Construction Noise. Construction Management Plan to be submitted for certification.
Construction - Traffic	Minor	Truck movements to be minimal. Construction Management Plan to be submitted for certification.

17 Assessment of Effects of Designation for Land Application Field

17.1 The Proposal – As Part of the Proposed Wastewater Scheme

This Notice of Requirement is submitted by Whakatāne District Council as a requiring authority, to designate 4.6 hectares of land located on the Western Recreation Reserves site for the purpose of a Land Application Field for the disposal of treated wastewater from the Matatā Wastewater Plant.

Part A of this document, in particular Sections 5 and 7 outline the description of the site, the proposed works for the Land Application Field and the associated construction and on-going activities for which this designation is sought. Section 5 also contains an overall description of the Proposed Wastewater Scheme and its related components including the Wastewater Treatment Plant.

A designation plan of the Proposed Land Application Field is shown in Figure 17-1 below.

In accordance with the requirements of the Resource Management Regulations 2003 (Form 20), this section of the AEE provides an assessment of the effects that the proposed works will have on the environment and the ways in which any adverse effects will be mitigated.

17.2 Requirement

The requirement is for a total of 4.2 hectares for the Land Application Field and 0.4 hectares for the access road, giving a total of 4.6 hectares. The amount of land required for the Land Application Field has been determined based on the estimated wastewater flow rate, the mass loads for the Matatā WWTP, and the required areas for land disposal based on the site specific soil characteristics as outlined in the URS report Matatā Wastewater Scheme – Wastewater Land Application Groundwater Assessment (refer Support Document 5). Based on a long term loading rate of 30mm/day for drip irrigation, approximately 4.2 hectares will be required. As a 100% reserve area is required as specified in AS/NZS 1547:2012, 2 hectares will be used at a time for the application of treated wastewater, with each 2 hectare area being used for 7 days at a time.

The Land Application Field itself will be sited approximately 100m from the adjacent western boundary, approximately 450m from the adjacent eastern boundary, and approximately 40 metres from the southern boundary. The northern side of the Field will be located adjacent to the northern boundary.

17.3 Positive Effects including Social and Cultural Effects

The proposed Wastewater Treatment scheme has positive benefits for the Matatā community. For a description of the positive effects including the social and cultural effects, please refer to Part B, Section 14 of this document.

17.4 Access

Access to the site is to be via the adjoining privately owned property to the south which will be subject to an easement through the Robinson's land. Affected party consent is included at Attachment A. The access is over an existing vehicle route (farm track) which is to be suitably upgraded. The access route that is beyond the subject site does not form part of this Notice of Requirement.



Figure 17-1: Plan View of NoR Designation of Land Application Field and Access Road

17.5 Landscape and Visual Effects

The site of the Land Application Field is part of a wider area which is recognised for its high natural character which includes its existing visual characteristics and qualities. The site is identified in the Whakatāne Proposed District Plan as a Significant Amenity Landscape (Thornton Road Dunes). The plan's objectives and policies seek to maintain the visual quality and natural characteristics of the area, sustain the processes, values and associations that underpin the landscape, and to ensure proposed development is compatible with these qualities. The site is also identified in the Proposed Regional Policy Statement as an area of high natural character (Thornton Dunes). The New Zealand Coastal Policy Statement and the Bay of Plenty Regional Coastal Environment Plan also seek to preserve the natural character of the coastal environment.

An Assessment of Landscape and Visual Effects prepared by Wildlands dated August 2013 has been prepared for the Land Application Field and is included as Support Document 8.

The assessment found that the viewing audience for the site is small and is generally limited to travellers on SH2, Thornton Road and two neighbouring properties. In addition there are occasional users both pedestrian and vehicular on the dune-top 4WD tracks. As such the Land Application Field will largely be hidden from public view and will be somewhat screened from neighbours and SH2 by the higher rear dunes.

Notwithstanding the contribution the site makes to the characteristics of the wider coastal environment, it is presently modified from its natural appearance in that it is dominated by exotic grass species and is being used for animal grazing. It is proposed that this area will be rehabilitated with locally representative native vegetation such as kanuka (see comments in section 17.6 below). This will ensure the Land Application Field eventually becomes a seamless part of the dune vegetation. Regeneration of the site will positively affect the area in that the existing grazing will cease and the site will return to a more natural state.

Up to 4,900m³ of earthworks are proposed to install the sub-irrigation system and access, however these will be spread over a 4 hectare area therefore changes to the existing landform will be minimal. The proposed works will avoid disturbance to the naturally undulating landforms of the dunes and existing contours will not be altered.

The pipework will be installed underground so will not be visible. This is in accordance with Objective WNU1, Policy 2 of the Operative Whakatāne District Plan which states that services associated with network utilities should be placed underground where technically and feasibly practical. The only visible structure will be a small building to house the pump, measuring approximately 1.8m x 1.8m x 1.8m (i.e. the size of a small garden shed). This building will be appropriately sited behind the higher rear dunes, on a low area of dune out of view from SH2 and the nearby urupa and Tarawera River, and will be partially buried below ground if necessary. The building will be designed and constructed to ensure it blends into the surrounding area using a recessive design and naturally coloured materials that match the dunes.

The Land Application Field will be fenced with post and wire fencing to allow for the vegetation to establish. Fencing is to be removed from the site once this occurs.

The access is to be formed in accordance with WDC standard access road requirements.

It is considered that the proposed works will be suitably integrated into the existing landscape and that the landscape and visual effects of the proposal will be minor.

17.6 Ecological Effects

An Ecological Assessment for the Proposed Wastewater Scheme prepared by Wildlands dated August 2013 is contained within Support Document 7.

The site is part of the Te Teko Ecological District which contains a suite of threatened indigenous species and habitats and is recognised as having regional and national ecological significance. The site is identified as having high ecological value in the following statutory documents in Table 17-1.

Table 17-1: Statutory Documents – Ecological Value

Statutory Document	Ecological Value
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Bay of Plenty Proposed Regional Policy Statement	Area of high natural character (Thornton Dunes) – unique species of manuka (Thornton manuka) which is dominant vegetation cover ¹¹ .
Bay of Plenty Regional Coastal Environment Plan	Site of Significance – significant indigenous vegetation including pingao and buffer to adjoining kanuka forest.
Proposed Whakatāne District Plan	Significant Indigenous Biodiversity Site (Thornton Road Dunes)

The vegetation on the area for the Land Application Field is predominantly exotic grassland species, with some coastal mahoe, but is managed as a protective buffer to the nationally significant population of Thornton kanuka (classified as Threatened – Nationally Vulnerable) and nationally significant coastal dune systems with which it is contiguous. The site is presently used for animal grazing and is considered to be of low ecological value with low quality habitat for both introduced and indigenous bird species.

It is proposed that no stripping of grass or topsoil is to occur on the Land Application Field and excavation for drainage lines is required to be minimal. Pipes are to be preferably laid by mole plough pipe lying method or similar. Once the works are complete the whole site of the Land Application Field will be re-planted with suitable ecosourced indigenous species, such as kanuka, as part of an Ecological Restoration Plan, which will include appropriate weed and pest (rabbits and hares) control measures. In addition weed and pest control will be undertaken on adjacent dunes.

Whakatāne District Council has a long term goal of rehabilitating native vegetation over the entire Western Reserve network, with the Land Application Field site seen as a catalyst for this work. Replacement of the exotic vegetation with suitable native species will improve the ecological integrity of the wider ecosystem and associated vegetative sequence and coastal habitat. Replanting of the site will occur in the first available planting season (Autumn through to Winter/early Spring). In the event of a time lag between completion of works and the available planting season the area will be protected with weed matting or similar.

To ensure that the adjacent stands of Thornton kanuka and other native coastal vegetation are not affected during works, suitable best practice site practices will be deployed. A 5 metre buffer will be left undisturbed adjacent to these areas, within which there will be no vegetation clearance or vehicular access, and no soil dumping or stockpiling.

The treated wastewater to be discharged to the Land Application Field may increase the nutrient levels within the soils, which could result in the colonisation of nutrient-tolerant exotic species. It is expected that some grass or weed species may remain on the site however a robust on-going weed eradication programme will ensure that weeds are kept to a minimum.

There are no substantial water based ecosystems that will be adversely affected by the proposal as confirmed by URS reports Matatā Wastewater Scheme – Waste Water Land Application Groundwater Assessment, (included as Support Document 5 to this AEE) and Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment, (included as Support Document 6 to this AEE). The reports confirm that groundwater discharging from the Land Application Field is predicted to flow into the farm drains which discharge into Bennett Road Stream, located south of the farmland. The water quality and ecological value of the Bennett Road Stream and the surface drainage network are currently not considered to be of high value due to their pure agricultural purposes and current degraded status. Monitoring of the ecological status and sensitivity of the Bennett Road Stream also confirms the degraded nature of the stream in terms of ecological values and overwhelming effects of tidal influence. The slight likelihood of nutrient increase within the Bennett Road Stream as a result of the wastewater land application at the Land Application Field should be considered to have no more than minor effects on the current status of the water body.

The potential ecological effects of the proposal are therefore considered to be minor, and the overall outcome for the site as a result of the proposed works is considered to be positive given the current grazing use will cease, exotic grass species will be removed and replaced with indigenous species, and the site will be rehabilitated in accordance with a suitable restoration plan.

¹¹ The PRPS refers to manuka, the Bay of Plenty Regional Coastal Environment Plan and Wildlands report Ecological Assessment of Potential Sites for the Proposed Matatā Wastewater Treatment Plant and Disposal Field August 2013 refer to kanuka.

It is proposed that a condition on the designation be included requiring that the Ecological Restoration Plan be submitted to WDC for certification prior to commencement of the works. The Draft Restoration Plan is listed as Support Document 9 to this AEE.

17.7 Effects on the Tarawera River

The site is within the Tarawera River catchment as described in the Bay of Plenty Regional Plan for the Tarawera River Catchment. As stated in Section 17.6 above, groundwater flows into farm drains, which eventually enter the Tarawera River via Bennett Road Stream. The water quality and ecological value of the Bennett Road Stream and the surface drainage network are currently not considered to be of high value due to their pure agricultural purposes and current degraded status. Monitoring of the ecological status and sensitivity of the Bennett Road Stream also confirms the degraded nature of the stream in terms of ecological values and overwhelming effects of tidal influence. The slight likelihood of nutrient increase within the Bennett Road Stream as a result of the wastewater land application at the Land Application Field should be considered to have no more than minor effects on the current status of the water body. This in turn will have a minor effect on the receiving waters in the Tarawera River.

The overall effects on the Tarawera River are therefore considered to be minor.

17.8 Operation and Servicing

Minimal servicing and operational visits are expected. A draft maintenance schedule is to be prepared which will specify weekly/monthly/quarterly and annual works. It is proposed that an Operations and Maintenance Management Plan, which specifies the on-going maintenance schedule, be submitted for certification as a condition on the designation.

17.9 Noise Effects

There will be minimal noise associated with the activity and it is expected that noise levels will comply with the noise standards within the Whakatāne Proposed District Plan.

17.10 Odour Effects

Due to the relatively low level of odorous contaminants in the treated wastewater and the relatively short travel distance to the Land Application Field, septicity is unlikely to be an issue when the treated wastewater arrives at the Land Application Field.

More importantly, the treated wastewater will be applied to the Land Application Field using subsurface drip application. The subsurface drip lines will be buried approximately 300mm below ground surface, and vegetation will be planted at the surface. This means there will be no direct odour emission from the drip line into the air. Furthermore, the 300mm (approximately) layer of soil together with the vegetation can act as natural biofilter that will help minimise odour (if any) emission.

It is therefore expected that any nuisance odour effects from the proposal will be minimal. Notwithstanding this, it is proposed that an Odour Management Plan be submitted for approval as a condition on resource consent.

17.11 Natural Hazards

As outlined in section 8 of this document, the site of the Land Application Field is identified in the Bay of Plenty Regional Coastal Environment Plan as being within an Area Sensitive to Coastal Hazards, and in the Whakatāne Operative and Proposed District Plans as being subject to erosion and inundation. The District Council planning documents are based on research undertaken by Tonkin and Taylor in 2001 to define the extent of the risk area and are therefore more definitive than the Regional Council map. The proposed Land Application Field itself is to be sited outside (landward side) of the erosion and inundation hazard lines, which run along the coast and is therefore unlikely to be significantly affected by coastal erosion or inundation.

Analysis of the effects of a potential tsunami event on the scheme has been undertaken as outlined in section 7.1.6.4 of this report. A tsunami event with a 1-3 metre wave will not cause inundation of the Land Application Field area. A 3m wave may render the Land Application Field out of operation for some weeks due to tsunami debris, but it could easily be recommissioned once any debris was removed. Residents would have to undertake alternative means of wastewater disposal during this time should an

event such as this occur. WDC have indicated that this level of risk is considered acceptable and the benefits of using this site against other the sites considered for the land application (refer to section 6 of this report) area outweigh the associated tsunami risk. The likelihood of a 3 metre wave event occurring has been rated 3 in the GIS based Constraints Analysis which is moderate – “the event should occur at some time”.

This site is not at risk of earthquake, landslide, debris flow or flooding as outlined in section 7.1.6 of this document. The proposed activity will retain the natural contours of the dune system, and is not expected to contribute to any further erosion of the land. Any erosion that occurs is likely to be a result of natural processes. No particular hazard protection works are required with regard to the proposal.

Any effects on the proposal as a result of natural hazards are there expected to be minor to moderate.

17.12 Climate Change

The effects of climate change on the Proposed Wastewater Scheme are required to be had particular regard to pursuant to Part 2, section 7(i) of the RMA. In this respect, the most recent Intergovernmental Panel on Climate Change (IPCC) advice to policy makers, along with the NIWA predictions for the Bay of Plenty Region (see section 7.1.7 of this report), indicate that predicted climate change may have consequences on wastewater systems. The following are considered relevant to the proposed Wastewater Scheme generally:

Sea Level Rise

Considerations of predicted sea level rise have been taken account on this project as follows:

- For the location of infrastructure and particularly the Land Application Field and conveyance pipelines.
- Coastal erosion was also considered in this respect.

Increased Intensity and/or Duration of Rainstorm Events

In conventional gravity type wastewater collection systems, increased intensity and/or duration of rainstorm events would be likely to result in higher instantaneous peak wet weather flows of wastewater. As the Proposed Wastewater Scheme is a sealed pressure sewer collection system, the wet weather flows are very much reduced compared to gravity based systems and accordingly there is expected to be some, but a relatively small increase in wet weather flow rates and volumes with intense rainstorm events and/or prolonged wet periods. Attention to house connections and gully traps at the time of installation including rigorous inspections should also ensure the minimisation of increased wet weather flows at periods of intense and/or prolonged rainfall.

Higher Ambient Air Temperature at Times

Higher ambient air temperature would aid the biological treatment processes in that the micro-organisms are temperature dependant and more efficiently undertake their metabolic processes at higher temperatures, providing these are within their natural range. High temperatures (treatment) however can result in increased odour release from raw wastewater. The design and operation of the wastewater collection system including the operation of the individual household (property) grinder pumps along with the inlet facilities at the Wastewater Treatment Plant and the pumping station at the Land Application Field will be undertaken in such a way to minimise any odour release from the various components of the Proposed Wastewater Scheme.

17.13 Risk Management

The site will have on-going visits and monitoring by appropriate personnel in accordance with the Operations and Management Plan. It is proposed that the Operations Management Plan be submitted for certification as a condition on the designation.

As outlined in the Matatā Wastewater Scheme – Receiving Environment Water Quality, Ecological and Public Health Risk Assessment, prepared by URS dated November 2013, the risk to public health as a result of the proposal is low for the following reasons:

- The shortest travel time for the groundwater from the land application site to the surface drainage network was estimated to be approximately one year. This is significantly longer than the estimated time for complete microbial inactivation of faecal coliforms or E.coli, with or without UV disinfection. Conservative microbial die-off rate was applied in this estimation, which

indicates that the pathogen load from the irrigated wastewater into the receiving environment should be considered very unlikely.

- The public health risk issues of the Bennett Road Stream were assessed qualitatively based on the current pathogen load within the stream from surrounding land use. A comparison of the current pathogen levels against MfE's "Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas" microbial assessment categories indicated that the Bennett Road Stream is currently in breach of Action/Red mode for freshwater, therefore representing a significant risk for public health, should the public be in direct contact with the aquatic environment.
- Due to the limited public access to the Bennett Road Stream, and essentially minimal pathogen input into the receiving aquatic environment, the public health risks associated directly with the proposed wastewater land application discharge may be considered no more than minor; provided that the proposed land application site is properly maintained and site maintenance plan is implemented to reduce direct public exposure.

The effects on groundwater and surface water are also considered to be low, and a resource consent is to be sought for the discharge of treated wastewater to the Land Application Field. Section 11 of this report (the afore-mentioned resource consent application) provides further information on the effects of the proposal on receiving waters.

The site is to be fenced whilst the proposed native planting becomes established

It is therefore considered that any environmental or health risks associated with the proposal will be minor.

17.14 Hazardous Substance Risk

As the proposed designation for the Land Application Field only involves treated wastewater, hazardous substances are not considered to be an issue.

17.15 Tangata Whenua Considerations

Consultation has been undertaken with the following iwi groups, and their representatives have prepared Cultural Impact Assessments which are contained in the Companion Document to this AEE.

- Ngāti Rangitahi with input from Ngāti Umutahi;
- Ngāti Awa; and
- Ngāti Tuwharetoa with input from Ōnīao marae trustees.

Section 13 of this document outlines the recommendations provided in the Cultural Impact Assessments and the response of the WDC.

17.16 Construction Effects

The overall design and construction period for the overall wastewater scheme will be a total of 12 – 15 months from March 2014. The effects associated with the construction activities of the Land Application Field are outlined below.

17.16.1 Earthworks

The Land Application Field will be installed utilising methods to protect the groundcover of the dunes as far as possible. During construction of the Land Application Field WDC propose to:

1. Ensure that no stripping of grass sward or topsoil is to occur;
2. Protect the groundcover of the dunes as far as possible;
3. Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar; and
4. Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.

The earthworks components at the Land Application Field include:

- Approximately 4km of sub-surface dripper pipe and associated components of the land application system will be placed within an area of approximately 4 hectares. Up to 300mm of surface material may need to be disturbed along the pipeline vents over the 4 hectare Land Application Field, depending upon the installation method for the piping (mole plough is preferred).
- Other components of the land application system include trenching to install mains, submains and flushing pipelines (0.5m deep x 0.25m width), together with a small partially buried pump station (total size 1.8m x 1.8m x 1.8m) and various small chambers. The estimated total volume for these works is up to 550m³.
- A 6m wide access road, which will run along the southern boundary of the Land Application Field (within the proposed designation) to connect with the access road on the adjoining property, will need to be constructed for a length of approximately 600m. The volume of earthworks for the access is approximately 1125m³.

The total volume of earthworks at the Land Application Field is 4,900m³. All of these earthworks occur within the Erosion Hazard Zone as identified in the BoPRC Regional Water and Land Plan.

The period of vegetation clearance and earthworks is expected to occur over approximately 8 weeks.

It is proposed that a condition of consent be included requiring that a Construction Management Plan that identifies how sediment, stormwater and erosion will be controlled and contained, be submitted to WDC for certification prior to commencement of the works. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". All erosion and sediment controls will be installed prior to the commencement of earthworks and will be subject to weekly monitoring with additional monitoring within 24 hours after each rainstorm event. The controls will be maintained in an effective capacity at all times and any accumulated sediment in sedimentation devices shall be removed and placed in a stable position before sediment levels reach 25% of that device's volume.

Once works are completed the Land Application Field is to be replanted with suitable indigenous species such as kanuka which will have a stabilising effect on the land surface and minimise future erosion. Replanting of the site will occur in the first available planting season (Autumn through to Winter/early Spring). In the event of a time lag between completion of works and the available planting season the area will be protected with weed matting or similar.

The overall effects of the proposed earthworks are considered to be minor.

17.16.2 Archaeological

The Operative and Proposed Whakatāne District Plans do not include any archaeological sites within the Western Whakatāne Coastal Recreation Reserve or on the proposed access way. In addition the site is not included in the Historic Places Trust Register. The proposed access route is to be located well away (approximately 1.5km minimum) from the urupa (Maori burial ground) at the western end of the site. It is not therefore expected that proposed earthworks are likely to uncover any archaeological remains, however in the event of an accidental discovery, works are to cease and the relevant authorities notified. It is proposed that a condition to this effect be included on the designation and resource consents.

17.16.3 Dust

To control the effects of airborne dust the site will be regularly sprayed with water and a water truck will be on site for this purpose. The management of dust is to form part of the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan is to be submitted to WDC for certification prior to commencement of the works.

17.16.4 Noise

The effects of construction noise does have the potential to affect users of the wider recreation reserves and the beach, therefore it is proposed that a condition on the designation be included requiring that construction noise is to be measured, assessed and comply with NZS 6803:1999 Acoustics – Construction Noise. The management of construction noise is to form part of the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan be submitted to WDC for certification prior to commencement of the works.

17.16.5 Traffic

It is proposed that the earthworks material will be re-used on site which will minimise the number of truck movements going to and from the site. It is expected that there would be no more than a total of 6 truck movements per day with a total of 36 movements per week (in addition to the 6 movements per day for the construction of the Wastewater Treatment Plant). It is considered that the existing road network will easily be able to absorb these truck movements. The management of truck movements during construction will be included in the Construction Management Plan for the site. It is proposed that a condition be included requiring that a Construction Management Plan be submitted to WDC for certification prior to commencement of the works.

17.17 Summary of Potential Effects and Proposed Mitigation Measures

The potential effects and the proposed mitigation measures are summarised in Table 17-2 below.

Table 17-2: Summary of Potential Effects and Proposed Mitigation Measures

Potential Effect	Magnitude	Proposed Mitigation Measures
Social and Cultural	Positive	Replanting of site with suitable indigenous species. Reserve to be publicly accessible once planting is established.
Landscape and Visual	Minor	Retention of existing landform and contours, replanting of site with suitable indigenous species.
Ecological	Minor	Replanting of site with suitable indigenous species. Protection of adjoining kanuka stands. Ecological Restoration Plan to be submitted for approval.
Tarawera River	Minor	No specific mitigation measures proposed. The proposal will not aggravate an existing situation.
Operation and Servicing	Minor	Operations and Maintenance Management Plan to be submitted for approval.
Noise	Minor	Condition on designation requiring that noise levels are to be within District Plan noise levels.
Odour	Minor	300mm (approximately) layer of soil together with the vegetation above the sub-surface dripper pipes can act as natural biofilter.
Natural Hazards	Minor to Moderate	Land Application Field could be recommissioned within weeks if damaged by debris from a tsunami event.
Climate Change	Minor	Attention to house connections and gully traps at the time of installation. Minimisation of odour release.
Risk Management	Minor	Operations and Maintenance Management Plan to be submitted for approval.
Hazardous Substances	None	None required as no risk.
Tangata Whenua	Minor	The majority of recommendations requested have been agreed to by WDC as outlined in section 13.
Construction - Earthworks	Minor	Construction Management Plan to be submitted for certification that identifies how sediment, stormwater and erosion will be controlled and contained. Proposed mitigation measures will be designed in accordance with EBOP Guideline 2010/01 "Erosion and Sediment Control Guidelines for Land Disturbing Activities". Sediment controls to be subject to regular monitoring and maintenance.

Potential Effect	Magnitude	Proposed Mitigation Measures
Construction - Archaeological	Minor	Accidental discovery protocols as a condition on the designation.
Construction - Dust	Minor	Spraying of site with water from on-site water truck. Construction Management Plan to be submitted for approval.
Construction - Noise		Noise to be within NZS 6803:1999 Acoustics – Construction Noise. Construction Management Plan to be submitted for approval.
Construction - Traffic	Minor	Truck movements to be minimal. Construction Management Plan to be submitted for approval.

