STDC Waiinu Beach Settlement Monitoring Programme Annual Report 2019-2020

Technical Report 2020-13

ISSN: 1178-1467 (Online)

Document: 2537709 (Pdf)

Document: 2477147 (Word)

Taranaki Regional Council

Private Bag 713

STRATFORD

September 2020

Executive summary

The South Taranaki District Council (STDC) operates a wastewater treatment system located at the Waiinu Beach Settlement, in the Waitotara catchment. This report for the period July 2019 to June 2020 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess STDC's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of STDC's activities.

STDC holds one resource consent, which includes a total of 16 conditions setting out the requirements that STDC must satisfy. This resource consent was renewed early on 1 December 2017, as STDC was in the process of upgrading the wastewater treatment system. The upgraded system was installed and commissioned in December 2019. The consent allows them to discharge treated domestic wastewater from the Waiinu Beach Wastewater Treatment Plant to land.

During the monitoring period, STDC demonstrated an overall high level of environmental performance.

The Council's monitoring programme for the year under review included three site inspections, with associated bacteriological sampling of seawater.

The monitoring showed that the wastewater treatment system was well maintained. As in previous years, the monitoring indicated that the discharges from the wastewater treatment system had no adverse effects on coastal water quality. There were no unauthorised incidents recording non-compliance in respect of this consent holder during the period under review.

During the year, STDC demonstrated a high level of environmental and administrative performance with the resource consent.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance remains at a high level in the year under review.

This report includes recommendations for the 2020-2021 year.

Table of contents

| | | | | Page |
|--------|----------|-------------|--|--------|
| 1 | | Introducti | on | 1 |
| | 1.1 | Complia | ance monitoring programme reports and the Resource Management Act 1991 | 1 |
| | | 1.1.1 | Introduction | 1 |
| | | 1.1.2 | Structure of this report | 1 |
| | | 1.1.3 | The Resource Management Act 1991 and monitoring | 1 |
| | | 1.1.4 | Evaluation of environmental and administrative performance | 2 |
| | 1.2 | Process | description | 3 |
| | 1.3 | Resourc | e consents | 5 |
| | 1.4 | Monitor | ring programme | 5 |
| | | 1.4.1 | Introduction | 5 |
| | | 1.4.2 | Programme liaison and management | 6 |
| | | 1.4.3 | Site inspections | 6 |
| | | 1.4.4 | Bacteriological monitoring | 6 |
| 2 | | Results | | 7 |
| | 2.1 | Inspecti | ons | 7 |
| | 2.2 | Results | of bacteriological monitoring | 7 |
| | 2.3 | Investig | ations, interventions, and incidents | 8 |
| 3 | | Discussion | า | 9 |
| | 3.1 | Discussi | ion of site performance | 9 |
| | 3.2 | Environ | mental effects of exercise of consents | 9 |
| | 3.3 | Evaluati | on of performance | 9 |
| | 3.4 | Recomn | nendations from the 2018-2019 Annual Report | 11 |
| | 3.5 | Alteration | ons to monitoring programmes for 2020-2021 | 12 |
| 4 | | Recomme | endations endations | 13 |
| Glossa | ary of c | ommon tei | rms and abbreviations | 14 |
| Biblio | graphy | and refere | nces | 15 |
| Apper | ndix I F | Resource co | onsents held by STDC | |
| | | | List of tables | |
| Table | 1 | Summary | of resource consents held by STDC | 5 |
| Table | 2 | Marine re | creational bathing guidelines (MfE, 2003) | 6 |
| Table | 3 | | ogical monitoring results from the two coastal sites at Waiinu Beach, including a of previous data from 1992 to 2019 | a 8 |

| Table 4 | Summary of performance for consent 3769-4 | 9 |
|----------|---|---------------------|
| Table 5 | Evaluation of environmental performance over time | 11 |
| | List of figures | |
| Figure 1 | Locations of coastal bacteriological sampling sites and wastewater treatment sy. Beach Settlement | stem at Waiinu 5 |
| | List of photos | |
| Photo 1 | Construction of the SAF plant at the Waiinu Beach Settlement wastewater treatr January 2020) | nent system (3 4 |

1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with a resource consent held by the South Taranaki District Council (STDC). STDC operates a wastewater treatment system situated at the Waiinu Beach Settlement in South Taranaki.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consent held by STDC that relates to the discharge of treated sewage effluent to land in the Waitotara catchment. This is the 27th annual report to be prepared by the Council to cover STDC's water discharges and their effects.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about:

- consent compliance monitoring under the *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites though annual programmes;
- the resource consent held by STDC in the Waitotara catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted in the Waiinu Beach Settlement.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2020-2021 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural and socialeconomic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each

activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by STDC, this report also assigns them a rating for their environmental and administrative performance during the period under review.

