

South Road Quarries Limited  
Tokaora Quarry  
Monitoring Programme  
Triennial Report  
2010-2013  
Technical Report 2013 – 60

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## **Executive summary**

South Road Quarries Limited (the Company) operated a quarry located on South Road at Tokaora, in the Waingongoro catchment. This report for the period July 2010-April 2013 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 held four resource consents for its Tokaora quarry, which included a total of thirty-four conditions setting out the requirements that the Company must satisfy. One consent licensed the abstraction and use of surface water. Two consents licensed the discharge of treated stormwater and washwater into the Waingongoro River, and the remaining consent licensed the discharge of cleanfill to land.

The monitoring programme for the period under review included four inspections of the site. No water samples were collected during the monitoring period.

The monitoring showed there were no adverse effects noted in the Waingongoro River as a result of the Company's activities. The monitoring indicated deterioration in environmental performance.

During the period under review the Company demonstrated a improvement desired level of environmental performance and compliance with its resource consents. The site has now been closed and consents surrendered.

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.

During the monitoring period there were no unauthorised incidents.



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## 1. Introduction

This triennial report for the period July 2010 – April 2013 by the Taranaki Regional Council describes the monitoring programme associated with resource consents that were held by South Road Quarries Limited [South Road Quarries] for its quarry operation situated on South Road (SH45), Tokaora. This will be the last report for the site as all consents have now been surrendered on 2 April 2013..

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by South Road Quarries that relate to discharges of water and cleanfill in the Waingongoro catchment. This is the eleventh monitoring report to be prepared by the Taranaki Regional Council to cover the discharges from the South Road Quarry to water and land, 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 and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by South Road Quarries, 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 quarry.

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.

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

### 1.2 Compliance monitoring and the Resource Management Act 1991

The Resource Management Act 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 a discharger, 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 (e.g., 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 discharge source. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the Resource Management Act to assess the effects of the exercise of consents. In accordance with section 35 of the Resource Management Act 1991, 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 (such as data supplied after a deadline) 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 desirable (environmental) or improvement desirable (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 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 (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.

## **1.3 Process description**

### **1.3.1 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 valuable sources 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 issuing 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-eight operating quarries presently supply aggregate in Taranaki. These quarries are generally located in reasonable proximity to urban areas, from which the greatest demand for aggregate stems.

Quarrying and shingle extraction in Taranaki is covered by the Resource Management Act 1991 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 Resource Management Act 1991 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, 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.

### **1.3.2 South Road Quarries**

The Company's quarry site was located on State Highway 45, approximately five kilometres west of Hawera. The quarry occupied land on both sides of the highway and was adjacent to the true right bank of the Waingongoro River (Figure 1). It was a moderate size operation which extracted alluvial aggregate from the river terraces. Aggregate washing was performed on site. The site was contoured and bunded to direct stormwater to two settling pond systems.

The treatment pond to the east of SH45 received stormwater and groundwater from the quarry. Treated water was either discharged to the Waingongoro River, or pumped to an adjacent dairy farm for pasture irrigation purposes.

The treatment pond to the west of SH45 received quarry washwater which was recycled through the plant. An emergency overflow pipe installed in this pond discharged to the river during very high rainfall events.

## **1.4 Resource consents**

### **1.4.1 Water abstraction permit**

Section 14 of the Resource Management Act 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 per day, and the abstraction rate shall not exceed 1.5 litres per second.

South Road Quarries Ltd held water permit **0275-2** to take and use up to 27 cubic metres/day at a maximum rate of 4 litres/second of water from the Waingongoro River for shingle washing purposes.

Consent 0275-2 was surrendered on 15 September 2010.

There were two special conditions attached to this consent.

Condition 1 related to the construction, operation and maintenance of the intake structure.

Condition 2 was a review provision.

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

#### **1.4.2 Water discharge permit**

Section 15(1)(a) of the Resource Management Act 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.

Washwater 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 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 most important in maintaining water quality.

