

Vickers Quarries Limited
Toko and Midhirst Quarries
Compliance Monitoring Programme
Annual Report
2009-2010
Technical Report 2010–57

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Executive summary

Vickers Quarries Limited operates two quarries in Taranaki. One is located off York Road in the Waitara catchment; and the other is located off Toko Road in the Patea catchment. Both operate on a commercial basis.

This report for the period July 2009-June 2010 describes the monitoring programme implemented by the Taranaki Regional Council to assess the Company's environmental performance and environmental effects of the Company's activities.

Vickers Quarries Ltd hold a total of four resource consents to cover activities at its two quarries. These four consents collectively include a total of thirty-nine special conditions setting out discharge water quality and environmental protection requirements that the Company must satisfy.

Three of the consents relate to the York Road quarry and cover the abstraction of water from, and the discharge of treated stormwater and washwater into an unnamed tributary of the Waipuku Stream. Aggregate washing at the York Road site commenced May 2007. The Company also holds a consent to allow the Toko Road quarry to discharge treated wastewater into the Patea River.

Compliance monitoring of the Company's two quarries in 2009-2010 included a total of six inspections. No water samples were collected from either site during the 2009-2010 monitoring year. Visual checks detected no adverse environmental effects on the waters of the Waitara or Patea catchments as a result of quarry operations.

Both quarry sites appeared to be well maintained and managed with regard to environmental matters.

As in previous years, the Company has demonstrated a high level of environmental performance and compliance with its consents and appropriate control over the discharge of contaminants into waterways.

There were no incidents recorded in relation to operations at the Vickers quarry sites in the monitoring period under review.

This report includes recommendations for the 2010-2011 monitoring year.

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1. Introduction

This report is the Annual Report for the period July 2009-June 2010 by the Taranaki Regional Council describing the monitoring programme associated with resource consents held by Vickers Quarries Limited (the Company). The Company operates two quarry sites in Taranaki. One site is located off York Road in the Waitara catchment, and the other is off Toko Road, in the Patea catchment.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Vickers Quarries Limited that relate to abstractions and discharges of water in the Waitara and Patea catchments.

This is the sixteenth Annual Report to be prepared by the Taranaki Regional Council to cover the Company's stormwater and washwater 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 and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by Vickers Quarries Limited in the Waitara and Patea catchments, 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 two sites.

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 2010-2011 monitoring year.

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' 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, including 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, to move closer to achieving sustainable development of the region's resources.

1.2.1 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by Vickers Quarries Limited in the Waitara and Patea catchments 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 trivial (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 year were negligible or minor at most, items of concern were resolved positively, co-operatively, and quickly, the Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices, 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.
- **improvement desirable** indicates that the Council may have been obliged to record a verified unauthorised incident involving significant environmental impacts against the company, and/or abatement notices may have been issued; there were adverse 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.

- **poor** performance is used when there were grounds for prosecution or infringement notice

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 a valuable source of aggregate. The aggregate source within these rivers was often over-exploited. The protective armouring of the boulders and gravel was removed in places, exposing the underlying erodible ash beds and creating deep narrow channels, which moved progressively upstream with no noticeable recovery. This brought about the need for the Shingle Extraction Bylaw introduced in 1974. Aggregate extraction from rivers was then controlled through the issue of permits accompanied by a set of conditions, with the removal of river-based aggregate being restricted to that for river control purposes only.

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

Thirty-one 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 laharcic deposits has occurred due to the controlled river bed extraction. These resources are of good quality and are relatively plentiful. Importation of various aggregates may need to continue to meet the requirement for aggregate types not available in Taranaki.

Quarrying and 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 and 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.

1.3.2 Vickers Quarry – Toko Road

The Company's Toko Road quarry is on the true left bank of the Patea River, approximately 0.5 km below its confluence with the Toko Stream (Photo 1 and Figure 1). The site is now well established and covers an area of about 5.5 ha. Quarrying began in 1975 and the aggregate was processed by dry crushing. The Company first obtained resource consent to discharge treated stormwater in March 1990. A washing plant with recirculation system was installed at the start of 1993.

The washer is only used periodically. Washwater is sourced from the stormwater treatment pond and from groundwater pumped from the working pit. Washwater is discharged from the wash ponds to the excavation pit/stormwater pond for treatment and recirculation. The excavation pit/stormwater pond is deep and while there is a discharge outlet into the Patea River, discharges to the river do not regularly occur. The riparian margin between the quarry and the Patea River has been planted to help mitigate the effects of the quarry on this river. Reinstatement is carried out using hard fill and other inert materials sourced from the quarry property.



Photograph 1 Location of Vickers Quarry – Toko Road site (2006)