18 Conclusion and Suggested Designation Conditions

18.1 Conclusion

This AEE report has described the current disposal of wastewater in Matatā and the new wastewater reticulation, treatment and land application system that will make up a new scheme. This new scheme is referred to as the 'Proposed Wastewater Scheme'.

The Proposed Wastewater Scheme will be critically important and significant part of the infrastructure of the Matatā area and will contribute significantly to the health, safety and well-being of the Matatā area. Accordingly, there are very many positive or beneficial effects associated with the Proposed Wastewater Scheme.

There are a number of minor adverse effects of the Proposed Wastewater Scheme that have been outlined and evaluated associated with the construction and operational components of the Proposed Scheme. These include the WWTP and land application field areas. The suggested resource consent and designation conditions have been proposed to avoid, remedy or mitigate any adverse effects associated with the Scheme. These are described in Sections 15.1 and 18.2 of this AEE.

18.2 Suggested Designation Conditions

This Section is intended to assist the reader by setting out the suggested designation consent conditions that WDC envisages being placed on the new designations, should they be confirmed. These would formalise WDC's undertaking in accordance with the RMA to avoid, remedy or mitigate any adverse effects associated with the Proposed Wastewater Scheme.

Designations

- 1 – Wastewater Treatment Plant
- 2 – Environmental Protection Buffer for Wastewater Treatment Plant
- 3 – Access to Wastewater Treatment Plant
- 4 – Land Application Field

Table 18-1: Suggested Designation Conditions - Construction

Condition No	Designation Applying To	Condition
Construction Management Plan		
1.0	All	No later than thirty (30) working days prior to the commencement of any construction activity the Requiring Authority shall submit a Construction Management Plan (CMP) to the Whakatāne District Council for the certification of the Chief Executive Officer or delegate. The objective of the CMP is to avoid, remedy or mitigate any adverse effects of construction through methods identified in the CMP.
1.1	All	The CMP shall include the following details: <ol style="list-style-type: none"> a) Details of the site or project manager, including their contact details (phone, facsimile (if any), postal address, email address); b) Methods to ensure that the adverse effects of construction noise and vibration and construction related traffic are appropriately avoided, remedied or mitigated; c) The location of notice boards that clearly identify the name, telephone number and address for service of the site or project manager;

Condition No	Designation Applying To	Condition
		<ul style="list-style-type: none"> d) An outline construction programme of the works; e) Measures to be adopted to maintain the land affected by the works in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities; f) Location of workers' offices, conveniences (e.g. portaloos) and site access and parking; g) Procedures for controlling sediment runoff, dust, truck movements, and the removal of soil and construction materials from public roads or places, including wheel wash for construction vehicles; h) Procedures for ensuring that residents in the immediate vicinity of construction areas are given prior notice of the commencement of construction activities and are informed about the expected duration of the works; i) Procedures to ensure compliance with Condition 4.0 (Accidental Discovery Protocol); j) Means of ensuring the safety of the general public; and k) Methods for receiving and responding to complaints about noise, construction dust, and odour from the works.
1.2	All	The Requiring Authority shall ensure that all works shall be carried out in accordance with the CMP.
2.0	All	<p>Outline Plan of Works</p> <p>Where an outline plan or plans are required by section 176A of the RMA for works in any particular location(s) and the Whakatāne District Council agrees that the CMP or relevant part(s) of the CMP contains adequate details to satisfy section 176A of the RMA, then the CMP or relevant part(s) of the CMP shall be deemed to be a waiver of the requirement for an outline plan in respect of the works in the particular location(s), as provided for in section 176A(2)(c) of the RMA.</p> <p>Construction Noise</p>
3.0	All	The Requiring Authority shall ensure that Construction Noise is measured, assessed and complies with NZS 6803:1999 Acoustics – Construction Noise.
		<p>Accidental Discovery Protocol</p>
4.0	All	A Taonga Tuturu Monitor shall be employed by the Requiring Authority to monitor, act in accord with the Accidental Discovery Protocol (attachment A to these conditions) and report any discoveries during earthworks.
4.1	All	<p>The following procedures will be adopted in the event that kōiwi or taonga are unearthed or are reasonably suspected to have been unearthed during the course of construction.</p> <ul style="list-style-type: none"> a) Immediately it becomes apparent or is suspected by workers at the site that kōiwi or taonga have been uncovered, all activity in the immediate area will cease.

Condition No	Designation Applying To	Condition
		<p>b) The construction plant operator will act with caution by shutting down all machinery or activity in the immediate area to ensure that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Site Construction Manager or the on-site supervisor.</p> <p>c) The Site Construction Manager or on-site Supervisor shall take immediate steps to secure the area in a way that ensures that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Taonga Tuturu Monitor.</p>
4.2	All	<p>The Taonga Tuturu Monitor will:</p> <p>a) Seek advice from iwi contacts from kaumātua from Ngati Rangitahi, Ngati Tuwharetoa BOP and Ngati Awa to guide and advise the Site Manager and any other parties as to the appropriate course of action to be taken and the identity of persons to involve as appropriate to the circumstances.</p> <p>b) Upon the advice of iwi contacts from kaumātua from Ngati Rangitahi, Ngati Tuwharetoa BOP and Ngati Awa and an archaeologist from the Historic Places Trust providing a description of the find and seeking their advice as to whether they consider it necessary to immediately request kaumātua, Pukenga, an archaeologist and/or the NZ Police attendance at the site.</p> <p>c) Ensure the find area is secure and available for inspection by kaumātua, Pukenga, an archaeologist and/or the NZ Police and for photographic recording by the archaeologist should a decision be reached to request attendance at the scene.</p> <p>d) In the event it is considered by the Taonga Tuturu Monitor and archaeologist unnecessary for kaumātua, Pukenga and the NZ Police to attend the scene, the Taonga Tuturu Monitor and archaeologist will:</p> <ul style="list-style-type: none"> • Record, photograph and report the potential findspot including reasons why attendance was not required. • Take photographs of the find site to share with iwi and others and ensure the archaeologist and site manager have recorded GPS co-ordinates for the site should it be confirmed by the archaeologist the site is a newly discovered site. • Take photographic records of any taonga tuturu and the find spot. • Collect and retain custody of any koiwi in a suitable receptacle to be located at until the completion of the works upon which time iwi will hui to deliberate on the appropriate place for re-interment of koiwi. <p>e) Upon the discovery of taonga tuturu the Taonga Tuturu Monitor and archaeologist shall:</p> <ul style="list-style-type: none"> • Photograph the taonga and findspot and record the circumstances of the find. • In compliance with the Protected Objects Act 2007, register the taonga tuturu with the Senior Advisor Heritage Operations at the Ministry for Culture and Heritage, and with

Condition No	Designation Applying To	Condition
		each iwi. Seek from the Ministry for Culture and Heritage approval to place the taonga tuturu into the interim custody of the Whakatāne Museum in order to enable subsequent claims for custodianship and ownership to be lodged by iwi with the Ministry of Culture & Heritage (in compliance with Taonga Tuturu Protocols between settled iwi and the Ministry) while also providing for the enablement of processes under the Protected Objects Act 2007 that require decisions from the Maori Land Court as to custody and ownership in perpetuity.
4.3	All	In the event of a significant find and consequential attendance at the scene the Site Construction Manager shall ensure that kaumātua, Pukenga, the archaeologist and Taonga Tuturu Monitor are given the opportunity to undertake karakia (prayer) and any such other cultural ceremonies and activities at the site and affected workers, in accordance with tikanga Māori.
4.4	All	Activity in the immediate area will remain halted until kaumātua, the Police and Historic Places Trust (as the case may be) have given approval for operation in that area to recommence. In the event that rua (caves), pits or other archaeological features are discovered, a comprehensive report, inclusive of photographs are to be taken and labelled by an archaeologist with copies sent to Te Mana o Ngāti Rangitahi Trust, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Historic Places Trust, NZ Archaeological Association File-keeper and the Heritage Co-ordinator at the Bay of Plenty Regional Council.
4.5	All	At the conclusion of the proposed construction works a Hui-A- Iwi will be convened by the Taonga Tuturu Monitor at the expense of the Requiring Authority at which reports on any discovery of koiwi and or taonga tuturu will be provided including the location of protected objects held in the interim custody of the Whakatāne Museum and for koiwi held in the interim custody of [to be confirmed]. The purpose of the hui will be to: <ul style="list-style-type: none"> a) Provide for the Taonga tuturu monitor to request iwi deliberation, decision-making and implementation for the re-interment of koiwi. b) Be informed of the process required by the Protected Objects Act 2007 administered by the Ministry for Culture and Heritage and determined by the Maori Land Court to enable iwi to make claims for ownership and custodianship in perpetuity for taonga tuturu.
4.6	All	The Requiring Authority will cover all expenses relating to the implementation of the Accidental Discovery Protocol including those incurred by kaumātua, Pukenga, the archaeologist and iwi attendees.
Landscape and Visual Management		
5.0	1	No later than thirty (30) working days prior to the commencement of any construction activity the Requiring Authority shall submit a Landscape and Visual Management Plan (LVMP) to the Whakatāne District Council for the certification of the Chief Executive Officer or delegate.

Condition No	Designation Applying To	Condition
		The objective of the LVMP is to describe measures to mitigate the adverse visual effects of the Wastewater Treatment Plant on surrounding properties.
5.1	1	The LVMP shall include as a minimum include the following details: <ul style="list-style-type: none"> a) The recommended vegetation planting in terms of numbers, location and species of plants within the Wastewater Treatment Plant designation perimeter to mitigate adverse visual effects; and b) The proposed earth bund to be constructed on the northern, eastern and southern sides of the Wastewater Treatment Plant within the Wastewater Treatment Plant designation perimeter to a minimum of 5m wide and 2m high.
5.2	1	The vegetation and proposed earth bund within the Wastewater Treatment Plant designation perimeter shall, as a minimum, form a buffer of at least 5m wide and 5m high when fully established. <i>Note: 'Fully established' is defined as within five years of completion of construction activity.</i>
Dust Management		
6.0	All	Dust mitigation measures shall include use of water sprays to control any dust nuisance that arises and a water truck shall be retained on site for this purpose.
Earthworks		
7.0	4	No physical works shall occur within 5m of any kanuka vegetation located within the Land Application Field.
8.0	4	During the construction of the land application field the Requiring Authority shall: <ul style="list-style-type: none"> a) Ensure that no stripping of grass sward or topsoil is to occur on the land application field; b) Protect the groundcover of the dunes as far as possible within the land application field; c) Minimise excavation to lay pipelines within the land application field. The preference is for pipelines to be laid using mole plough pipe laying method or similar; d) Ensure that vehicles use only the formal roadway off Thornton Road for access to the land application site.

Table 18-2: Suggested Designation Conditions - Operational

Condition No	Designation Applying To	Condition
Operation and Management Plan		
1.0	All	No later than thirty (30) working days prior to the commencement of the initial sampling period from the Wastewater Treatment Plant the Requiring Authority shall submit an Operational and Management Plan (OMP) to the Whakatāne District Council for the certification of

Condition No	Designation Applying To	Condition				
		the Chief Executive Officer or delegate of the Whakatāne District Council. The objective of the OMP is to avoid, remedy or mitigate any adverse effects of the operation of the Wastewater Treatment Plant through methods identified in the CMP.				
1.1	All	<p>The OMP shall include as a minimum include the following details:</p> <ul style="list-style-type: none"> a) Methods to ensure on-going monitoring and compliance with condition 2.0 (operational noise); b) Methods to ensure the on-going maintenance of the vegetation planting within the Wastewater Treatment Plant designation perimeter; c) Methods to manage risk associated with the use and storage of hazardous substances; d) The on-going maintenance schedule for the Wastewater Treatment Plant, treated wastewater pipeline and Land Application Field; and e) Methods to manage any faults or power outages at the Wastewater Treatment Plant site designation. 				
Operational Noise						
2.0	2	<p>The Requiring Authority shall ensure that the operational noise from the Wastewater Treatment Plant site does not exceed the following limits at the boundary of the Environmental Protection Buffer:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Daytime (Mon to Sat 7am to 10pm)</th> <th style="text-align: center;">Night Time (at all other times including Public Holidays)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">50 LAeq</td> <td style="text-align: center;">40 LAeq 70 LMax</td> </tr> </tbody> </table>	Daytime (Mon to Sat 7am to 10pm)	Night Time (at all other times including Public Holidays)	50 LAeq	40 LAeq 70 LMax
Daytime (Mon to Sat 7am to 10pm)	Night Time (at all other times including Public Holidays)					
50 LAeq	40 LAeq 70 LMax					
Ecological Restoration						
3.0	4	No later than thirty (30) working days prior to the commencement of the initial sampling period of the Wastewater Treatment Plant the Requiring Authority shall submit a Restoration Management Plan (RMP) to the Whakatāne District Council for the certification of the Chief Executive Officer or delegate of the Whakatāne District Council. The objective of the RMP is to set out the measures and implementation methods for post-construction ecological restoration of the Land Application Field.				
3.1	4	<p>The ERMP shall include as a minimum include the following details:</p> <ul style="list-style-type: none"> a) Recommended replanting with eco-sourced indigenous species; b) Weed control measures; c) Any temporary fencing requirements; d) Animal pest management measures; and e) Monitoring procedures. 				
3.2	4	The Requiring Authority shall ensure that the Land Application Field is managed in accordance with the requirements of the RMP.				
Land Application Field Activities						

Condition No	Designation Applying To	Condition
4.0	4	No above ground structures other than a wastewater pumping station, chambers and site fencing shall be constructed in the Land Application Field.
		Environmental Protection Buffer Activities
5.0	2	The Environmental Protection Buffer shall contain no above-ground structures associated with the treatment of wastewater, with the exception of access road and security fence.
		Wastewater Treatment Plant Activities
6.0	1	The Wastewater Treatment Plant shall contain no above-ground structures greater than 3.5m in height.
		Fencing
7.0	1	A site perimeter fence with a minimum height of 2.0m shall be constructed around the Wastewater Treatment Plant site.
		Lighting
8.0	2	The Requiring Authority shall ensure that any Wastewater Treatment Plant lighting is designed so that the light spill does not cause any added illuminance exceeding 10 Lux measured vertically at the boundary of any site outside of the designation.

Acknowledgements

Te Mana o Ngāti Rangitihī Trust

Te Runanga o Ngāti Awa

Ngāti Tuwahretoa (BOP) Settlement Trust

Personnel/Officers in the following stakeholder organisations:

- Bay of Plenty Regional Council;
- Forest & Bird;
- Bay of Plenty District Health Board;
- Department of Conservation;
- Fish & Game

Attendees at the Matatā Community Meeting

Glossary of Terms and Abbreviations

ADWF	Average dry weather flow
AEE	Assessment of Effects on the Environment. The document to support new Resource Consents applications.
ANZECC	Australian and New Zealand Environment and Conservation Council
Best Practicable Option (BPO)	<p>In terms of the Resource Management Act 1991 – <i>“in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:</i></p> <ul style="list-style-type: none">a) <i>The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects;</i>b) <i>The financial implications, and the effects on the environment, of that option when compared with other options; and</i>c) <i>The current state of technical knowledge and the likelihood that the option can be successfully applied.”</i>
Biosolids	The term used to refer to appropriately treated sludge that can be beneficially used on land
BOD =cBOD₅	Carbonaceous biochemical oxygen demand (cBOD ₅) (measured as 5 day standard test) this is a measure of the organic strength or load of wastewater, cBOD ₅ = BOD in this Report and the associated references
BoPRC	Bay of Plenty Regional Council
BoPRCEP	The Bay of Plenty Regional Coastal Environment Plan
cfu/100ml	Colony forming units (of micro-organisms) per 100ml of liquid sample
CIA	Cultural Impact Assessment (with respect to Tangata Whenua/Maori considerations)
CMA	<p>In terms of the Resource Management Act 1991 – means <i>“the foreshore, seabed, and coastal water, and the air space above the water –</i></p> <ul style="list-style-type: none">a) <i>Of which the seaward boundary is the outer limits of the territorial sea:</i>b) <i>Of which the landward boundary at that point shall be whichever is the lesser of –</i><ul style="list-style-type: none">(i) <i>1 kilometre upstream from the mouth of the river; or</i>(ii) <i>The point upstream that is calculated by multiplying the width of the river mouth by 5</i>
Contaminant	<p>In terms of the Resource Management Act 1991, <i>“includes any substance (including gases, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat -</i></p> <ul style="list-style-type: none">a) <i>When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or</i>b) <i>When discharged onto or into land or into air, changes or is likely to change.”</i>
DO	Dissolved Oxygen
DoC	Department of Conservation
Domestic Sewage	The discharge from household and other toilets, showers, sinks, washing machines, baths and other household discharges
DRP	Dissolved Reactive Phosphorus (typically about 80% to 90% of Total Phosphorus (TP) in domestic wastewater)

EBOP	Environment Bay of Plenty – now called Bay of Plenty Regional Council (BoPRC)
E.coli	Escherichia Coli, a species of bacterium normally present in the intestinal tract of humans and other animals used as an indicator of faecal contamination – used as an indicator micro-organism for pathogenic micro-organisms.
Effect	<p><i>“Effect means - In terms of the Resource Management Act 1991, unless the context otherwise requires, the term “effect” includes -</i></p> <p><i>(a) Any positive or adverse effect; and</i></p> <p><i>(b) Any temporary or permanent effect; and</i></p> <p><i>(c) Any past, present, or future effect; and</i></p> <p><i>(d) Any cumulative effect which arises over time or in combination with other effects - regardless of the scale, intensity, duration, or frequency of the effect, and also includes –</i></p> <p><i>(e) Any potential effect of high probability; and</i></p> <p><i>(f) Any potential effect of low probability which has a high potential impact.”</i></p>
Environment	<p>Environment, in terms of the Resource Management Act 1991, includes -</p> <p><i>(a) Ecosystems and their constituent parts, including people and communities; and</i></p> <p><i>(b) All natural and physical resources; and</i></p> <p><i>(c) Amenity values; and</i></p> <p><i>(d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.”</i></p>
Faecal Coliform (FC)	Faecal coliform (FC) bacterial being an indicator micro-organism for pathogenic micro-organisms measured as number or n/100ml of water or wastewater sample
g/m³	Grams per cubic metre being a concentration measure of a contaminant in liquid, g/m ³ is the same as mg/L and is in effect the same as parts per millions (ppm)
GPS	Global positioning system
GST	NZ Goods and Services Tax
ha	Hectare – land area unit (10,000 m ²)
Hapu	Comprises whanau of shared ancestry (extended families)
I & I	Infiltration and Inflow
ICA	Instrumental Control and Automation
Indicator organisms	The bacteria (E.Coli, faecal coliforms and enterococci) that are used to indicate the possible presence of pathogens (disease causing micro-organisms)
Iwi	Tribe or grouping of Maori
Kaitiakitanga	In terms of the Resource Management Act 1991 – means <i>“the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Maori in relation to natural and physical resources; and includes the ethic of stewardship.”</i>
kg/d	Kilograms per day
LGA	Local Government Act 2002 and subsequent amendments.
L/s	Litres per second, a flow rate
LTCCP	Long Term Plan – a procedure and document required under the Local Government Act 2002
LTP	Long Term Plan – the new (2011) name for the LTCCP
\$M	Dollars Million (NZ Dollars)
m	Metre as a measure of length
m³	Cubic metres as a measure of volume

m³/sec	Cubic metres per second (a measure of flow rate)
m/sec	Metres per second (a measure of speed)
MfE	Ministry for the Environment
mg/L	Milligrams per litre being a concentration measure of a contaminant in liquid, is the same as mg/L is the same as g/m ³ and is in effect the same as parts per million (ppm)
MoH	Ministry of Health
MWH	Consultants – MWH NZ Limited – Principal Consultants to WDC for this Project
N	Nitrogen
NA or N/A	Not Applicable
Natural Character	In terms of the Resource Management Act 1991 – means “ <i>the qualities of the environment that give recognisable character to an area. These qualities may be ecological, physical, spiritual, cultural or aesthetic in nature. They include modified and managed environs.</i> ”
NES	National Environmental Standard
NH₃	Ammonia
NH₄ - N	Ammoniacal nitrogen
NIWA	National Institute of Water and Atmospheric – a Crown Research Institute
NZCPS	New Zealand Coastal Policy Statement 2010
O & M	Operation and Management
P	Phosphorous
Pathogens	Disease causing microorganisms
PE or Pe	Population equivalent (that is equivalent to the domestic wastewater from one person)
Percentile	Division of a frequency distribution into one hundredths
pH	Measure of acid or base nature of liquid
PWWF	Peak Wet Weather Flow
Residuals	The by-products from wastewater treatment such as screenings, sludge, biosolids, noise, odour and other air emissions
RMA	Resource Management Act 1991 and subsequent amendments
RPS	Bay of Plenty Regional Policy Statement
RWLP	Bay of Plenty Regional Water and Land Plan
Sewage	Means foul water and may include trade wastes – definition from NZS 9201: Part 23:2004 – Model General Bylaws Part 23 Trade Waste.
Sewage Sludge	Means the material settled out and removed from sewage during the treatment process – definition from NZS 9201: Part 23:2004 – Model General Bylaws Part 23 Trade Waste.
Sewerage System	Same as Wastewater Scheme or Wastewater System, the system of pipes, pump stations, treatment and disposal facilities which convey wastewater. These are the component parts of a Wastewater Scheme.
Sludge	Refer sewage sludge
SoE	State of Environment
Structure	In terms of the Resource Management Act 1991 – means “ <i>any building, equipment, device, or other facility made by people and which is fixed to land; and</i> ”

	<i>includes any raft.”</i>
Suspended Solids SS = TSS	Suspended Solids equals Total Suspended Solids (SS=TSS)
Tangata Whenua	In terms of the Resource Management Act 1991 – means <i>“in relation to a particular area, means the iwi, or hapu, that holds mana whenua over that area.”</i>
Taonga	Treasure or property. Taonga are prized and protected as sacred possessions of the tribe. The term carries a deep spiritual meaning and taonga may be things that cannot be seen or touched. Taonga includes waahi tapu, waterways, fishing grounds and mountains.
TBA	To Be Advised
TBD	To Be Determined
Tikanga Maori	Maori customary values and practices
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
Total Suspended Solids (TSS)	Fine solids in wastewater as determined by a standard test (TSS = SS)
TP	Total Phosphorus
Trade Waste	Those liquid wastes discharged by trade premises industries that produce wastewater as a result of their processes. These industries are commonly called “wet” industries. Trade waste is the terminology used in the Local Government Act 2002
TRCMP	Tarawera River Catchment Management Plan
URS	Consultants involved in engineering and soil-hydrogeological investigations for this project.
UV	Ultra violet light irradiation used as a wastewater disinfection technique
Wastewater	The mix of domestic sewage, trade waste (industrial wastewater) and (unfortunately particularly at rainfall times) rain water and groundwater
Wastewater System	Same as Sewerage System. The system of pipes, pump stations, treatment and disposal facilities which convey, treat and discharge wastewater.
WDP	Whakatāne District Plan
WDC	Whakatāne District Council
WW	Wastewater. The mix of domestic sewage, trade waste (industrial wastewater) and (unfortunately) particularly at rainfall times rain water and groundwater.
WWTP	Wastewater Treatment Plant

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Whakatāne District Plan

Whakatāne District Council, Proposed District Plan

Whakatāne District Council, 2004, Western Whakatāne Coastal Recreation Reserves Management Plan.

