Hey Trust
Quarry Monitoring Programme
Biennial Report
2013-2015

Technical Report 2015-25

ISSN: 1178-1467 (Online)
Document: 1539039 (Word)
Document: 1560021 (Pdf)

Taranaki Regional Council
Private Bag 713
STRATFORD

October 2015

Executive summary

The Hey Trust (the Trust) operates a quarry located on Monmouth Road, Stratford in the Patea catchment. The consent holder holds a resource consent to allow the discharge of treated stormwater from a quarry site onto and into land and into the Kahouri Stream in the Patea catchment. This report for the period July 2013 to June 2015 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Trust's environmental performance during the period under review, and the results and environmental effects of the Trust's activities.

The Trust holds one resource consent, which includes a total of 15 special conditions setting out the requirements that the Trust must satisfy.

During the monitoring period, the Trust demonstrated an overall good level of environmental performance.

The Council's monitoring programme for the period under review included three inspections. No water samples were collected for laboratory analyses.

Overall the site was found to be well maintained and complying with consent conditions. The first inspection found an issue regarding sediment controls, however this had been remedied prior to the following visit. No adverse effects were observed in the receiving waters.

During the reporting period there were no unauthorised incidents associated with the consent holder.

The Trust achieved a good level of environmental and administrative performance and compliance with the resource consent in the 2013-2015 monitoring period.

For reference, in the 2013-2014 year, 60% 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 29% demonstrated a good level of environmental performance and compliance with their consents. 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.

This report includes recommendations for the 2015-2017 monitoring period.

Table of contents

List of tables

List of figures

1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the biennial report for the period July 2013-June 2015 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with the resource consent held by Hey Trust (the Trust). The Trust operates a quarry situated on Monmouth Road, Stratford.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consent held by the Trust that relates to the discharge of water in the Patea catchment. This is the third report to be prepared by the Council to cover the Trust's stormwater discharges and subsequent 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* 1991 and the Council's obligations and general approach to monitoring sites though annual programmes, the resource consents held by the Trust in the Patea catchment, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at the Trust's quarry site.

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 2015-2017 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 during the period under review, this report also assigns a rating as to the Trust'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 Trust'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 2013-2014 year, 60% 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 29% demonstrated a good level of environmental performance and compliance with their consents. 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

1.1.1 Background

In the past, a large percentage of aggregate production came from river-based sites within Taranaki. The Waiwhakaiho River supplied much of New Plymouth's requirements as far back as the 1950s with the Waitara River, Waiongana River, Kapuni Stream and Waingongoro River also providing a valuable source of aggregate. The aggregate source within these rivers was often over-exploited. The protective armouring of the boulders and gravel was removed in places, exposing the underlying erodible ash beds and creating deep narrow channels, which moved progressively upstream with no noticeable recovery. This brought about the need for the Shingle Extraction Bylaw introduced in 1974. Aggregate extraction from rivers was then controlled through the issue of permits accompanied by a set of conditions, with the removal of river-based aggregate being restricted to that for river control purposes only.

Historically, land-based sites required steady markets to compete with the easily won river-based extraction operations. However, in the early 1980s, due to the restriction placed on river-based aggregate extraction (and the completion of various major river control programmes and 'Think Big' projects) land-based sites became more widespread (Taranaki Regional Council, 1992).

Currently, there are twenty six quarries in the region that are monitored by the Council. These quarries are generally located in a reasonable proximity to urban areas, from which the greatest demand for aggregate stems.

Provision of aggregate to meet longer term demand will continue to be dominated by several large quarry operations. Extra demand on alluvial terraces and laharic deposits has occurred due to the controlled river bed extraction. These resources are of good quality and are relatively plentiful. Importation of various aggregates may need to continue to meet the requirement for aggregate types not available in Taranaki.