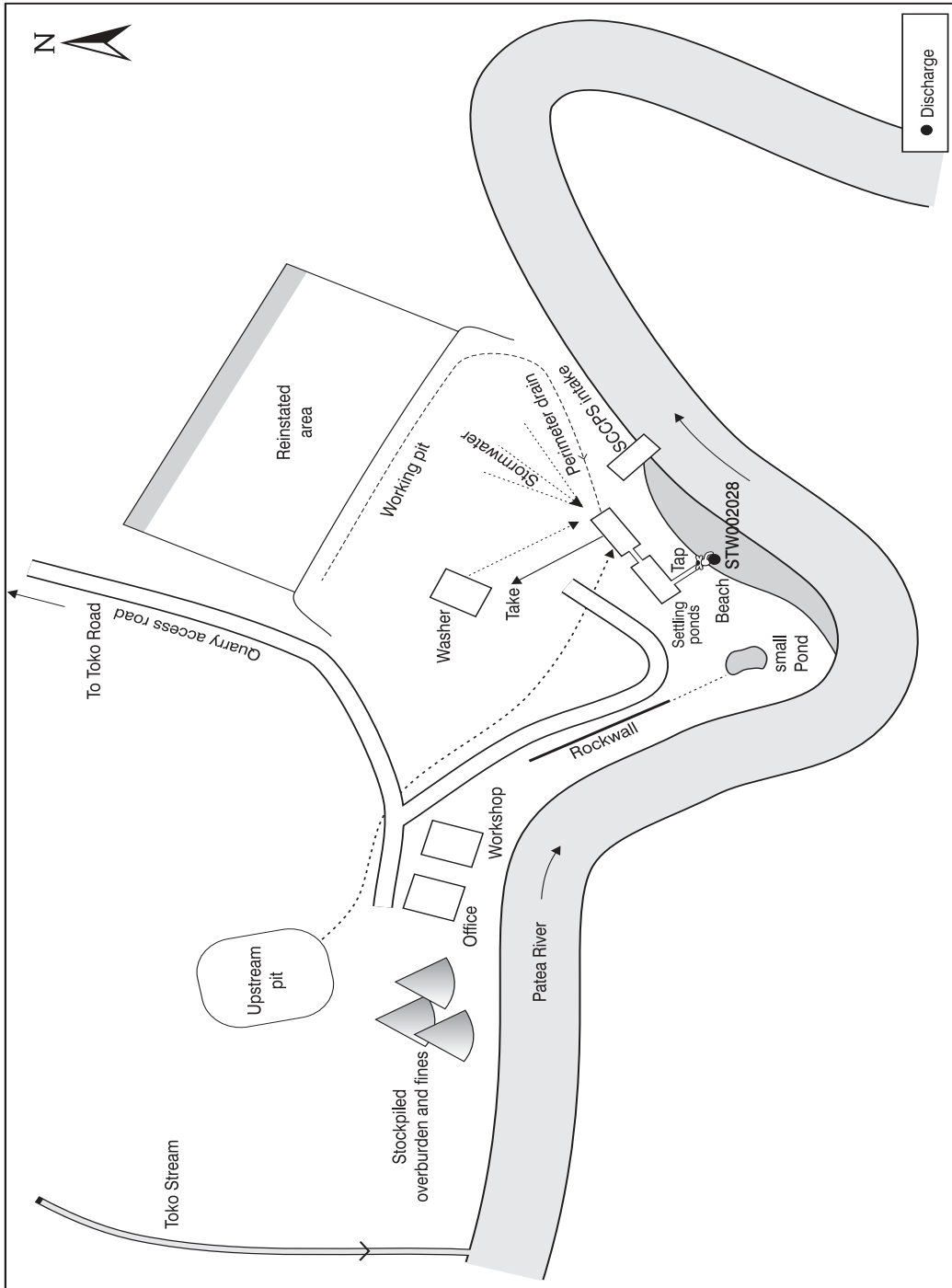


Figure 1 Toko Road quarry site layout, sampling site and the Patea River

1.3.3 Vickers Quarry –York Road

The Company's York Road quarry is situated between the Manganui River and an unnamed tributary of the Waipuku Stream (Photo 2 and Figure 2). This site is well established and was first excavated by Ed Mahon around 1945. At this time and for some years after, excavation at the site was entirely river-based. Following Ed Mahon, several other parties operated the site, including Len Angus, Wilkins and Davies, Tonks Metal Company, Industrial Lime, Alan Goble, and CML. Vickers Quarries Ltd first obtained resource consents for the York Road site in March 1995 and began operating early in the following year. A lease agreement with the Department of Conservation allows the Company to occupy a strip of Crown Land

between the quarry and the Manganui River. The riparian margin of the unnamed tributary has been planted (Council Land Management Plan LM10/74) to help mitigate the effects of the quarry operations on this waterway. The quarry is separated into two main areas: the lower site, and the upper site.

The lower site is located on the true left bank of the Manganui River and contains the offices, stock piles, processing, loading out areas, and lower treatment ponds. The stormwater and washwater discharge from this part of the site is covered by consent 4905. Washing commenced in May 2007. Stormwater and generated at the upper site is directed to treatment ponds before being discharged into the unnamed tributary of the Manganui River. Recycled service water for aggregate washing purposes also occurs at the lower site.

The upper site is also located on the true left bank of the Manganui River, about 500 m above the lower site. This part of the quarry was opened up for excavation in 2001-2002 and is presently used only for extraction. A series of stormwater treatment ponds have been constructed there, but otherwise there are no facilities. Stormwater and groundwater generated at the upper site is directed to treatment ponds before being discharged into the unnamed tributary of the Manganui River at site STW002052. The stormwater discharge from this site is covered by consent 5218.