Appendix A Affected Parties' Consent

4 September 2013

Inka Krawczyk
Whakatāne District Council
Private Bag 1002
Whakatāne 3120

Dear Inka

**PROPOSED NOTICE OF REQUIREMENT FOR MATATĀ WASTEWATER
TREATMENT FACILITY – ALLOT 6A MATATĀ PSH, CT: SA275/265**

As Trustees for the aforementioned allotment, we have no objection to a designation being applied to the allotment for the purpose of a wastewater treatment facility. I would also like to note the Trust is currently negotiating lease arrangements with the Whakatāne District Council and that the designation purpose would only be applied if agreement is reached and the project is confirmed for this site.

If you have any questions please do not hesitate to contact us.

Yours faithfully



Robert Gardiner
Trustee/Trust Chair



Anthony Olsen
Trustee/Trust Secretary

27 November 2013

Inka Krawczyk
Whakatane District Council
Private Bag
Whakatāne 3120

**Proposed Notice of Requirement for Matatā Land Application Field - Legal Description: Part Allot
273 Rangitaiki PSH**

Access to the Land Application field by means of easement on 1432C Bennett Road - Legal
Description: Allot 107 Rangitaiki PSH, CT Title: SA658/285

As owners of the allotment 107 Rangitaiki PSH, CT Title: SA658/285, we have no objection to
providing access to the Land Application field (Part Allot 273 Rangitaiki PSH) subject to an easement
agreement, which we are currently negotiating with the Whakatāne District Council.

Yours faithfully

Sheryl Margaret Robinson
Owner



Shayne Aaron Robinson
Owner



Appendix B Accidental Discovery Protocol

ACCIDENTAL DISCOVERY PROTOCOL FOR EARTHWORKS ACTIVITIES UNDERTAKEN IN THE CONSTRUCTION OF THE MATATA WASTEWATER SCHEME

Introduction

This Protocol for Accidental Discovery of Kōiwi or other Taonga specifically relates to earthworks activities undertaken in the construction of the Matata Wastewater Scheme as outlined in consents sought by Whakatane District Council in December 2013.

This Protocol is agreed by Te Mana o Ngati Rangitihi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Whakatane District Council to be imposed by consent condition on any consent granted.

This Protocol is collaboratively designed by iwi to enable their exercise of kaitiakitanga in respect to waahi tapu and waahi taonga. In it iwi identify actions to be given effect in the event of disturbance or discovery of known or unknown sites of cultural significance.

In developing this Protocol Te Mana o Ngati Rangitihi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa have considered the following:

- The Protected Objects Act 1975 requirements for found objects or taonga tuturu
- Historic Places Act 1993 requirements for damage, destruction and modification of historic sites (whether known or unknown)
- Protocols with the Ministry for Culture and Heritage contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005
- Protocols with the Historic Places Trust contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005
- Section 6(e) of the Resource Management Act 1991 Matters of national importance as identified in iwi management plans and recognised in regional and district planning instruments relevant to the proposed consents

1.0 Purpose

The purpose of this Protocol is:

1. To manage and protect the integrity of 'known' and 'unknown' waahi tapu, waahi taonga, archaeological and historic sites from unmitigated damage, destruction and modification
2. To maximise the opportunity to identify physical and archaeological evidence from disturbed sites
3. To obtain evidence of the lives, activities, food and resource use, trails and sites of pre-European Maori occupancy where such sites are disturbed or discovered during the proposed works

4. To enable study of sites and found items to enrich iwi and New Zealanders understanding of our country's historic heritage
5. To ensure that the management of any Kōiwi or other Taonga discovered is appropriate and undertaken in adherence with the actions identified here by Te Mana o Ngāti Rangitihi Trust, Tuwharetoa BOP Settlement Trust and Te Runanga o Ngati Awa.

Recognising and Providing for Waahi Tapu and Taonga Tuturu

Iwi proposed and Whakatane District Council agreed to:

- Adopt this Protocol as a condition of consents granted
- Employ a Taonga Tuturu Monitor and
- Require earth-workers to be trained how to recognise a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery.

3 hour Training Workshop for Earth Workers

The 3 Hour Training Workshop will be conducted by persons recommended by iwi and an experienced and qualified archaeologist.

Persons required to participate in the workshop include:

- Taonga Tuturu Monitor
- Earth-workers, pipeline trench workers and site managers

Others to be invited to participate in the workshop are:

- An archaeologist from the Historic Places Trust (who may wish to provide the archaeological training component)
- Kaumatua and pukenga invited by Te Mana o Ngati Rangitihi, Ngati Tuwharetoa (BOP) Settlement Trust, and Te Runanga o Ngati Awa
- NZ Police (CIB Detective Senior Sergeant Greg Standen)
- Curator Whakatane Museum
- Maori Liaison staff from Whakatane District Council and the Bay of Plenty Regional Council

The focus of training will be recognition of a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery. Practical application of the Protocol is the key focus for training.

Taonga Tuturu Monitor

A Taonga Tuturu Monitor shall be employed by Whakatane District Council to monitor, act in accord with this Protocol and report any discoveries during earthworks.

The Taonga Tuturu Monitor shall be present during earthworks relating specifically to:

- The access-way to the proposed treatment plant
- Site preparations for the proposed treatment plant site at Allotment 6A Matata Parish
- The access-way to the proposed disposal site at Part Allotment 273 Rangitaiki Parish
- Site preparations and installation of dispersal drippers at the proposed disposal site

The Taonga Tuturu Monitor will liaise with and support earth-workers and site managers in the giving effect of procedures identified in this Protocol.

Key Tasks for the Taonga Tuturu Monitor include:

- Being present and available to give effect to this protocol during earthworks at sites specified above
- Being on-call and available to provide a rapid response that gives effect to this protocol in the event that pipeline trench workers discover a potential site
- Carrying out the activities identified in this Protocol in close cooperation with site managers, and where necessary or appropriate with kaumatua, pukenga, NZ Police (where koiwi are discovered) and archaeologists.

Procedures if Kōiwi or other Taonga are Unearthed

The following procedures will be adopted in the event that kōiwi or taonga are unearthed or are reasonably suspected to have been unearthed during the course of operations.

1. Immediately it becomes apparent or is suspected by workers at the site that kōiwi or taonga have been uncovered, all activity in the immediate area will cease
2. The plant operator will act with caution by shutting down all machinery or activity in the immediate area to ensure that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Site Manager or the onsite supervisor
3. The Site Manager or on-site Supervisor shall take immediate steps to secure the area in a way that ensures that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Taonga Tuturu Monitor.

IMPORTANT NOTE:

NZ POLICE (CIB) MUST BE CALLED TO ATTEND KOIWI DISCOVERY BUT DO NOT ATTEND WHEN ARTEFACTS ARE DISCOVERED

Where koiwi are discovered it is important to ensure Whakatane Policy Station has been contacted and Criminal Investigations Branch called to the scene.

The Whakatane Police Station can be contacted by telephoning 07 30 85 255

It is likely the officer attending the scene where koiwi have been discovered will be Detective Senior Sergeant Greg Standen.

NZ Police will have priority when attending a scene where human remains have been discovered. Police do NOT attend a scene where artefacts have been discovered.

4. The Taonga Tuturu Monitor will:

- a) Seek advice from iwi to guide and advise Site Managers and any other parties as to the appropriate course of action to be taken and the identity of persons to involve as appropriate to the circumstances
- b) Upon the advice of iwi contact kaumātua from Te Mana o Ngati Rangitahi, Ngati Tuwharetoa BOP and Te Runanga o Ngati Awa and an archaeologist from the Historic Places Trust providing a description of the find and seeking their advice as to whether they consider it necessary to immediately request Kaumatua, Pukenga, archaeologist and/or the NZ Police attendance at the scene
- c) Ensure the find area is secure and available for inspection by Kaumatua, Pukenga, archaeologist and/or the NZ Police and for photographic recording by the archaeologist should a decision be reached to request attendance at the scene
- d) In the event it is considered by the Taonga Tuturu Monitor and archaeologist unnecessary for kaumatua, Pukenga (and the NZ Police where koiwi only are discovered) to attend the scene, the Taonga Tuturu Monitor and archaeologist will record, photograph and report the potential findspot including reasons why attendance was not required
- e) Take photographs of the find site to share with iwi and others and ensure the archaeologist and site manager have recorded GPS co-ordinates for the site should it be confirmed by the archaeologist the site is a newly discovered site
- f) Take photographic records of any taonga tuturu and the find spot
- g) Collect and retain custody of any koiwi in a suitable receptacle to be located at
into the care of until the completion of the works upon which time iwi will hui to deliberate on the appropriate place for re-interment of koiwi
- h) Upon the discovery of taonga tuturu the Taonga Tuturu Monitor and archaeologist shall photograph the taonga and findspot and record the circumstances of the find. The archaeologist will, in compliance with the Protected objects Act 2007, register the taonga tuturu with the Senior Advisor Heritage Operations at the Ministry for Culture and Heritage, and with each iwi. The Archaeologist will seek from the Ministry for Culture and Heritage approval to place the taonga tuturu into the interim custody of the Whakatane Museum in order to enable subsequent claims for custodianship and ownership to be lodged by iwi with the Ministry of Culture & Heritage (in compliance with Taonga Tuturu Protocols between settled iwi and the Ministry) while also providing for the enablement of processes under the POA that require decisions from the Maori Land Court as to custody and ownership in perpetuity.

5. In the event of a significant find and consequential attendance at the scene the Site Manager shall ensure that kaumātua, Pukenga, the archaeologist and Taonga Tuturu Monitor are given the opportunity to undertake karakia (prayer) and any such other cultural ceremonies and activities at the site and affected workers, in accordance with tikanga Māori
6. Activity in the immediate area will remain halted until kaumātua, the Police and Historic Places Trust (as the case may be) have given approval for operation in that area to recommence. In the event that rua (caves), pits or other archaeological features are discovered, a comprehensive report, inclusive of photographs are to be taken and labelled by the archaeologists with copies sent to Te Mana o Ngāti Rangitahi Trust, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Historic Places Trust, NZ Archaeological Association File-keeper and the Heritage Co-ordinator at the Bay of Plenty Regional Council
7. At the conclusion of the proposed works a Hui-A- Iwi will be convened by the Taonga Tuturu Monitor at the expense of the applicant at which reports on any discovery of koiwi and or taonga tuturu will be provided including the location of protected objects held in the interim custody of the Whakatane Museum and for koiwi held in the interim custody of
.....

The purpose of the hui will be to:

- Provide for the Taonga tuturu monitor to request iwi deliberation, decision-making and implementation for the re-interment of koiwi
 - Be notified of the process required by the Protected Objects Act 2007 administered by the Ministry for Culture and Heritage and determined by the Maori Land Court to enable iwi to make claims for ownership and custodianship in perpetuity for taonga tuturu.
8. The applicant will cover all expenses relating to the implementation of this Protocol including those incurred by kaumātua, Pukenga, the archaeologist and iwi attendees.
 9. This Protocol is agreed by the parties to cover accidental discovery of a find or several finds during proposed works. Agreement is demonstrated by the affixing of signatures below of those authorised to sign on behalf of their respective organisations:

TE MANA O NGATI RANGITIHI TRUST

Signed:

Authorised Representative for Te Mana o Ngati Rangitahi

Contact Details for Ngati Rangitahi contact is:

Chris Clarke, Te Mana o Ngati Rangitahi, 07 3222 452, 3 Onewairere Street, Matatā

NGATI TUWHARETOA BOP SETTLEMENT TRUST

Signed:

Authorised Representative for Ngati Tuwharetoa BOP Settlement Trust

Contact details for Ngati Tuwharetoa BOP Settlement Trust are:

Trust Manager: Elaine August, PO Box 334, Waterhouse Street Extension, Kawerau 3169.

Phone: 07 323 4164 Email: eaugust@ntst.co.nz

TE RUNANGA O NGATI AWA

Signed:

Authorised Representative for Te Runanga o Ngati Awa

Contact details for Te Runanga o Ngati Awa are:

Ray Thompson, Environmental Kaitiaki, PO Box 76, 4 – 10 Louvain Street, Whakatane,

Phone 07 30 70 760

WHAKATANE DISTRICT COUNCIL INFRASTRUCTURE

Signed:

Authorised Representative for Whakatane District Council Infrastructure

Private Bag 1002, Whakatane 3165

DEFINITIONS

Kōiwi means human remains such as skeletal material

Taonga - a cultural artefact from which people can gain a greater understanding of the way that pre-European Maori lived. Cultural artefacts include implements, weapons or decorations, traditionally and historically utilised by tangata whēnua and includes parts or the remains thereof.

Archaeological features such as rua (caves) and pits are also tāōnga.

Archaeological site means any place in Aotearoa, New Zealand that;

(a) Either:

(i) Was associated with human activity that occurred before 1900; or

(ii) Is the site of the wreck of any vessel where that wreck occurred

before 1900 and

(b) is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand (Historic Places Act, 1993).

Archaeological features and remains can take the form of burnt and fire cracked stones, charcoal, rubbish heaps including shell, bone and/or 19th century glass and crockery, ditches, banks, pits, old building foundations, artefacts of Ngāti Rangitihī origin, or human remains.

Site means the relevant location within the land development area.

Historic Places Act and Requirements - In addition to any requirements under the RMA 1991, The Historic Places Act 1993 protects all archaeological sites whether recorded or not, and they may not be damaged or destroyed unless an Authority to modify an archaeological site has been issued by the New Zealand Historic Places Trust (NZHPT).

Taonga tūturu means an object that—

(a) relates to Māori culture, history, or society; and

(b) was, or appears to have been,—

(i) manufactured or modified in New Zealand by Māori; or

(ii) brought into New Zealand by Māori; or

(iii) used by Māori; and

(c) is more than 50 years old

Companion Document



Cultural Impact Assessment of the Proposed Matata Wastewater Scheme

Picture of Matata taken from Whakatane District Council Newsletter 2013

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CULTURAL ASSESSMENT OF THE PROPOSED MATATĀ WASTEWATER SCHEME ACTIVITIES

Introduction

The Whakatane District Council Infrastructure Team seeks consent to install a reticulated wastewater scheme at Matatā.

The scheme proposes earthworks in an area of cultural significance to Te Mana o Ngati Rangitahi (TMONR), Ngati Tuwharetoa BOP Settlement Trust (NTBOPST) and Te Runanga o Ngati Awa (TRONA) and their hapu who also own lands adjacent to or affected by the proposed scheme.

The proposed scheme will occupy three sites linked by pressurised pipeline. Earthworks involving pipeline trenching and backfilling, construction of access roads to the proposed treatment plant and treated wastewater disposal site and foundation works at each site is proposed.

There is potential for discovery of sites of cultural and historic significance, taonga tuturu (protected objects) or koiwi (indigenous human remains) at all of the land subject to earthworks.

Consultation with Maori people for whom the proposed areas are significant has been undertaken since 2010 in the development of possible scheme options (2010), successive reports to Whakatane District Council, development of the proposed scheme design, amendments to scheme layout, development of three iwi authority cultural impact assessments (October 2013) in site visits notes (7 October 2013) and in the making of this cultural assessment. A table summarising of evidence of consultation is attached in Appendix 1.

Consultation outcomes and Interim Responses and further consultation outcomes from Te Mana o Ngati Rangitahi Trust, Tuwharetoa BOP Settlement Trust and Te Runanga o Ngati Awa (Appendix 2), and notes from discussions with Andre Patterson and David Potter of Matatā, contribute significantly to this Cultural Assessment Report. Final Cultural Impact Assessments will be appended to this document when they will become available.

Focus of Assessments

This assessment examines actual and potential effects of the proposed activities on places, resources, values and relationships of significance to Maori people who have engaged in consultation with the applicant's and their consultants.

Maori Heritage Criteria in the Operative Bay of Plenty Regional Policy Statement, methods of implementation recommended in the Kaitiakitanga chapter of the Bay of Plenty Regional Water & Land Plan and contributed to on-going engagement with each iwi, and their respective Pukenga (cultural experts) which contributed to the ways this cultural impacts assessment is made.

This assessment aims to contribute to the consent authority's decisions whether to grant or decline consents and if granted, recommended consent conditions and advice notes to impose that will minimise adverse environmental effects affecting Maori.

Proposed Activities

Council proposes to install a pressurised reticulated wastewater system for all existing lots and marae (subject to Marae Trustees approval as well as scheme design and capacity) in the residential zone at Matatā.

The proposed scheme involves construction and operation of a reticulated wastewater system involving:

- Property and street plumbing, pumping and electricity connections
- A piped conveyance system
- A solids and wastewater treatment plant at proposed site 'G'
- Access roads to the treatment plant and to the treated wastewater disposal site
- Transport and disposal of solids to vermi-casting at Kawerau (or at Whakatane if worm farm is located)
- Treated wastewater disposal to land

Property and street treatments

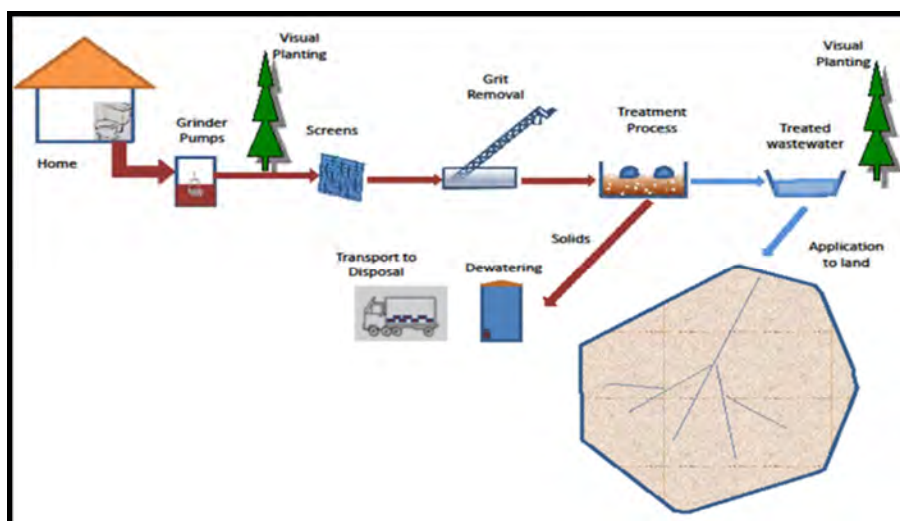
In Matatā Council proposes to install at all lots as well as Oniao, Umutahi and Rangiaohia Marae – underground tanks and necessary fittings, power connections for a pressurised pump to pipework for to regulated street check valves and from there by regulated pressurised pumping to the waste water treatment plant at site 'G'.

The regularity of pumping each street is proposed to be systemised to maintain pressure in the systems pipelines, provide regular clearance of household tanks and manage timing of the overall system.

Conveyance system

Conveyance will be by flexible, earthquake resilient polyethylene pipe (commencing in a 50mm diameter roll of pipe that graduates to 100mm diameter sections of pipe, with all joints welded). Pipes would be laid along relatively flat terrain and at a shallower depth (between approximately 50cm– 70cm) as the system is regulated more by pressure than gravity.

Council advised that where pipes approach and cross waterways the pipes will be doubled to further protect them from rupturing and spilling into a waterway. Council advised pipes would be located on bridge structures in places where they are at least risk from flood or tidal effects.



Typical Wastewater Cycle (extracted from Consultation Presentation)

Solids and wastewater treatment plant at proposed site 'G'

At site 'G' a solids dewatering system involving semi-subterranean, sealed tanks where solids are held and dewatered. Solids accumulate and are removed on a weekly basis and transported to an existing vermi-casting operation currently operating in Kawerau but possibly transferring to Whakatane.

It is proposed that at Site 'G' the treatment plant will be located within an 85mx160m buffer area that can be grazed. Within this area would be a smaller 45mx120m area enclosure, fenced with 5m wide and 2m high embankments planted with native species to provide visual screening from the treatment plant structures. Once plants are established this will be 4 - 5 m high screening.

Council advised it will seek imposition of consent conditions that limit offensive odour to within the limits of these site 'G' buffers.

Council sought advice on whether it might include two small treated wastewater storage basins similar to those at Maketu, if odour limits are achievable and cultural values can be appropriately recognised and provided to the satisfaction of iwi. All water tanks and ponds on site will be covered.



Treatment plant about half the size required for Matatā. Only control building would be visible above 2m line. Image courtesy of Hynds Environmental

Treated wastewater disposal

Treated wastewater is proposed to be conveyed by pipes (as described above) to the proposed treated wastewater dissipation site 450 m east of the Tuwharetoa land near the coastline.

The treated wastewater site has a maximum capacity area of 4ha which allows for twice the required area to service 50 year forecasted growth of Matatā town population. It is proposed that subterranean drippers will be installed to a depth of about 30cm within this area. It is proposed that the Land Application area will be divided into two sections that can be switched on and off to manage soil saturation. A Wildland's Report has identified a variety of ecologically appropriate native species that will be planted over the site.

An area of Council reserve adjacent to the proposed 4ha land disposal site will be retired from grazing and planted with eco-sourced kanuka.



Southern boundary (along sandy ridge)



Native vegetation along northern boundary



Grazed area south of proposed disposal site

Consents Required

Separate consents and permits are required for the construction of the proposed scheme and for the proposed scheme's on-going operation (including maintenance and irrigation to meet future growth needs including for business and industry in the community).

The proposed term for consents and permits is 35 years.

Discharge permits and earthworks consents are sought from the Bay of Plenty Regional Council and land use consent is required for the sewage treatment plant from the Whakatane District Council.

Table 8-2 (extracted from the Assessment of Environmental Effects) sets out the discretionary activities resource consents, relevant plan and corresponding rules and is modified to show regional and district planning instruments relevant to the assessment of cultural values, relationships and places of significance to Maori.

Table 8.2: Resource Consents Sought

Activity to Be Consented	Rule/Plan Reference and Activity Status	Relevant Regional Planning Instrument
A Discharge Permit for air contaminants (odour) for the following components of the scheme: <ul style="list-style-type: none"> • Wastewater Treatment Plant on Site G • Holding tank on Site 8 • Air valves on transfer main running between Site G and Site 8 	Rule 19 of the Bay of Plenty Regional Air Plan Discretionary Activity	Chapter 2 Kaitiakitanga (BOPW&LP) Policies 1, 3, 5, 8(b), 9, 10, 11, 13, 14, 15, 16, 17 (a & b), 18, 19 and 20 Methods 11, 13, 14, 15, 16, 17, 20, 21, 22 and 23
A Discharge Permit for the discharge of treated wastewater from the Matatā Wastewater Treatment Plant to Site 8 (maximum discharge of up to XXX m ³ per day) Note we may also need to include water coming out of the valves on the transfer main.	Rule 37 of the Bay of Plenty Regional Water and Land Plan Discretionary Activity	Chapter 2 Kaitiakitanga (BOPW&LP) Policies 1, 3, 5, 8(b), 9, 10, 11, 13, 14, 15, 16, 17 (a & b), 18, 19 and 20 Methods 11, 13, 14, 15, 16, 17, 20, 21, 22 and 23
Land Use Consent for the following works: <ul style="list-style-type: none"> • xm² and xm³ of earthworks on land within the Erosion Hazard Zone on Site 8 • disturbance of land and soil resulting from xm² of vegetation clearance on land within the Erosion Hazard Zone on Site 8 	Rule 1C of the Bay of Plenty Regional Water and Land Plan Rule 2C of the Bay of Plenty Regional Water and Land Plan	Chapter 2 Kaitiakitanga (BOPW&LP) Policies 1, 3, 5, 8(b), 9, 10, 11, 13, 14, 15, 16, 17 (a & b), 18, 19 and 20 Methods 11, 13, 14, 15, 16, 17, 20, 21, 22 and 23

Source: Draft Assessment of Environmental Effects from WDC on 18 October 2013(right column added)

Statutory Context

RMA Part 6 – Resource Consents

Section 104 of the RMA sets out the matters a consent authority must regard, subject to Part II – (the Purpose and Principles of the RMA), when deciding resource consent applications.