Environmental performance is concerned with <u>actual or likely effects</u> on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance <u>in site operations and management</u> including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder <u>and</u> unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

Environmental Performance

High: No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

Good: Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

Improvement required: Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

Poor: Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

High: The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

Good: Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

Improvement required: Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

Poor: Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.¹

1.2 Process description

The Waiinu Beach Settlement wastewater treatment system was installed in 1992 and replaced in December 2019 by the current Submerged Aerated Filtration (SAF) plant. The plant is designed to service a population of up to 600 campers and 305 residents over the peak holiday period. Primary treatment of wastewater is provided by 21 communal septic tanks. Effluent from the septic tanks is gravity fed to a wet well at the SAF plant which delivers the influent via pumps to the SAF plant. The influent is pumped to the balance tanks and solids removal tank. The balance tank delivers timed doses to the 1st stage primary septic tank which is then gravity feed into the 2nd stage primary septic tank, for the first stage treatment of the wastewater. The septic tanks provide sufficient residence time to ensure sufficient BOD reduction has occurred. Effluent is then gravity fed to the Anoxic Tanks which provide up to 85% of total nitrogen reduction.

After the anoxic tanks the effluent is split evenly into both aeration tanks where fine bubble aeration diffusers are installed at the base of the tanks to ensure efficient oxygen distribution and thus providing a high rate of biomass production for BOD reduction and nitrification. Treated effluent from the aeration tanks flow through to the clarification tanks, where the effluent settles. The treated effluent is transferred into the UV dosing tank before treatment by the UV unit. The wastewater is then treated with ferric chloride for phosphorous reduction. After treatment for phosphorous reduction, the wastewater is stored in irrigation tanks before discharge to the land application field. A flow meter records the discharge to the disposal fields.

¹ The Council has used these compliance grading criteria for 15 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

The shallow groundwater receiving the treated effluent flows more than 200 m toward the beach. The monitoring of coastal seawater quality allows the effectiveness of the wastewater treatment system to be assessed (Figure 1). The Waiinu beach settlement is supplied with water from a 45 m deep bore, to the west of the settlement. There are no other users of shallow groundwater in the area.



Photo 1 Construction of the SAF plant at the Waiinu Beach Settlement wastewater treatment system (Photo supplied by STDC)



Figure 1 Locations of coastal bacteriological sampling sites and wastewater treatment system at Waiinu Beach Settlement

1.3 Resource consents

STDC holds one resource consent, the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 3 of this report.

A summary of the various consent types issued by the Council is included in Appendix I, as is a copy of the permit held by STDC during the period under review.

Table 1 Summary of resource consents held by STDC

| | Consent Purpose number | | Review | Expires | | |
|--------|--|--------------------|------------------|-------------|--|--|
| | Water discharge permits | | | | | |
| 3769-4 | To discharge treated domestic wastewater from the Waiinu Beach Waste Water Treatment Plant to land | 1 December 2017 | June annually | 1 June 2034 | | |

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for the Waiinu Beach Settlement site consisted of three primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- · discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The Waiinu Beach Settlement site was visited three times during the monitoring period. With regard to the consent for the discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions.

1.4.4 Bacteriological monitoring

The Council undertook routine sampling of the coastal waters at two sites on three occasions during the monitoring year (Figure 1).

Each sample was analysed for enterococci and conductivity. In 2003 the Ministry for the Environment (MfE) developed microbiological water quality guidelines for marine and freshwater recreational areas, to assess the safety of water for contact recreation. The guidelines use enterococci as the preferred indicator for the microbiological quality of marine waters. Alert mode occurs when a single sample maximum is greater than 140 enterococci cfu/100 ml and action mode occurs when two consecutive samples are greater than 280 cfu/100 ml (Table 2).