Photograph 2 Location of Vickers Quarry – York Road site (2006)

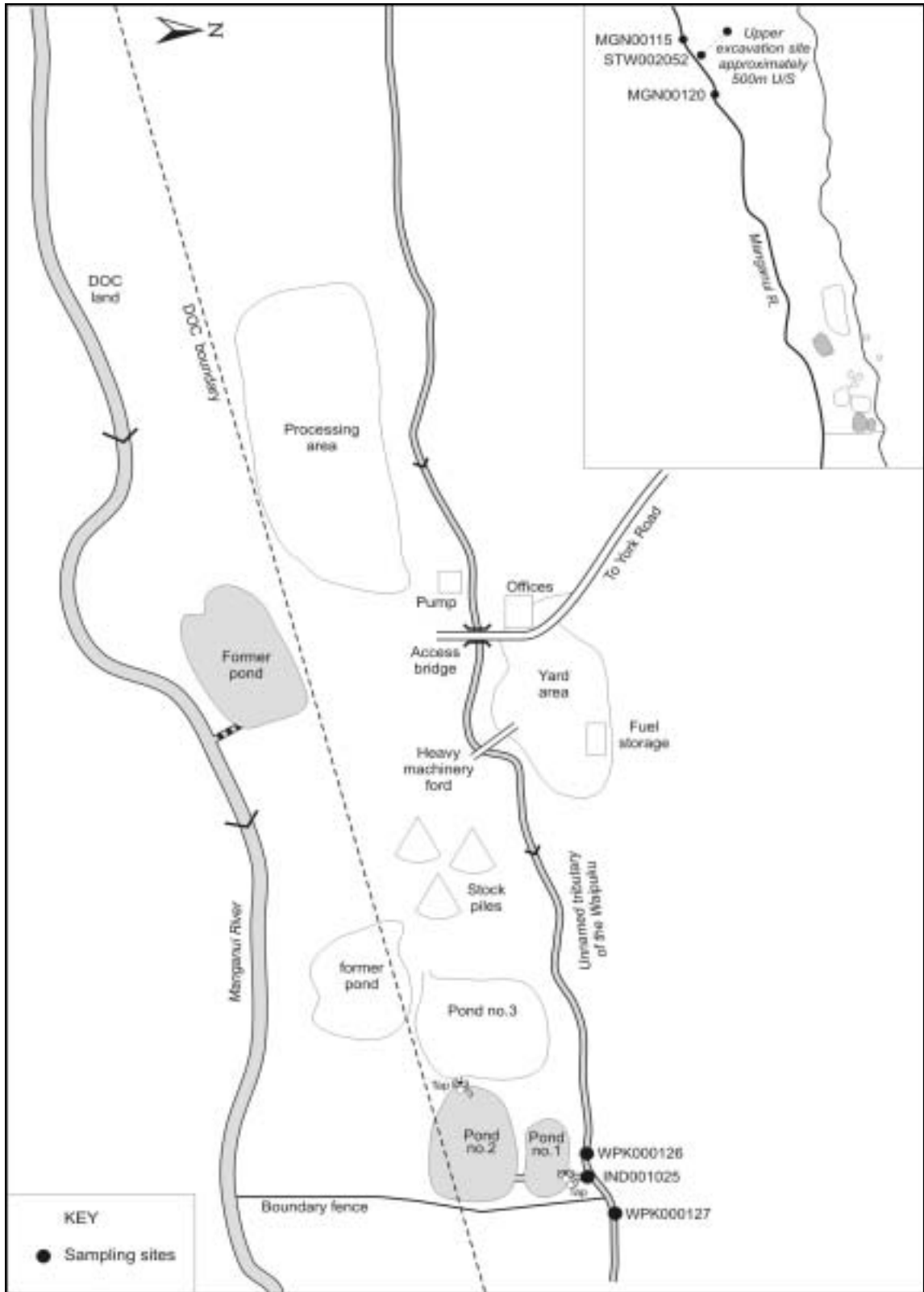


Figure 2 York Road quarry site layout, sampling sites and the Manganui River

1.4 Resource consents

Vickers Quarries Limited held four resource consents to cover its activities at the two quarry sites, the consents included a total of thirty-nine special conditions, prior to renewal of consent 3654-2. Following renewal of the consent there were forty-two special conditions that the Company must satisfy. In December 2010 consent 4904-2 was surrendered leaving a total of thirty-three conditions to be complied with.

The Company holds one consent to take and use surface water for aggregate washing purposes, one consent to discharge treated stormwater and groundwater into surface water, and two consents to discharge treated stormwater and washwater into surface water.

All four consents were issued by the Taranaki Regional Council under Section 87(e) of the Resource Management Act 1991 (the Act). These consents are discussed in more detail below in sections 1.3.1 and 1.3.2. Copies of the consent certificates are attached to this report in Appendix I.

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.

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 primarily only 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.

Vickers Quarries Limited holds water abstraction permit **4904-2** to take water from an unnamed tributary of the Waipuku Stream a tributary of the Manganui River for aggregate washing purposes. This consent was renewed on 13 December 2002 and is due to expire on 1 June 2011. This consent was surrendered in December 2010 and an application to renew the consent was withdrawn as the Company was utilising water from the settling ponds for washing.

There were six special conditions attached to this consent.

Conditions 1, 2 and 3 referred to the method and measurement of water abstraction and efficiency of water use.

Condition 4 required the abstraction to be measured and abstraction records to be provided.

Condition 5 referred to Council controls on the abstraction.

Condition 6 was a review provision.

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

1.4.2 Water discharge permits

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.

Waste water from aggregate washing has a high silt concentration. Discharge of this silt-contaminated water into a waterbody, particularly to a river during low flow, results in a smothering of in stream life and deterioration in aesthetic conditions and can affect downstream users 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.

Vickers Quarries Limited held consent **3564-2** to cover the discharge of treated quarry stormwater and washwater from the Toko Road site into the Patea River. This consent was granted on 22 March 1995 and expired on 1 June 2010, a consent renewal was applied for in late 2009 and consent **3564-3** was granted on 18 June 2010.