South Road Quarries Ltd held discharge permit **0902-2** to discharge up to 27 cubic metres/day [4 litres/second] of settled washing wastewater by seepage to groundwater into the Waingongoro River.

Consent 0902-2 was surrendered on 15 September 2010.

There were three special conditions attached to this consent.

Condition 1 set out the effects to be avoided in the receiving.

Condition 2 referred to erosion control and mitigation.

Condition 3 was a review provision.

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

South Road Quarries Ltd held water discharge permit **4617-1** to cover the discharge of up to 170 litres/second of stormwater and groundwater seepage from a quarry site onto and into land and into the Waingongoro River via a discharge structure onto and into land for pasture irrigation purposes.

There were twenty special conditions attached to this consent.

Conditions 1, 2, 3, 5, 7, 8, 10, 15, and 16 referred to site stormwater control and discharge, and the management of the stormwater treatment system.

Condition 4 required the discharge structure to provide for the passage of eels.

Conditions 6 and 17 prohibited the discharge of untreated site stormwater or groundwater into the Waingongoro River.

Condition 11 specified the water quality parameters for the treated discharge, while special conditions 9, 12, and 13 set out the effects to be avoided in ground water and the receiving waters from the discharge.

Condition 14 required a contingency plan to be provided to cover spillages and the accidental discharge of contaminants. Special condition 18 prohibits stock access to the Waingongoro River via the quarry, while special condition 19 refers to riparian planting.

Condition 20 was a review provision.

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

#### **1.4.3 Air discharge permit**

Section 15(1)(c) of the Resource Management Act 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. The Company held no air discharge consents for its South Road quarry operation because airborne discharges [mainly dust] from the operation met the requirements of Rule 16 of the Regional Air Plan.

#### **1.4.4 Discharges of wastes to land**

Sections 15(1)(b) and (d) of the Resource Management Act stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

South Road Quarries held discharge permit **6414-1** to cover the discharge of cleanfill onto and into land in the vicinity of the Waingongoro River for quarry reinstatement purposes.

There were nine special conditions attached to this consent.

Condition 1 refers to the information supporting the consent application.

Conditions 2 and 3 specify the types of materials that can and cannot be discharged, while special condition 4 requires written approval from the Council to discharge any materials not specified in conditions 2 or 3.

Condition 5 prohibits any contaminant discharged to land from entering the Waingongoro River.

Condition 6 refers to cleanfill management, while special condition 8 requires a cleanfill operation and management plan to be provided.

Condition 7 relates to site reinstatement.

Condition 9 is a review provision.

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

## **1.5 Monitoring programme**

### **1.5.1 Introduction**

Section 35 of the Resource Management Act 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 South Road Quarries site consisted of three primary components.

### **1.5.2 Programme liaison and management**

There is generally a significant investment of time and resources by the Taranaki Regional Council in on-going 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.

### **1.5.3 Site inspections**

The South Road Quarries site was visited five times during the monitoring period. With regard to consents for the abstraction of and 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. The neighbourhood was surveyed for environmental effects.

#### **1.5.4 Sampling**

Sampling of the discharge, and the receiving waters upstream and downstream of the discharge, was programmed to be undertaken if warranted. No sampling was undertaken during the period under review.

## **2. Results**

### **2.1 Water**

#### **2.1.1 Inspections**

##### **28 January 2011**

Inspection of the site was undertaken during fine but overcast weather. The inspecting officer spoke with the operator. There was little more extraction to be carried out. There was some crushing being undertaken. A small amount of product was being trucked off site. The ponds looked good. There were no issues with regard to dust. There were several loads of concrete and bricks that had been dumped near the gate (which was locked).

##### **4 April 2011**

Inspection was undertaken following overnight rain. There was a reasonable amount of product stockpiled on site, there was product being trucked off site. There was no processing occurring at the time of inspection. The silt ponds looked good. A small amount of mainly concrete had been added to the cleanfill. All consents were being complied with at the time of inspection.

##### **23 June 2011**

Inspection was undertaken during wet weather. The gates were locked at the time of inspection. There was some concrete, bricks, and soil that had been added to the cleanfill since the last inspection. The site was tidy.