RMA Part II identifies matters of national importance that must be recognised and provided for by persons exercising powers and functions under the Act.

For the purposes of cultural impact assessment the outcomes of consultation with Maori and the following statutory tests have been applied to inform Councils consent decisions in respect to:

- RMA Part II sections 6(e), 7(a) and 8

- New Zealand National Coastal Policy Statement
- Bay of Plenty Regional Policy Statement (Maori Heritage Criteria)
- Iwi Management Plans (where these are recognised by an iwi authority)

Settlement Legislation, Iwi Management Plans and Marine and Coastal Area (Takutai Moana) Act 2011

Ngati Tuwharetoa BOP Settlement Trust and Te Runanga o Ngati Awa are settled iwi that hold statutory acknowledgements that describe their relationships, culture and traditions with the areas subject to the activities proposed by Whakatane District Council applicants for resource consent. Each settled iwi employs an environmental staff member who is mandated to consult, assess and respond to applications for resource consent on behalf their iwi.

Te Mana o Ngati Rangitahi Trust is the Post Settlement Governance Entity (PSGE) for Ngati Rangitahi at Matatā. PSGE status was achieved through Te Mana o Ngati Rangitahi lodgements of claims for representation in CNI (Central North Island) claims in 2009. Te Mana o Ngati Rangitahi Trust employs an environmental staff member who is mandated to consult, assess and respond to applications for resource consent on behalf of Te Mana o Ngati Rangitahi Trust.

Marae Trustees representing Umutahi Marae, Rangitahi Marae (Rangiaohia) and Oniao Marae have also contributed through consultation with consent applicants and their consultants.

Recognition of relationships of Maori as described by the following statutes also contributed to this assessment:

- Tuwharetoa (BOP) Claims Settlement Act 2005
- Te Runanga o Ngati Awa Claims Settlement Act 2005, Te Runanga o Ngati Awa Act 2005, Te Runanga o Ngati Awa Charter, the Proposed Ngati Awa Natural Resources Management Plan and the Waahi Tapu Sites of Ngati Awa Report 2000
- Te Mana o Ngati Rangitahi PSGE Charter, Te Mana o Ngati Rangitahi Iwi Management Plan
- Maori Reservation Trust Deeds for Umutahi, Oniao and Rangitahi Marae
- Ngati Umutahi Iwi Management Plan

Historic Places Act and Protected Objects Act

Geographic Information Systems at the Whakatane District Council includes data from NZAA, Historic Places Trust, 'Waahi Tapu Sites of Ngati Awa' (October 2000) and information provided by contributing iwi identifies that no recorded sites will be directly affected by the proposed activities. However it should be noted that there are historic and significant areas that will be subject to proposed earthworks including the proposed treatment plant site which is identified as significant to all three of iwi, and specified in the TRONA Cultural Impact Assessment (7/10/2013) as being a repository of physical taonga that might be located anywhere in the vicinity at that location. As with recorded sites the exact location of sites is not always known therefore the potential for accidental discovery of sites, taonga tuturu (protected objects, and koiwi (human remains) is one that must be recognised and provided for.

In considering legislative requirements, settlement legislation and the relationships of Maori in the context of section 6(e) of the RMA it is recognised that iwi have usefully recommended the imposition of consent conditions for the adoption of Accidental Discovery Protocols in the event that unrecorded and unknown sites (historic, archaeological, waahi tapu), taonga tuturu (protected objects), and koiwi (human remains) are accidentally discovered.

The attached Accidental Discovery Protocol (Appendix 3) has been designed to enable appropriate activities that are not inconsistent with the:

- Historic Places Act and Historic Places Trust functions
- Protected Objects Act (2006)
- Settlement legislation and Protocols held by settled iwi
- Policy in iwi management plans
- Regional and district planning instruments.

Marine and Coastal Area (Takutai Moana) Act 2011

On 21 May 2013, Ngati Rangitahi Raupatu Trust Inc representing the Tangihia Hapu of Ngati Rangitahi applied, under section 96 of the Marine and Coastal Area (Takutai Moana) Act 2011 to engage with the Crown for the recognition of CMT interests in respect of part of the common marine and coastal area in the vicinity of Matata, Bay of Plenty. The landward boundaries defined in this application are from the mouth of the Waitahanui Stream, Otamarakau to Otaramuturangi. The eastern seaward boundary follows a line 40 degrees North-East from Otaramuturangi Urupa then past the eastern side of Moutoki Island for a distance of 25 miles from the beach.¹ (Please see Map at Appendix 7)

The area subject to the application for CMT is unaffected by the proposed activities relevant to consents sought.

Method of Assessment

Taking account of each statutory test identified in Table 8.2 and in observation of consultation outcomes and cultural impact assessments contributed by three iwi, including their advice in respect to Accidental Discovery of Koiwi and Taonga Tuturu, the following cultural impacts assessment of actual and potential adverse environmental effects of proposed activities has been prepared for Councils consideration.

Cultural Impacts Assessment

Regional policy and methods of implementation recognise that kaitiakitanga is undertaken by Maori with relationships with their ancestral taonga including their ancestral lands, waters, waahi tapu, sites and other taonga. In this instance all three resident iwi (Ngati Rangitahi, Ngati Tuwharetoa BOP and Ngati Awa) own land, have relationships with the area and are demonstrating their exercise of kaitiakitanga for natural, physical and cultural resources subject to the proposed activities.

In exercising kaitiakitanga iwi governance entities and marae trustees have engaged in consultation from the scoping of options to development of scheme design and in the process of preparation of applications for resource consent. Their participation has culminated in development of their respective cultural impact assessments which have been the core data upon which the following Mitigation Table is developed.

Analysis of the Consultation Process

There are three iwi with relationships with the subject area. They are Ngati Awa, Tuwharetoa and Ngati Rangitahi. Each asserts status as tangata whenua. Each iwi acts as kaitiaki of waahi tapu and taonga, including natural resources, such as land, water and air in the subject area.

¹ Office of Treaty Settlements letter to the Chief Executive Bay of Plenty Regional council dated 14 June 2013

Each iwi:

- Has a governance entity mandated by the descendants of hapu, many of whom are affiliated to more than one of the three iwi, to represent kaitiakitanga. They have participated in consultation and provided interim and final cultural impact assessments that inform this assessment and consent decisions
- Has hapu with relationships, culture and traditions relevant to the subject area
- Has connection to a marae at Matata each of which is proposed to be connected to the reticulated system
- Owns title to land adjacent to the proposed disposal site and whose affiliates own title to multiply owned Maori Freehold Land being the site of the proposed wastewater treatment plant
- Employs a manager of environmental matters that is mandated to consult, assess and prepare responses to consents applications on behalf of the iwi governance entities
- Employs processes for assessing proposed consent activities that include accessing advice from pukenga (cultural experts) relied upon by their respective communities to contribute to assessing impacts on cultural values, relationships, traditional practices and adverse effects relevant to places that may be actually or potentially affected by the proposed activities
- Involved members of their communities including Marae Trustees for Oniao, Rangiaohia and Umutahi Marae and interested parties that have engaged in consultation and contributed to outcomes in the Mitigation Table. Their contributions are made as a means of giving effect to kaitiakitanga responsibilities they hold in respect to their marae and to ensure any adverse impact on marae is no more than minor

Assessment of Consultation Outcomes against Regional Planning Instruments

Consultation outcomes identified mitigation measures that have been discussed and informed by iwi, Marae Trustees and Trustees for Maori Freehold Lands directly affected by or adjacent to proposed activity areas.

Iwi environmental staff and the consent applicant's consultants have:

- Had regard to iwi planning documents in the preparation of cultural impact assessments as consistent with Method 13 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Consulted tangata whenua through iwi authorities, tribal Runanga, relevant hapu, marae trustees and relevant Maori Land Trustees as consistent with Method 14 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Consulted with tangata whenua at hui including a site visit (7 October 2013) and marae visit (5 November 2013) as consistent with Method 15 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Engaged in assessment of the proposed activities to identify mitigation measures that will recognise and provide for the effect on the mauri of the receiving environment (as consistent with Methods 17 and 18 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan), including:
 - Avoidance of direct discharges of human faecal matter and contaminants to water
 - Adverse effects on water

- Appropriate provisions to avoid adverse effects on culturally sensitive places, values and relationships including the connection of marae to the reticulated system as a means of providing for wastewater management at frequently used venues, two of which are designated evacuation accommodation venues in times of emergency and the third of which (Umutahi marae) also provides for evacuation accommodation in times of emergency
- Avoidance of adverse effects on the state of water bodies, including natural processes and heritage values associated with shellfish gathering at the beach close to the proposed disposal site
- Consulted directly as consistent with Method 19 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Engaged since scoping of options to the development of this assessment as consistent with Method 20 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Identified methods for avoiding and mitigating adverse effects as consistent with Methods 21 and 22 of in Chapter 2 of the Bay of Plenty Regional Water and Land Plan
- Identified monitoring activities of interest to tangata whenua in respect to odour and shellfish gathering, and acknowledging that monitoring of water quality and the ongoing operation of the proposed scheme will be subject to consent conditions requiring monitoring, as consistent with Method 23 in Chapter 2 of the Bay of Plenty Regional Water and Land Plan and Objective 2 and rules 1 – 20 in the Bay of Plenty Regional Air Plan.

As evidenced in the Assessment of Environmental Effects and Appendices (which include interim and final Cultural Impact Assessments from each iwi), it is clear that consultation has been undertaken in ways consistent with regional planning instruments.

Each iwi, marae and Trustees of Maori Freehold land subject to the proposed activities has contributed consultation outcomes through the cultural impact assessments provided.

Maori Land Trustees have entered into agreements with Whakatane District Council for long term use of their land for the establishment of the proposed treatment plant.

Consultation Outcomes – Mitigation Measures

The outcomes of consultation with Maori has culminated in the development of the following Mitigation Table which identifies iwi concerns, iwi recommended mitigation solutions, Council Scheme Proposed Mitigation and the Cultural Impacts Assessment Recommended Consent Conditions that have been subject to consultation with contributing iwi/Maori.

The aim of the Mitigation Table is to provide the consent authority with recommended consent conditions and advice notes that can recognise and provide for the relationships of Maori with their ancestral taonga.

Mitigation Table 1

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
1	Protection of waahi tapu and waahi taonga including all known and unknown sites	<p>Adopt Accidental Discovery Protocols recommended by each iwi</p> <p>Avoid disturbance of Otaramuturangi Urupa, Wahieroa, Te Toangapoto and sites of significance identified by the TRONA cultural Impact Assessment</p> <p>Avoid adverse effects at Umutahi, Oniao and Rangiaohia Marae ensuring that any installation of reticulated connections are undertaken in close co-operation with Marae Trustees</p> <p>Employ an iwi-selected Taonga Tuturu monitor</p> <p>Ensure monitoring</p>	<p>Pipelines in shallow trenches minimise risk of disturbance of waahi tapu.</p> <p>Iwi-selected monitor present during site earthworks.</p> <p>Pipeline trench workers trained to give effect to proposed Accidental Discovery Protocols.</p> <p>Access way to proposed disposal site avoids Otaramuturangi.</p>	<p>Impose a consent condition adoption of the agreed Accidental Discovery Protocol.</p> <p>Impose a condition requiring Taonga Recognition Training by HPT and iwi representative/s to earth and trench workers on giving effect to the Accidental Discovery Protocol.</p> <p>Include an advice note providing pipeline trench works in Matata streets and at Matata residences and marae, and the state highway routes to the proposed treatment plant and disposal field to be carried out by workers trained in recognition of potential taonga and in giving effect to the agree Accidental Discovery Protocol.</p> <p>Where earthworks are deeper than 1000mm ensure the presence of a pan-tribally selected iwi Taonga Tuturu Monitor trained in giving effect to the agreed Accidental Discovery Protocol</p> <p>Require by consent condition the reporting of any accidental discovery of newly discovered cultural, archaeological or historic sites to iwi and the Historic Places Trust.</p> <p>Note that proposed works avoid Otaramuturangi</p>

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
		<p>during earthworks at the proposed treatment plant site with particular awareness of cultural values associated with the site including its proximity to Oniao Marae, the Maori Land Owners and the values identified in the TRONA Cultural Impact Assessment dated 7 October 2013</p>		
2	<p>Prevention of wastewater seepage or discharge into water, including salt water</p>	<p>Double-sleeve pipelines where they cross water bodies</p> <p>Prevent leakage and ensure rapid response in the event of accidental leakage and to provide resilience during natural disaster events</p>	<p>All open water crossings will be carried over the ground level in casing pipes (double sleeve). Pipe will be attached to bridge structure on the downstream side to avoid damage from possible flooding and debris flow. All pipes will be durable, flexible PE pipes, providing maximum flexibility during earthquakes.</p> <p>Contractor will be required to monitor pipeline on monthly basis. Any contamination due to pipe rupture during disaster event will have limited impact. Network is low pressure system. Any disaster event will likely cause power cut, shutting grinder pumps and limiting wastewater and treated wastewater flow.</p> <p>All grinder pump tanks will have min 24 hour storage capacities to</p>	<p>Note that proposed activity is being designed to be established and operated to prevent wastewater seepage or discharge into water, including salt water</p> <p>Note that the proposed treatment plant is sited off a known earthquake fault-line to mitigate risk of adverse effects in the event of an earthquake.</p>

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
			<p>allow for possible power cuts.</p> <p>Wastewater treatment plant will be screened from view by means of 2 m high embankment that can help to containing any spillage due to disaster, within the plant area.</p> <p>Treated wastewater will be disposed of by means of subterranean drip-lines to dunes east of Tarawera River. Hydrogeological investigation indicates that water flow within dunes is from dunes towards the land, ending in the swale between dunes and Oniri stream. Pathogens in the drain water are not predicted to increase, owing to travel times in the order of one year between application and discharge to the drains and pathogens die-off.</p> <p>The proposed treatment plant is sited with 20 m fault avoidance zone from a known earthquake fault-line to mitigate risk of adverse effects in the event of a fault rupture.</p>	
3	Prevention of adverse effects on food gathering places		Hydrology at proposed disposal site demonstrates the potential adverse effect if wastewater on fresh and salt water is less than minor because the direction of groundwater flow is towards land rather than the ocean and the water travel time allows for pathogens die-off.	<p>Monitoring of ground water quality by WWTP Operator</p> <p>Note that the Hydrogeological Report prepared by URS in November 2013 demonstrates that groundwater flow directions are from the north to the south. The report indicates that treated wastewater dissipated below ground at the proposed disposal site will also percolate through the soils in a southerly direction taking a calculated 12 months to reach farm drains. Within the percolation</p>

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
				<p>period any remaining pathogens in dissipated treated wastewater will die off before reaching the farm drains. This indicates that shellfish on the beach north of the proposed disposal site are likely to be unaffected by discharges into land at the disposal site.</p> <p>Taking a precautionary approach in the interests of human health, it is recommended that an advice note be attached to any consent granted for regular shellfish monitoring to be undertaken at the beach north of the proposed disposal site the results of which may be reported to iwi and the Matata community through council newsletters. In the event of a poor monitoring result that signage be erected and public notices provided to the community advising them of the poor monitoring result and recommending avoiding shellfish collection at that location for a period of time.</p> <p>It should be noted that the area subject to application for coastal Marine Title applications lodged by Ngati Rangitahi Raupatu Inc. on behalf of Tangihia Hapu of Ngati Rangitahi is significantly distant from the proposed disposal site. As well as this the URS Hydrogeological Report produced in November 2013 demonstrates that the area of beach north of the proposed treated wastewater land based disposal site from which shellfish may be gathered is unlikely to be affected due to the direction of groundwater flow away from the beach and towards the farm drains.</p>
4	Prevention of odour effects at marae and in the community	Ensure odour affects do not create an adverse effect at properties adjacent to the proposed	All tanks and ponds on site will be covered. All odorous components shall be sited as far to the south of the site as reasonably practical namely away from the	Note that the treatment plant must be designed in such a way that the operation of the plant does not result in offensive or objectionable odours at, or beyond the environmental protection buffer. Contact details for persons

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
		treatment plant including Oniao Marae	<p>marae. All potentially odorous areas of the process reactors shall be covered and odour extracted. The ultimate odour performance standard for the WWTP is that it must be designed in such a way that the operation of the plant does not result in offensive or objectionable odours at, or beyond the environmental protection buffer zone.</p> <p>In achieving this standard (above) the contractor shall take all necessary steps to ensure the Plant (including all necessary control equipment) on the Site is designed and installed, such that odours from the Site meet the standard and that odours are minimised. Odours will be monitored on weekly basis around WWTP parameter and during any potentially odour generating activities on site or during adverse atmospheric conditions.</p> <p>Odours will be actively managed to achieve standards required by consent authorities that will be measured from the environmental protection buffer enclosing the proposed treatment plant. Contact details for persons responsible for addressing odour issues (should they arise) will be readily available from Council in the event odours are detectable from properties neighbouring the proposed treatment plant</p>	responsible for addressing odour issues (should they arise) will be readily available from Council in the event odours are detectable from properties neighbouring the proposed treatment plant

	Iwi/Maori Concern	Iwi/Maori Recommended Mitigation Measure	Council/Scheme Proposed Mitigation	Recommended consent conditions and advice notes to recognise and provide for the relationships of Maori with their ancestral taonga
5	Affordability for the Matata community	Achieve affordability for Matata residents	<p>Significant national and regional government grants contribute to the works thus minimising costs to Matata Community</p> <p>Rates equalisation within Whakatane district (as a whole) will also contribute to minimising installation and ongoing operational costs to Matata residents.</p> <p>Installation of the scheme components at Matata residences will be covered by grants and district contributions while household electricity charges and relatively affordable annual rate contributions to be contributed by Matata residents</p>	Note the means by which applicants have sought central and regional government funding to supplement costs, and have broadened ongoing costs to be met by overall district contributions in order to achieve greater affordability for Matata residents
6	Provision for Marae wastewater systems to be connected to the proposed system	Discuss and decide the connection of Oniao, Umutahi and Rangiaohia marae to the proposed scheme with respective Marae Trustees	Rangiaohia and Ōniao Marae will be included in the wastewater scheme. Council is investigating connection of Umutahi marae. It is acknowledged by Council that Umutahi marae is designated civil defence evacuation centre along Rangiaohia marae	<p>Note that Council has consulted and undertaken investigations and negotiations to connect all three marae to the proposed reticulated scheme. The three marae to be connected include:</p> <p>Oniao Marae Rangiaohia Marae Umutahi Marae</p>
7	Emergency management planning in the event of a natural disaster	Please refer to above comments about the prevention of adverse effects in the event of natural disaster	<p>Proposed treatment plant located off known earthquake fault-line.</p> <p>Various measures to avoid or mitigate leakage to land or water as expressed above</p>	<p>Note the design measures proposed to be taken in the establishment of an earthquake and storm resilient scheme.</p> <p>Note that marae provide emergency evacuation accommodation for the Matata community and that Umutahi Marae is also identified in Emergency Management Pamphlets as being outside of inundations areas susceptible to tsunami.</p>

Explanations

The following provides further explanation in respect to recommended consent conditions and advice notes identified above.

Many of the mitigation measures noted above were parameters required by Council applicants to form part of the proposed scheme design. Explanations relating to these mitigating measures are covered elsewhere in the Assessment of Environmental Effects.

Mitigation measures recommended by iwi including Accidental Discovery Protocols and connection of all three marae to the reticulated system are explained here.

Accidental Discovery Protocols

Matata is a place where there are numerous known and unknown sites of significance to tangata whenua and the Matata community's historic heritage.

The likelihood of discovery of koiwi (human remains) or taonga tuturu (artefacts) is relatively high at Matata given it is an area that includes battlegrounds, Urupa, pa (including swamp pa), and habitation places that have been occupied by Maori for many generations. Sites of significance can also be considered historic heritage sites and of importance for archaeological values where artefacts or koiwi are found.

It is a place where human remains and artefacts can be discovered.

Each iwi contributed an Accidental Discovery Protocol as part of their interim and final cultural impact assessments. Each contained step by step advice in the event of accidental discovery of known and unknown sites that each iwi recommended should be imposed as conditions on any consent granted.

During consultation the consultant recommended that iwi agree to develop an Accidental Discovery Protocol (ADP) that will meet the needs of each iwi while rationalising the effectiveness of the protocol by providing greater certainty as to how it may be given effect in practice. (Please refer to Appendix 3).

The ADP recommends employment of an iwi selected Taonga Tuturu Monitor to be onsite during earthworks for access roading and earthworks at the proposed treatment plant site and disposal site.

It provides for training of earth-workers, trench pipeline workers and the Taonga Tuturu Monitor so they may be alert to recognising a potential discovery and the procedure to follow should a site be discovered.

Earth-worker and trench pipeline workers will have access to the Taonga tuturu monitor who will be on call in the event of a discovery during pipeline works in Matata Streets and along the highway to the proposed treatment plant site and disposal site.

It provides for rapid response by an archaeologist to attend the scene and determine whether an archaeological or historic site has been discovered consequently requiring applications for a blanket authority from the Historic Places Trust.

The Accidental Discovery Protocol has been agreed by all iwi and Whakatane District Council and is attached for consideration and imposition by way of consent condition by the consent authority.

On the basis of advice received from the Historic Places Trust the Accidental Discovery Protocol has included permission that provides blanket authority from iwi in the event that one or more sites are discovered during proposed works. This is included to minimise delays and avoid duplication of consultation processes in the lodgement of any applications for authority with the Historic Places Trust.

Where there is retrieval of koiwi (human remains) or artefacts (taonga tuturu) such items will be collected in a safe location that complies with the requirements of the Protected Objects Act 1975 and the Historic Places Act 1993 and will be available at the conclusion of the works, to the collective of iwi so they may meet to determine amongst themselves the appropriate location for the re-interment of koiwi and their respective approach, and potentially – co-operative approach to lodgement of claims for taonga tuturu with the Ministry for Culture and heritage as required by the Protected Objects Act and in accord with the Protocols held by settled iwi.

Oniao, Rangiaohia and Umutahi Marae Connection to the System

Scheme Zones and the location of Marae

The proposed scheme is designed to cover the residential zone at Matata.

Rangiaohia Marae

Rangiaohia Marae is located within the residential zone and will be connected to the proposed reticulated system. Rangiaohia Marae is connected with Ngati Rangitahi iwi.

Rangiaohia Marae provides a designated point of assembly and emergency accommodation when evacuation of Matata is necessary. It is capable of providing accommodation for approximately 80 to 100 people at any given time with additional numbers routinely accommodated by Umutahi Marae when required.

Connection to the reticulated system will enable ongoing use and enjoyment of the marae facilities by the many descendants of Maori people connected to Rangiaohia Marae and for many others in the Matata community who frequent the marae and who may rely on its availability and utilities in times of emergency.

Oniao Marae

Oniao Marae is located in the rural zone on land adjacent to the proposed wastewater treatment plant. Oniao Marae is connected to Ngati Tuwharetoa and Ngati Awa iwi.

The land adjacent to Oniao Marae proposed for the wastewater treatment plant is multiply owned Maori Freehold Land that has been vested in Trustees mandated by shareholders to manage the land on behalf of the multiple Maori land owners.

Trustees have agreed to provide the land to Whakatane District Council for the establishment, designation and long term occupation of the proposed wastewater treatment plant by way of lease and subject to mitigation of odour effects at Oniao Marae and connection of the marae to the reticulated system given its proximity to the proposed wastewater treatment plant.

Many owners of the proposed wastewater treatment site are also Matata residents who utilise Oniao, Rangiaohia and Umutahi Marae from time to time.

Given the above it is considered appropriate that Oniao Marae be connected to the proposed wastewater treatment scheme as agreed by Council applicants.