Table 2 Marine recreational bathing guidelines (MfE, 2003)

| | Indicator | Mode | | |
|--------|-----------------------------|--------------------------|---------------------|-------------------------------------|
| | | Surveillance | Alert | Action |
| Marine | Enterococci (cfu/100 ml) | No single sample >140 | Single sample > 140 | Two consecutive single samples >280 |

2 Results

2.1 Inspections

10 December 2019

The camp was quiet during the inspection, with five campervans scattered about the campsite. The wastewater treatment system was being upgraded during the time of inspection with multiple contractors about working on the site.

The sea was turbid and a brown colour during the inspection.

Routine bacteriological water quality sampling was carried out during the inspection, with two seawater samples collected from Waiinu Beach.

3 January 2020

At the time of the inspection there were no odour or visual issues associated with the wastewater treatment system. There was 14 campervans and nine tents in the campground.

The sea was a dark green/brown colour with strong winds during the time of the inspection.

The work on the upgraded wastewater treatment system had been completed.

Routine bacteriological water quality sampling was carried out during the inspection, with two seawater samples collected from Waiinu Beach.

3 February 2020

At the time of inspection there were no odour or visual issues associated with the wastewater treatment system.

There was one bus present in the campground.

The sea was a brown/blue colour at the time of inspection.

Two routine seawater samples were collected during the site inspection.

2.2 Results of bacteriological monitoring

During each inspection, seawater samples were collected at two coastal sites located at either end of Waiinu Beach (Figure 1). These bacteriological monitoring results for 2019-2020, along with a statistical summary of data between 1992 and 2019, are presented in Table 3. Enterococci counts were low across all samples collected during the year under review. Over the course of the monitoring period, all of the samples analysed had enterococci counts below the MfE 'Alert' guideline level (Table 2). The low faecal indicator bacteria counts recorded in the 2019-2020 monitoring year were mostly similar to the historical median values.

Table 3 Bacteriological monitoring results from the two coastal sites at Waiinu Beach, including a summary of previous data from 1992 to 2019

| Site | Western end of beach – SEA907093 | | Eastern end of beach – SEA90709 | | | | |
|-------------|----------------------------------|-----------------------|---------------------------------|--------------|--|--|--|
| Parameter | Enterococci | Conductivity | Enterococci | Conductivity | | | |
| Unit | cfu/100 ml | mS/m@20°C | cfu/100 ml | mS/m@20°C | | | |
| | Summary statistics | | | | | | |
| Minimum | <1 | 4,020 | <1 | 3,990 | | | |
| Maximum | 310 | 5,400 | 1,400 | 5,380 | | | |
| Median | 3 | 4,650 | 3 | 4,615 | | | |
| Number | Number 80 | | 80 | 74 | | | |
| | 2019 | 9-2020 monitoring res | sults | | | | |
| 10-Dec-2019 | 10 | 5,150 | 10 | 5,050 | | | |
| 3-Jan-2020 | <10 | 5,050 | <10 | 5,070 | | | |
| 3-Feb-2020 | <10 | 5,240 | 10 | 5,080 | | | |

2.3 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with STDC. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council maintains a database record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified individual/organisation is indeed the source of the incident (or that the allegation cannot be proven).

In the 2019-2020 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with STDC's conditions in their resource consent or provisions in Regional Plans.

3 Discussion

3.1 Discussion of site performance

During the three site inspections of the 2019 to 2020 monitoring period, the site appeared to be well maintained and no odours or ponding were detected. During the first inspection on 10 December 2019 the wastewater treatment system was in the midst of an upgrade. The redesigned wastewater treatment system, was installed and commissioned before the second round of sampling in January 2020. The aim of the upgrade was to mitigate the odour issues associated with the beds. The new plant appears to be working well with no complaints received from the local community.

3.2 Environmental effects of exercise of consents

Operation of the wastewater treatment system at the Waiinu Beach Settlement was not found to have any adverse effects on seawater quality at the Waiinu Beach during the monitoring period. Overall, routine bacteriological monitoring has continued to return low faecal indicator bacteria counts.