##### **5 November 2012**

Inspection was undertaken during fine weather. The gates looked to have been smashed open. There did not seem to have been anything added for some time. The material around the gate was mainly broken concrete and bricks.

##### **25 January 2013**

Inspection was undertaken during fine weather. The gates were locked. Nothing had been dumped for some time. Material around the gate consisted of broken concrete and bricks.

#### **2.1.2 Results of discharge monitoring**

No discharge samples were collected during the monitoring period. This was because no discharges were occurring at the time of the inspections.

#### **2.1.3 Results of receiving environmental monitoring**

No receiving water samples were collected during the monitoring period. This was because no discharges were occurring at the time of the inspections.

## **2.2 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 years matters may arise which require additional activity by the Council e.g. provision of advice and information, or investigation of potential or actual courses of non-compliance or failure to maintain good practices.

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).

During the monitoring period, it was not necessary for the Council to undertake any significant additional investigations and/or interventions, or record any incidents, in association with operations at the South Road Quarries site.

### 3. Discussion

#### 3.1 Discussion of site performance

During the period under review compliance with consent conditions was generally achieved. Management of the site was found to be good. There were no complaints received by the Council, and no abatement notices issued during the reporting period. Inspections found that there was no discharge from the site during the monitoring period. However Condition 7 of consent 6414-1 requiring revegetation according to plans submitted by the applicant (Clean Full Management Plan October 2004) have not been undertaken. See also Table 3, Page 12.

#### 3.2 Environmental effects of exercise of consents

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

The Taranaki Regional Council monitors for effects on instream life by inspecting the stream bed up and downstream of the quarry site.

#### 3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the years under review is set out in Tables 1-4.

**Table 1** Summary of performance for consent 0275-2 – Abstraction of water for shingle washing purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Intake system	Inspections	Yes
2. Review Provision	Consent surrendered 15 September 2010	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		<b>High</b>

**Table 2** Summary of performance for Consent 0902 – Discharge of settled washing wastewater

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Discharge not to give rise to: oil, grease, scum, change in colour, emission of odour, etc	Inspections of site	Yes
2. Prevent or mitigate erosion	Inspections of site	Yes
3. Review provision	Consent surrendered 15 September 2010	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		<b>High</b>

**Table 3** Summary of performance for Consent 6414 – Discharge cleanfill for quarry reinstatement purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Exercise of consent to be undertaken in accordance with documentation submitted	Inspections of site	No
2. Contaminants to be limited to cleanfill and/or inert material	Inspections of site	No
3. Discharge of food wastes, paper, garden waste, textiles, steel, etc is not to occur	Inspections of site	No
4. If uncertain of acceptability of certain material the consent holder is to obtain written approval from Council	N/A	No
5. Discharge to land shall not result in any contaminant entering surface water	Inspections of site	Yes
6. Adopt best practicable option to prevent or minimise effects	Inspections of site	Yes
7. Upon completion of works the discharge site is to be revegetated	No evidence of any revegetation had been undertaken on any of the original pit surrounds as per plan	No
8. Provision of a management plan	Received	Yes
9. Review provision	Consent surrendered 2 April 2013	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		<b>Improvement Desired</b>