There were six special conditions attached to consent 3564-2 (expired).

Condition 1 referred to adverse effects in the receiving waters from the discharge that must be avoided.

Condition 2 set chemical limits on the quality of the discharge.

Condition 3 related to erosion and silt control.

Condition 4 required an approved contingency plan to be provided.

Condition 5 related to site reinstatement.

Condition 6 was a review provision.

Vickers Quarries Limited holds consent **3564-3** to discharge treated stormwater and treated aggregate washwater from quarry site. This consent was granted on 18 June 2010 and it is due to expire on 1 June 2020.

There are nine special conditions attached to consent 3564-3.

Condition 1 relates to capacity of sediment traps and settling ponds.

Condition 2 requires the active quarry areas to be contoured and bunded.

Condition 3 states the level of suspended solids in discharge not to exceed 100gm³.

Condition 4 refers to adverse effects in the receiving waters from the discharge that must be avoided.

Condition 5 relates to contingency planning.

Condition 6 relates to progressive site reinstatement.

Condition 7 requires a site rehabilitation plan to be submitted at least 3 months prior to completion of extraction activities.

Condition 8 requires the site is rehabilitated in accordance with rehabilitation plan.

Condition 9 is a review provision.

Copies of these permits are attached to this report in Appendix I.

Vickers Quarries Limited holds consent **5218-1** that covers the discharge of treated quarry stormwater and groundwater into an unnamed tributary of the Manganui River at the York Road site. This consent was granted on 5 August 1998 and is due to expire on 1 June 2011. An application to renew this consent has been received by the Council.

There are 12 special conditions attached to this consent.

Condition 1 prohibits the direct discharge of untreated stormwater or groundwater into the unnamed tributary.

Condition 2 requires the site be bunded and contoured directing water to silt control structures.

Condition 3 refers to silt and sediment control of exposed areas during excavation.

Condition 4 requires progressive reinstatement of the site and minimising exposed unvegetated areas within the stormwater catchment area.

Condition 5 requires consent holder to properly and efficiently manage silt control structures.

Condition 6 sets chemical limits on the quality of the discharge.

Condition 7 refers to adverse effects in the receiving waters from the discharge that must be avoided.

Condition 8 sets other in-stream limits.

Condition 9 requires reinstatement of the site on cessation of quarrying.

Condition 10 requires an approved contingency plan to be provided.

Condition 11 relates to consent lapse.

Condition 12 is a review provision.

Copies of these permits are attached to this report in Appendix I.

Vickers Quarries Limited holds consent **4905-2** that covers the discharge of treated quarry stormwater and washwater into an unnamed tributary of the Waipuku Stream, a tributary of the Manganui River, at the York Road site. This permit was granted on 13 December 2002 and is due to expire on 1 June 2011.

There are 15 special conditions attached to this consent.

Condition 1 requires consent holder to adopt best practicable option.

Condition 2 states the maximum stormwater catchment area.

Condition 3 prohibits the direct discharge of untreated stormwater or washwater into the unnamed tributary.

Condition 4 states the site must be contoured and banded so all water is directed to silt control structures.

Condition 5 refers to adverse effects in the receiving waters from the discharge that must be avoided.

Condition 6 sets other in-stream limits.

Condition 7 sets chemical limits on the quality of the discharge.

Condition 8 requires the consent holder to progressively reinstate the site.

Condition 9 requires the consent holder to properly and efficiently maintain and operate the settling pond system.

Condition 10 requires an approved contingency plan to be provided.

Condition 11 requires site to be reinstated on cessation of quarrying.

Condition 12 refers to the lapsing of the consent.

Condition 13 relates to design, management and maintenance of the stormwater system.

Condition 14 requires consent holder to control erosion to minimise amount of silt and sediment in discharge.

Condition 15 is 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 17 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.

Vickers Quarries Limited holds no air discharge permits for either the Toko Road or York Road site because airborne discharges from the operations meet the requirements of Rule 17 of the RAP.

1.5 Monitoring programme

1.5.1 Introduction

Section 35 of the Resource Management Act sets out an obligation for 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.

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 2009-2010 monitoring programme for the Company's two sites consisted of three primary components which are discussed below.

1.5.2 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.

1.5.3 Site inspections

The York Road site and the Toko Road site were each visited three times during the monitoring period. Routine inspections were made of the quarry operational areas and adjacent waterways, with particular reference to consent conditions. The main points of interest were plant processes that potentially or actually discharge to watercourses, including contaminated stormwater and process wastewaters. Where

appropriate, sources of data being collected by the consent holder (such as water abstraction records) 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

Wastewater and receiving water sampling was not performed at Toko Road and York Road quarry sites during the 2009-2010 monitoring year as inspections of the site and operations found compliance with special conditions of the resource consents.

2. Results

2.1 Water

2.1.1 Inspections

During the 2009-2010 monitoring period the Council carried out a total of six routine inspections; three inspections at each of the two quarry sites. Inspection notes are summarised below:

Toko Road Quarry



Photograph 3 Vickers Quarry Toko Road (13 July 2009)

13 July 2009

Inspection was undertaken during fine weather. Shingle was being extracted and put through the crusher at the time of the inspection. Groundwater was being pumped from the extraction area to the wash plant where material washing was being carried out. The washwater was running through two silt ponds before discharging to a drain and to the final silt ponds. The final ponds looked clean. No discharge was occurring to the stream at the time of inspection. The discharge hose is manually opened. There was a lot of stockpiled material on-site. The site was tidy.