Quarrying and extraction of gravel in NZ is regulated by two statutory processes. Allocation and protection of priority rights to extract gravel is obtained under the Crown Minerals Act from NZ Petroleum and Minerals, a division of the Ministry of Economic Development. Regulatory responsibility for control of environmental effects of quarrying and extraction is under the RMA 1991 as applied by respective regional councils. In some cases these controls may act as a constraint or limitation on allocation decisions.

Sections 15 and 30 of the RMA give regional councils responsibility for the discharge of contaminants into the environment. Discharges of water into water, contaminants onto or into land that may result in water contamination, and contaminants from industrial premises into air or onto/into land, may not take place unless expressly allowed by a rule in a regional plan, a resource consent, or regulations. Aggregate extraction usually involves washing aggregates, and therefore requires the discharge of wastes. Other

discharges, such as emissions to air from crushing and processing plants, disposal of spoil and solid wastes, and discharges of stormwater are also the responsibility of regional councils.

1.1.2 Hey Trust quarry

The Trust's quarry is located off Monmouth Road, Stratford, on the true right bank of the Kahouri Stream (Figure 1). The Trust operates a small quarry on a part time basis to supply aggregate mostly for use on their farm, however it occasionally supplies the local market on demand.

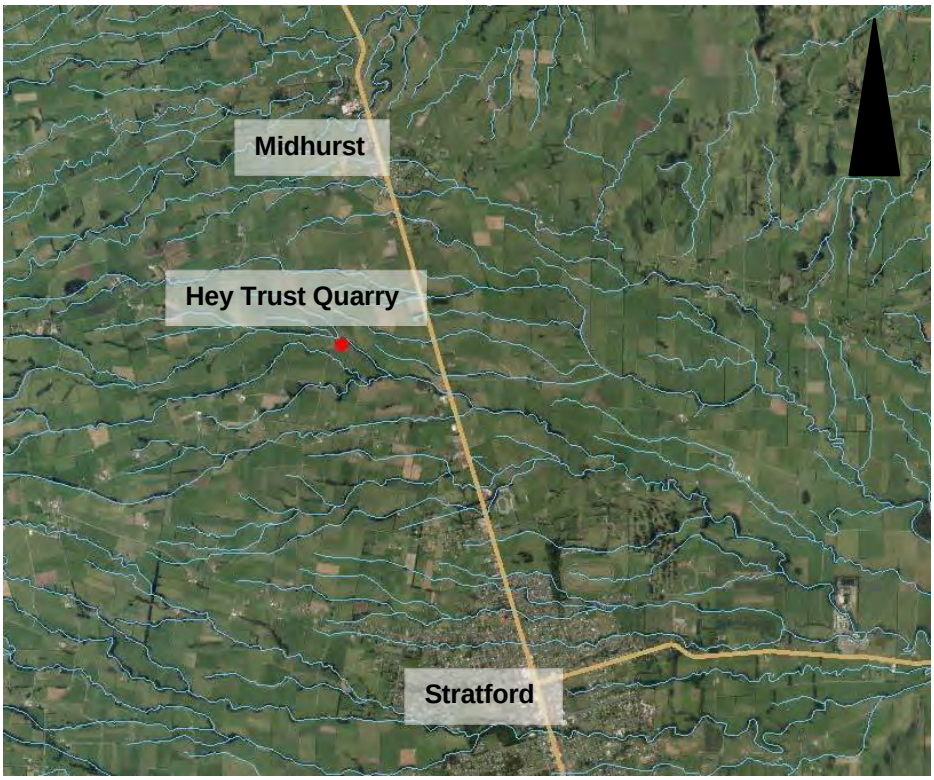

Figure 1 Approximate location of Hey Trust quarry on Monmouth Road

The site workings cover an area of about 0.5 ha, although this area may become larger as the quarry operation develops, to a maximum area of 1 ha. Aggregate extracted from the site is suitable for use on farm races and for hardfill. The material will be extracted as required, and there is no intention to stockpile material onsite. No washing is carried out at this site.

A thin layer of topsoil which forms the overburden will be stripped off and set aside for reinstatement.

Figure 2 Hey Trust quarry site

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.