**Table 4** Summary of performance for Consent 4617-1 Discharge of stormwater and groundwater seepage from a quarry site

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections	Yes
2. Installation of a treatment system	Inspections	Yes
3. Design, installation, and management of stormwater treatment system to minimise instability of surrounding land	Inspections of system	Yes
4. Discharge structure to be designed to allow movement of eels into the system	Inspections	Yes
5. Structure to be designed to prevent flow of water from Waingongoro River into the system	Inspections	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
6. No direct discharge of untreated stormwater or groundwater from the active quarry site to the river	Inspections	Yes
7. Active quarry site to be contoured/bunded so water is directed for treatment prior to discharge	Inspections	Yes
8. Control erosion of exposed areas during excavation to minimise silt and sediment in stormwater	Inspections	Yes
9. No adverse effects shall occur to shallow groundwater in vicinity of discharge	Inspections	Not tested
10. Properly maintain and operate the stormwater treatment system	Inspections	Yes
11. Concentration limits	Sampling – no sampling undertaken	N/A
12. Mixing zone effects	Inspections and sampling – no sampling undertaken	Yes
13. Discharge not to decrease clarity by more than 50%	Inspections – No discharge	Yes
14. Contingency plan	Received and approved	Yes
15. Discharge shall not result in ponding that remains more than 3 hours	Inspections	Yes
16. Best practicable option to prevent or minimise adverse effects from discharge of water for irrigation purposes	Inspections	Yes
17. No direct discharge of untreated water from the active quarry site	Inspections	Yes
18. Prevent stock from accessing the Waingongoro River on or bordering the consent holders property	Inspections	Yes
19. Undertake riparian planting	Inspections	No
20. Review provision	Consent expired 1 June 2011	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		<b>Improvement Desired</b>

During the monitoring period, the Company demonstrated an improvement desired level of environmental performance and compliance with the resource consents.

### **3.4 Recommendations from the 2008-2010 Biennial Report**

In the 2008-2010 Report, it was recommended:

1. THAT monitoring of discharges from South Road Quarries Limited Tokaora quarry in the 2010-2012 monitoring period continue at the same level as in 2008-2010.

This recommendation was carried out.

### **3.5 Alterations to monitoring programmes for 2012-2014**

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 Resource Management Act, 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.

No further monitoring will be undertaken as consent 0275-2 to take surface water and consent 0902-2 to discharge washwater from quarrying activity were surrendered in September 2010; Consent 4617-1 to discharge stormwater and groundwater expired 1 June 2011 and was not renewed. The last consent, 6414-1, for the discharge of cleanfill was surrendered on 2 April 2013. Very little cleanfill had been disposed of at the site in the last 18 months prior to surrender.

#### **4. Recommendation**

THAT no further monitoring and reporting of the South Road Quarries site at Tokaora be undertaken as all consents under which the site was operated were surrendered successively between September 2010 and April 2013.

## Glossary of common terms and abbreviations

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

bund	a wall around a tank to contain its contents in the case of a leak
COD	chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a sample by chemical reaction
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 <sup>3</sup>	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
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
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.

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- Taranaki Regional Council, Quarries Monitoring Programme Annual Report 1997-98 Combined Quarries Limited, Victoria Road Stratford. Technical Report 98-14.
- Taranaki Regional Council, Quarries Monitoring Programme Annual Report 1996-97 Combined Quarries Limited, Victoria Road Stratford. Technical Report 97-35.
- Taranaki Regional Council, Quarries Monitoring Programme Annual Report 1995-96 Combined Quarries Limited, Victoria Road Stratford. Technical Report 96-15.
- Taranaki Regional Council, 1992: Regional Policy Statement Working Paper. Aggregate extraction in Taranaki. TRC Report.



## **Appendix I**

### **Resource consents held by South Road Quarries Limited**



# SURRENDERED

15-09-2010

Consent 0275-2



**TARANAKI  
REGIONAL  
COUNCIL**

PRIVATE BAG 713  
47 CLOTON ROAD  
STRATFORD  
NEW ZEALAND  
PHONE 0-6-765 7127  
FAX 0-6-765 5097

## Water Permit

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

Name of Consent Holder:	South Road Quarries Limited P O Box 336 HAWERA	New Address:  P O Box 65 Stratford 4352
Renewal Granted Date:	8 September 1993	

## Conditions Of Consent

Consent Granted: To take up to 27 cubic metres/day [4 litres/second] of water, from the Waingongoro River, for shingle washing purposes at or about GR: Q21:138-801

