R A Wallis Limited
Quarry Monitoring Programme
Biennial Report
2012-2014

Technical Report 2014–36

ISSN: 0114-8184 (Print)
ISSN:1178-1467 (Online)
Document:1372854 (Word)
Document:1387818 (Pdf)

Taranaki Regional Council
Private Bag 713
STRATFORD

September 2014

Executive summary

R A Wallis Limited (R A Wallis) operates a quarry located on Omahuru Road at Okaiawa, in the Waingongoro catchment. This report for the period July 2012-June 2014 describes the monitoring programme implemented by the Taranaki Regional Council to assess the Company's environmental performance during the period under review, and the results and environmental effects of the Company's activities.

The Company holds one resource consent 5719-1, which includes 15 conditions setting out the requirements that the Company must satisfy with regard to the discharge of washwater, stormwater and groundwater into the Waingongoro River.

The Council's monitoring programme for the year under review included three inspections. No water samples were collected for physicochemical analysis.

The monitoring showed that the site was complying with all of the conditions outlined in its consent. The site was generally tidy and well managed. The discharge from the site was having no visual impact on the receiving waters.

There were no unauthorised incidents recorded related to operations at the R A Wallis quarry during the period under review.

During the year, the Company demonstrated a high level of environmental performance and compliance with the resource consents.

This report includes recommendations for the 2014-2016 period.

Table of contents

		Page
1.	Introduction	1
1.1	Structure of this report	1
1.2	The Resource Management Act (1991) and monitoring	1
1.2.1	Evaluation of environmental and consent performance	2
1.3	Process description	3
1.3.1	R A Wallis Ltd, Okaiawa quarry	4
1.4	Resource consent	5
1.4.1	Water abstraction	5
1.4.2	Water discharge permit	5
1.4.3	Air discharge	6
1.5	Monitoring programme	7
1.5.1	Programme liaison and management	7
1.5.2	Site inspections	7
1.5.3	Chemical sampling	7
2.	Results	8
2.1	Water	8
2.1.1	Inspections	8
2.1.2	Results of abstraction and discharge monitoring	8
2.1.3	Results of receiving environment monitoring	8
2.2	Air	8
2.2.1	Inspections	8
2.3	Investigations, interventions, and incidents	8
3.	Discussion	10
3.1	Discussion of site performance	10
3.2	Environmental effects of exercise of consents	10
3.3	Evaluation of performance	10
3.4	Recommendations from the 2010-2012 Biennial Report	11
3.5	Alterations to monitoring programmes for 2014-2016	11
4.	Recommendations	12
Glossary of common terms and abbreviations		13
Bibliography and references		15
Appendix I	Resource consent held by R A Wallis Ltd	

List of tables

Table 1 Summary of performance for Consent 5719-1 discharge washwater, groundwater and stormwater Okaiawa quarry 10

List of figures

Figure 1 Approximate location of R A Wallis quarry 4
Figure 2 Location of R A Wallis Limited quarry site 5

1. Introduction

This is the Biennial Report for the period July 2012-June 2014 by the Taranaki Regional Council describing the monitoring programme associated with resource consent held by R A Wallis Limited (R A Wallis). The Company operates a quarry situated on Omahuru Road at Okaiawa.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consent held by R A Wallis that relate to discharges of water in the Waingongoro catchment. This is the twelfth Biennial Report to be prepared by the Taranaki Regional Council to cover the discharges and their effects.

1.1 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* (RMA) and the Council's obligations and general approach to monitoring sites through biennial programmes, the resource consent held by R A Wallis, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at the Company's site.

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 2014-2016 monitoring period.

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

1.2 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 socio-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 (eg, 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 Taranaki Regional Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each an 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 performance of resource users against regional plans and consents. Compliance monitoring, (covering both activity and impact) monitoring, also enables the Council to continuously assess its own performance in resource management as well as that of resource users particularly consent holders. It further 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.

1.2.1 Evaluation of environmental and consent 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 an overall rating. The categories used by the Council, and their interpretation, are as follows:

- A **high** level of environmental performance and compliance indicates that essentially there were no adverse environmental effects to be concerned about, and no, or inconsequential non-compliance with conditions.

- A **good** level of environmental performance and compliance indicates that adverse environmental effects of activities during the monitoring period were negligible or minor at most, or, 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, or, there were perhaps some items noted on inspection notices for attention but these items were not urgent nor critical, and follow-up inspections showed they have been dealt with, and any inconsequential non compliances with conditions were resolved positively, co-operatively, and quickly.