Although objectionable odours from the wastewater treatment system have had some impact on the neighbourhood community in recent years, STDC has responded to these complaints effectively by initiating the system upgrade, which was completed during the period being reported. No such issues were identified during inspections of the system, nor were any complaints regarding odour recorded by the Council during the reported period.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 4. Table 5 sets out a summary of environmental performance by STDC over time.

Table 4 Summary of performance for consent 3769-4

| | Purpose: To discharge treated domestic wastewater from the Waiinu Beach Wastewater Treatment Plant to land | | | | | | |
|----|--|---|----------------------|--|--|--|--|
| | Condition requirement | Means of monitoring during period under review | Compliance achieved? | | | | |
| 1. | Exercise of consent to be carried out in accordance with information supplied | Site inspections of system and receiving waters | Yes | | | | |
| 2. | Consent holder to adopt best practicable option to minimise effects on the environment | Bacteriological sampling and site inspections | Yes | | | | |
| 3. | Consent holder to advise the Council prior to making any significant changes to the system | Site inspections | Yes | | | | |
| 4. | Discharge to not exceed 100 m ³ in any 24 hour period ending at midnight | Data provided by STDC | Yes | | | | |

Purpose: To discharge treated domestic wastewater from the Waiinu Beach Wastewater Treatment Plant to land

| | Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|-----|--|---|----------------------|
| 5. | Consent holder to maintain a meter and datalogger at site of discharge. Records to be made available to Chief Executive on request | Data provided by STDC | Yes |
| 6. | Records of discharge to be in a suitable format and to be provided within one month after the end of the 12-month period ending 30 June | Data provided by STDC | Yes |
| 7. | To be no surface run-off, ponding, or contamination of surface water | Bacteriological sampling and site inspections | Yes |
| 8. | Consent holder shall suitably maintain and operate the wastewater treatment system | Site inspections | Yes |
| 9. | Disposal field shall be located in accordance with information supplied | Old disposal field currently in use is within consented location. Application for consent variation for new disposal area in progress | Yes |
| 10. | There shall be no offensive or objectionable odour beyond the boundaries | Site inspections | Yes |
| 11. | Consent holder shall ensure that there is an accessible point where treated effluent can be sampled | Accessible point in upgraded system | Yes |
| 12. | Contingency plan to be provided to the satisfaction of Chief Executive | Contingency plan provided 16 June 2020 | Yes |
| 13. | Site shall be operated in accordance with a 'Management Plan' | Management plan provided 16 June 2020 | Yes |
| 14. | Consent holder shall report to the Council before 31 July annually, the results of the monitoring undertaken in accordance with condition 13 | Provided by Mott MacDonald | Yes |
| 15. | Consent holder shall commission a report, making a recommendation about the need for disinfection | UV disinfection installed in upgraded system | N/A |
| 16. | Optional review provision regarding environmental effects | Not required | N/A |

| Purpose: To discharge treated domestic wastewater from the Waiinu Beach Wastewater Treatment Plant to land | | | | | |
|--|--|----------------------|--|--|--|
| Condition requirement | Means of monitoring during period under review | Compliance achieved? | | | |
| Overall assessment of consent compl of this consent Overall assessment of administrative | High High | | | | |

N/A = not applicable, as condition relates to redesigned wastewater treatment system that has not yet been instated and therefore cannot be assessed

Table 5 Evaluation of environmental performance over time

| Year | Consent no | High | Good | Improvement req | Poor |
|-----------|------------------|------|------|-----------------|------|
| 2010-2011 | 3769-3 | 1 | - | - | - |
| 2011-2013 | 3769-3 | 1 | - | - | - |
| 2013-2014 | 3769-3 | 1 | - | - | - |
| 2014-2015 | 3769-3 | 1 | - | - | - |
| 2015-2016 | 3769-3 | 1 | - | - | - |
| 2016-2017 | 3769-3 | 1 | - | - | - |
| 2017-2018 | 3769-3 3769-4 | 1 | - | - | - |
| 2018-2019 | 3769-4 | 1 | - | - | - |
| 2019-2020 | 3679-4 | 1 | - | - | - |
| Totals | - | 9 | 0 | 0 | 0 |

During the year, STDC demonstrated high levels of environmental and administrative performance with the resource consent as defined in Section 1.1.4.