Water quality is a primary concern to the Council with regard to aggregate extraction. A quarry can operate as either a 'dry' quarry discharging only stormwater or a 'washing' quarry where aggregate washing facilities are in place. Many of the quarries in Taranaki have a washing facility and also operate in the vicinity of a water body or have some form of discharge into a water body.

Waste water from aggregate washing has a high silt concentration. Discharge of this water into a waterbody, particularly to a river during low flow, results in a smothering of instream life and deterioration in aesthetic conditions and can affect downstream abstractions of water, local fisheries and recreational activity.

Stormwater is generally less contaminated (in terms of silt concentration) and run-off tends to occur when rivers are in higher flow. This means that the effect of silt contamination is reduced due to lower quantities, dilution and carrying capacity. The installation of appropriate stormwater diversion structures, together with construction and maintenance of contaminated stormwater and aggregate washing discharge treatment facilities are important in maintaining water quality.

Hey Trust holds consent **7123-1** to discharge treated stormwater from a quarry site onto and into land and into the Kahouri Stream in the Patea Catchment. This permit was issued by the Council on 10 July 2007 under Section 87(e) of the RMA, and is due to expire on 1 June 2022.

There are 15 special conditions attached to this consent.

Condition 1 requires the consent holder to adopt the best practicable option to prevent or minimise effects.

Condition 2 requires exercise of consent to be undertaken in accordance with documentation submitted.

Condition 3 states there shall be no direct discharge of untreated stormwater from the site.

Condition 4 requires the site to be bunded and contoured so that all water is directed for treatment.

Condition 5 requires the consent holder to control erosion of exposed soil and minimise sediment contained in stormwater.

Condition 6 requires progressive reinstatement of the site.

Condition 7 states the maximum stormwater catchment area.

Condition 8 requires the consent holder to maintain and operate the sediment control structures to ensure compliance with conditions.

Condition 9 states concentration limits for suspended solids and hydrocarbons.

Condition 10 relates to the mixing zone and adverse effects.

Condition 11 relates to turbidity levels following mixing.

Condition 12 relates to stormwater management and contingency planning requirements.

Condition 13 relates to site reinstatement.

Condition 14 relates to consent lapse.

Condition 15 allows the Council to review, amend, delete or add to conditions of consent.

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

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 Trust's quarry 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 main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. The neighbourhood and receiving waters were surveyed for environmental effects.

1.4.4 Chemical sampling

The monitoring programme includes physicochemical sampling of the treated discharge at the stormwater outfall, if warranted. Samples are to be analysed for turbidity, suspended solids and hydrocarbons.

2. Results

2.1 Water

2.1.1 Inspections

During the 2013-2015 monitoring period the Council carried out three routine inspections of the Trust's quarry site. Inspection notes are summarised below.

19 May 2014
There was a small amount of product onsite and piled near the race. The settling pond was discharging at the time of the inspection. An additional drain at the eastern end of the quarry was also found to be discharging over land and into the Kahouri Stream. There was no settling pond associated with this drain, however the discharge was clear at the time of the inspection. Following the inspection, it was requested that a settlement pond be installed in order to treat the stormwater prior to discharge. Aside from this issue, the quarry was considered to be in a satisfactory condition at the time of the inspection.

2 December 2014
This inspection followed recent heavy rain. There had been little change on site. However, satisfactory silt and sediment controls had been installed since the previous inspection. There were no dust or ponding issues. The site was tidy and complying with consent conditions at the time of inspection.

30 June 2015
There was a large pile of product near the race prior to entering the quarry. Drainage systems were found to be in a satisfactory condition. The extraction area was also found in a satisfactory condition. Overall, the quarry site was well maintained and complying with consent conditions at the time of inspection.

2.1.2 Results of discharge monitoring

No water samples were collected for physicochemical analyses during either inspection as this was considered unnecessary (the discharge was clear and was having no visible effect the receiving waters).

2.2 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 consent holder 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 individual is indeed the source of the incident (or that the allegation cannot be proven).