- **Improvement required (environmental)** or **improvement required (administrative compliance)** (as appropriate) indicates that the Council may have been obliged to record a verified unauthorised incident involving measurable environmental impacts, and/or, there were measurable environmental effects arising from activities and intervention by Council staff was required and there were matters that required urgent intervention, took some time to resolve, or remained unresolved at the end of the period under review, and/or, there were on-going issues around meeting resource consent conditions even in the absence of environmental effects. Abatement notices may have been issued.

- **Poor performance (environmental)** or **poor performance (administrative compliance)** indicates generally that the Council was obliged to record a verified

unauthorised incident involving significant environmental impacts, or there were material failings to comply with resource consent conditions that required significant intervention by the Council even in the absence of environmental effects. Typically there were grounds for either a prosecution or an infringement notice.

For reference, in the 2012-2013 year, 35% 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 59% demonstrated a good level of environmental performance and compliance with their consents.

In the 2013-2014 year, 60% of consent holders achieved a high level of environmental performance and compliance with their consents, while another 29% demonstrated a good level of environmental performance and compliance.

1.3 Process description

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-utilised. 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).

Twenty-five operating quarries presently supply aggregate in Taranaki. 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, although Taranaki aggregates are known to have a lower crushing strength (85 kN) than aggregates from most other parts of the country. Importation of various aggregates may need to continue to meet the requirement for aggregate types not available in Taranaki.

Quarrying and shingle extraction in Taranaki is covered by the RMA and, if the minerals in question are Crown owned, by the Crown Minerals Act 1991. Regional councils have no control over the provision of exclusive rights to minerals. However, regional councils do have control over the environmental effects of aggregate extraction from river and lake beds, and land in certain circumstances, and 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.

1.3.1 R A Wallis Ltd, Okaiawa quarry

The Okaiawa quarry site covers approximately 8.3 hectares and is located adjacent to the true right bank of the Waingongoro River, off Omahuru Road, Okaiawa. The quarry first began operating in March 2002. Aggregate is excavated and processed using a dry crusher, screening plant and digger.

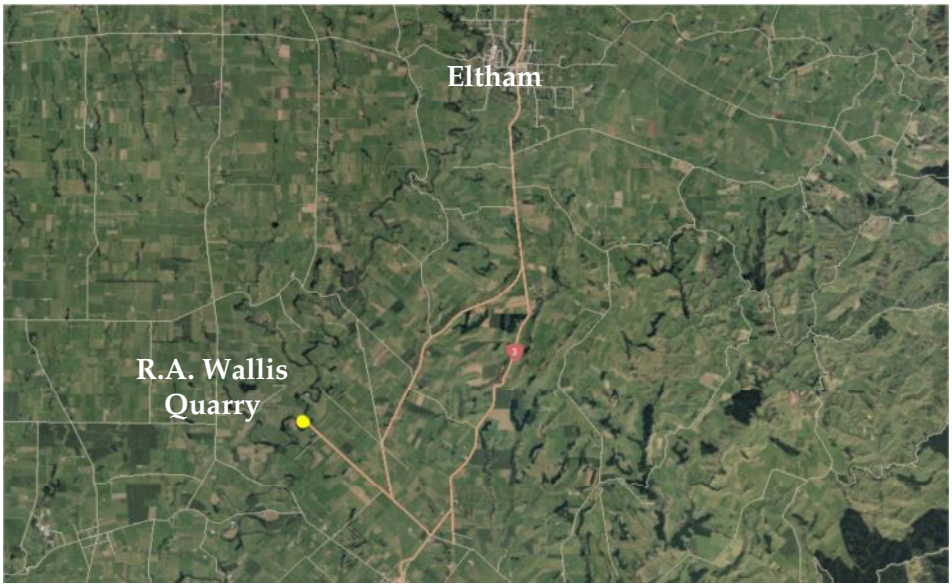

Figure 1 Approximate location of R A Wallis quarry

Stormwater, washwater and groundwater from the operation is directed to settling ponds before being discharged into the Waingongoro River. A riparian buffer zone of undisturbed land approximately 6 m wide separates the active site from the Waingongoro River.

Figure 2 Location of R A Wallis Limited quarry site

1.4 Resource consent

1.4.1 Water abstraction

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.