Umutahi Marae

While Umutahi Marae is located in the rural zone it is closely associated with Matata town.

While Umutahi Marae is culturally connected with Ngati Awa and Ngati Tuwharetoa iwi, various family's from the Matata community have held events at Umutahi Marae which generously provides for such use when requested.

Umutahi Marae can accommodate approximately 80 to 100 people overnight at any given time. As with Rangiaohia Marae any additional visitors can be accommodated between these two marae and at Oniao Marae when necessary or appropriate.

Umutahi Marae provided such accommodation to members of the Matata community who had been evacuated from their homes during the debris flow events of May 2005 and could not be accommodated at Rangiaohia Marae.

Umutahi Marae is identified in the Eastern Bay of Plenty Evacuation Information Booklet as being unaffected by a tsunami up to 8.5m in height while both Oniao and Rangiaohia are identified as being susceptible to inundation effects in a tsunami of that size.

Since 2009 Council applicants have consistently advised their intention to connect all three marae to the proposed reticulated wastewater system.

Given the potential to provide for members of the community that frequently use Umutahi Marae and the availability of all three marae for accommodation, including in emergencies, the provision of multiply owned Maori land as a site for the proposed treatment plant and the potential for odour to adversely affects Oniao, and in a worst case scenario, Umutahi and Rangiaohia Marae, it is reasonable to anticipate that Councils commitment to connect the Umutahi Marae to the system will be implemented in close co-operation with Marae Trustees, as with those from Oniao and Rangiaohia Marae.

Recommendations

It is recommended that imposition of the following consent conditions and advice notes will recognise and provide for the relationships of Maori and their culture and traditions with their ancestral lands, water sites and other taonga while minimising adverse environmental effects identified by Maori and recognised in regional planning instruments:

Impose the Agreed Accidental Discovery Protocol as a Consent Condition

Impose the agreed Accidental Discovery Protocol as a condition of any consent granted.

Include an advice note providing pipeline trench works in Matata streets and at Matata residences and marae, and the state highway routes to the proposed treatment plant and disposal field to be

carried out by workers trained in recognition of potential taonga and in giving effect to the agreed Accidental Discovery Protocol.

Where earthworks are deeper than 1000mm ensure the presence of a pan-tribally selected iwi Taonga Tuturu Monitor trained in giving effect to the agreed Accidental Discovery Protocol

Note that proposed works avoid Otaramuturangi, Wahieroa and Te Toangapoto.

Reporting

Require by consent condition the reporting of any accidental discovery of newly discovered cultural, archaeological or historic sites to iwi and the Historic Places Trust.

Monitoring

Monitoring of ground water quality by WWTP Operator

Note that the Hydrogeological Report prepared by URS in November 2013 demonstrates that groundwater flow directions are from the north to the south. The report indicates that treated wastewater dissipated below ground at the proposed disposal site will also percolate through the soils in a southerly direction (i.e. *away from the beach*), taking a calculated 12 months to reach farm drains. Within the percolation period any remaining pathogens in dissipated treated wastewater will die off before reaching the farm drains. This indicates that shellfish on the beach north of the proposed disposal site are likely to be unaffected by discharges into land at the disposal site.

Taking a precautionary approach in the interests of human health, it is recommended that an advice note be attached to any consent granted for annual shellfish monitoring to be undertaken at the beach north of the proposed disposal site and results reported to iwi and the Matata community through council newsletters. In the event of a poor monitoring result that signage be erected and public notices provided to the community advising them of the poor monitoring result and recommending avoiding shellfish collection at that location for a period of time.

Connect all Three Marae to the Proposed Reticulated Wastewater Scheme

Council has consulted and undertaken investigations to connect all three marae to the proposed reticulated scheme. The three marae to be connected include:

- Oniao Marae
- Rangiaohia Marae
- Umutahi Marae

Connecting Umutahi Marae to the proposed reticulated system is strongly recommended to Council as such an arrangement will:

- enable ongoing use and enjoyment of the marae facilities by the many descendants of Maori people connected to Umutahi Marae and many others in the Matata community who frequent the marae
- provide accommodation of members of the Matata community where they are evacuated in the event of an emergency including a tsunami
- give effect to the intentions expressed by Council during consultation with Umutahi Marae Trustees including those expressed in 2009 when Council suggested Umutahi Marae delay

repairs to its existing onsite effluent disposal system on the basis that Council proposes to connect Umutahi Marae to the reticulated wastewater system for Matata.

Beverley Hughes

Appendix 1

Summary Record of Consultation with Maori Proposed Matata Wastewater Scheme

Item No	Who?	When?	Matters raised	WDC's Response
1.	Te Mana o Ngati Rangitihī	2/2/2012 June 2012 1/6/2012 31/7/2012 1/8/2012 15/3/2013	<p>The Environmental Manager for TMoNRT at the time spoke with the then Manager of Utilities that TMoNRT is the leading iwi for the Proposed Matatā Waste water Project</p> <p>WDC consulted with Matatā property owners by way of a questionnaire</p> <p>WDC contacted Kura Paul-Burke and Harina Warbrick via e-mail attaching three (3) documents detailing the process WDC intend to follow to reassess the need for a wastewater reticulation and treatment system in Matatā</p> <p>WDC conducted a meeting at the Matatā Football Club to discuss the On-site effluent Treatment regional Plan 2006 Proposed Plan Change 2 (Maintenance Zones)</p> <p>Report sent out on the Matatā wastewater project review</p> <p>Site visit conducted by WDC to the Maketu/Little Waihi Wastewater Treatment site, attended by members of the Matatā community and Council members</p>	<p>[Descriptions of Consultation activities identified in this row are extracted from the Interim CIA prepared by Te Mana o Ngati Rangitihī Trust].</p> <p>Consultation Process</p> <p>In the initial planning stages for the project Whakatāne District Council met with the Chief Executive Officer for TMoNRT to discuss possible options for a proposed reticulated wastewater system for Matatā Township. The Chief Executive TMoNRT introduced the possibility that land owned by Matatā 6A Trust would be available for a solids treatment station.</p>
2.	Matatā Community	Consultations before 20/05/2013 (See above references made by Ngati Rangitihī)	<p>Development of Scheme options:</p> <ul style="list-style-type: none"> • Doing nothing, • Partial sewage reticulation limited to approx. 50,properties with acute septic tank problems, • Full sewage reticulation. 	Report to the Council of 20th May 2013 recommended full sewage reticulation on the basis of the community survey.
3.	Te Rūnanga O Ngāti Awa	9/05/2013	In the letter following the meeting concerning proposed	WDC has considered the cultural constraints in the

Item No	Who?	When?	Matters raised	WDC's Response
	(TRONA): Ray Thompson – Portfolio Manager Environment, Jessica Wiseman, Environmental Manager		<p>sites for land application and the treatment plant, TRONA responded that the whole area is of cultural significance for Ngāti Awa and provided more detailed cultural information about specific sites.</p> <ul style="list-style-type: none"> • Site 8 is immediately to the east of Ngāti Awa land and for this reason it is unlikely, that TRONA will approve operation on neighbouring land. TRONA may also have concern over disposal of treated wastewater in sandy soils or dunes in close proximity to coastal waters. • Site A was outright rejected due to its cultural and historic values. Site C is located close to Matatā Township with Ngāti Awa Waahi Tapu sites Waitepuru and Awatarerehika in close proximity. • Site W is immediately to the west of the Ōniao Marae. Ngāti Awa Waahi Tapu sites Tiepataua and Kopuatawhiti are located in close proximity. • Site X has no identified Ngāti Awa Waahi Tapu sites here (with regard to being scheduled to the Whakatāne District Plan) it is where Te Toki stream is located. This area was traditionally used for cultivation and food gathering. • TRONA expressed doubt, that they would support option of wetland treatment in the Te Awa a Te Atea Wildlife Refuge Reserve (Site B) and final discharge to the mouth of the Tarawera River. A portion of the Wildlife Reserve located at the river mouth is identified as Nohoanga Entitlement for Ngāti Awa. 	<p>Multiple Criteria Analysis and GIS Risk Assessment Report and will continue to consider these throughout the Project until Proposed Scheme is developed. Site A was not considered in the GIS Risk Assessment Report because it's high cultural value.</p> <p>Site 8 was considered preferable, from GIS Risk Assessment and cultural perspective.</p> <p>The issue of land application of treated effluent was discussed during the meeting 30.08.2013, see item 7</p>
4.	Ngāti Rangitahi CEO – Anthony Olsen	16/07/2013	Concern was raised regarding affordability of house owners to pay for connection to the Wastewater Scheme.	WDC staff explained that the cost of connections made at the time of the Project implementation and all the necessary installations will be covered within the Project by WDC. Cost of later connection

Item No	Who?	When?	Matters raised	WDC's Response
				will have to be covered by house owners.
			While discussing hui organisation, the request has been made to provide information on the Scheme before the meeting to allow Iwi members to familiarise themselves with the topic and give them time to think of possible issues and questions that they would like to ask.	WDC staff obligated themselves to prepare information packet suitable for handing over before the hui, allowing for topic familiarisation prior to the hui.
5.	Ngāti Rangitīhi Tangihia Hapu representatives: David Potter and Andre Patterson	17/07/2013	The concern was raised about treated wastewater seeping to the ocean. David Potter advised us on potential engineering issues with crossing Tarawera River with the pipe, due to the earthquake fault line just west of the River.	WDC staff informed that the level of the wastewater treatment in modern WWTP is very high. Additional treatment with UV lamps will remove pathogens. With additional treatment nitrogen can significantly be removed as well. But if the method of disposal is to the land those costly processes are unlikely to be necessary, as the sand filtering could take care of removing pathogens and nitrogen may not be a significant issue. Local knowledge will be used during system design.
6.	Ngāti Tūwharetoa Trust Manager - Elaine August, Reverend Graham Te Rire	23/07/2013	Questions related to the Wastewater Scheme itself and the history of the Scheme development.	WDC staff provided information and handed draft information packed that is being developed for further community consultation and hui.
7.	Te Rūnanga O Ngāti Awa Chief Executive Enid Ratahi-Pryor, Ray Thompson - Portfolio Manager - Environmental	30/07/2013	Discussion centred on the Wastewater Scheme description. Both Ngāti Awa representatives expressed preference on behalf of the Iwi, for land application rather than ocean outfall, explaining that the shore around the Reserve and the river mouth is the traditional food gathering area for local Iwi. Ray Thompson wanted to understand the impact of treated wastewater on ground water, Tarawera River catchment and the shore.	The Wastewater Scheme will implement land application of high quality treated wastewater. The plant and Land Application treatment field will be localised to provide a buffer zone from the Ngāti Awa Land. The Wastewater Treatment Plant will be designed to ensure that the receiving water quality is not deteriorated due to treated

Item No	Who?	When?	Matters raised	WDC's Response
				wastewater from the land application facility.
8.	Ngāti Tūwharetoa Trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC Project Information; Robbie Gardiner – Chair, Anthony Olsen, Tomairangi Fox, Colleen Skerritt-White	1/08/2013	Trustees were handed the draft Information Pack about the Matatā Wastewater Scheme. They were interested to see how the proposed treatment plant may look like and stressed that treatment plant with open tanks or ponds would not be culturally acceptable. Plant considered for this site has to have covered tanks.	Intention of the WDC is to call for compact WWTP with covered tanks.
9.	Dwayne McKay - Consents Team Leader, BOPRC; Jo Noble - Senior Planner, BOPRC, Yves Denicourt, Senior Consents Officer	2/08/2013	WDC staff updated on Project Progress. BOPC Officers asked to be updated when hydrogeological draft report is available and advised to contact Public Health Services and DoC. BOPC Officers provided list of Iwi which should be consulted. Apart from Iwi already consulted, Ngāti Umutahi, who lodged with BOPRC Iwi Management Plan and Ngāti Mākino were named.	WDC staff contacted DoC (Chris Stokes), providing concise information about the project and maps of possible and proposed sites. In the e-mail response he promised to pass the information on relevant officers and respond if there are concerns. WDC informed about the Scheme persons listed for contacts under RMA by e-mail. Anthony Olsen listed for Ngāti Umutahi talked with Pia Bennett listed for Ngāti Mākino and will consider their cultural heritage in CIA which is prepared together with Ngāti Rangitahi and Ngāti Tūwharetoa. Pia Bennett stated that Ngāti Mākino has no interests in the area where Wastewater Scheme is located.

Item No	Who?	When?	Matters raised	WDC's Response
10.	Ngāti Tūwharetoa trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC's Project Information; Robbie Gardiner – Chair, Anthony Olsen, Tomairangi Fox, Paora Hunia	5/08/2013	Trustees were handed photos of compact wastewater treatment plants to show examples of how the proposed plant may look like. They indicated concerns relating to incoming untreated sewage (wastewater) pipe to the site, due to human waste considered tapu in Māori culture. Trustees would be interested to have sewer pipe and water connected to the marae in exchange for providing the land.	Along the western side of the Parcel 6A runs paper road and pipe can be buried under this road. WDC could consider providing sewer and water services to the marae.
11.	Ngāti Umutahi Anthony Olsen	6/08/2013	Ngāti Umutahi lodged with BOPRC Iwi Management Plan	The contact person under RMA is Anthony Olsen CEO for Ngāti Rangitīhi. He will take care to consider cultural heritage of Ngāti Umutahi in Cultural Impact Assessment of Ngāti Rangitīhi.
12.	Ngāti Mākinu Pia Bennett	6/08/2013		Pia Bennett informed in the email that Ngāti Mākinu has no vested interests in the area where Wastewater Scheme is located and Ngāti Mākinu refers to Ngāti Rangitīhi in matters concerning the Scheme. Cultural Impact Assessment for Ngāti Rangitīhi will address cultural heritage of Ngāti Mākinu as well.
13.	Te Rūnanga O Ngāti Awa (TRONA) Chief Executive Enid Ratahi-Pryor, Ray Thompson - Portfolio Manager - Environmental	8/08/2013	The purpose of the meeting was to discuss TRONA offer to allow for access to the site 8 located within the Western Reserve through Ngāti Awa land. The access would be provided for the road, pipes with treated or untreated wastewater and water pipe under the road and power line.	WDC will consider offer. This may prove very helpful in terms of gaining access to the site, but for the offer to be effective, WDC needs to obtain agreement from Robinson's family to access through their land as well.
14.	Residents of Matatā and neighbours of the planned WWTP a Land Application sites	16/08/2013	Update on the project progress, invitation to the community meeting	
15.	Ngāti Awa, Ngāti Rangitīhi, Ngāti	19/08/2013	Update on the project progress, invitation to community meeting, providing electronic	

Item No	Who?	When?	Matters raised	WDC's Response
	Tūwharetoa, Ngāti Mākino executives		version of presentation from the community meeting.	
16.	Ngāti Tūwharetoa trustees of Matatā 6A Trust, owners of plot of land labelled as site G in WDC's Project Information; Robbie Gardiner, Anthony Olsen, Responsible Trustees	21/08/2013	WDC staff and consultants (MWH and URS) provided current information about the scheme. The trustees representing owners of the Matatā 6A Parcel, (site G) agreed to enter formal agreement to lease land for WWTP construction.	WDC intends to build compact treatment plant with minimised visual impact. The WWTP will be screened by protective planting.
17.	Ngāti Rangitahi Tangihia Hapu representatives: David Potter and Andre Patterson	10/09/2013	Update of the scheme presented. Ngāti Rangitahi Tangihia Hapu representatives asked to be updated, when hydrogeological report will be available and expressed support for the scheme. Minutes attached.	WDC will provide report and invite them to a meeting with BOPRC. Notes from this meeting are attached to this Cultural Impact Assessment as Appendix 4
18.	Ngāti Tūwharetoa Trust Manager - Elaine August, Environmental Officer - Jessica Wiseman	18/09/2013	Update on the scheme. Concerns regarding quality of wastewater released to environment. Concern regarding close neighbourhood of WWTP and the Ōnīao marae. Discussion regarding Cultural Impact Assessment approach. Accidental Discovery procedures.	WDC representative assured that the treatment of wastewater will be of high quality. Hydrogeological Report and Public Health Assessment Report will provide data regarding hydrological properties of dunes and quality of water in the receiving environment. Plant design will consider this information in the design of the treatment and disposal process. WDC met earlier with Ōnīao marae trustee Paora Hunia, but plans on hui with all interested trustees. Marae will be provided with water and wastewater connections with no cost to the marae members. Marae will be obligated to pay water and wastewater rates.
19.	Te Mana o Ngāti Rangitahi Trust	30/09/2013	Update on the scheme. Discussion on Recommendations of Initial CIA. Discussion regarding Cultural Impact Assessment approach. Accidental Discovery	WDC representative provided response regarding council's position regarding recommendations. Council's response forms attachment to this table.

Item No	Who?	When?	Matters raised	WDC's Response
20.	Elaine August - (General Manager, Tuwharetoa BOP Settlement Trust)' Jessica Wiseman (Environmental Manager, Ngati Tuwharetoa Holdings Ltd), Mrs Whaiora Brown - (Kaumatua, Oniao Marae), Grant 'Skippy' Savage (Chairman, Oniao Marae Trustees), Merehira Savage - (Member of Oniao Marae community) Miss Savage, Beverley Hughes (Independent Consultant)	7/10/2013	<p>procedures.</p> <p>The visits purpose was to show proposed scheme layout in the terrain:</p> <ul style="list-style-type: none"> The distance from Oniao Marae buildings, the lay of the land, noting that the marae cannot be seen from the proposed treatment plant site, the proposed site for the access road noting that there is an existing 'paper' road identified on land titles but as yet a roadway has not been formed. <p>Concerns raised:</p> <ul style="list-style-type: none"> Soil composition at site 'G' and whether there is any potential for leakage from the system into the soil and groundwater. Contingency planning in regards to leaks or odours 	<ul style="list-style-type: none"> Wastewater will be carried by closed pipes to the treatment plant for treatment. Highly Treated wastewater again will be carried by pipes to the Land Application in the Reserve. Pipes will be underground; Tarawera River crossing will be in casing pipe above water attached to the bridge on the seaside of the bridge to prevent pipe damage due to flooding. There is no potential for leakage under normal operation. Obviously big disaster (earthquake of big magnitude) may cause damage and leakage, but this is low probability disaster. In the Treatment Plant wastewater will not have any connection with the soil and ground water. Soil at the site is sand, coarse sand, pumice and gravel. In the tender documents WDC requires Contractor to keep very tight monitoring regime. Odours are to be monitored on weekly basis, walking along site perimeter or during unusual weather conditions or some activities on site potentially causing odours. In case of problems Contractor is obligated to adopt more rigorous odours removal. Contractor will be required to repair any leaks, but if this would be causing any potential of contamination, wastewater will be transported to Whakatane Wastewater Treatment Plant until repairs are made. <p>Notes from this Site visit are attached to this Cultural Impact Assessment as Appendix 5</p>

Appendix 2

Cultural Impact Assessments Received from Iwi including Interim and Final Assessments from:

- **Te Runanga o Ngati Awa (17/5/2013 and 7/10/2013)**
- **Te Mana o Ngati Rangitahi Trust (24/9/2013)**
- **Ngati Tuwharetoa BOP Settlement Trust (22/10/2013)**



TE RUNANGA O NGATI AWA

6622/RMT

17 May 2013

Attention: Tomasz Krawczyk (General Manager Infrastructure)

Whakatane District Council
Private Bag 1002
WHAKATANE 3158

MATATA SEWAGE LAND APPLICATION SITES – INITIAL RESPONSE

The following correspondence is in response to your request for Te Runanga o Ngati Awa (TRONA) to provide an initial response to potential land application and treatment sites for the Matata Sewage project. TRONA understands that this response may be used to assist Whakatane District Council to develop a "short list" of potential sites for further consideration. TRONA also understands that Whakatane District Council is seeking similar initial responses from the Ngati Tuwharetoa Settlement Trust and Te Mana o Ngati Rangitahi Trust. Please be aware that this is an initial response to potential treatment and land disposal sites identified by Whakatane District Council. Te Runanga o Ngati Awa reserves the right to undertake a more detailed assessment of the project once Whakatane District Council provides more information about the short listed sites.

POSSIBLE LAND APPLICATION SITES

A meeting was held on 9th May 2013 between Whakatane District Council (Tomasz Krawczyk, General Manager Infrastructure and Santha Agas, Manager Three Waters) and representatives of TRONA (Ray Thompson, Portfolio Manager Environment) and the Ngati Tuwharetoa Settlement Trust (Jessica Wiseman, Environmental Manager). WDC staff provided the attached map "Land Application Sites Being Further Investigated" for consideration in this initial assessment. While all of the identified sites are to be considered, WDC have requested that TRONA give specific consideration to areas B, C, W and X. Area A located to the west of the Matata Township has been discounted due to its cultural and historic values.

While there is a very short timeframe for this initial response, the writer was able to have a brief discussion about the proposed sites with Pauroto Ngaropo (Senior Cultural Advisor, TRONA and Chairperson and Board Representative for Iramoko). Mr Ngaropo advised that the entire area is of considerable significance to Ngati Awa. Mr Ngaropo also provided additional cultural information about specific sites and the area in general.

Area B This area is immediately to the east of a land parcel of Vest-Fee Simple with reserve Status Title under Te Runanga o Ngati Awa (Area 9). It is unlikely TRONA will approve of a treatment and/or disposal operation on neighbouring land. TRONA may also have some concerns over disposal of treated wastewater in sandy soils or dunes in close proximity to coastal waters. This was a concern for TRONA on recent investigations for disposal of treated wastewater in Ohope.

HE MANU HOU AHAU HE KOHANGA I REUA

NGATI AWA HOUSE • 4-10 LOUWAIN STREET • PO BOX 76 • WHAKATANE 3158 • NEW ZEALAND
T: (041) 07 307 0180 • F: (041) 07 307 0182 • E: runanga@ngatiawa.govt.nz • W: www.ngatiawa.govt.nz

Area C This area is located close to the Matata Township with Ngati Awa Wahi Tapu sites Waitepuru and Awatarerehika in close proximity.

Area W This area is immediately to the west of the Oniao Marae. Ngati Awa Wahi Tapu sites Tiepataua and Kopuatahiti are located in close proximity.

Area X While there are no identified Ngati Awa Wahi Tapu sites here (with regard to being scheduled to the Whakatane District Plan), it is where the Whaariki Te Toki stream is located. Mr Ngaropo recounted how this area was traditionally used for cultivation and food gathering. Iramoko's wife Te Paetata would observe the stars at this place.

Te Runanga o Ngati Awa was also asked to initially consider the option of wetland treatment in the Te Awa a Te Atua Wildlife Refuge Reserve and final discharge to the mouth of the Tarawera River during an outgoing tide. The Wildlife Reserve is a Statutory Acknowledgement area which is managed under the Te Awa a Te Atua Joint Advisory Committee along with the Matata Scenic Reserve. A portion of the Wildlife Reserve located at the river mouth is also identified as a Nohoanga Entitlement for Ngati Awa. While this is only an initial assessment, Te Runanga o Ngati Awa is unlikely to be supportive of such an option given significant cultural values present, wildlife values and as there is recreational and customary food gathering at the mouth of the Tarawera River.

As stated above, this is an initial assessment only. Te Runanga o Ngati Awa reserves the right to undertake a more detailed assessment of options for the project once Whakatane District Council provides more information about the short listed sites. This correspondence was prepared by Ray Thompson, Portfolio Manager - Environment, Te Runanga o Ngati Awa. If you have any queries, please contact the undersigned.