23 November 2009

Inspection was carried out during fine but overcast weather. The site was inspected with Erin Zydervelt (TRC, Scientific Officer). Crushing was being undertaken at the time of inspection. There was no washing occurring. The first silt ponds looked almost dry; recommended cleaning out the first silt pond. The final silt ponds looked good. No discharge to the river was occurring. A lot of product was stockpiled on-site. The site was tidy.

10 June 2010

Inspection was undertaken during wet weather. Inspection of site was undertaken with Shaun Broderick (TRC, Investigating Officer). Water was being taken from the final silt ponds for washing. No washing or crushing was occurring at the time of

inspection. The silt ponds were looking good and were not discharging to the river. The extraction area looked good.

York Road Quarry

13 July 2009

Inspection was undertaken following recent rain. Product was being trucked off-site during the inspection. Crushing and washing was also being carried out. The washwater/stormwater silt ponds look good. The final pond was discharging to the unnamed tributary and it was not causing a visual impact on the receiving water. Extraction was being undertaken in the upper site. Stormwater runoff was going to the silt ponds via a constructed drain. Iron oxide was visible in the drain. The silt ponds for the upper site looked good. The receiving waterbody looked good. A lot of product was stockpiled on-site. The site was tidy.

23 November 2009

Inspection was undertaken during fine but overcast weather. The inspection was carried out with Erin Zydervelt (TRC, Scientific Officer). No processing or washing was occurring at the time of inspection. The silt ponds at the lower site looked good with a clear discharge. The upper site silt ponds also looked good. There was no extraction occurring at the time of inspection. A lot of product was stockpiled on-site. The site was tidy.

10 June 2010

Inspection was undertaken during wet weather. Inspection carried out with Shaun Broderick (TRC, Investigating Officer). Washing was occurring at the time of inspection. There was no product being crushed. A lot of product stockpiled on-site. The silt ponds all looked good with no visual impact on the receiving waterbody. The extraction area looked good.

2.1.2 Results of water abstraction monitoring

Consent 4904-2 licenses the abstraction of water from an unnamed tributary of the Waipuku Stream for aggregate washing purposes at the York Road quarry.

Washing of aggregate commenced at the York Road quarry in May 2007 and no records were requested. However, as per condition 3 of consent 4904, the consent holder should have installed a measuring device capable of recording daily rates of abstraction and make records available to the Council, upon request. However, this consent has now been surrendered and the obligation to measure abstraction rates no longer applies.

2.1.3 Results of discharge monitoring

Wastewater sampling was not performed at the Toko Road or the York Road quarry sites during 2009-2010 monitoring year as compliance monitoring inspections of the site and the discharge from the silt/sediment ponds found treated stormwater and/or washwater discharges occurring on several occasions; but the discharge was visually clear.

2.1.4 Results of receiving environment monitoring

Receiving water sampling was not performed at the Toko Road or the York Road quarry sites during the 2009-2010 monitoring year as compliance monitoring inspections of the site found discharge occurring on several occasions; but the discharge was clear and was having no visible effect on the receiving water.

2.2 Register of incidents

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.

Incidents may be alleged to be associated with a particular site. If there is 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 2009-2010 year, there were no incidents recorded by the Council that were associated with Vickers Quarries Limited.

3. Discussion

3.1 Discussion of site performance

During the year under review a total of six compliance monitoring inspections of the Company's two quarry sites were carried out.

Management of the two quarries sites was good for the reporting period with no complaints received by the Council and no abatement notices issued during the reporting period.

Overall, the consent holder demonstrated high level environmental management at both quarry sites.

3.2 Environmental effects of exercise of water permit

The main potential environment effects on waterways that quarries can have are the discharges of washwater 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, the formation of a barrier to fish movement and may affect fish spawning habitats.

The Taranaki Regional Council monitors for possible effects on stream life by conducting a visual inspection of the streambed both up and downstream of the quarry, and measuring physicochemical properties of the stormwater and receiving environment if warranted.

Inspections of the Company's York Road and Toko Road quarries during 2009-2010 showed that no adverse effects caused by discharges from these sites were evident downstream of the quarries.

The Company demonstrated a high level of environmental performance and compliance with its consents to discharge contaminants.

3.3 Evaluation of performance

A tabular summary of the Company's compliance record for the year under review is set out in Tables 1- 5.

Table 1 Summary of performance for Consent 5218-1 (York Road) to discharge treated stormwater and groundwater seepage into an unnamed tributary of the Manganui River

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. No direct discharge of untreated stormwater, or groundwater	Inspections of discharge point inspections	Yes
2. Active quarry site shall be bunded and contoured so all water directed to silt control structures	Inspections of site	Yes
3. Undertake to control erosion of exposed areas within the quarry site	Inspections of site	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Operate and progressively reinstate the quarry site to minimise stormwater catchment area	Inspections of site	Yes
5. Properly and efficiently maintain and operate the silt control structures to minimise discharge	Inspections of site	Yes
6. Concentration limits	Inspections of site (no sampling required)	Yes
7. Mixing zone	Inspections of site (no sampling required)	Yes
8. Turbidity not to increase more than 33% in the receiving waters	Inspections of site (no sampling required)	Yes
9. On cessation of quarrying operations at the site all areas shall be reinstated	Inspections	N/A
10. Provide Contingency Plan to TRC	Received	Yes
11. Consent lapse	N/A	N/A
12. TRC may review any or all of the conditions of this consent	Expires June 2011, application to renew has been received	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