Expiry Date: 1 June 2011

Review Date[s]: June 1999 and June 2005

Site Location: Hawera-Opunake Highway Bridge Hawera

Legal Description: Pt Lot 2 Dp5113 Blk VIII Waimate SD

Catchment: Waingongoro

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

# SURRENDERED

Consent 0275-2

**General conditions**

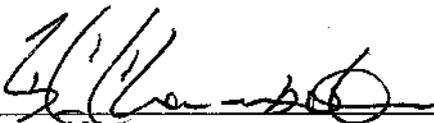
- (a) The consent holder shall provide on request by the General Manager, Taranaki Regional Council, plans, specifications and maintenance programmes of works associated with the exercise of the consent, showing that the conditions of the consent are able to be met.
- (b) The standards, techniques and frequency of monitoring of the consent shall be to the specific approval of the General Manager, Taranaki Regional Council.
- (c) The consent holder shall pay all charges required by the General Manager, Taranaki Regional Council, to enable recovery of the actual and reasonable costs incurred in administration, monitoring and supervision of the consent.

**Special conditions**

- 1. THAT the intake system shall be constructed, operated and maintained to the satisfaction of the General Manager, Taranaki Regional Council.
- 2. THAT the Taranaki Regional Council may review any or all of the conditions of this consent on or about 1 June 1999 and/or 1 June 2005, if the General Manager, Taranaki Regional Council, considers that it is necessary to do so for the purpose of ensuring that the conditions adequately deal with the environmental effects of the abstraction.

Transferred at Stratford on 26 October 1999

For and on behalf of  
Taranaki Regional Council



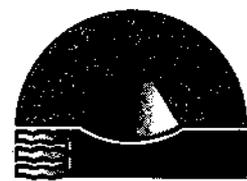
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General Manager

# SURRENDERED

15-09-2010

Consent 0902-2



**TARANAKI  
REGIONAL  
COUNCIL**

PRIVATE BAG 713  
47 CLOTON ROAD  
STRATFORD  
NEW ZEALAND  
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: South Road Quarries Limited  
P O Box 140  
HAWERA

New Address:  
P O Box 65  
Stratford 4352

Renewal Granted Date: 8 September 1993

## Conditions Of Consent

Consent Granted: To discharge up to 27 cubic metres/day [4 litres/second] of settled washing wastewater by seepage to groundwater into the Waingongoro River at or about GR: Q21:138-802

Expiry Date: 1 June 2011

Review Date[s]: June 1999 and June 2005

Site Location: Hawera-Opunake Highway next to Waingongoro River

Legal Description: Pt Lot 1 DP 5113 Blk VIII Waimate SD

Catchment: Waingongoro

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

# SURRENDERED

Consent 0902-2

## General conditions

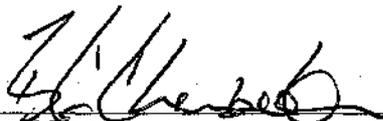
- (a) The consent holder shall provide on request by the General Manager, Taranaki Regional Council, plans, specifications and maintenance programmes of works associated with the exercise of the consent, showing that the conditions of the consent are able to be met.
- (b) The standards, techniques and frequency of monitoring of the consent shall be to the specific approval of the General Manager, Taranaki Regional Council.
- (c) The consent holder shall pay all charges required by the General Manager, Taranaki Regional Council, to enable recovery of the actual and reasonable costs incurred in administration, monitoring and supervision of the consent.

## Special conditions

1. THAT the discharge shall not give rise to any of the following effects in 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 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 effect on aquatic life.
2. THAT the consent holder shall prevent or mitigate erosion which may occur as a result of the exercise of this consent, to the satisfaction of the General Manager, Taranaki Regional Council.
3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent on or about 1 June 1999 and/or 1 June 2005 if the General Manager, Taranaki Regional Council considers that it is necessary to do so for the purpose of ensuring that the conditions adequately deal with the environmental effects of the discharge.

