

Wai-inu Beach Settlement
Monitoring Programme
Annual Report
2014-2015

Technical Report 2015-14

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Executive summary

The South Taranaki District Council (STDC) operates a sewage treatment system located at the Wai-inu Beach Settlement, in the Waitotara catchment. This report for the period July 2014-June 2015 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the STDC's environmental performance during the period under review, and the results and environmental effects of STDC's activities.

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

The STDC hold one resource consent in relation to the sewage treatment system, which includes a total of six conditions setting out the requirements that the STDC must satisfy.

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

Issues were identified with the sand filters of the sewage treatment system during two of the three site inspections. These issues were dealt with by STDC staff in a prompt manner. Bacteriological sampling did not indicate faecal contamination of seawater as a result of the treatment system.

During the 2014-2015 monitoring year, the STDC demonstrated a good level of administrative compliance with the resource consent and a high level of environmental performance in relation to the consent. During the year there were no unauthorised incidents or any adverse effects on the receiving environment in relation to Consent 3769-3.

This report includes recommendations for the 2015-2016 year.

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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 2014-June 2015 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with a resource consent held by the South Taranaki District Council (STDC). The STDC operate a wastewater treatment system situated at the Wai-inu 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 the STDC that relate to the discharge of treated sewage effluent to groundwater in the Waitotara catchment. This is the 22nd report to be prepared by the Council to cover the STDC water discharge and its effects.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the Resource Management Act and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by STDC, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted in the Wai-inu 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 interpretation, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2015-2016 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 *Resource Management Act 1991* (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 social-economic 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);
- (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 the consent holder/s during the period under review, this report also assigns a rating as to each Company's environmental and administrative performance.

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. **Administrative performance** is concerned with the Company's approach to demonstrating consent compliance in site operations and management 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 and 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 significant 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 in response to unauthorised incident reports, 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 in response to unauthorised incident reports. 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 in response to unauthorised incident reports. 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 2014-2015 year, 75% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 22% demonstrated a good level of environmental performance and compliance with their consents.

1.2 Process description

The Wai-inu Beach Settlement treatment system was designed to service a population of approximately 420 persons. Communal septic tanks of 3,600 litre capacity treat wastes from a maximum of four residential sections per septic tank. Effluent from the septic tanks is gravity fed to an underground dosing chamber of sufficient storage to allow the alternative dosing, via pumps, of two sand filter beds. The pumps are operated automatically by float switches and provide a dose volume of approximately 14 m³ to the surface of one or other of the filter beds. These filter beds are about 15.6 m in diameter and comprise of layers of coarse sand, pea gravel and graded stone chip. The filter media provides a limited amount of biological filtration of the effluent prior to discharge to groundwater.

This is a simple and effective treatment system; provided the septic tanks receive regular maintenance to prevent gross solids from clogging the filter system and the filter beds are not overloaded. The filter beds are essentially an aerated treatment device and when saturated for long periods, anaerobic conditions can occur causing excessive and pungent odour. Weed growth on top of the sand filter beds also needs to be monitored and removed on a regular basis.

The shallow groundwater receiving the treated effluent flows more than 200 m toward the beach, the measurement of coastal seawater quality allows the effectiveness of the effluent treatment system to be assessed. The Wai-inu beach settlement is supplied from a bore (45 m deep) to the west of the settlement as there are no other users of shallow groundwater in the area.

1.3 Resource consents

1.3.1 Water discharge permit

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.

STDC holds water discharge permit **3769** to cover the discharge of up to 84 cubic metres/day of treated domestic wastewater from the Wai-inu Beach Settlement via seepage to groundwater in the Waitotara catchment. This permit was issued by the Council on 29 July 1992 under Section 87(c) of the RMA. It was reissued in November 2003 and is due to expire on 1 June 2022.

There are six special conditions attached to this consent.

Condition 1 relates to the exercise of the consent being carried out in accordance with the information supplied in support of the application.

Condition 2 requires the consent holder to adopt the best practicable option to prevent or minimise any actual or potential effect on the environment.

Condition 3 relates to the proper and effective maintenance and operation of the treatment system, in particular the septic tank and filter beds.

Condition 4 requires monitoring of the treatment system and coastal waters.

Condition 5 requires the consent holder to provide the Council with a contingency plan.

Condition 6 deals with reviews of the consent.

A copy of the permit is attached to this report in Appendix I.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets out obligations upon the Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region and report upon these.