3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

- 1. THAT in the first instance, monitoring of consented activities at Waiinu Beach Settlement in the 2019-2020 year continues at the same level as in 2018-2019.
- 2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

These recommendations were implemented in full.

3.5 Alterations to monitoring programmes for 2020-2021

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA:
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

It is proposed that for 2020-2021, the monitoring programme for the Waiinu Beach Settlement remains unchanged on the grounds that there were no significant adverse effects on the receiving environment during the 2019-2020 monitoring period.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site(s) in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2020-2021.

4 Recommendations

- 1. THAT in the first instance, monitoring of consented activities at Waiinu Beach Settlement in the 2020-2021 year continues at the same level as in 2019-2020.
- 2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

'Action' mode Two consecutive single samples greater than 280 enterococci/100 ml.

'Alert' mode Single sample greater than 140 enterococci/100 ml.

Bacteriological Micro-organisms selected as indicators of faecal material indicators.

Bathers Those who enter the water, and either partially or fully immerse themselves.

Bathing season Generally, the bathing season extends between 1 November and 31 March.

Beach The shore or any access point to the sea.

BOD Biochemical oxygen demand. A measure of the presence of degradable organic

matter, taking into account the biological conversion of ammonia to nitrate.

cfu Colony forming units. A measure of the concentration of bacteria usually expressed as

per 100 ml sample.

Conductivity An indication of the level of dissolved salts in a sample, usually measured at 20°C and

expressed in mS/cm.

Contact recreation Recreational activities that bring people physically in contact with water, involving a

risk of involuntary ingestion or inhalation of water.

Enterococci An indicator of the possible presence of faecal material and pathological micro-

organisms. Usually expressed as colony forming units per 100 ml of sample.

Faecal coliforms An indicator of the possible presence of faecal material and pathological micro-

organisms. Usually expressed as colony forming units per 100 ml sample.

Incident An event that is alleged or is found to have occurred that may have actual or potential

environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically

mean such an outcome had actually occurred.

Intervention Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the

likelihood of an incident occurring.

Investigation Action taken by Council to establish what were the circumstances/events surrounding

an incident including any allegations of an incident.

Incident Register The Unauthorised Incident Register – contains a list of events recorded by the Council

on the basis that they may have the potential or actual environmental consequences

that may represent a breach of a consent or provision in a Regional Plan.

Median Central value when values are arranged in order of magnitude.

Resource consent Refer Section 87 of the RMA. Resource consents include land use consents (refer

Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits

(Section 14) and discharge permits (Section 15).

RMA Resource Management Act 1991 and subsequent amendments.

Temperature Measured in °C (degrees Celsius).

Water quality The bacteriological condition of a water body as it relates to human health, measured

using indicator bacteria.

For further information on analytical methods, contact a Science Services Manager.

Bibliography and references

- Ministry for the Environment and Ministry of Health (2002): *Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas.* Ministry for the Environment, Wellington.
- Ministry for the Environment (2018): *Best Practice Guidelines for Compliance, Monitoring and Enforcement under the Resource Management Act 1991.* Wellington: Ministry for the Environment.
- Taranaki Regional Council (2019): *Waiinu Beach Settlement Monitoring Programme Annual Report 2018-2019*. Technical Report 2019-07.
- Taranaki Regional Council (2018): *Waiinu Beach Settlement Monitoring Programme Annual Report 2017-2018*. Technical Report 2018-06.
- Taranaki Regional Council (2017): *Waiinu Beach Settlement Monitoring Programme Annual Report 2016-2017*. Technical Report 2017-43.
- Taranaki Regional Council (2016): *Waiinu Beach Settlement Monitoring Programme Annual Report 2015-2016*. Technical Report 2016-109.
- Taranaki Regional Council (2015): *Waiinu Beach Settlement Monitoring Programme Annual Report 2014-2015.*Technical Report 2015-14.
- Taranaki Regional Council (2014): *Waiinu Beach Settlement Monitoring Programme Annual Report 2013-2014*. Technical Report 2014-08.
- Taranaki Regional Council (2013): *Waiinu Beach Settlement Monitoring Programme Biennial Report 2011-2013*. Technical Report 2012-61.
- Taranaki Regional Council (2013): *Bathing Beach Water Quality State of the Environment Monitoring Report 2012-2013. Technical* Report 2013-17.
- Taranaki Regional Council (2011): *Waiinu Beach Settlement Monitoring Programme Annual Report 2010-2011*. Technical Report 2011-04.
- Taranaki Regional Council (2010): *Bathing Beach Water Quality State of the Environment Monitoring Report 2009-2010*. Technical Report 2010-08.
- Taranaki Regional Council (2010): *Waiinu Beach Settlement Monitoring Programme Annual Report 2009-2010.*Technical Report 2010-07.
- Taranaki Regional Council (2009): *Waiinu Beach Settlement Monitoring Programme. Annual Report 2008-2009.* Technical Report 2009-07.
- Taranaki Regional Council (2008): *Waiinu Beach Settlement Monitoring Programme Annual Report 2007-2008*. Technical Report 2008-17.
- Taranaki Regional Council (2007): *Waiinu Beach Settlement Monitoring Programme Annual Report 2006-2007*. Technical Report 2007-14.
- Taranaki Regional Council (2006): *Waiinu Beach Settlement Monitoring Programme Annual Report 2005-2006.*Technical Report 2006-08.