Transferred at Stratford on 26 October 1999

For and on behalf of  
Taranaki Regional Council

  
\_\_\_\_\_  
General Manager



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

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

Name of Consent Holder: South Road Quarries Limited  
P O Box 336  
HAWERA

New Address:  
P O Box 65  
Stratford 4352



Change To Conditions Date: 19 December 2001 [Granted: 19 September 1994]

**Conditions of Consent**



Consent Granted: To discharge up to 170 litres/second of stormwater and groundwater seepage from a quarry site onto and into land and into the Waingongoro River via a discharge structure at or about GR: Q21:138-804 and onto and into land for pasture irrigation purposes at or about GR: Q21:133-800

Expiry Date: 1 June 2011

Review Date(s): June 1999, June 2005

Site Location: South Road, Tokaora

Legal Description: Pt Lot 2 DP 5113 Blk VIII Hawera SD Sec 93 Blk VIII Waimate SD Pt Sec 92 Blk VIII Waimate SD

Catchment: Waingongoro

## Consent 4617-1

### 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

#### conditions 1 – 14 [unchanged]

1. That the consent holder shall adopt the best practicable option to prevent or minimise any actual or potential effect on the environment arising from the discharge of stormwater and groundwater seepage.
2. That a stormwater treatment system be installed.
3. That the design, installation and management of the stormwater treatment system shall be undertaken so as to minimise instability of the surrounding land.
4. That the discharge structure shall be designed so as to allow the movement of eels into the stormwater treatment system.
5. That the discharge structure shall be designed so as to prevent the flow of water from the Waingongoro River into the stormwater treatment system.
6. That there shall be no direct discharge of untreated stormwater, or groundwater, from the active quarry site into the Waingongoro River as a result of the exercise of this consent.
7. That the active quarry site shall be contoured/bunded so that: all water generated in this area is directed to the stormwater treatment system for treatment prior to discharge; and the flow of uncontaminated stormwater into this area is prevented, as far as is practicable.
8. That the consent holder shall undertake measures during excavation to control erosion of exposed areas within the quarry site and to minimise the amounts of silt and sediment which could be contained in the stormwater or groundwater licensed by this consent.
9. That no adverse effects shall occur to shallow groundwater in the vicinity of the discharge, as a result of the exercise of this consent.
10. That the consent holder shall properly and efficiently maintain and operate the stormwater treatment system in such a manner that any discharge which may occur shall not breach the conditions of this consent. The stormwater treatment system shall be operated, as far as practicable, so as to maximise the treatment of stormwater, and to minimise the duration, frequency and rate of discharge.

## Consent 4617-1

11. That the following concentrations shall not be exceeded in any discharge

Component	Concentration
pH (range)	6-9
Suspended solids	200 gm <sup>-3</sup>
Total recoverable hydrocarbons	15 gm <sup>-3</sup>

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

12. That 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:
- the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - any conspicuous change in the colour or visual clarity;
  - any emission of objectionable odour;
  - the rendering of fresh water unsuitable for consumption by farm animals;
  - any significant adverse effects on aquatic life.
13. That after allowing for reasonable mixing, within a mixing zone extending 75 metres downstream of the discharge point, the discharge shall not give rise to a decrease in river clarity of more than 50% in the Waingongoro River.
14. That within two months of the exercise of this consent, the consent holder shall provide a contingency plan to the Taranaki Regional Council, outlining measures and procedures to be undertaken to prevent the spillage or accidental discharge of contaminants in the stormwater catchment, and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.



### Conditions 15 – 19 [new]

#### Pasture irrigation

15. The discharge shall not result in ponding on the surface that remains for more than three hours after the discharge has ceased.
16. At all times the consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of water onto land for pasture irrigation purposes.
17. There shall be no direct discharge of untreated stormwater, or groundwater, from the active quarry site onto land as a result of the exercise of this consent.
18. The consent holder shall prevent stock at all times from accessing the Waingongoro River on or bordering the consent holder's property, by constructing and maintaining fences or other controls as may be appropriate and effective, such means of prevention to be established within two years of the granting of this consent.
19. The consent holder shall undertake planting and subsequent maintenance of the riparian margins of the waterbodies within the fenced or controlled area(s) as required by special condition 18, to the satisfaction of the Chief Executive, Taranaki Regional Council within four years of the granting of this consent, for the purpose of enhancing water quality and aquatic habitat.