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 Wai-inu 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;
- in discussion over monitoring requirements;
- preparation for any reviews;
- renewals;
- new consents;
- advice on the Council's environmental management strategies and content of regional plans and;
- consultation on associated matters.

1.4.3 Site inspections

The Wai-inu beach settlement site was visited three times during the monitoring year. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions.



Figure 1 Location of bacteriological sampling sites and treatment system

1.4.4 Bacteriological sampling

The Council typically undertakes sampling of coastal waters at two sites on three occasions annually, in conjunction with site inspections. Figure 1 shows the location of the two main sampling sites in relation to the twin filter beds.

Each sample was analysed for faecal coliforms, enterococci and conductivity. In 2003 the Ministry for the Environment (MfE) developed the Guidelines for recreational water quality 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. Action mode occurs when two consecutive samples are greater than 280 cfu/100 ml.

Table 1 Marine recreational bathing guidelines (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

Three scheduled compliance monitoring inspections were performed during the year under review in relation to the wastewater treatment system at Wai-inu Beach Settlement.

15 December 2014

A few weeds were growing on the sand filters at the time of the inspection; however, there was no surface ponding of waste water. No sewage odours were detected near the filters. The camp was quiet with one campervan on site. Seawater samples were collected.

7 January 2015

Weeds and brown sludge were present on the surface of the sand filters at the time of the inspection. There was a strong sewage odour present at the sand filter and throughout the camp ground (as far as the toilets). The camp was relatively busy with 17 caravans and 10 tents on site. Seawater samples were collected. In the subsequent inspection letter STDC were instructed to investigate the odour associated with the sand filter. In a response from STDC, it was noted that an inspection was conducted on the 8th of January. No odour was detected beyond the plant perimeter fence during this inspection. Staff removed 1 m³ of sludge and weeds from the surface of the filter beds.

2 March 2015

The eastern sand filter had patchy weed growth across its surface. Patches of weeds had also grown on the surface of the western sand filter. Around 50% of the surface of the western sand filter was submerged in wastewater at the time of the inspection. A very faint sewage odour was detected at the sand filters. The camp was quiet at the time of the inspection; three campervans and one caravan were present. Seawater samples were collected. Following the inspection, STDC staff were notified of the condition of the sand filters. The issue was promptly resolved by STDC, with follow up correspondence confirming that the weeds had been removed and that the ponding had subsided.



Photo 1 Patchy weed growth on the eastern sand filter (2 March 2015).