The maintenance of sufficient volumes of water within streams and rivers to protect aquatic habitat is a primary concern of the Regional Council with respect to water abstraction permits. Water abstraction for quarries is mainly required for the washing of aggregate, and in this regard the Council encourages the recycling of both washwater and stormwater to minimise the requirement to abstract surface water. Often when combined with efficient recycling, the small volumes of surface water required to be abstracted for washing at quarries fit within the permitted activity rule [Rule 15] of the Regional Fresh Water Plan for Taranaki. That is, the abstraction volume shall not exceed 50 cubic metres in any one day, and the abstraction rate shall not exceed 1.5 litres per second.

1.4.2 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 Regional 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 some form of 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 water body, particularly to a river during low flow, results in a smothering of in-stream 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 most important in maintaining water quality.

R A Wallis Ltd holds water discharge permit 5719-1 to cover the discharge of treated washwater, stormwater and groundwater from quarry operations into land and into the Waingongoro River. The permit was issued on 21 March 2001 and is due to expire on 1 June 2017.

There are fifteen special conditions attached to this consent.

Condition 1 states the consent holder shall adopt best practicable option and condition 2 states the maximum stormwater catchment area.

Conditions 3 and 4 relate to stormwater and washwater management.

Condition 5 requires active quarry area to be contoured and bunded.

Conditions 6 and 7 relates to the mixing zone.

Condition 8 states concentration limits and condition 9 requires progressive reinstatement.

Condition 10 relates to operation and maintenance of the stormwater system.

Condition 11 relates to contingency planning.

Condition 12 relates to site reinstatement.

Condition 13 relates to consent lapse.

Condition 14 requires installation of a back flow prevention device.

Condition 15 is a review provision.

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

1.4.3 Air discharge

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.

Rule 16 of the Council's Regional Air Plan for Taranaki allows the discharge of emissions from quarrying operations as a permitted activity, subject to compliance with various environmental performance conditions.

R A Wallis hold no air discharge consents for its Okaiawa quarry operation as the discharges to air from the site meet the requirements of Rule 16 of the Regional Air Plan.

1.5 Monitoring programme

Section 35 of the RMA sets out obligation/s upon the Taranaki Regional 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 Taranaki Regional 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 Okaiawa site consisted of three primary components.

1.5.1 Programme liaison and management

There is generally a significant investment of time and resources by the Taranaki Regional 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, or new consents, advice on the Council's environmental management strategies and the content of regional plans, and consultation on associated matters.

1.5.2 Site inspections

The Okaiawa quarry site was visited three times during the monitoring period. With regard to consent for the 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. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council.

1.5.3 Chemical sampling

Sampling of the stormwater and washwater from the R A Wallis is to be undertaken only if warranted during the monitoring period. The Taranaki Regional Council did not undertake sampling of the discharge or the receiving water during the period under review.

2. Results

2.1 Water

2.1.1 Inspections

5 November 2012
There was extracting and processing occurring at the time of inspection. There was quite a lot of product stockpiled onsite and some was being trucked off site. There was a new extraction area at the entrance end of the site. The pond looked good. The site was tidy and complying with consent conditions at the time of inspection.

25 January 2013
Processing and extracting was found to be occurring at the time of inspection. There was some product stockpiled on site. The pond looked in good condition visually and the site was tidy and complying with consent conditions at the time of inspection.

1 May 2014
There was a truck loading sand at time of inspection. A large area had been reinstated, advice was given to ensure silt and sediment traps were installed. There was not a lot of material onsite. There was no processing at time of inspection and the site was clean and tidy.

2.1.2 Results of abstraction and discharge monitoring

No discharge monitoring was undertaken at the R A Wallis quarry during the 2012-2014 monitoring period. The ponds were only discharging on one occasion and there was no effect evident in the receiving waters.

2.1.3 Results of receiving environment monitoring

No sampling of the receiving waters was undertaken, as the discharge was having no adverse visual effect on the receiving waters.

2.2 Air

2.2.1 Inspections

Many industries emit dust from various sources during operational periods. Rule 16 of the Council's Regional Air Plan for Taranaki allows the discharge of emissions from quarrying operations as a permitted activity, subject to compliance with various environmental performance conditions.

During compliance monitoring inspections the site was checked for discharges to air. There were no issues with dust or other emissions to air at the site during the monitoring period.

2.3 Investigations, interventions, and incidents

The monitoring programme for the period was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent

holder. During the monitoring period 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.

The Taranaki Regional 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 Unauthorised Incident Register (UIR) 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 2012-2014 monitoring period there were no unauthorised incidents recorded in relation to operations at the quarry site.