In the 2013-2015 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Trust's conditions in their resource consent or provisions in Regional Plans.

3. Discussion

3.1 Discussion of site performance

During the 2013-2015 monitoring period three compliance monitoring inspections of the Trust's quarry site were carried out.

On the first inspection of the monitoring period a drain was found on the east of the site which lacked an associated settlement pond. This issue was remedied prior to the following inspection. Overall the site was well maintained and complying with consent conditions.

3.2 Environmental effects of exercise of consents

The main potential environment effect on waterways that quarries have is the discharges of stormwater and/or wastewater containing high sediment concentrations into surface watercourses. Such discharges can result in discolouration of the waterways and may result in smothering of benthic life forms, form a barrier to fish movement and may affect fish spawning habitats.

During the first inspection it was discovered that stormwater was being discharged from an eastern drain without passing through a settlement pond. However, the discharge was subjected to an indirect form of treatment as it ran over vegetated land before entering the Kahouri Stream. Furthermore, the discharge was clear at the time of the inspection. A satisfactory stormwater drainage system had been installed prior to the subsequent inspection. No adverse effects on receiving waters were noted over the course of the inspections.

3.3 Evaluation of performance

A tabular summary of the Trusts's compliance record for the period under review is set out in Table 1.

Table 1 Summary of performance for consent 7123-1

Purpose: To discharge treated stormwater onto and into land and into the Kahouri Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections of site and records	Yes
2. Exercise of consent in accordance with documentation	Inspections of site and records	Yes
3. No direct discharge of untreated stormwater	Inspections of site	Yes
4. Active quarry site to be bunded	Inspections of site	Yes
5. Control erosion of exposed areas and minimise silt/sediment in stormwater	Inspections of site	Yes
6. Progressive reinstatement of site	Inspections of site	Yes
7. Maximum stormwater catchment area	Inspections of site	Yes

Purpose: To discharge treated stormwater onto and into land and into the Kahouri Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
8. Maintain and operate silt control structures	Inspections of site	On two of three inspections
9. Concentration limits	Sampling and visual inspection	Yes
10. Receiving water – mixing zone effects	Sampling and visual inspection	Yes
11. Turbidity not to be increased by more than 50%	Sampling and visual inspection	Yes
12. Site plan, stormwater management plan and contingency plan	Plans received	Yes
13. Site reinstatement on cessation of quarrying	N/A	N/A
14. Consent lapse	N/A	N/A
15. Council may review, amend, delete or add to conditions	N/A – next optional review date – June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**Good**
Overall assessment of administrative performance in respect of this consent		**High**

The Trust achieved a good level of environmental and a high level of administrative performance and compliance with their resource consent in the 2013-2015 monitoring period. Although an issue was discovered with the eastern stormwater drain on one occasion, this was promptly resolved and the Trust remained in compliance with the conditions of their consent.

3.4 Recommendations from the 2011-2013 Annual Report

In the 2011-2013 Annual Report, it was recommended:

1. THAT monitoring of discharges from the Hey Trust quarry site in 2013-2015 continues at the same level as in 2011-2013.

3.5 Alterations to monitoring programmes for 2015-2017

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.

In the case of Hey Trust, it is proposed that the monitoring programmes for 2015-2017 remain unaltered from that of 2013-2015. Recommendations to this effect are made in section 4.

3.6 Exercise of optional review of consent

Resource consent 7123-1 does not provide for an optional review of the consent 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 the Hey Trust quarry site in 2015-2017 continues at the same level as in 2013-2015.

2. THAT the effects of turbidity and sedimentation on receiving waters be minimised by operating and maintaining the settling pond system in accordance with the conditions of consent 7123-1 and best quarry management practices.

Glossary of common terms and abbreviations

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

Biomonitoring	Assessing the health of the environment using aquatic organisms.
Bund	A wall around a tank to contain its contents in the case of a leak.
Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m.
Fresh	Elevated flow in a stream, such as after heavy rainfall.
g/m^3	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
IR	Incident Register.
L/s	Litres per second.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	Measurement of both physical properties(e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
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.
SS	Suspended solids.
Temp	Temperature, measured in °C.
Turb	Turbidity, expressed in NTU.
UI	Unauthorised Incident - an event recorded by the Council on the basis that it had potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.