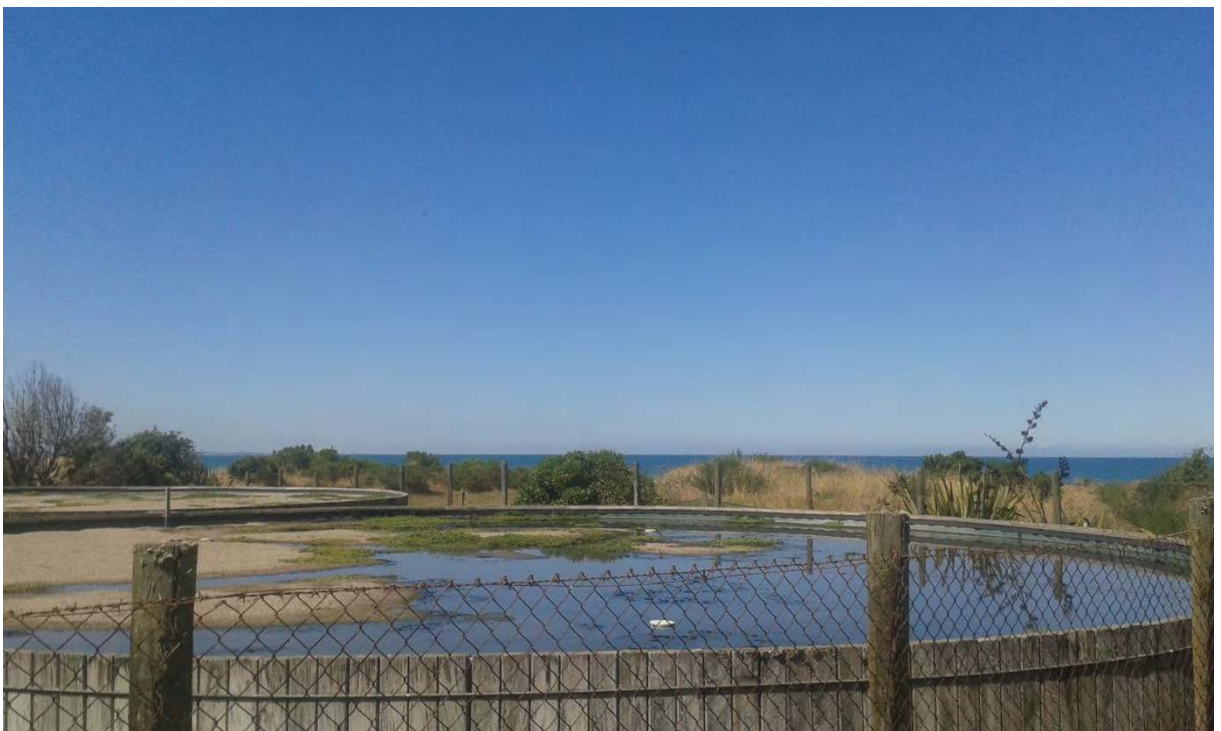


Photo 2 Patchy weed growth on the western sand filter with half of the surface submerged in wastewater (2 March 2015).

2.2 Results of bacteriological monitoring

During each inspection, seawater samples were collected at two coastal sites located at either end of Wai-inu Beach (SEA907093 and SEA907098). These bacteriological results for 2014-2015, along with a statistical summary of data between 1992 and 2014, are presented in Table 2. Faecal indicator bacteria counts were low in all samples collected

during the 2014-2015 monitoring year. Enterococci counts did not exceed the MfE 'Alert' guideline level (>140 cfu/100 ml).

Table 2 Bacteriological monitoring at Wai-inu Beach Settlement 2014-2015, including a summary of data collected from 1992 to 2014.

| Site | Western end of beach – SEA907093 | | | Eastern end of beach – SEA907098 | | |
|-----------------|----------------------------------|---------------------------|---------------------|----------------------------------|--------------------------|---------------------|
| Date | Faecal coliform (cfu/100 ml) | Enterococci (cfu /100 ml) | Conductivity (mS/m) | Faecal coliform (cfu/100 ml) | Enterococci (cfu/100 ml) | Conductivity (mS/m) |
| 15-Dec-14 | 3 | <1 | 4,650 | 5 | <1 | 4,720 |
| 7-Jan-15 | 35 | 36 | 4,400 | 15 | 27 | 4,460 |
| 2-Mar-15 | <1 | <1 | 4,670 | <1 | <1 | 4,680 |
| Historical data | | | | | | |
| No of samples | 66 | 64 | 58 | 66 | 64 | 58 |
| Minimum | <1 | <1 | 4,020 | <1 | <1 | 3,990 |
| Maximum | 300 | 310 | 4,880 | 1000 | 1400 | 4,920 |
| Median | 3 | 3 | 4,640 | 3 | 2 | 4,600 |

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 the consent holder. 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 courses of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Incident Register (IR) includes events where the Company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

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 company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2014-2015 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1 Discussion of site performance

Issues with the wastewater treatment system were identified upon inspecting the beach settlement during the 2014-2015 summer period. On one occasion the accumulation of waste solids on the surface of the filter was discovered. This exposed sludge likely contributed to the widespread and objectionable sewage odours that were noted on the same occasion. Extensive wastewater ponding coincided with the presence of patchy weed growth in the following inspection. However, STDC staff have continued to resolve these issues in a prompt manner following notification from the TRC. Furthermore, STDC acknowledge the inadequacies of the current treatment system and propose a system rebuild as a long term solution.

3.2 Environmental effects of exercise of consents

Routine bacteriological monitoring has continued to return low counts of faecal indicator bacteria; no counts exceeded the MfE 'Alert' guideline level. This would suggest that the current wastewater treatment remains adequate in preventing faecal contamination of the adjacent coastal waters. However, objectionable odours have been recorded as a result of the system functioning improperly. The generation of these odours has the potential to detract from the recreational value of the beach settlement and potentially the effect adjacent neighbourhood.

3.3 Evaluation of performance

A summary of the consent holder's compliance record for the year under review is set out in Table 3.