- Taranaki Regional Council (2005): *Waiinu Beach Settlement Monitoring Programme Annual Report 2004-2005*. Technical Report 2005-23.
- Taranaki Regional Council (2004): *Waiinu Beach Settlement Monitoring Programme Annual Report 2003-2004*. Technical Report 2004-13.
- Taranaki Regional Council (2003): *Waiinu Beach Settlement Monitoring Programme Annual Report 2002-2003*. Technical Report 2003-10.
- Taranaki Regional Council (2002): *Waiinu Beach Settlement Monitoring Programme Annual Report 2001-2002*. Technical Report 02-31.
- Taranaki Regional Council (2001): *Waiinu Beach Settlement Monitoring Programme Annual Report 2000-2001*. Technical Report 01-34.
- Taranaki Regional Council (2000): *Waiinu Beach Settlement Monitoring Programme Annual Report 1999-2000.*Council Technical Report 00-29.
- Taranaki Regional Council (1999): *Waiinu Beach Settlement Monitoring Programme Annual Report 1998-1999*. Technical Report 99-37.
- Taranaki Regional Council (1998): *Waiinu Beach Settlement Monitoring Programme Annual Report 1997-1998.*Technical Report 98-49.
- Taranaki Regional Council (1997): *Waiinu Beach Settlement Monitoring Programme Annual Report 1996-1997*. Technical Report 97-17.
- Taranaki Regional Council (1996): *Waiinu Beach Settlement Monitoring Programme Annual Report 1995-1996*. Technical Report 96-13.
- Taranaki Regional Council (1995): *Waiinu Beach Settlement Monitoring Programme Annual Report 1994-1995.*Technical Report 95-23.
- Taranaki Regional Council (1994): *Waiinu Beach Settlement Monitoring Programme Annual Report 1993-1994.*Technical Report 94-5.
- Taranaki Regional Council (1993): *Waiinu Beach Settlement Monitoring Programme Annual Report 1992-1993*. Technical Report 93-8.

Appendix I

Resource consents held by STDC

(For a copy of the signed resource consent please contact the TRC Consents department)

Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14. Permits authorising the abstraction of water are issued by the Council under Section 87(d) of the RMA.

Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations. Permits authorising discharges to water are issued by the Council under Section 87(e) of the RMA.

Air discharge permits

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising discharges to air are issued by the Council under Section 87(e) of the RMA.

Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Land use permits are issued by the Council under Section 87(a) of the RMA.

Coastal permits

Section 12(1)(b) of the RMA stipulates that no person may erect, reconstruct, place, alter, extend, remove, or demolish any structure that is fixed in, on, under, or over any foreshore or seabed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Coastal permits are issued by the Council under Section 87(c) of the RMA.