Naku noa, na



Ray Thompson
**PORTFOLIO MANAGER – ENVIRONMENT, TE RUNANGA O NGATI AWA
FOR CHIEF EXECUTIVE**

Copy to: Pouroto Ngaropo
Te Runanga o Ngati Awa
P O Box 76
WHAKATANE 3158



TE RŪNANGA O NGĀTI AWA

6641/RMT

7 October 2013

Attention: Inka Krawczyk (Project Manager)

Whakatane District Council
Private Bag 1002
WHAKATANE 3158

MATATA WASTEWATER RETICULATION SCHEME & DISPOSAL FIELD – NGATI AWA INITIAL CULTURAL IMPACT ASSESSMENT

The following correspondence is in response to your request for Te Runanga o Ngati Awa (TRONA) to prepare an initial cultural impact assessment for the proposed Matata wastewater reticulation scheme, treatment options and disposal field. Whakatane District Council has requested a 2 stage cultural impact assessment. This assessment includes initial consultation and responses by TRONA and nga hapu o Ngati Awa Ngati Hikakino, Te Tawera and Ngai Te Rangihouhiri II regarding the overall approach to the treatment and disposal of wastewater from a reticulated sewage scheme in Matata. This initial assessment will be used by Whakatane District Council in determining the final detail and layout of the proposed scheme, prior to lodgement with Regional Council for necessary authorisations. TRONA reserves the right to provide further comment on the proposal once final detail and layout of the scheme is confirmed. TRONA has previously provided an initial response regarding potential land application and treatment sites (Matata Sewage Land Application Sites – Initial Response, dated 17 May 2013 our ref 6622/RMT). Correspondence received has included the following;

- Whakatane District Council, Waste Water Reticulation Scheme with Disposal Field (4 Ha), dated 23/08/2013, received by email 25 August 2013;
- Matata Wastewater Scheme Community Newsletter, dated 15 August 2013;
- Whakatane District Council, Matata Wastewater Scheme Update, Information Sharing Pack, dated 1 August 2013 (Draft);
- Western Recreation Reserve Profile (A375324), received by email 12 July 2013;
- Potential Wastewater Treatment and Land Disposal Sites 10 July 2013, received by email 12 July 2013;
- Whakatane District Council, Possible Sites 7 May 2013, received by email 12 July 2013.

SUMMARY OF THE PROPOSAL

This summary of the proposed Matata wastewater reticulation scheme, treatment plant, transfer pipeline and disposal field is based on limited information provided to date. TRONA understands that final detail and layout of the proposal will be confirmed following the completion of initial consultation with interested parties and affected land holders. TRONA reserves the right to provide further comment on the proposal once final detail and layout of the scheme is confirmed.

HE MANU HOU AHAU HE KOHANGA I REREĀ

NGĀTI AWA HOUSE • 4-10 LOUVAIN STREET • PO BOX 76 • WHAKATĀNE 3158 • NEW ZEALAND
T: (64) 07 307 0760 • F: (64) 07 307 0762 • E: runanga@ngatiawa.iwi.nz • W: www.ngatiawa.iwi.nz

The proposed Matata wastewater reticulation scheme will involve the reticulation of approximately 260 existing residential properties in the Matata Township. Each property will require a small pumping unit and 24-hour emergence storage tank to be connected to the reticulated collection system. The pressurised reticulated collection system will transfer household wastewater to a treatment facility to be located to east of the township on a property adjacent to Oniao Marae. The treatment plant would be an enclosed tank system largely located beneath the ground surface.

Treated wastewater would then be transferred via a pipeline east along the State Highway corridor crossing the Tarawera River utilising the existing State Highway Bridge and the Orini Stream floodgate structure and the informal sand road. The pipeline would then travel east along the coastal back dunes to a land disposal field to be located approximately 1.5kms to the east of the Tarawera River mouth on District Council coastal reserve land. The pipeline alignment from the State Highway to the land disposal field will require the construction of a formed road to provide access to the land disposal site.

At the time of completing this initial assessment TRONA has been advised that the preferred alignment option for the access road (through the Robinson property) has proved difficult and an alternative is being scoped via Walker Road further to the east. For general layout and location details of the proposed scheme refer to the attached plan provided by Whakatane District Council (Western Recreation Reserve Profile (A375324)).

CONSULTATION WITH TE RUNANGA O NGATI AWA

Whakatane District Council have consulted with Te Runanga o Ngati Awa in regard to initial site selection and treatment options and the preparation of cultural impact assessments for the proposed wastewater scheme. Consultation with TRONA has included options for providing secure vehicle access to Ngati Awa reserve land Te Toangapoto located adjacent to the proposed land disposal site. Te Toangapoto is currently land-locked with no formal access and is under-utilised. TRONA considers the provision of secured road access to Te Toangapoto to be necessary for Ngati Awa to realise the potential of this 10 hectare coastal reserve that was returned as a cultural redress property under the Ngati Awa Settlement Act 2005.

Te Runanga o Ngati Awa is also requesting that Whakatane District Council use this process to rectify existing property issues with regard to the informal sand road that provides vehicle access along the eastern bank of the Tarawera River to the river mouth. The road provides public access to the coast and is frequently used by recreational fishers including nga uri o Ngati Awa. The road also provides access to the Otaramuturangi Urupa, which is a traditional burial ground for Ngati Awa ancestors and Ngati Awa Wahi Tapu site.

Te Runanga o Ngati Awa has consulted with nga hapu o Ngati Awa Ngati Hikakino and Te Rangihouhiri and neighbouring iwi Tuwharetoa ki Kawerau and Ngati Rangitahi regarding the proposed Matata wastewater reticulation scheme, treatment options and disposal field. TRONA met with Te Rangihouhiri on 25th August 2013 as part of their monthly hui. A motion was passed at the meeting that Te Rangihouhiri agrees to support TRONA's efforts to negotiate access to the land-locked Te Toangapoto property, noting the proposed WDC roadway and sewer pipe option. Ngati Hikakino kaumatua and leadership have also agreed to support TRONA's efforts to gain access to Te Toangapoto. A motion to formalise agreement will be passed at the Ngati Hikakino September hapu Hui. Te Runanga o Ngati Awa has also discussed the Matata wastewater proposal with neighbouring iwi Tuwharetoa ki Kawerau and Ngati Rangitahi.

STATUTORY CONTEXT

The proposed works to establish a reticulated wastewater scheme, treatment and piping to a land based disposal field are located within the Ngati Awa Antiquities Protocol Area. The Ngati Awa Claims Settlement Act 2005 includes various mechanisms acknowledging Ngati Awa's traditional and current relationship in Matata including the following;

- Statutory Acknowledgement and Deed of recognition of Ngati Awa's relationship to the Tarawera River (which includes the Orini Stream)
- The Te Awa a Te Atua Wildlife Refuge Reserve is located to the west of the Tarawera River mouth extending along the shoreline occupying the wetlands, dunes and lagoons seaward of the Matata Township. The reserve is jointly managed by Ngati Awa and the Department of Conservation under a Joint Advisory Committee.
- The Te Awa a Te Atua Nohoanga site is located at the eastern extent of the Te Awa a Te Atua Wildlife Refuge Reserve to the west of the Tarawera River mouth and is approximately 1 hectare in area.
- Te Toangapoto is a cultural redress property located immediately to the east of Otaramaturangi Urupa and the Tarawera River mouth. The Te Toangapoto Recreation Reserve is approximately 10 hectares in area.
- The Matata Scenic Reserve is located in the foothills to the south of the Matata Township. The reserve is jointly managed by Ngati Awa and the Department of Conservation under a Joint Advisory Committee.
- The Whakapaukorero Historic Reserve is located in the foothills to the south of the Matata Township, within the Matata Scenic Reserve. The reserve is approximately 33 hectares in area.

TRONA acknowledges that the Matata area is also of significance to neighbouring iwi Ngati Tuwharetoa ki Kawerau and Ngati Rangitahi.

ARCHAEOLOGICAL AND HISTORIC HERITAGE

The proposed Matata wastewater reticulation scheme, treatment options and disposal field has been assessed using the Ngati Awa GIS Database and Wahi Tapu Sites of Ngati Awa October 1999 report. There are several Wahi Tapu sites of Ngati Awa located in the area. The attached maps entitled Ngati Awa GIS Database: Matata Township & Ngati Awa GIS Database: Tarawera Mouth identifies numerous Wahi Tapu sites of Ngati Awa located in and around the Matata Township and Tarawera River Mouth that provide details of the cultural heritage and history of the area.

Please recognise and provide for:

- The various Wahi Tapu sites of Ngati Awa identified within the attached maps and detailed below;
- While Wahi Tapu sites of Ngati Awa are recorded as a point they may refer to the use or occupation of a wider area;
- Please note that recorded sites can be +/- 100m from the actual icon identifying the recorded site on the attached map. In addition, the land area in and around the Matata Township and Tarawera River has been significantly modified as a result of drainage works in the early 1900's and land development.
- Additions to information sourced from the Wahi Tapu Sites of Ngati Awa October 1999 report are provided within square brackets [...].

MATATA TOWNSHIP

WDC Ngati Awa Historical Site – Entry No. 395 Punawhenua – *This landmark of Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] is situated at the base of the Matata subway and encompasses the surrounding lands. This was regularly utilised as a collection point for kaimoana by Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II].*

WDC Ngati Awa Historical Site – Entry No. 299 Te Awatarariki – *This is a river of oratory flowing to the sea near the Matata subway. According to the ancestors of Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] there are three taniwha of legend that live here. They are the taniwha Kiore, Tuna and Tohara and they were the guardians of various resources at this place. The Ngati awa hapu Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] would often conduct the appropriate rituals to maintain the productivity of these resources.*

WDC Ngati Awa Historical Site – Entry No. 318 Te Pamu – *This is the sacred fishing grounds of Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II], it is located off-shore and just north of the Matata lagoon.*

WDC Ngati Awa Historical Site – Entry No. 317 Atoangapoto – *These are the sand dunes which front the Matata Reserve and extend beyond Te Otaramuturangi. It was here that Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] gathered kaimoana for large hui.*

WDC Ngati Awa Historical Site – Entry No's 298A & 298B Waimea & Waitepuru – *Waimea is a small stream that flows past the present site of the Matata Rugby Football Club and out towards the old Matata Post Office. Waitepuru is the stream that runs past the Catholic Church flowing towards Te Awa o Te Atua swamp. This stream is also known as Te Waitoto o Te Rangihouhiri.*

These streams were used for special ceremonies, in former times when Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] went into battle they would return with the bodies of their enemy and wash the bones in these two streams. The warriors of Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] would then hang the bodies on Pohutakawa trees to dry.

WDC Ngati Awa Historical Site – Entry No. 308 Te Rangatai – *This area close to Punawhenua is significant to Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] as it reminds Te Tawera hapu of the actions of Mair and Te Arawa soldiers who fought against them. They used this area as a gathering point before the battle of Te Kaakaoroa.*

WDC Ngati Awa Historical Site – Entry No's 269A & 269B Te Marae o Whakatane & Oniao – *This pa site associates Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] to the Tainui people. It is here near Oniao pa in Matata that the sacred talisman Mataketake was buried by the Tainui people upon their arrival to these shores. The reason for this is that it traditionally warded off all evil and dispelled any misfortune affecting the people of Ngati awa living in close proximity.*

WDC Ngati Awa Historical Site – Entry No. 313 Awatarerehika – *This block of land is situated where the Ngati Rangitahi Marae now stands. This land was given to Ngati Rangitahi for their services rendered in assisting the Government forces prior to the raupatu. This land was traditionally occupied by Te Tawera [and Ngati Hikakino] and Ngati Rangihouhiri in former times.*

TARAWERA MOUTH

WDC Ngati Awa Historical Site – Entry No. 304 Te Wai-u-o-Paremokai – *This is the site not far from the Tarawera Bridge near Matata. It was a significant place for the Ngati Awa hapu Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] and it provided fresh drinking water for the hapu of the area.*

WDC Ngati Awa Historical Site – Entry No. 314 Te Kopua a Kuku – *This land mark has a special significance to Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] and indeed all hapu of the region. This is the place where the four ancestral canoes (Mataatua, Te Arawa, Takitumu and Tainui) at different times, made landfall near the Oniao Marae in Matata. It has special significance to all hapu of the region who originate from these four waka including Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II].*

WDC Ngati Awa Historical Site – Entry No. 256 Tarawera – *According to the oral traditions of Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II], this river in legend is the tears of Tarawera who yearned for her husband Putauaki who left her for the island Moutohora. The Tarawera River is the parent river to Te Waikamihī, as it is through Te Waikamihī that the Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] people have spiritual connection to the Tarawera River. It was at the junction of Te Waikamihī and Tarawera that Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] used to net white bait, eels and fish.*

WDC Ngati Awa Historical Site – Entry No. 267 Matata – *This pa site is situated in the swamp a little east of the present town. It was occupied by Ngati Kuarangi, a sub tribe of Te Tawera, and the hapu of Ngati Rangihouhiri.*

WDC Ngati Awa Historical Site – Entry No. 303 Awaiti – *This is a stream that flows into the Tarawera River north east of Te Awakaponga. It provided a traditional source of food for Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II] e.g. eels, fish and particularly whitebait.*

WDC Ngati Awa Historical Site – Entry No. 315 Otaramuturangi – *Otaramuturangi is recorded as the landing place of the waka Te Paepaekīrarotonga captained by the Ngati Awa chief, Waitaha Ariki Kore. Otaramuturangi commemorates the final landing place where Waitaha Ariki Kore ended his long journey to Aotearoa, assisted by four taniwha Tuara, Te Rangihīria, Tupai and Tutarakauika. These taniwha took the physical form of lizards.*

This is also the burial site of Te Tawera situated at the original outlet to Te Awa o te Atua. Interestingly, when seen from the air, the outlet beside Otaramuturangi resembles two fish, a barracuda entering the river on the left hand side and another fish diving below the first. There is also a spear head configuration at this place, resembling the imprint of the taniwha on the landscape.

WDC Ngati Awa Historical Site – Entry No. 263 Te Matapihi – *This pa was located at the west bank of the Tarwera River approximately half a mile inland from State Highway 2. It was a kainga site (settlement) of the Ngati Awa tribe known as Te Tawera [and Ngati Hikakino and Ngai Te Rangihouhiri II].*

The proposed Matata wastewater reticulation scheme, treatment plant, transfer pipeline and disposal field will require extensive excavation works. Given the scale of the proposal and traditional cultural use and occupation in the area there is considered to be a high likelihood that items of

cultural significance may be uncovered. Te Runanga o Ngati Awa will request the adoption of an accidental discovery protocol for all disturbance works for the proposal.

RECOMMENDATIONS

Te Runanga o Ngati Awa (TRONA) generally supports the overall approach to the collection, treatment and disposal of wastewater from a reticulated sewage scheme in Matata proposed by Whakatane District Council. TRONA is aware that Matata Township's current reliance on individual on site effluent systems to dispose of wastewater is negatively affecting water quality and cannot be relied upon in the future. Ngati Awa supports the appropriate disposal of treated wastewater to land in circumstances where land disposal will not result in the discharge of contaminants to adjacent waterways. Ngati Awa would be unlikely to support the discharge of treated wastewater directly to waterways or the ocean. TRONA reserves the right to provide further comment on the proposal once final detail and layout of the scheme is confirmed. While Ngati Awa provides general support for the approach, we seek assurances on the following matters;

- That Whakatane District Council provide adequate information on containment and ongoing management of the collection system and transfer pipeline to establish the risk of breach or failure is minimal and that responses to possible breach or failure are appropriate and effective;
- That Whakatane District Council provides adequate information on the proposed level of treatment of wastewater and the effectiveness of proposed land disposal and ongoing monitoring to establish that there will be no risk of contamination of ground and surface water or the open coast.
- That Regional Council completes a detailed peer review of all technical information and reports provided by Whakatane District Council for the proposal and provide a copy of the findings of that peer review to TRONA.

Te Toangapoto is currently unavailable to Ngati Awa as the area is land locked. The property currently suffers from illegal camping and dumping and is being used for stock grazing by the adjacent farm. Te Runanga o Ngati Awa considers the provision of controlled vehicle access to Te Toangapoto to be necessary for Ngati Awa to realise the potential of this 10 hectare coastal reserve. At the time of completing this initial assessment TRONA has been advised that the preferred alignment option for the access road (through the Robinson property) has proved difficult and an alternative is being scoped via Walker Road further to the east. TRONA understands this will be confirmed in the final layout of the proposal and will assess the implications of the alternative route at that time.

Te Runanga o Ngati Awa requests that Whakatane District Council use this process to rectify existing private property issues with regard to the informal sand road that provides vehicle access along the eastern bank of the Tarawera River to the river mouth. The road provides public access to the coast and is frequently used by recreational fishers including nga uri o Ngati Awa. The road also provides access to the Otaramuturangi Urupe, which is a traditional burial ground.

Te Runanga o Ngati Awa requests the opportunity to conduct karakia prior to the commencement of works for the Matata wastewater scheme. Te Runanga o Ngati Awa will also request that an accidental discovery protocol is adopted and applied to all excavation works for the proposed Matata wastewater reticulation scheme, treatment plant, transfer pipeline and disposal field. This is likely to include a request to have a cultural monitor appointed for disturbance works in areas of significant cultural value or interest. As the area is of shared cultural interest with neighbouring Iwi,

Ngati Awa is willing to consider the development of a combined accidental discovery protocol with Tuwharetoa ki Kawerau and Ngati Rangitahi.

This correspondence was prepared by Ray Thompson, Portfolio Manager Environment, Te Runanga o Ngati Awa. If you have any queries, please contact the undersigned.

Naku noa, na



Ray Thompson
**ENVIRONMENTAL KAITIAKI TE RUNANGA O NGATI AWA
FOR CHIEF EXECUTIVE**

Copy to: Pouroto Ngaropo (Senior Cultural Advisor, TRONA)
Te Runanga o Ngati Awa
P O Box 76
WHAKATANE 3158

Copy to: Manu Glen (TRONA Board Representative)
Ngai Te Rangihouhiri II
P O Box 438
WHAKATANE 3158

Copy to: Stanley Ratahi (TRONA Board Representative)
Ngati Hikakino
50B Wano Road
RD 1
WHAKATANE 3191



Ngati Awa GIS Database: Matata Township







Ngati Awa GIS Database: Tarawera Mouth Properties



Waste Water Reticulation Scheme with Disposal Field (4 Ha)
 Scale: 1:18,094.12
 Author: CB

Waikato District Council
 Path: G:\DATA\GIS\Projects\Map\Utilities\Matahuna\Water\Disposal.mxd
 Date of issue: 23/08/2013

Based on the 2008, 2009, 2010, 2011, and 2012 aerial photography for the area. The Waikato District Council (WDC) has reviewed all relevant aerial photography and other data available to it and has determined that the information is accurate and reliable. The WDC does not warrant the accuracy or reliability of the information and does not accept any liability for any loss or damage arising from its use. The information is provided for your information only and should not be used for any other purpose. The WDC is not responsible for any loss or damage arising from its use.





Te Mana o Ngāti Rangitahi Trust
3 Onewairere Place
Matatā
PO Box 831
Whakatāne 3158
P: +64 7 322 2452
F: +64 7 322 2453
E: info@ngatirangitahi.iwi.nz
W: www.ngatirangitahi.iwi.nz
FB: www.facebook.com/ngatirangitahi

24 September 2013

Attention: Inka Krawczyk

Project Manager

Whakatāne District Council

Private Bag 1002

Whakatāne 3195

Tena koe Inka,

Te Mana o Ngāti Rangitahi Trust's Response to the Proposed Matatā Wastewater Scheme Project

Thank you for entering into consultation with Te Mana o Ngāti Rangitahi Trust (TMoNRT) in respect to the proposed Matatā Wastewater Scheme Project. We note that there have been a number of meetings with the Chief Executive in the initial stages of development of a proposal. We also acknowledge that Council is anticipating receipt of a hydrogeological report which TMoNRT wishes to receive before it can conclude its response and Cultural Impact Assessment of the proposed activity.

In the interest of expediency, we provide the following partial response based on the information provided as at today's date.

This letter therefore forms an interim response on behalf of TMoNRT noting that upon receipt of the hydrogeological report TMoNRT will assess whether the report findings in respect to potential effects of treated wastewater disposal at the proposed coastal site will

have a more than minor adverse effect on groundwater, surface water and coastal waters in proximity to that disposal site.

That Matatā 6A is a private Maori land block who have persons of Ngāti Rangitahi descent as registered beneficiaries. It is this block that is proposed for lease and use by Whakatāne District Council as the solid waste treatment site known in the project as site 'G'.

Ngāti Rangitahi and the Matatā 6A Trust are therefore affected parties in respect to the proposed wastewater system project.

Te Mana o Ngāti Rangitahi Trust

TMoNRT is a Post Settlement Governance Entity (PSGE) established as Common Law Trust to administer assets derived via the Central North Island Iwi Collective Settlement (CNI). TMoNRT is governed by elected members onto the Board of Trustees established in September 2009.

The Trust Deed mandate for TMoNRT (in addition to exercising stewardship over the CNI settlement) seeks to ensure that:

- Ngāti Rangitahi is enabled to flourish in perpetuity, supported by their unique self-determining capabilities
- The mana of the iwi is upheld, developed and organised
- The iwi resources are identified and optimised
- The survival and growth of the iwi is enabled (including: cultural, economic, social, spiritual, environmental and political survival and growth)
- The iwi whānau support networks are developed and maintained; and
- The iwi members capacity to be self-reliant is enhanced

TMoNRT regularly works alongside its neighbour iwi and local, regional and central government authorities in social, cultural, environmental and economic matters.

Iwi Environmental Management Plan

Te Mahere ā Rohe mō Ngāti Rangitahi – Ngāti Rangitahi Iwi Environmental Management Plan 2011 (the Plan) was lodged with the Whakatāne District Council (9 February 2012) and the Bay of Plenty Regional Council (23 February 2012).

The New Zealand Planning Institute awarded TMoNRT the Nancy Northcroft Planning Practice Award: Supreme Practice Award for TMoNRT – Iwi Environmental Management Plan, May 2013.

TMoNRT was also the recipient of the Best Practice Award: Non-Statutory Planning for the Iwi Environmental Management Plan, May 2013.

The Plan is a key tool in responding to resource management matters including resource consents, designations and district/regional plan reviews.

Kaitiakitanga

The Plan recognises kaitiakitanga (active guardianship) and the duty of Ngāti Rangitahi to sustain the mauri of natural and physical resources and; to protect and preserve conservation values within areas of cultural interest to Ngāti Rangitahi, constant with s5(c) and s7(a)(aa) of the Resource Management Act 1991 (the Act).

The Regional Policy Statement, 2010 (RPS 2010) supports the implementation of policies and objectives from Iwi Environmental Management Plans. The RPS (2010) asserts that Iwi Environmental Management Plans can assist local authorities with undertaking their obligations under Part II of the Act 1991, and that a precautionary approach should be taken to activities with potentially significant adverse effects on ancestral taonga (Policy IW8D).

Integrated Resource Management

Integrated resource management refers to relationships between iwi, agencies, users and their values, legislation, policy statements, plans, resource consents and other mechanisms, which enable the promotion of sustainable resource management.

Effective and efficient resource management requires taking an integrated approach and working with other parties. It also requires taking a non-regulatory approach to achieve desired outcomes. Taking an integrated resource management approach ensures the districts communities are not caught unprepared by sudden or cumulative changes either in the environment, or in the pressures and demands on resources.

TMoNRT encourage and promote an integrated resource management approach which incorporates a holistic view that looks beyond organisational, spatial or administrative boundaries. For integrated management to be effective and efficient it requires a coherent and consistent approach with agencies involved in resource management working together in a collaborative manner.