N/A = not applicable

Table 2 Summary of performance for Consent 3564-2 (Toko Road) to discharge treated stormwater and washwater from a quarry into the Patea River (expired)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Discharge not to give rise to: oil, grease, colour/clarity changes, emission of odour, etc	Inspections of site	Yes
2. Concentration limits	Inspections of site (no sampling required)	Yes
3. Undertake to control erosion of exposed areas within the quarry site	Inspections of site	Yes
4. Provide TRC with contingency plan	Received	Yes
5. Progressively reinstate the quarry site to minimise the stormwater catchment area	Inspections of site	Yes
6. Review condition	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 3 Summary of performance for Consent 3564-3 (Toko Road) to discharge treated stormwater and washwater from a quarry into the Patea River

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Requires sediment traps or settling ponds to be used	Inspections of site	Yes
2. Requires active quarry area to be bunded	Inspections of site	Yes
3. Suspended solids not to exceed 100g/m ³	Sampling (not required)	Yes
4. Discharge not to cause effect beyond mixing zone	Inspections of receiving water	Yes
5. Supply TRC with contingency plan	Received	Yes
6. Progressive reinstatement of site	Inspections of site	Yes
7. Rehabilitation plan to be submitted prior to completion of extraction activities	N/A	N/A
8. Rehabilitate site prior to rehabilitation or expiry of consent	N/A	N/A
9. Review condition	Optional review date June 2015	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 4 Summary of performance for Consent 4904-2 (York Road) to take water from unnamed tributary of the Waipuku Stream (surrendered)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Implement appropriate water conservation measures	Inspections of site and records	Yes
2. Abstraction not exceed 45 cubic metres/day	Inspections of site and records	Yes
3. Means of taking water shall be maintained to satisfaction of TRC	Inspections of site	Yes
4. Install and operate a device capable of recording daily rates of abstraction	Inspections of site and records	No
5. TRC reserves the right to suspend or reduce the abstraction during low flow events	Inspections of site and records	Yes
6. Review condition	Consent surrendered December 2010	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 5 Summary of performance for Consent 4905-2 (York Road) to discharge stormwater and washwater from a quarry site onto land and into an unnamed tributary of the Waipuku Stream

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option	Inspections of site and records	Yes
2. Maximum disturbed stormwater catchment area shall be no more than 6 hectares	Inspections of site and records	Yes
3. No direct discharge of untreated stormwater or groundwater	Inspections of site and records	Yes
4. Active quarry site shall be contoured and or bunded so all water is directed to silt control structures	Inspections of site and records	Yes
5. Discharge shall not give rise to: oil, grease, change in colour or clarity, emissions of odour, etc	Inspections of site and records	Yes
6. Discharge shall not cause an increase in turbidity of more than 50%	Inspections of site	Yes
7. Concentration limits	Inspections of site and sampling	Yes
8. Progressively reinstate site to ensure that exposed area is kept to a minimum	Inspections of site	Yes
9. Properly and efficiently maintain and operate the settling pond system	Inspections of site and sampling	Yes
10. Provide contingency plan to TRC	Received	Yes
11. On cessation of quarry operations at the site the active quarry site and surrounding shall be reinstated	Inspections of site	N/A
12. Consent lapse	N/A	N/A
13. Design, management, and maintenance of the stormwater system to be undertaken in accordance with information submitted	Inspections of site and records	Yes
14. Consent holder shall undertake measures during excavation to control erosion of exposed areas	Inspections of site	Yes
15. TRC may serve notice of its intention to review, amend, delete, or add to the conditions of this consent	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

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

3.4 Exercise of optional review of consents

There was no provision for the optional review of resource consents held by the Company in the period under review.

Consent 4904-2 was surrendered in December 2010 and an application to renew the consent was also withdrawn. Applications for consent renewals have also been received for consents 5812-1 and 4905-2 which both expire in June 2011.

3.5 Recommendations from the 2008-2009 Annual Report

The recommendations made in the 2008-2009 annual compliance monitoring report for Vickers Quarries Ltd (TRC 2008) were as follows:

1. THAT monitoring of the Vickers Quarries Limited York Road quarry in 2009-2010 remains unchanged from the previous year.
2. THAT monitoring of the Vickers Quarries Limited Toko Road quarry in 2009-2010 remains unchanged from the previous year.

These recommendations were implemented in 2009-2010.

3.6 Alterations to monitoring programmes for 2010-2011

In designing and implementing the monitoring programmes for 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 abstractions, 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 that are discharging to the environment.

It is now proposed for the Company's York Road and Toko Road quarries that the monitoring programmes for the 2010-2011 period remain unchanged from previous year.

Recommendations to this effect are attached to this report in section 4.

4. Recommendations

1. THAT monitoring of the Vickers Quarries Limited York Road quarry in 2010-2011 remains unchanged from the previous year.
2. THAT monitoring of the Vickers Quarries Limited Toko Road quarry in 2010-2011 remains unchanged from the previous year.