Discharge Permit Pursuant to the Resource Management Act 1991 a resource consent is hereby granted by the Taranaki Regional Council

Name of South Taranaki District Council

Consent Holder: Private Bag 902

Hawera 4640

Decision Date: 1 December 2017

Commencement Date: 1 December 2017

Conditions of Consent

Consent Granted: To discharge treated domestic wastewater from the Waiinu

Beach Waste Water Treatment Plant to land

Expiry Date: 1 June 2034

Review Date(s): June annually

Site Location: Nukumaru Parade, Waiinu Beach

Grid Reference (NZTM) 1749195E-5585813N

Catchment: Waitotara

For General, Standard and Special conditions pertaining to this consent please see reverse side of this document

General condition

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

- 1. This consent authorises the discharge of treated domestic effluent from the Waiinu Beach Township Wastewater Treatment Plant as generally described in the application and supporting documentation.
- 2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge.
- 3. The consent holder shall advise the Taranaki Regional Council prior to making any change in the processes undertaken at the site which could significantly alter the nature of the discharge. The advice shall be given by emailing consents@trc.govt.nz.
- 4. The discharge shall not exceed 100 m³ in any 24 hour period ending at midnight (New Zealand standard time).
- 5. From the date that the upgraded Waiinu Beach Township Waste Water Treatment Plant is commissioned the consent holder shall maintain a meter and a datalogger at the site of discharge. The flow meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of the discharge to an accuracy of ± 5%, at intervals not exceeding 15 minutes. Records of the date, the time and the rate and volume the discharge, shall be made available to the Chief Executive, Taranaki Regional Council on request.
- 6. The records of discharge shall:
 - a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing; and
 - b) for each 12-month period ending on 30 June, be provided to the Chief Executive, Taranaki Regional Council within one month after end of that period.
- 7. There shall be no surface run-off, ponding, or contamination of surface water resulting from the discharge of treated wastewater to land.
- 8. The wastewater treatment system shall be operated and maintained according to the manufacturer's guidelines and/or operations management plan (whichever is most appropriate).
- 9. The disposal field shall be located within the boundaries of the subject property shown in Appendix 1 and in accordance with the information submitted in support of this application.
- 10. There shall be no offensive or objectionable odour beyond the boundaries of the subject property shown in Appendix 1.

- 11. The consent holder shall ensure that there is a point where the treated effluent can be sampled before it is discharged to the effluent land application area. The consent holder shall provide access for the Taranaki Regional Council to enable a sample to be taken as required.
- 12. From the date that the upgraded Waiinu Beach Township Waste Water Treatment Plant is commissioned the consent holder shall prepare, maintain and regularly update a 'Contingency Plan' which details measures and procedures that will be undertaken to prevent and/or to avoid environmental effects from a spillage or any discharge of contaminants not authorised by this consent. The plan and any amended versions shall be provided to the Chief Executive of the Taranaki Regional Council and Te Kaahui o Rauru.
- 13. From the date that the upgraded Waiinu Beach Township Waste Water Treatment Plant is commissioned the site shall be operated in accordance with a 'Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The Management Plan shall detail how the site is to be managed and monitored and shall include as minimum:
 - a) monitoring the wastewater effluent quality and rate of the discharge;
 - b) management of the wastewater treatment system;
 - c) environmental monitoring plan to investigate the need for UV disinfection;
 - d) general housekeeping; and
 - e) reporting.

The consent holder shall provide a copy of the current Management Plan to Te Kaahui o Rauru.

Advice note: The Management Plan may include other information that the consent holder considers appropriate, such as how cultural matters are being addressed in the management of the Waste Water Treatment Plant.

- 14. The consent holder shall report to the Taranaki Regional Council before 31 July annually detailing results of the environmental monitoring undertaken in accordance with condition 13 above. The consent holder shall provide a copy of the annual environmental monitoring to Te Kaahui o Rauru.
- 15. Before 30 June 2021 the consent holder shall engage a suitably qualified independent person to prepare a report investigating environmental monitoring results and making a recommendation about the need for disinfection in the Waste Water Treatment Plant system. The consent holder shall provide a copy of the recommendation report to Te Kaahui o Rauru.

Consent 3769-4.0

- 16. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June annually for the purposes of:
 - a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
 - b) requiring any data collected in accordance with the conditions of this consent to be transmitted directly to the Taranaki Regional Council's computer system, in a format suitable for providing a 'real time' record over the internet.

Signed at Stratford on 1 December 2017

For and on behalf of Taranaki Regional Council

A D McLay

Director - Resource Management