Consultation Process

In the initial planning stages for the project Whakatāne District Council met with the Chief Executive Officer for TMoNRT to discuss possible options for a proposed reticulated wastewater system for Matatā Township. The Chief Executive introduced the possibility that land owned by Matatā 6A Trust would be available for a solids treatment station. Other consultation dates to be noted would include but not be limited to:

- **February 2 2012** The Environmental Manager for TMoNRT at the time spoke with the then Manager of Utilities that TMoNRT is the leading iwi for the Proposed Matatā Waste water Project

- **June 2012** WDC consulted with Matatā property owners by way of a questionnaire
- **June 01 2012** WDC contacted Kura and Harina via e-mail attaching three (3) documents detailing the process WDC intend to follow to reassess the need for a wastewater reticulation and treatment system in Matatā
- **July 31 2012** WDC conducted a meeting at the Matatā Football Club to discuss the On-site effluent Treatment regional Plan 2006 Proposed Plan Change 2 (Maintenance Zones)
- **August 01 2012** Report sent out on the Matatā wastewater project review
- **February 20 2013** Article in the Whakatāne Beacon 'Full Sewage Plan Would Raise Rates
- **March 15 2013** Site visit conducted by WDC to the Maketu/Little Waihi Wastewater Treatment site, attended by members of the Matatā community and Council members
- **March 19 2013** Community consultation meeting at the Matatā Rugby and Football Club

Recommended Mitigation Measures

TMoNRT wish to point out the main concerns and mitigating measures we recommend be imposed as consent conditions on any consent granted.

- Impose by way of consent conditions the Accidental Discovery Protocol for Koiwi and Taonga Tuturu (copy of report attached) as a means of providing for their accidental discovery during earthworks
- Employ a cultural monitor that can be present during all earthworks activities and thereby able to initiate the giving effect to the Accidental Discovery Protocol, collecting of Koiwi or artefacts and storing them in an appropriate location until such time as iwi can discuss and agree their re-interment, custody or long term ownership for which confirmation through processes required by the Protected Objects Act (2006) will be applied
- Use flexible pipe materials resilient in earthquakes events
- Use double pipes crossing water-bodies are located on bridges where they are least likely to be affected by river flooding effects or tidal surge events
- Ensure odour issues are mitigated, particularly where there is potential for odours to affect Oniao, Rangiaohia and Umutahi Marae by:
 - Refraining from use of open ponds at site 'G', or by minimising the size of open ponds
 - Locating the solids treatment site within a buffer that provides screening for ponds and all structures at site 'G' using native planting that will minimise adverse visual effects
 - Joining all three marae to the reticulated system

- That the Wahieroa settlement blocks SO 331003 and SO 332912 being owned by Ngāti Awa and Ngāti Tuwharetoa respectively be protected visually from site 8 through planting of a buffer strip with coastal kanuka or relevant species adapted to coastal conditions
- Provide appropriate roading access to all parts of the proposed treatment system including to the beach proper
- Protect Otaramuturangi Urupa from any actual or potential adverse effects from the proposed activity by fencing the access way, which veers from the eastern side of the Tarawera River towards site 8, on either side for security purposes and privacy.
- Note that TMOVRT wishes to discuss any opportunities for employment that might arise at times when planting of site 'G' and site 8 is required, or for on-going maintenance of the system, should that work become available to local contractors
- That TMOVRT shall be allowed full unprohibited access to either of the sites for monitoring purposes
- That monitoring of the pipeline which carries the wastewater from 'Matatā 6A' to site 8 is monitored for any leakage on a monthly basis.
- TMOVRT advise that hydrogeological examinations be carried out four (4) times during the year on pre-determined areas, and reports to be directed to TMOVRT in the first instance
- That seasonal variations be taken into consideration i.e. the effects of permeation especially after long dry periods and extreme wet spells, when hydrological testing is to be conducted
- If contamination of our coastal waters is detected through hydrogeological examinations operations will cease immediately
- That the coastal area is of significance for the gathering of tuatua (*Paphies subtriangulata*) and that contamination of this resource is unacceptable

Conclusion

Te Mana o Ngāti Rangitahi awaits the hydrogeological report and will complete its cultural impact assessment once it is in hand.

Our hope is that the hydrological report will demonstrate that the volumes of treated wastewater to be disposed at site 8 will not have any more than minor adverse effects (if any) on groundwater, surface water and coastal waters in the vicinity of the disposal site.

While it is not possible at this time to conclude this cultural impact assessment, TMOVRT anticipates this will be achievable upon receipt of the hydrological report.

At this stage however, TMOVRT wishes to express its support (**in principle**) for the proposed activity on the basis that it will provide for improved treatment and management of effluent disposal in the Matatā Township using significant grants from central and regional government that will contribute significantly to reducing the cost to the Matatā community

while providing for improved human health in our area. We note that Ngāti Makino has expressed support for TMONRT's approach to this matter.

Should you require any further information about the contents of this letter, please direct your enquiries to Christopher Clarke in the first instance.

Nga mihi

Anthony Olsen

Chief Executive



22 October 2013

Attention: Inka Krawczyk

Project Manager
Whakatane District Council
Private Bag 1002
Whakatane 3195

Tena koe Inka,

Ngati Tuwharetoa (Bay of Plenty) Settlement Trust ("NTST") Interim Response to the Proposed Matata Wastewater Scheme Project

Thank you for your engagement with NTST on the proposed Matata Wastewater Scheme Project.

Our latest meeting was at the site visit of 7 October 2013 with Reverend Graham Te Rire (Cultural Adviser, NTST), Mrs Elaine August (Trust Manager, NTST), Jessica Wiseman (Ngati Tuwharetoa Holdings Ltd), Mr Skip Grant Savage (Chairman, Oniao Marae Trust), Mrs Mere Savage, Mrs Whaiora Brown and Ms Beverley Hughes.

At this stage we are unable to provide a Cultural Impact Assessment as we have not yet received:

- A copy of the URS Hydrogeological Report including base line information relating to ground and surface water quality and flow-path information, soil saturation information and a description of effects of the proposed treated wastewater dissipation site on the adjacent Ngati Tuwharetoa coastal property;
- Information identifying the outcomes of consultation with Oniao and Umutahi Marae;
- Information in relation to the re-routing of the pipeline (Walkers Road) and the proposed small aeration ponds.

We will supply our Cultural Impact Assessment after receipt of this information from Council.

We recommend Council shows us the outcomes of consultation with Oniao and Umutahi Marae Trustees, so that we can take their comments into account in our Cultural Impact Assessment.

We do this in acknowledgement of the autonomy of each of the Marae and in our having expressed willingness to take their views into account in our Cultural Impact Assessment.

In the meantime we supply this interim correspondence to Council on the understanding that this is an interim response only, and is not a Cultural Impact Assessment.

This interim response outlines our understanding of the proposed activities as they currently stand, and is submitted now because we understand that unless Council progresses the tender process by December 2013, it will be required to return significant grants for the scheme to central and regional government funding agencies.

Description of the Proposed Matata Wastewater System Project

We note that Council is currently finalising its Assessment of Environmental Effects and Resource Consent Applications and that information provided to us so far may change.

At this stage we can only reflect our understanding of the proposed activities as they currently stand, so you can update us of any further changes we should assess when we prepare our Cultural Impact Assessment.

From the information provided (to date) we understand Council proposes to install a pressurised reticulated wastewater system for all existing household lots and marae at Matata. The proposed system will involve:

- property and street treatments;
- a piped conveyance system;
- solids and wastewater treatment plant at proposed site 'G';
- transport and disposal of solids to vermi-casting at Kawerau (or at Whakatane if worm farm is relocated); and
- treated wastewater.

Property and street treatments

In Matata, Council proposes to install at all lots (as well as Oniao, Umutahi and Rangitihi Marae, at the Trustees discretion) – underground tanks and necessary fittings, power connections for a pressurised pump to pipework for to regulated street check valves and from there by regulated pressurised pumping to the wastewater treatment plant at site 'G'.

The regularity of pumping each street will be computerised to maintain pressure in the systems pipelines and provide for regular clearance of household tanks and to manage pressure in the overall system.

Conveyance system

Conveyance is proposed to be by flexible, earthquake resilient polyethylene pipe (commencing in a 50mm diameter roll of pipe that graduates to 100mm diameter sections of pipe, with all joints welded). Pipes would be laid along relatively flat terrain and at a shallower depth (between approximately 50cm– 70cm).

Council advised that where pipes approach and cross waterways the pipes will be doubled-sleeved to avoid rupturing and spilling wastewater into waterways. Council advised pipes would be located on bridge structures in places where they are at least risk from flood or tidal effects.

Solids and wastewater treatment plant at proposed site 'G'

At site 'G', it is proposed to install a solids dewatering system involving semi-subterranean, sealed tanks where solids are held and dewatered. Solids will be accumulated, stored and removed on a weekly basis to an existing vermi-casting operation currently operating in Kawerau but possibly transferring to Whakatane.

It is proposed that at Site 'G' the treatment plant will be located within a 150m x 150m buffer area that can be grazed. Within this area would be a smaller 80m x 80m area enclosure, fenced and planted with native species to provide visual screening from the treatment plant structures.

Council advised it will seek imposition of consent conditions that limit offensive odour to within the limits of these site 'G' buffers.

Council sought advice on whether it might include two small aeration ponds like those at Maketu. While further consultation on ponds is invited, at this stage NTST and Oniao Marae Trustees that undertook the site visit with Ms Hughes prefer that there be no ponds installed at proposed site 'G'.

Treated wastewater disposal

Treated wastewater is proposed to be conveyed by pipes (as described above) to the proposed treated wastewater dissipation site just east of our land called Te Wāhioroa near the coastline.

We understand from Ms Hughes that Council will re-route the proposed pipeline to a place that may avoid any effect on Otaramuturangi Urupa. We seek consultation with Council on that matter to achieve certainty about the proposed new route so we may provide our advice on that matter in our Cultural Impact Assessment.

The treated wastewater site is within a 32.4ha parcel owned by Whakatane District council. We understand the disposal site has a maximum capacity of 4ha to accommodate wastewater from twice the current population of Matata town.

It is proposed that subterranean drippers will be installed at a depth of about 60cm within this area. Drippers will be organised into cells that can be switched on and off to manage soil saturation, A Wildland's Report has identified a variety of ecologically appropriate native species that will be planted over the site.

An area of Council reserve adjacent to the proposed 4ha land disposal site will be retired from, grazing and planted with eco-sourced kanuka.

Waahi Tapu and Waahi Taonga

NTST notes that earthworks will be undertaken through the proposed scheme. Earthworks, whether shallow or deep, have potential to adversely affect recorded and unrecorded sites of cultural, historic heritage and archaeological value.

There is also a potential that koiwi (human remains) and/or taonga tuturu (artefacts) can be discovered during earthworks.

NTST is also party to a Protocol with the Ministry for Culture & Heritage that entitles NTST to engage with the Ministry in the event taonga tuturu are discovered in areas with NTST has relationships.

All of the areas in which earthworks are proposed fall into this category.

Summary

Ngati Tuwharetoa (BOP) Settlement Trust awaits the hydrogeological report, information identifying the outcomes of consultation with Oniao and Umutahi Marae, and information in relation to the re-routing of the pipeline (Walkers Road) and the proposed small aeration ponds.

Once this information is in hand we can prepare our Cultural Impact Assessment and provide it to Council.

Should you require any further information about the contents of this letter, please contact me by telephoning 07 323164, in the first instance.

Naku noa na



Elaine August

Trust Manager

Copied to:

Grant Skip Savage
Chairman Oniao Marae Trust
C/- 5 Apollo Place
Sunnybrook
Rotorua

Jim Rota
Chairman Umutahi Marae Trust
12 Pakeha Street
RD 4
Matata 3194

Appendix 3

Accidental Discovery Protocol

ACCIDENTAL DISCOVERY PROTOCOL FOR EARTHWORKS ACTIVITIES UNDERTAKEN IN THE CONSTRUCTION OF THE MATATA WASTEWATER SCHEME

Introduction

This Protocol for Accidental Discovery of Kōiwi or other Taonga specifically relates to earthworks activities undertaken in the construction of the Matata Wastewater Scheme as outlined in consents sought by Whakatane District Council in December 2013.

This Protocol is agreed by Te Mana o Ngati Rangitihi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Whakatane District Council to be imposed by consent condition on any consent granted.

This Protocol is collaboratively designed by iwi to enable their exercise of kaitiakitanga in respect to waahi tapu and waahi taonga. In it iwi identify actions to be given effect in the event of disturbance or discovery of known or unknown sites of cultural significance.

In developing this Protocol Te Mana o Ngati Rangitihi, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa have considered the following:

- The Protected Objects Act 1975 requirements for found objects or taonga tuturu
- Historic Places Act 1993 requirements for damage, destruction and modification of historic sites (whether known or unknown)
- Protocols with the Ministry for Culture and Heritage contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005
- Protocols with the Historic Places Trust contained in Ngati Tuwharetoa BOP Claims Settlement Act 2005 Act and Ngati Awa Claims Settlement Act 2005
- Section 6(e) of the Resource Management Act 1991 Matters of national importance as identified in iwi management plans and recognised in regional and district planning instruments relevant to the proposed consents

1.0 Purpose

The purpose of this Protocol is:

1. To manage and protect the integrity of 'known' and 'unknown' waahi tapu, waahi taonga, archaeological and historic sites from unmitigated damage, destruction and modification
2. To maximise the opportunity to identify physical and archaeological evidence from disturbed sites
3. To obtain evidence of the lives, activities, food and resource use, trails and sites of pre-European Maori occupancy where such sites are disturbed or discovered during the proposed works

4. To enable study of sites and found items to enrich iwi and New Zealanders understanding of our country's historic heritage
5. To ensure that the management of any Kōiwi or other Taonga discovered is appropriate and undertaken in adherence with the actions identified here by Te Mana o Ngāti Rangitihi Trust, Tuwharetoa BOP Settlement Trust and Te Runanga o Ngati Awa.

Recognising and Providing for Waahi Tapu and Taonga Tuturu

Iwi proposed and Whakatane District Council agreed to:

- Adopt this Protocol as a condition of consents granted
- Employ a Taonga Tuturu Monitor and
- Require earth-workers to be trained how to recognise a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery.

3 hour Training Workshop for Earth Workers

The 3 Hour Training Workshop will be conducted by persons recommended by iwi and an experienced and qualified archaeologist.

Persons required to participate in the workshop include:

- Taonga Tuturu Monitor
- Earth-workers, pipeline trench workers and site managers

Others to be invited to participate in the workshop are:

- An archaeologist from the Historic Places Trust (who may wish to provide the archaeological training component)
- Kaumatua and pukenga invited by Te Mana o Ngati Rangitihi, Ngati Tuwharetoa (BOP) Settlement Trust, and Te Runanga o Ngati Awa
- NZ Police (CIB Detective Senior Sergeant Greg Standen)
- Curator Whakatane Museum
- Maori Liaison staff from Whakatane District Council and the Bay of Plenty Regional Council

The focus of training will be recognition of a significant site, koiwi and taonga tuturu and how to give effect to this Protocol in the event of such a discovery. Practical application of the Protocol is the key focus for training.

Taonga Tuturu Monitor

A Taonga Tuturu Monitor shall be employed by Whakatane District Council to monitor, act in accord with this Protocol and report any discoveries during earthworks.

The Taonga Tuturu Monitor shall be present during earthworks relating specifically to:

- The access-way to the proposed treatment plant
- Site preparations for the proposed treatment plant site at Allotment 6A Matata Parish
- The access-way to the proposed disposal site at Part Allotment 273 Rangitaiki Parish
- Site preparations and installation of dispersal drippers at the proposed disposal site

The Taonga Tuturu Monitor will liaise with and support earth-workers and site managers in the giving effect of procedures identified in this Protocol.

Key Tasks for the Taonga Tuturu Monitor include:

- Being present and available to give effect to this protocol during earthworks at sites specified above
- Being on-call and available to provide a rapid response that gives effect to this protocol in the event that pipeline trench workers discover a potential site
- Carrying out the activities identified in this Protocol in close cooperation with site managers, and where necessary or appropriate with kaumatua, pukenga, NZ Police (where koiwi are discovered) and archaeologists.

Procedures if Kōiwi or other Taonga are Unearthed

The following procedures will be adopted in the event that kōiwi or taonga are unearthed or are reasonably suspected to have been unearthed during the course of operations.

1. Immediately it becomes apparent or is suspected by workers at the site that kōiwi or taonga have been uncovered, all activity in the immediate area will cease
2. The plant operator will act with caution by shutting down all machinery or activity in the immediate area to ensure that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Site Manager or the onsite supervisor
3. The Site Manager or on-site Supervisor shall take immediate steps to secure the area in a way that ensures that kōiwi or taonga remain untouched as far as possible in the circumstances and shall notify the Taonga Tuturu Monitor.

IMPORTANT NOTE:

NZ POLICE (CIB) MUST BE CALLED TO ATTEND KOIWI DISCOVERY BUT DO NOT ATTEND WHEN ARTEFACTS ARE DISCOVERED

Where koiwi are discovered it is important to ensure Whakatane Policy Station has been contacted and Criminal Investigations Branch called to the scene.

The Whakatane Police Station can be contacted by telephoning 07 30 85 255

It is likely the officer attending the scene where koiwi have been discovered will be Detective Senior Sergeant Greg Standen.

NZ Police will have priority when attending a scene where human remains have been discovered. Police do NOT attend a scene where artefacts have been discovered.

4. The Taonga Tuturu Monitor will:

- a) Seek advice from iwi to guide and advise Site Managers and any other parties as to the appropriate course of action to be taken and the identity of persons to involve as appropriate to the circumstances
- b) Upon the advice of iwi contact kaumātua from Te Mana o Ngati Rangitahi, Ngati Tuwharetoa BOP and Te Runanga o Ngati Awa and an archaeologist from the Historic Places Trust providing a description of the find and seeking their advice as to whether they consider it necessary to immediately request Kaumatua, Pukenga, archaeologist and/or the NZ Police attendance at the scene
- c) Ensure the find area is secure and available for inspection by Kaumatua, Pukenga, archaeologist and/or the NZ Police and for photographic recording by the archaeologist should a decision be reached to request attendance at the scene
- d) In the event it is considered by the Taonga Tuturu Monitor and archaeologist unnecessary for kaumatua, Pukenga (and the NZ Police where koiwi only are discovered) to attend the scene, the Taonga Tuturu Monitor and archaeologist will record, photograph and report the potential findspot including reasons why attendance was not required
- e) Take photographs of the find site to share with iwi and others and ensure the archaeologist and site manager have recorded GPS co-ordinates for the site should it be confirmed by the archaeologist the site is a newly discovered site
- f) Take photographic records of any taonga tuturu and the find spot
- g) Collect and retain custody of any koiwi in a suitable receptacle to be located at
into the care of until the completion of the works upon which time iwi will hui to deliberate on the appropriate place for re-interment of koiwi
- h) Upon the discovery of taonga tuturu the Taonga Tuturu Monitor and archaeologist shall photograph the taonga and findspot and record the circumstances of the find. The archaeologist will, in compliance with the Protected objects Act 2007, register the taonga tuturu with the Senior Advisor Heritage Operations at the Ministry for Culture and Heritage, and with each iwi. The Archaeologist will seek from the Ministry for Culture and Heritage approval to place the taonga tuturu into the interim custody of the Whakatane Museum in order to enable subsequent claims for custodianship and ownership to be lodged by iwi with the Ministry of Culture & Heritage (in compliance with Taonga Tuturu Protocols between settled iwi and the Ministry) while also providing for the enablement of processes under the POA that require decisions from the Maori Land Court as to custody and ownership in perpetuity.

5. In the event of a significant find and consequential attendance at the scene the Site Manager shall ensure that kaumātua, Pukenga, the archaeologist and Taonga Tuturu Monitor are given the opportunity to undertake karakia (prayer) and any such other cultural ceremonies and activities at the site and affected workers, in accordance with tikanga Māori
6. Activity in the immediate area will remain halted until kaumātua, the Police and Historic Places Trust (as the case may be) have given approval for operation in that area to recommence. In the event that rua (caves), pits or other archaeological features are discovered, a comprehensive report, inclusive of photographs are to be taken and labelled by the archaeologists with copies sent to Te Mana o Ngāti Rangitahi Trust, Ngati Tuwharetoa BOP Settlement Trust, Te Runanga o Ngati Awa and the Historic Places Trust, NZ Archaeological Association File-keeper and the Heritage Co-ordinator at the Bay of Plenty Regional Council
7. At the conclusion of the proposed works a Hui-A- Iwi will be convened by the Taonga Tuturu Monitor at the expense of the applicant at which reports on any discovery of koiwi and or taonga tuturu will be provided including the location of protected objects held in the interim custody of the Whakatane Museum and for koiwi held in the interim custody of
.....

The purpose of the hui will be to:

- Provide for the Taonga tuturu monitor to request iwi deliberation, decision-making and implementation for the re-interment of koiwi
 - Be notified of the process required by the Protected Objects Act 2007 administered by the Ministry for Culture and Heritage and determined by the Maori Land Court to enable iwi to make claims for ownership and custodianship in perpetuity for taonga tuturu.
8. The applicant will cover all expenses relating to the implementation of this Protocol including those incurred by kaumātua, Pukenga, the archaeologist and iwi attendees.
 9. This Protocol is agreed by the parties to cover accidental discovery of a find or several finds during proposed works. Agreement is demonstrated by the affixing of signatures below of those authorised to sign on behalf of their respective organisations:

TE MANA O NGATI RANGITHI TRUST

Signed:

Authorised Representative for Te Mana o Ngati Rangitahi

Contact Details for Ngati Rangitahi contact is:

Chris Clarke, Te Mana o Ngati Rangitahi, 07 3222 452, 3 Onewairere Street, Matatā

NGATI TUWHARETOA BOP SETTLEMENT TRUST

Signed:

Authorised Representative for Ngati Tuwharetoa BOP Settlement Trust

Contact details for Ngati Tuwharetoa BOP Settlement Trust are:

Trust Manager: Elaine August, PO Box 334, Waterhouse Street Extension, Kawerau 3169.

Phone: 07 323 4164 Email: eaugust@ntst.co.nz

TE RUNANGA O NGATI AWA

Signed:

Authorised Representative for Te Runanga o Ngati Awa

Contact details for Te Runanga o Ngati Awa are:

Ray Thompson, Environmental Kaitiaki, PO Box 76, 4 – 10 Louvain Street, Whakatane,

Phone 07 30 70 760

WHAKATANE DISTRICT COUNCIL INFRASTRUCTURE

Signed:

Authorised Representative for Whakatane District Council Infrastructure

Private Bag 1002, Whakatane 3165

DEFINITIONS

Kōiwi means human remains such as skeletal material

Taonga - a cultural artefact from which people can gain a greater understanding of the way that pre-European Maori lived. Cultural artefacts include implements, weapons or decorations, traditionally and historically utilised by tangata whēnua and includes parts or the remains thereof.

Archaeological features such as rua (caves) and pits are also tāōnga.

Archaeological site means any place in Aotearoa, New Zealand that;

(a) Either:

(i) Was associated with human activity that occurred before 1900; or

(ii) Is the site of the wreck of any vessel where that wreck occurred

before 1900 and

(b) is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand (Historic Places Act, 1993).

Archaeological features and remains can take the form of burnt and fire cracked stones, charcoal, rubbish heaps including shell, bone and/or 19th century glass and crockery, ditches, banks, pits, old building foundations, artefacts of Ngāti Rangitihī origin, or human remains.

Site means the relevant location within the land development area.

Historic Places Act and Requirements - In addition to any requirements under the RMA 1991, The Historic Places Act 1993 protects all archaeological sites whether recorded or not, and they may not be damaged or destroyed unless an Authority to modify an archaeological site has been issued by the New Zealand Historic Places Trust (NZHPT).