For further information on analytical methods, contact the Council's laboratory.

Bibliography and references

Taranaki Regional Council, 1992: Regional Policy Statement Working Paper, Aggregate extraction in Taranaki TRC Report.

Taranaki Regional Council, 2011: Hey Trust Quarry Monitoring Programme Biennial Report. Technical Report 2011-64.

Taranaki Regional Council, 2013: Hey Trust Quarry Monitoring Programme Biennial Report. Technical Report 2013-77.

Appendix I

Resource consents held by Hey Trust

Discharge Permit

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

Name of Consent Holder:	Hey Trust 224 Monmouth Road R D 24 STRATFORD
Consent Granted Date:	10 July 2007

Conditions of Consent

Consent Granted:	To discharge treated stormwater from a quarry site onto and into land and into the Kahouri Stream in the Patea catchment at or about 2618825E-6210055N
Expiry Date:	1 June 2022
Review Date(s):	June 2010, June 2016
Site Location:	224 Monmouth Road, Stratford
Legal Description:	Lot 2 DP 307233 Blk XIII Huiroa SD
Catchment:	Patea
Tributary:	Kahouri

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

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 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 adverse effects on the environment from the exercise of this consent.

2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 4660 and to ensure that the conditions of this consent are met at all times. In the case of any contradiction between the documentation submitted in support of application 4660 and the conditions of this consent, the conditions of this consent shall prevail.

3. There shall be no direct discharge of untreated stormwater from the quarry into the Kahouri Stream as a result of the exercise of this consent.

4. The active quarry site shall be contoured and/or bunded so that all water generated in this area is directed to the silt control structures for treatment prior to discharge; and the flow of uncontaminated stormwater into this area is prevented.

5. The consent holder shall undertake measures during excavation to control erosion of exposed areas within the quarry site and to minimise the amounts of sediment contained in the stormwater discharge licensed by this consent.

6. The consent holder shall operate and progressively reinstate the quarry site in a manner which ensures that the area of exposed, unvegetated earth within the quarry's stormwater catchment is kept to a minimum at all times.

7. The maximum disturbed stormwater catchment area shall be no more than 1.0 hectare at any one time.

8. The consent holder shall maintain and operate the silt control structures in such a manner that any discharge which may occur shall not breach the conditions of this consent. The silt control structures shall be operated, as far as practicable, so as to maximise the treatment of the stormwater, and to minimise the duration and frequency of the discharge.

9. The following concentrations shall not be exceeded in the discharge:

Component	**Concentration**
total recoverable hydrocarbons [infrared spectroscopic technique]	15 gm^{-3}
suspended solids	100 gm^{-3}

This condition shall apply prior to the entry of the stormwater into the receiving waters of the Kahouri Stream, at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

10. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point to the Kahouri Stream, the discharge shall not give rise to any of the following effects in the receiving waters of the Kahouri Stream:

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

11. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point to the Kahouri Stream, the discharge shall not give rise to an increase in turbidity of more than 50 % in the Kahouri Stream, as determined by NTU [nephelometric turbidity units].

12. The consent holder shall provide a site plan, stormwater management plan, and contingency plan to the Taranaki Regional Council. These plans are to outline the measures and procedures to be undertaken to prevent the spillage or accidental discharge of contaminants into the stormwater catchment, and measures to avoid, remedy or mitigate environmental effects from the exercise of this consent.

13. On cessation of quarrying operations, or prior to the surrender or lapsing of this consent at the site licensed by this consent, the active quarry area including silt control structures and surrounding areas, shall be reinstated to the satisfaction of the Chief Executive, Taranaki Regional Council.

14. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

15. 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 10 July 2007

For and on behalf of
Taranaki Regional Council

_____

Director-Resource Management