Glossary of common terms and abbreviations

The following abbreviations and terms that may have been used within this report:

Biomonitoring	assessing the health of the environment using aquatic organisms
bund	a wall around a tank to contain its contents in the case of a leak
Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m
fresh	elevated flow in a stream, such as after heavy rainfall
g/m ³	grammes per cubic metre, and equivalent to milligrammes per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures
l/s	litres per second
MCI	macroinvertebrate community index; a numerical indication of the state of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats
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 subsequent amendments
Temp	temperature, measured in °C
Turb	turbidity, expressed in NTU
UI	Unauthorised Incident - an event recorded by the Council on the basis that it had potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan
UIR	Unauthorised Incident Register

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- Taranaki Regional Council, 2007: Vickers Quarries Limited Toko and Midhirst Quarries Compliance Monitoring Programme Annual Report 2006-2007. Technical Report 2007-66

Taranaki Regional Council, 2008: Vickers Quarries Limited Toko and Midhirst Quarries Compliance Monitoring Programme Annual Report 2007-2008. Technical Report 2008-73

Taranaki Regional Council, 2009: Vickers Quarries Limited Toko and Midhirst Quarries Compliance Monitoring Programme Annual Report 2008-2009. Technical Report 2009-38

Appendix I

Resource consents held by Vickers Quarries Limited

TRK953564



PRIVATE BAG 713
47 CLOTEN 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: VICKERS QUARRIES
29 RADNOR ROAD RD24 STRATFORD

Renewal Granted Date: 22 March 1995

CONDITIONS OF CONSENT

Consent Granted: TO DISCHARGE UP TO 120 LITRES/SECOND OF TREATED STORMWATER AND TREATED AGGREGATE WASHWATER FROM A QUARRY SITE INTO THE PATEA RIVER AT OR ABOUT GR: Q20:318-048

Expiry Date: 1 June 2010

Review Date[s]: June 1998 and June 2004

Site Location: TOKO ROAD QUARRY, TOKO ROAD, STRATFORD

Legal Description: PT LOT 2 BLK IV NGAERE SD

Catchment: PATEA 343.000

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 General Manager, Taranaki Regional Council (hereinafter the General Manager), 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;
 - (ii) charges for the carrying out of the Council's functions under section 35 in relation to this consent; and
 - (iii) charges authorised by regulations.

SPECIAL CONDITIONS

- 1) THAT the discharge shall not give rise, beyond a 25-metre mixing zone, to any or all of the following effects in the receiving water:
 - (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 effects on aquatic life.

- 2) THAT the following concentrations shall not be exceeded in the discharge effluent:

<u>Component</u>	<u>Concentration</u>
Suspended solids	100 gm ⁻³
Total recoverable hydrocarbons [infra red spectroscopic technique]	15 gm ⁻³

This condition shall apply prior to the entry of the stormwater into the receiving waters, at designated sampling points approved by the General Manager, Taranaki Regional Council.

- 3) THAT the consent holder shall take 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 licensed by this consent. Such measures shall be to the satisfaction of the General Manager, Taranaki Regional Council.
- 4) THAT the consent holder shall provide to the General Manager, Taranaki Regional Council, for written approval, a contingency plan outlining all procedures to be undertaken in the event of a spillage or accidental discharge of contaminants which could find its way into the discharge system. Such a plan is to be provided by 30 June 1995.

TRK953564

- 5) THAT 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 the satisfaction of the General Manager, Taranaki Regional Council.
- 6) 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 1998 and/or the month of June 2004 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects of the discharge on the environment.

Signed at Stratford on 22 March 1995

For and on behalf of
TARANAKI REGIONAL COUNCIL



GENERAL MANAGER



**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

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOVEN ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: Vickers Quarries Limited
125 Radnor Road
R D 24
STRATFORD 4394

Consent Granted
Date: 18 June 2010

Conditions of Consent

Consent Granted: To discharge treated stormwater and treated aggregate
washwater from a quarry site into the Patea River at or
about (NZTM) 1721850E-5643115N

Expiry Date: 1 June 2020

Review Date(s): June 2015

Site Location: 278 Toko Road, Stratford

Legal Description: Pt lot 2 DP 739

Catchment: Patea

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

General condition

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

Special conditions

1. If any area of soil is exposed, all run off from that area shall pass through settlement ponds or sediment traps with a minimum total capacity of:
- a) 100 cubic metres for every hectare of exposed soil between 1 November to 30 April; and
 - b) 200 cubic metres for every hectare of exposed soil between 1 May to 31 October;
- unless other sediment control measures that achieve an equivalent standard are agreed to by the Chief Executive of the Taranaki Regional Council.
2. 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.
3. The suspended solids concentration within the discharge shall not exceed 100 gm⁻³.
- This condition shall apply prior to the entry of the treated stormwater and aggregate washwater into the receiving waters of the Patea River at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.
4. After allowing for a mixing zone of 25 metres, the discharge shall not give rise to any of the following effects in the receiving waters of the Patea 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.
5. The consent holder shall maintain a contingency plan. The contingency plan shall be adhered to in the event of a spill or emergency and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.


The contingency plan shall be submitted to the Chief Executive, Taranaki Regional Council on request.

Consent 3564-3

6. The consent holder shall progressively reinstate the quarry site in a manner which ensures that the area of exposed, unvegetated earth, within the active quarry site is kept to a minimum at all times. This shall be undertaken to the satisfaction of the Chief Executive, Taranaki Regional Council.
7. A Site Rehabilitation Plan shall be submitted to the Chief Executive, Taranaki Regional Council no later than 3 months before the completion date of extraction activities. The Plan shall detail the proposed methods to rehabilitate and stabilise the site and an approximate timeframe by when the works will be commenced and completed.
8. Prior to this consent expiring or being surrendered, the consent holder shall rehabilitate the site in accordance with the Site Rehabilitation Plan, approved under condition 7 above.
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 2015, 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 18 June 2010