3. Discussion

3.1 Discussion of site performance

During the period under review there were three inspections undertaken at the R A Wallis quarry. Monitoring undertaken during the 2012-2014 period found the site was generally tidy and well managed. The ponds were discharging on one occasion and there was no adverse visual effect on the receiving waters.

No complaints were received regarding operations at the quarry and no unauthorised incidents were recorded during the monitoring period.

3.2 Environmental effects of exercise of consents

The main potential environment effect on waterways that quarries have is the discharges of washwater and stormwater containing high suspended solids concentrations into nearby waterways. Such discharges may result in discolouration of the waterway near the discharge point and may result in smothering of benthic life forms, form a barrier to fish movement and may affect fish spawning habitats.

As in previous monitoring periods, the quality of stormwater and washwater from the quarry has been of a high standard.

The Taranaki Regional Council monitored for possible effects on stream life by conducting a visual inspection of the streambed both up and downstream of the quarry. No adverse visual effects were noted in the receiving waters as a result of the discharge from the site.

3.3 Evaluation of performance

A summary of the consent holder's compliance record for the year under review is set out in Table 1.

Table 1 Summary of performance for Consent **5719-1** discharge washwater, groundwater and stormwater Okaiawa quarry

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise adverse effects of discharge	Site inspections and discussions with consent holder	Yes
2. Maximum disturbed stormwater catchment area no more than 2ha	Site inspections and discussions with consent holder	Yes
3. Washing area bunded, and recirculatory systems implemented	Site inspections and discussions with consent holder	Yes
4. No discharge of untreated wastewater to Waingongoro River	Site inspections	Yes
5. Active quarry site bunded to direct all stormwater to treatment system	Site inspections	Yes
6. No effects in receiving water	Inspections of receiving water	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
7. Limits on turbidity	Inspections of discharge point and receiving water. No discharge sampling warranted	Yes
8. Limits on pH and suspended solids	Inspections of discharge point and receiving water. No discharge sampling warranted	Yes
9. Progressively reinstate quarry to minimise exposed area	Site inspections	Yes
10. Properly maintain and operate settling ponds system to minimise discharge	Site inspections and discussion with consent holder	Yes
11. Prepare and maintain contingency plan	Most recent contingency plan received and approved by Council in July 2003	Yes
12. Reinstatement of site	Quarry still active	N/A
13. Lapse	Consent exercised	Yes
14. Back flow prevention device on discharge pipe	Site inspections and discussion with consent holder	Yes
15. Provision for review of conditions	Consent expires 1 June 2017	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**

During the period under review, the Company demonstrated a high level of environmental compliance. The site was generally tidy and well managed and there were no issues with regard to unauthorised incidents or complaints during the monitoring period.

3.4 Recommendations from the 2010-2012 Biennial Report

In the 2010-2012 Biennial Report, it was recommended:

1. THAT monitoring of the R A Wallis Ltd Okaiawa quarry site in the 2012-2014 monitoring period continue at the same level as in 2010-2012.

These recommendations were carried out.

3.5 Alterations to monitoring programmes for 2014-2016

In designing and implementing the monitoring programmes for air/water discharges in the region, the Taranaki Regional 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 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.

The monitoring programme for the R A Wallis Okaiawa quarry had remained unchanged from the original monitoring programme set up in 2002. In the 2014 period the monitoring programme has been reviewed and several alterations have been made. Additional programme supervision/ job management changes have been added to the programme which now includes administration for the programme.

4. Recommendations

1. THAT monitoring of the R A Wallis Ltd Okaiawa quarry site in the 2014-2016 monitoring period continue at the same level as in 2012-2014.

2. THAT job management charges and supervision criteria are included in the programme.

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.
BOD	Biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate.
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.
DO	Dissolved oxygen.
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.
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.
l/s	Litres per second.
mS/m	Millisiemens per metre.
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.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
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 including all subsequent amendments.
SS	Suspended solids.

Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.
UI	Unauthorised Incident.
UIR	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.

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

Bibliography and references

Taranaki Regional Council, 2010: R A Wallis Monitoring Programme Biennial Report 2010-12. Technical Report 2012-53.

Taranaki Regional Council, 2010: R A Wallis Monitoring Programme Biennial Report 2008-10. Technical Report 2010-74.

Taranaki Regional Council, 2008: R A Wallis Monitoring Programme Biennial Report 2006-08. Technical Report 2008-21.

Taranaki Regional Council, 2006: R A Wallis Monitoring Programme Biennial Report 2004-06. Technical Report 2006-34.

Taranaki Regional Council, 2005: R A Wallis Monitoring Programme Biennial Report 2002-04. Technical Report 2004-110.