Taonga tūturu means an object that—

(a) relates to Māori culture, history, or society; and

(b) was, or appears to have been,—

(i) manufactured or modified in New Zealand by Māori; or

(ii) brought into New Zealand by Māori; or

(iii) used by Māori; and

(c) is more than 50 years old

Appendix 4

10 September 2013 at Whakatane District Council

10am to 11.20am

WDC Further Consultation with David Potter and Andre Patterson regarding Matata Wastewater Scheme Project

[These Draft Notes are prepared by Beverley Hughes from handwritten notes she took at the meeting. They are provided in draft form to be available for participant's consideration and amendment to ensure accuracy and to achieve a common understanding of the ideas shared at the meeting. It should be noted the meeting was undertaken on a 'without prejudice' basis.]

Meeting convened by Inka Krawczyk

Present:	Andre Patterson	AP
David Potter	DP	
Inka Krawczyk	IK	
Tom Krawczyk	TK	
Santha Agas	SA	
Beverley Hughes	BH	

Inka

Welcome and thank you for coming. This is our second engagement on the proposed Matata Wastewater Project. At this stage we are awaiting the hydrological report – as yet incomplete, but arriving at the end of the month, hopefully. Once it arrives it can be shared with you.

At this stage our applications for resource consents and Assessment of Environmental Effects are not complete and ready for lodgement.

Here are copies of maps and our latest presentation for your further information.

Inka explained the following about the proposed scheme:

- Matata town will be reticulated
- Waste will be pumped to site 'G'
- Site 'G' was offered by the Trustees for the land
- A hui was held on the 21/8/2013 at which it was agreed the land could be used provided, as was agreed, visual mitigation by locating the wastewater treatment plant (see picture) in a footprint of approximately 50mx50m area – 80mx80m within a larger 150mx150m buffer area which will be leased. The buffer area may still be grazed and will provide for visual amenity, security of the system and contribute mitigation of any potential (but unlikely)

odour or noise issues. (The hui on the 21/8/2013 included Paora Hunia for the Marae, and with Anthony Olsen for the Land Trust. Hi Inka – a reference to an attendance register may be useful here?)

- Structures on site 'G' will be located beyond a high dune that runs between Oniao Marae and the site. This will aid visual screening of the site from the marae.
- There is a paper road on the Burt property they have agreed can provide access to site 'G'
- The route for the access road is also beyond that high dune system and this will provide for visual screening and security of the access road.
- The Maketu Treatment System shown in the presentation material is similar – though the option WDC is considering may not have ponds as seen in that example
- Sludge is processed in airtight containers for transport to Kawerau though at this juncture we are also considering the sludge may be eventually transferred to Whakatane Greenwaste area if approvals for that activity at the Whakatane sewage plant are achieved. At this stage we are still uncertain about that proposition and no particular decisions have been made at Council in respect to that at present.
- Treated wastewater will be piped along the state highway and an access road (see presentation) to the proposed 4ha treated wastewater disposal field
- It will pass Otaramuturangi Urupa and TRONA has agreed to allow the pipeline and access roadway to cross inside the boundary of their property to reach the 4ha disposal field
- At the disposal field the treated wastewater will drip from drip-lines that are 10 – 50cm underground on that 4ha disposal field
- Water permeability testing of the soils at the site is not yet complete but will be completed
- At this stage it is planned to divide the disposal field drip-lines into cell-type areas so the saturation of the disposal field can be actively managed
- A Wildland's Report has been prepared which recommends native sedges, grasses and other vegetation to establish at the disposal field
- Kanuka of the variety native and unique to the WDC coastal reserves is being re-established on the reserve adjacent to the proposed 4ha treated wastewater disposal field
- That part of the reserve is currently grazed so retirement from grazing and re-establishment of kanuka is considered an improvement

DP thanked Inka for the material sent and this update also.

He asked what type and size of pipe will be used?

TK/SA Starting in Matata with 50mm polyethylene pressurised pipe (in a continuous roll where size permits) graduating to 100mm width (to maintain pressure). 50mm in a roll. 100mm in sections. All joints will be welded. The wider pipe will come in sections and joints will be welded.

DP How flexible is the pipe?

TK/SA Very flexible. The pipes will need to be flexible to resist earthquake effects.

DP Thanks. I mention this because at Jennings Farm where the Matata water supply comes, more rigid pipes used there cracked during the 1987 Edgecumbe earthquake. A more flexible pipe would be a good idea.

IK Thank you. Yes. WDC appreciates the need for earthquake resistant materials and will be using flexible pipe in this project.

AP A good thing is there are now more modern materials available than when those works were carried out. We don't want to end up like Mangawhai up North.

SA This is why WDC wants to make its investigations of the proposal up front '

DP I'm a bit worried about any over-run on costs. We know this area very well. There are a lot of boulders under the ground through here which may affect installation.

SA/TK We propose to install the pipes at a relatively shallow depth - <500mm underground. The relatively flat gradient provides a gravity assisted flow (with a pressurised system also as we are not just relying on gravity). We think we can do it without having to go too deep, which is when it gets expensive. We think we should be able to cope with any boulders as we will be able to go around them.

SA We looked at a (solely) gravity system but it is more expensive because the pipes would need to be deeper.

TK With the system we propose we will promote with householders their avoiding connecting the roof water supply to the system as this would overload capacity. Some households are connected and we will need to advise them to disconnect because they would also incur (and probably notice) higher costs in their electricity bills for the power used to pump additional water.

We have assessed annual electricity costs for pumps per household to be between \$25 and \$40.00.

AP I understand you are anticipating overall annual rating costs per household at below \$400? I think that's quite a reasonable cost.

SA/TK/IK

Yes – that's correct – using the similarities of the system at Maketu as an example for working out costs we arrived at around \$400 per household per annum, including maintenance costs of \$150pa and trucking sludge to Kawerau

AP Some time ago WDC did some work on alternatives and included costing for pumping to Edgecumbe and if the option being considered for Edgecumbe pumping to Kawerau have you forecast costs for those systems over the next 30 years?

[My understanding is that at this part of the meeting Andre was interested to know whether a rationalised approach that would resolve issues at Edgecumbe sewage plant and its adverse effects on the Tarawera River may be presenting through central government and regional council sponsored works proposed at Matata].

TK In February Regional Council reminded WDC the Regional Tarawera River Management Plan regulating discharge to the Tarawera River is due for review and WDC may face issues with the discharges from the Edgecumbe system into the Omeheu Canal which empties into the Tarawera River. Regional council suggested Kawerau treatment plant as a possible destination to pump Edgecumbe and possibly Matata Sewage. WDC has asked OPUS to develop a paper that considers the options of rationalising the systems in some way including exploration of the following options:

Matata and Edgecumbe waste pumped to Kawerau

Matata only pumped to Kawerau

Edgecumbe only pumped to Kawerau

Matata and Edgecumbe pumped to Whakatane System noting this last option looks like it might be cheapest of those options because of height and topography pumping to Kawerau – literally pumping uphill to Kawerau.

SA Another problem with pumping to Kawerau is that it costs \$1 per cubic metre to pump, and it is pumping uphill

TK WDC consider it is better to complete the Matata system on its own and for there to be an upgrade of the system at Edgecumbe

AP The reason we are concerned is that we are making application under the Coastal Marine Act and will be opposing any method that will discharge wastewater into water because it will reach the coastal waters also. Likewise we will be opposing NST discharge to the river which reaches the coast. Edgecumbe has to be upgraded in future.

SA We are keeping the systems separate for now as it is cheaper

TK The whole district will be contributing to the Matata System

AP Is the grant from central government free?

IK Yes – the grants from central government and regional council do not have to be repaid. The cost to the Whakatane district is \$2m and that is what the district community rates will cover. It is distance to the treatment plants that increases cost also.

TK Also, the material stays in the pipelines longer if it has to travel longer distances and it becomes my putrid as it gets closer to the treatment plant because it has stayed in the pipes

longer. This contributes to more objectionable odour of older material in the pipe as it gets closer to the treatment system. Coastlands and residences close to the Whakatane treatment plant would therefore feel greater effects from odour and this would cause tremendous issues.

- IK The renewal of existing resource consent for Edgecumbe is due in the next 10 years and with the review of the Regional Tarawera River Management Plan, WDC knows it will need to address the Edgecumbe issues.
- TK The water quality issues in the Omeheu Canal are also affected by farming activities adjacent to the canal.
- AP Our point is that discharges end up at the ocean and we are concerned about human health issues. I know that the system used at Maketu appears to be a good one as there is a campground nearby and there are no complaints about odour. It will be important to keep odour down.
- DP A problem at Matata is that we don't have enough water.
- TK Shortly we will be doubling storage at Matata by installing another new tank on the hill
- DP I am very suspicious about the water quality in Matata at the moment. I know that when I wash my laundry the water in the machine is murky and can smell.
- AP What monitoring of water supply quality is done?
- TK it is tested at the booster station but I will talk with Santha about it also.
- DP Do you know what the arsenic levels in the Matata water spring?
- AP With your testing do you have any results?
- TK I will talk with Santha about this also.
- DP It's possible there may be a broken pipe in the water supply system since the earthquake of 1987 – perhaps there is a crack in the line between the pump station and my home at the eastern end of Pakeha Street?
- DP Returning back to the map – and the red (reticulated) system at the Matata town – no additional booster pump?
- IK We think there will be enough pressure because of the flat terrain and pipe size but we will be monitoring the system and install pumps if required
- DP So there will be pressure in the pipe at all times and you'll put check valves at each household?
- TK Yes. Each household will belong to an area that will have a check valve and each area will have the pumps working at different regulated times to keep all pipes pressurised and automatically pumping in sequence to maintain that pressure.

- DP What pressure do you anticipate in the red section?
- TK Can't quite remember but about 3 – 4 bars
- IK It will be pumped from the treatment site 'G' and has few solids by that stage so it's easier to pump treated wastewater to the coastal drip-line disposal field

Further discussion about Edgecumbe

- TK We think a system like the one proposed for Matata might be good to consider for Edgecumbe
- AP There appears to be running costs for Matata – Edgecumbe of \$2m?
- TK If we pumped Matata to Edgecumbe we would have to fix the Edgecumbe plant to be able to receive the Matata sewage and this would increase costs dramatically and also increase time.
- AP So when you upgrade Edgecumbe you might need to do something similar to what you propose to do at Matata?
- TK Explained the rationalisation options and issues including:
- Distances and cost implications
 - Rainwater inflow effects on systems
 - Upgrade of receiving system to accommodate satellite town's sewage and all the cost implications of these issues

AP promoted the following:

- Rationalised systems – long term
 - Rationalised costs across the whole district
 - Total upgrade costs being met fairly including rural land users (the farming community)
- TK Yes. It would be ideal to have a long term plan considering and we are considering a number of planning approaches to achieve the most efficient and cost-effective systems
- Our key priority is that if we do not spend the grant from central government (\$6.7m) now, within the timeframes we have been given by central government, we will lose this money and the district would be left to fund the entire Matata system. We would also lose the regional council's grant also.
- AP I understand. The most important matter is to retain the grant. This system looks supportable. I wanted to raise those other townships with you to understand your view and to promote with you a (rationalised) approach to the way the district treats sewage and to emphasise our commitment to opposing discharges to the water and ocean and our interest in making savings to the ratepayers. I believe this is what we need now as we've been given

rights under the Takutai Moana Act as a means of showing our commitment to coastal environment. It would be a good idea to meet with regional council and I would like to be at a meeting on rationalised systems with them also.

IK The main issue regional council has is the effects of the proposed Matata system on groundwater, surface water and coastal waters.

TK We are able to share information about this with you.

AP Site 'G' is a good looking site. I know the area well. Will the system leak do you think? Any ground water issues?

SA/TK/IK It is a sealed system at site 'G' so no – there will be no groundwater influence – unless there is a serious natural disaster event

AP So there will be groundwater monitoring and profiling at the coastal drip-line site?

IK Yes – the hydrological report will be here at the end of the month and we are very happy to share that with you. We will be testing the groundwater there and the report will show you what was done.

DP For construction of the system – I've worked in industry where we have made systems that have components from different parts of the world and where, as a result, we had problems fitting the components together and making them work. Will you be buying a ready-made system or will you be putting a tender out and what guarantees for the system are you seeking?

TK/IK We will be arranging tenders on a basis of design, build and operate for 2 years so the successful company will need to prove the system is designed, built and operates to consistently meet all quality standards required for the term of the consent and beyond it. From what we hear the 'ready-made' systems are very expensive. We also want the system to be compact and visually un-obstructive as well.

DP Was wondering what companies were out there that could build to match systems?

TK It's possible we may see comment on this is the tenders when they come in

DP Archaeological values - there was an old road to Whakatane along the inner dune. It started at the front of Matata and ran along the inside foot of the dune to Whakatane.

TK/IK yes – we have noticed some gravel along that dune and wondered about that.

IK We are receiving Cultural Impact Assessments which will further inform us about these kinds of values also.

DP Site 'G' was an old colonial army barracks. I have picked up shell cartridges there in the past. The American army was also stationed there.

At this point the meeting concluded with agreement to keep in touch as the project progresses.

Appendix 5

Matata Wastewater Scheme - Site Visit - 7 October 2013

Present:

Reverend Graham Kahu Te Rire (Cultural Adviser – Tuwharetoa BOP Settlement Trust)

Elaine August (General Manager, Tuwharetoa BOP Settlement Trust)

Jessica Wiseman (Environmental Manager, Ngati Tuwharetoa Holdings Ltd)

Mrs Whaiora Brown (Kaumatua, Oniao Marae – invited by Skippy Savage)

Grant 'Skippy' Savage (Chairman, Oniao Marae Trustees)

Merehira Savage (Partner of Chairman and member of Oniao Marae community)

Miss Savage (daughter of Skippy and Merehira)

Beverley Hughes (Independent Consultant)

We met at the Matata Tennis Courts at 9.30am on Monday 7 October 2013.

Bev thanked everyone for coming today, and acknowledged the relatively short notice provided on Thursday last week for the site visit today, Monday 7th October 2013 from 9.30am

Skippy advised that since our conversation on Thursday he had been able to telephone and invite Oniao Marae Trustees to attend the site visit. He acknowledged and thanked Mrs Whaiora Brown for being able to attend.

Merehira and Skippy both acknowledged with thanks the invitation to site visit and engage on the proposed Matata Wastewater Scheme. Prior to Bev's call they were both concerned they had not been approached for consultation. They mentioned they had serious reservations about the proposed project, in particular proposed site 'G' adjacent to Oniao Marae and the potential impacts of access-way earthworks on Otaramuturangi Urupa. Just prior to Bev's call they had prepared a 5-page letter to Council expressing opposition to the proposed activity. They said Bev's call came at an optimum time, prior to their sending their letter to council, and they were pleased to have further information and the opportunity to undertake a site visit alongside their whanau and Pukenga (cultural adviser) from Tuwharetoa.

All parties briefly discussed the possibilities that Oniao Marae Trust and Tuwharetoa BOP Settlement Trust will decide whether they wish to collaborate on their written assessment of the proposed activity. A decision on this matter was not reached on the day of the site visit, however this matter was noted as one they would consider and decide between themselves, in due course.

Bev explained that all parties and iwi are awaiting the Hydrogeological Report which will be in hand at the end of October, but that in the meantime iwi were taking a very pragmatic approach by

submitting interim Cultural Impact Assessments and reserving final comments until after they have had time to assess the Hydrogeological Report.

Bev explained that in order for Council to secure a company that can design, build and operate (for two years) in time for the earthworks season, Council needs to let its tender for the works before December 2013. She also explained that unless Council can progress the project to tender by December 2013, they risk losing the significant central government and regional council grants totalling \$8m.

Visit to Proposed Site 'G' – (Matata 6A)

We all drove to Oniao Marae, where we parked, climbed the fence and walked to the proposed wastewater treatment site. While there we discussed:

- The distance from Oniao Marae buildings
- The lay of the land, noting that the marae cannot be seen from the proposed treatment plant site because of the height of the dune that runs between them
- The topography at the proposed treatment plant site is relatively flat with a few undulations immediately to the west, inside the paddock
- The proposed site for the access road noting that there is an existing 'paper' road identified on land titles but as yet a roadway has not been formed. The Burt family are in discussions with council about the proposed access roadway
- That while predominating winds are thought to come from the northwest, they can come from any direction including from the south, as experienced during the site visit. Merehira suggested tall trees planted on 80x80m the boundary of the proposed treatment plant may help lift the wind and odour away from the marae and households. We noted that when activities such as whaikorero (oratory), powhiri (outdoor welcomes) for ope (a group of manuhiri or visitors) are being undertaken on the marae-atea (platform of land in front of the meeting house or wharepuni), it would be a more than minor adverse effect for orations or welcomes to be affected by strong odours of human waste from the treatment plant. This would undermine the mana of the marae and those who are receiving visitors there.
- Bev advised that the outer buffer (150m x 150m) will be written into consent conditions as the boundary at which odour issues will be arrested – that is – odours will need to be managed in ways that prevent offensive odours emanating past that buffer
- Bev asked whether the possibility of small ponds (as seen at Maketu and in the presentation material) would be something Tuwharetoa and Oniao would support. Both preferred to promote with council their avoiding installing ponds. This is mainly seen as a likely means of avoiding odours
- While the details of lease of Matata 6A is private between council and the Trustees for Matata 6A, Oniao and Tuwharetoa people were assured any agreement for use of the land which was offered by the Matata Trustees for use as a site for the proposed wastewater treatment plant, negotiated between those parties are likely to reach mutual agreement for

the benefit of the Trustees and owners of Matata 6A and for the Matata community for whom council is undertaking the project.

Questions and Actions for Bev that were inspired by the visit to Proposed Site 'G'

Merehira asked about the soil composition at site 'G' and whether there is any potential for leakage from the system into the soil and groundwater.

Bev explained that the proposed system will be sealed noting that a pressurised system (as is proposed) needs to be leak free to work at optimum capability.

Merehira and Skippy also asked about what contingency planning has been prepared in the event of, say:

- Odours emanating past the 150mx150m buffer?
- Leaks in the treatment plant tanks or system?

Elaine asked why small ponds might be required. Bev (who acknowledged she is not a civil engineer) provided a lay-persons explanation that ponds can provide for aeration and ultra-violet treatment of wastewater contributing a better quality treated wastewater as a result, but that she would follow up with Council to provide a more authoritative response that that question.

ACTIONS Bev will find out and email information to site visitors about:

- Soil composition at site 'g'
- Contingency planning in regards to leaks or odours
- Purpose of possible small ponds

Visit to Coastal Disposal Site

We all travelled down to Walker Road where we all piled into Jessica's truck for a ride to the proposed disposal site.

We parked opposite the Knight home and walked to the gate bordering the proposed disposal site.

Bev pointed out that the proposed disposal site will need to be shifted along towards the west so that it is not directly in front of the Knight home.

Bev explained that the Robinsons have sought to change the proposed access road which is now proposed to cross their property closer to their home rather than use the existing access track that crosses the Orini floodgate close to Tarawera River and meanders close to Otaramuturangi Urupa.

All site visitors were pleased to hear that the proposed access road had been moved to a location far from Otaramuturangi Urupa.

In particular Mrs Whaiora Brown provided profound comment in respect to the location – strongly emphasising the need to 'pupuritia ki te mauri o te whenua' – (hold on to the life-essence/fundamental spirit of the land and the purpose for which it is being used). I took this to

mean all of the lands that we had visited – but in particular, a comment relevant to Otaramuturangi, and the proposed coastal disposal site.

While at the proposed disposal site we observed:

- The distance between the fence-line of the council property and the beach is wider than we anticipated
- The proposed site slopes back towards the land, which is more elevated than the proposed disposal site thus causing the proposed disposal site to appear as though it is in a hollow between the dunes
- One cannot see Orini Canal from the proposed disposal site

Bev briefly explained that the company preparing the Hydrogeological Report had provided some interim feedback to council that groundwater appears to be flowing from the dunes and from the Orini canal direction and meeting at what might be an old subterranean river bed that may be causing groundwater flow to move towards the Tarawera River.

It was agreed the Hydrogeological Report will be a critical report for Tuwharetoa and other iwi to receive before concluding their CIA's.

We agreed that people were feeling better about the proposed activity now they had a chance to go to the proposed activity sites, see the lay of the land and feel the mauri present at each location.

However there is still work to do in assessing the proposed activities before any conclusive statements regarding the proposed activity can be made with confidence.

We left the site at around 12.45pm and headed back to Matata for fish and chips and a drink.

Back at Matata

Back at Matata we concluded our discussions over lunch.

We agreed the morning's site visit had been a success and we all felt better informed about the proposed activity.

Bev encouraged folk to provide written comments to Council as soon as possible, and noted that Oniao and Tuwharetoa would decide whether they would do that together, or separately – at their discretion.

Elaine and then Rev Kahu and Jessica excused themselves as they had other appointments that afternoon, but wished to extend their thanks for the site visit.

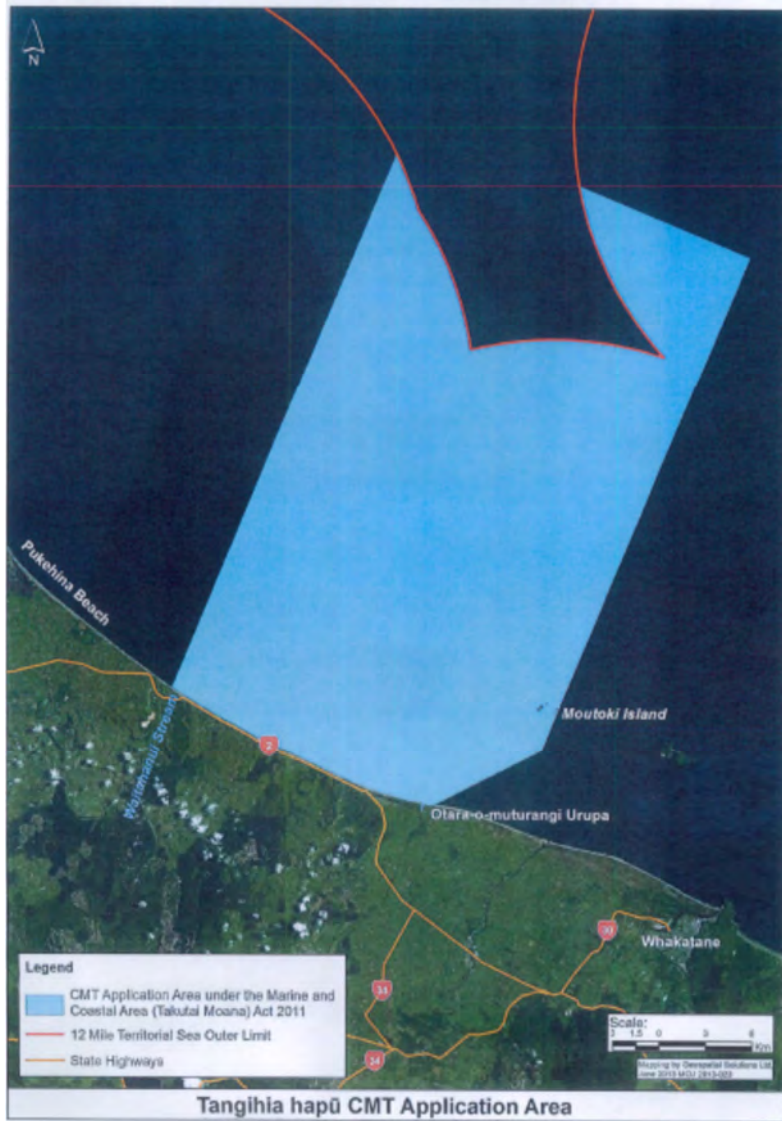
Bev exchanged contact details with Merehira and Skippy.

Site visit concluded after lunch at around 1.45pm.

Ends

Appendix 7

Map showing area for which Applications in claim of Coastal Marine Title has been lodged on behalf of Tangihia Hapu



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