Table 3 Summary of performance for Consent 3769-3

| Purpose: To discharge 84 cubic metres of treated domestic wastewater to groundwater from the Wai-inu Beach Settlement | | |
|---|---|--|
| 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 shall maintain and operate the treatment system | Site inspections | Issues were identified with the treatment system on two of the three inspection dates. |
| 4. Consent holder in conjunction with the Council to undertake monitoring of coastal waters | Bacteriological samples taken throughout the summer high use period | Yes |

| | | |
|---|------------------------------|-------------|
| 5. Contingency plan to be provided to the satisfaction of Chief Executive | Updated July 2012 | Yes |
| 6. Optional review provision re environmental effects | Next due in 2016 if required | N/A |
| Overall assessment of consent compliance and environment performance in respect of this consent | | High |
| Overall assessment of administrative performance in respect of this consent | | Good |

During the year, the STDC demonstrated a high level of environmental performance and compliance with the resource consent. STDC demonstrated a good level of administrative performance and compliance with the resource consent over the same period. On two occasions there were issues identified with the sand filters, however, these issues were quickly resolved by STDC staff. By promptly resolving these issues, STDC has fulfilled their responsibility to maintain the treatment system in accordance with their consent. In summary, there were no breaches of consent conditions and bacteriological sampling of the receiving waters showed no contamination from the treatment system.

3.4 Recommendations from the 2013-2014 Annual Report

In the 2013-2014 Annual Report, it was recommended:

THAT monitoring of discharges from Wai-inu Beach Settlement wastewater treatment system in the 2014-2015 year continues at the same level as in 2013-2014.

This recommendation was implemented during the year under review.

3.5 Alterations to monitoring programmes for 2015-2016

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA the obligations of the Act in terms of monitoring emissions/discharges and effects, and subsequently 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 emitting to the atmosphere/discharging to the environment.

It is proposed that for 2015-2016, the monitoring programme for the Wai-inu Beach Settlement remains unchanged on the grounds that there were no significant adverse effects on the receiving environment. A recommendation to this effect is attached to this report.

3.6 Exercise of optional review of consent

Resource consent 3769-3 does not provide for an optional review in June 2015. The next date on which the consent may be subjected to a review is June 2016.

4. Recommendations

1. THAT monitoring of discharges from Wai-inu Beach Settlement wastewater treatment system in the 2015-2016 year continues at the same level as in 2014-2015.

Glossary of common terms and abbreviations

The following abbreviations and terms are used within this report:

| | |
|--------------------|--|
| 'Action' mode | two consecutive single samples greater than 280 enterococci/100ml |
| 'Alert' mode | single sample greater than 140 enterococci/100ml |
| 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 |
| cfu | colony forming units. A measure of the concentration of bacteria usually expressed as per 100 millilitre sample |
| Condy | conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m |
| Contact recreation | recreation 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 millilitre 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 millilitre 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 |
| IR | 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) |

UI Unauthorised Incident

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 the Council's laboratory.

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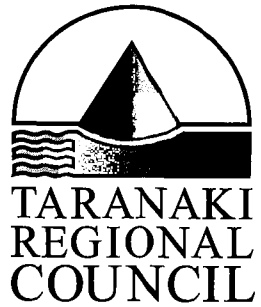
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Appendix I

**Resource consent held by
South Taranaki District Council
Wai-inu Beach Settlement**



CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

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

Name of
Consent Holder: South Taranaki District Council
Private Bag 902
HAWERA

Consent Granted
Date: 26 November 2003

Conditions of Consent

Consent Granted: To discharge up to 84 cubic metres/day of treated domestic wastewater from Waiinu Beach settlement via seepage to groundwater in the Waitotara catchment at or about GR: R22:595-473

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: Waiinu Beach Settlement, Waiinu Beach Road, Waitotara

Legal Description: Road Reserve Waiinu Beach Settlement Waitotara

Catchment: Waitotara

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*
www.trc.govt.nz

Consent 3769-3

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The exercise of this consent shall be carried out generally in accordance with the information supplied in support of the application.
2. The consent holder shall adopt the best practicable option or options [as defined in section 2 of the Resource Management Act 1991] to prevent or minimise any actual or potential effect on the environment arising from the exercise of this consent
3. The consent holder shall properly and effectively maintain and operate the treatment system with particular emphasis on septic tank and filter bed maintenance.
4. The consent holder shall, in conjunction with the Taranaki Regional Council, undertake such monitoring of the treatment system and coastal waters as deemed necessary by the Chief Executive, Taranaki Regional Council.
5. The consent holder shall provide a contingency plan to the satisfaction of the Chief Executive, Taranaki Regional Council, outlining septic tank maintenance and measures to be undertaken in the event of a failure of the components of the treatment system, within six months of granting this consent.
6. 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 2010 and/or June 2016, for the purpose of 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.

Signed at Stratford on 26 November 2003

For and on behalf of
Taranaki Regional Council



Director-Resource Management