Consent 4617-1

**Condition 20 [previously condition 15 - unchanged]**

**Review**

20. That the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 1999 and/or June 2005 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 consent, which were not foreseen at the time the application was considered and which is was not appropriate to deal with at that time.

Signed at Stratford on 19 December 2001

For and on behalf of  
Taranaki Regional Council



\_\_\_\_\_  
Director-Resource Management



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

CHIEF EXECUTIVE  
PRIVATE BAG 713  
47 CLOTEN ROAD  
STRATFORD  
NEW ZEALAND  
PHONE: 06-765 7127  
FAX: 06-765 5097  
[www.trc.govt.nz](http://www.trc.govt.nz)

Please quote our file number  
on all correspondence

Name of Consent Holder:	South Road Quarries Limited P O Box 336 HAWERA	<b>New Address:</b> P O Box 65 Stratford 4352
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Review Completed Date: 28 August 2008 [Granted: 22 July 2004]

**Conditions of Consent**

Consent Granted:	To discharge cleanfill onto and into land in the vicinity of the Waingongoro River for quarry reinstatement purposes at or about (NZTM) 1703763E-5618626N
Expiry Date:	1 June 2016
Review Date(s):	June 2012
Site Location:	Main South Road, Tokaora
Legal Description:	Pt Lots 1 & 2 DP 5113 Sec 105 SO 10693 Pt Sec 32 Blk VIII Waimate SD
Catchment:	Waingongoro

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

## Consent 6414-1

### 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

#### Condition 1 [unchanged]

1. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 3156. In the case of any contradiction between the documentation submitted in support of application 3156 and the conditions of this consent, the conditions of this consent shall prevail.

#### Conditions 2 to 3 [changed]

2. The contaminants to be discharged shall be limited to cleanfill and/or inert materials. For the purposes of this condition, "clean fill and inert materials" are defined as materials consisting of any concrete, cement or cement wastes, bricks, mortar, tiles (clay, ceramic or concrete), non-tanalised timber, porcelain, glass, gravels, boulders, shingles, fibreglass, plastics, sand, soils and clays, and/or tree stumps and roots, whether singly or in combination or mixture, or any other material (subject to conditions 3 & 5) that when placed onto and into land will not render that land or any vegetation grown on that land toxic to vegetation or animals consuming vegetation.
3. The discharge of the following contaminants shall not occur: food wastes, paper and cardboard, grass clippings, garden wastes including but not limited to wastes containing foliage or other vegetation (other than tree stumps and roots as permitted under condition 2), textiles, steel, galvanised metals, construction materials containing paint or fillers or sealers or their containers, oils or greases or any liquids or sludges or their containers, any industrial process by-products other than as permitted under condition 2, any poisons or solvents or their containers, batteries, general domestic refuse not otherwise described, or any wastes with the potential to render land or any vegetation grown on the land toxic to vegetation or to animals consuming such vegetation.

**Condition 4 [unchanged]**

4. If the consent holder is uncertain as to the acceptability or not of a certain material the consent holder shall obtain written approval from the Consents Manager, Taranaki Regional Council, prior to its discharge.

**Condition 5 [changed]**

5. The discharge to land shall not result in any contaminant entering surface water or groundwater.

**Conditions 6 to 9 [unchanged]**

6. Notwithstanding any conditions within this consent, the consent holder shall at all times 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 any discharge at the site.
7. Upon completion of the works associated with the exercise of this consent, the discharge site covered by this consent shall be stabilised and revegetated to the satisfaction of the Chief Executive, Taranaki Regional Council.
8. Within three months of the granting of this consent, the consent holder shall produce a detailed management plan covering all aspects of the reinstatement operation, including:
  - a) resource consent requirements
  - b) site management
  - c) waste acceptance criteria
  - d) waste acceptance controls and procedures
  - e) daily operating procedures
  - f) environmental controls and monitoring
  - g) emergency procedures

The report shall be to the satisfaction of the Chief Executive, Taranaki Regional Council.

9. 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 2008 or June 2012, 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 28 August 2008

For and on behalf of  
Taranaki Regional Council



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Chief Executive