Taranaki Regional Council, 2002: R A Wallis Monitoring Programme Annual Report 2001-02, Technical Report 2001-69.

Taranaki Regional Council, 2001: R A Wallis Monitoring Programme Annual Report 2000-01, Technical Report 2001-44.

Taranaki Regional Council, 2000: R A Wallis Monitoring Programme Annual Report 1999-00, Technical Report 2000-75.

Taranaki Regional Council, 1999: R A Wallis Monitoring Programme Annual Report 1998-99, Technical Report 99-94.

Taranaki Regional Council, 1998: R A Wallis Monitoring Programme Annual Report 1997-98, Technical Report 98-50.

Taranaki Regional Council, 1997: R A Wallis Monitoring Programme Annual Report 1996-97, Technical Report 97-72.

Taranaki Regional Council, 1996: R A Wallis Monitoring Programme Annual Report 1995-96, Technical Report 96-15D.

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

Appendix I

Resource consent held by R A Wallis Ltd

Consent 5719-I

TARANAKI
REGIONAL
COUNCIL

PRIVATE BAG 713
47CLOTEN ROAD
STRATFORD
NEWZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Discharge Permit

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

Name of Consent Holder:	R A Wallis Limited Private Bag 30 OKAIAWA
Consent Granted Date:	21 March 2001

Conditions of Consent

Consent Granted:	To discharge treated washwater, groundwater and stormwater from quarry operations into land and into the Waingongoro River at or about GR: Q21:174-882
Expiry Date:	1 June 2017
Review Date(s):	In the month 12 months following quarry operations becoming fully operational, and June 2005 and June 2011
Site Location:	Omahuru Road, Okaiawa [Property Owner: K & D Hancock]
Legal Description:	Umutahi 4C Blk I Hawera SD
Catchment:	Waingongoro

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

General conditions

a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.

b) That 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) That 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 the Resource Management Act 1991, to prevent or minimise any adverse effects of the discharge on the environment.

2) The maximum disturbed stormwater catchment area shall be no more than 2 hectares.

3) The area used for washing of aggregate shall be bunded/contoured to ensure separation from the stormwater catchment. Further the consent holder shall implement appropriate recirculatory systems, so as to minimise the volume of the washwater and stormwater discharge.

4) There shall be no direct discharge of untreated stormwater, washwater or groundwater from the active quarry site into the Waingongoro River as a result of the exercise of this consent.

5) The active quarry site shall be contoured/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, as far as is practicable.

6) After allowing for reasonable mixing, within a mixing zone extending 75 metres downstream of the discharge point, the discharge shall not give rise to any of the following effects in the receiving waters of the Waingongoro River:

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

7) After allowing for reasonable mixing, within a mixing zone extending 75 metres downstream of the discharge point, the discharge shall not give rise to an increase in turbidity (NTU) of more than 50%.

8) The following concentrations shall not be exceeded in the discharge:

Component	Concentration
pH (range)	6 - 9
Suspended solids	100 gm^{-3}

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

9) The consent holder shall 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. Such reinstatement shall be to a standard satisfactory to one of the Taranaki Regional Council soil conservators or to a soil conservator with a New Zealand Association of Resource Management practising certificate.

10) The consent holder shall properly and efficiently maintain and operate the settling ponds system, including the use of shut off valves, in such a manner that any discharge which may occur shall not breach the conditions of this consent. The settling ponds system shall be operated, as far as practicable, so as to minimise the duration and frequency of the discharge.

11) The consent holder shall prepare and maintain a contingency plan for action to be taken in the event of accidental discharge or spillage of contaminants; the initial plan to be provided prior to the exercise of this consent. In addition to other matters, the plan shall include details of procedures for containment and removal of any oil or grease which enters the stormwater system.

12) On cessation of quarry operations at the site licensed by this consent, the active quarry area, including the silt control structures, and surrounding areas shall be reinstated by the consent holder and inspected by, and be to a standard satisfactory to, one of the Taranaki Regional Council soil conservators or to a soil conservator with a New Zealand Association of Resource Management practising certificate.

13) This consent shall lapse on the expiry of four 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(l)(b) of the Resource Management Act 1991.

14) The consent holder shall install a back flow prevention device on the discharge pipe prior to exercise of this consent.

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 in the month 12 months following quarry operations becoming fully operational, and during the month of June 2005 and/or June 2011, 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 21 March 2001

For and on behalf of
Taranaki Regional Council

Chief Executive