For and on behalf of
Taranaki Regional Council


Director-Resource Management



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

Name of
Consent Holder: Vickers Quarries
 29 Radnor Road
 R D 24
 STRATFORD

Consent Granted
Date: 13 December 2002

Conditions of Consent

Consent Granted: To take and use water from an unnamed tributary of the
 Waipuku Stream a tributary of the Manganui River in the
 Waitara catchment for aggregate washing purposes at or
 about GR: Q20:127-122

Expiry Date: 1 June 2011

Review Date(s): June 2005, June 2008

Site Location: York Road, Midhurst

Legal Description: Secs 51 & 52 Blk XVI Egmont SD

Catchment: Waitara

Tributary: Manganui
 Waipuku

SURRENDERED

Consent 4904-2

General conditions

- a) 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) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall implement appropriate water conservation measures, such as recirculation of washwater and stormwater for aggregate washing purposes, so as to minimise the requirement for water abstraction from the unnamed tributary of the Waipuku Stream, to the satisfaction of the Chief Executive, Taranaki Regional Council.
2. The volume of water abstracted shall not exceed 45 cubic metres/day at a rate not exceeding 2.8 litres/second.
3. The means of taking water shall be maintained to the satisfaction of the Chief Executive, Taranaki Regional Council.
4. The consent holder shall install and operate to the satisfaction of the Chief Executive, Taranaki Regional Council, a measuring device capable of recording daily rates of abstraction and shall make such records available to the Chief Executive, Taranaki Regional Council, upon request.
5. The Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, to protect the biological communities in the stream, in accordance with section 329 of the Resource Management Act 1991.
6. 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 2005 and/or June 2008, 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 13 December 2002

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

Please quote our file number
on all correspondence

Name of
Consent Holder: Vickers Quarries
 29 Radnor Road
 R D 24
 STRATFORD

Consent Granted
Date: 13 December 2002

Conditions of Consent

Consent Granted: To discharge stormwater [and washwater] from a quarry
 site onto and into land and into an unnamed tributary of the
 Waipuku Stream a tributary of the Manganui River in the
 Waitara catchment at or about GR: Q20:127-122

Expiry Date: 1 June 2011

Review Date(s): June 2005, June 2008

Site Location: York Road, Midhirst

Legal Description: Secs 51 & 52 Blk XVI Egmont SD

Catchment: Waitara

Tributary: Manganui
 Waipuku

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

www.trc.govt.nz

Consent 4905-2

General conditions

- a) 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) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in the Resource Management Act 1991, to prevent or minimise any adverse effects of the discharge to the environment.
2. The maximum disturbed stormwater catchment area shall be no more than 6 hectares.
3. There shall be no direct discharge of untreated stormwater or groundwater from the active quarry site into the unnamed tributary of the Waipuku Stream as a result of exercising this consent.
4. The active quarry site shall be contoured or bunded so that: all water generated in this area is directed to silt control structures for treatment prior to discharge; and the flow of uncontaminated stormwater into this area is prevented, as far as is practicable.
5. After allowing for reasonable mixing, within a mixing zone extending 50 metres downstream of the discharge point, the discharge shall not give rise to any of the following effects in the receiving waters of the unnamed tributary of the Waipuku Stream:
 - 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.

Consent 4905-2

6. After allowing for reasonable mixing, within a mixing zone extending 50 metres downstream of the discharge point, the discharge shall not give rise to an increase in turbidity of more than 50% in the unnamed tributary of the Waipuku Stream, as determined using NTU (nephelometric turbidity units).

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

Component	Concentration
pH (range)	6 - 9
suspended solids	200 gm ⁻³
total recoverable hydrocarbons	15 gm ⁻³

Condition 7 shall apply prior to the entry of stormwater into the receiving waters of the unnamed tributary of the Waipuku Stream, at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

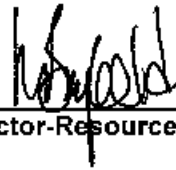
8. The consent holder shall operate and progressively reinstate the quarry site in a manner which ensures that the area of exposed, unvegetated earth, within the quarry's stormwater catchment is kept to a minimum at all times. Such reinstatement shall be to a standard satisfactory to the Chief Executive, Taranaki Regional Council.
9. 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 discharges.
10. Prior to exercising this consent, the consent holder shall provide a contingency plan to the Taranaki Regional Council, outlining the measures and procedures to be undertaken to prevent the spillage or accidental discharge of contaminants into the stormwater catchment, and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge. The consent holder shall annually review and maintain the plan.
11. 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, the Chief Executive of the Taranaki Regional Council.
12. 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(1)(b) of the Resource Management Act 1991.
13. The design, management and maintenance of the stormwater [washwater] system shall be generally undertaken in accordance with the information submitted in support of application 2073 and to ensure the conditions of this consent are met.
14. The consent holder shall undertake measures during excavation to control erosion of exposed areas within the quarry site and to minimise the amounts of sediment contained in the stormwater discharge licensed by this consent.

Consent 4905-2

15. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2005 and/or June 2008, 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 13 December 2002

For and on behalf of
Taranaki Regional Council



Director-Resource Management

TRK985218



DISCHARGE PERMIT

**Pursuant to the RESOURCE MANAGEMENT ACT 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

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

Name of
Consent Holder: **VICKERS QUARRIES
29 RADNOR ROAD RD24 STRATFORD**

Consent
Granted Date: **5 August 1998**

CONDITIONS OF CONSENT

Consent Granted: **TO DISCHARGE UP TO 100 LITRES/SECOND OF TREATED
STORMWATER AND GROUNDWATER SEEPAGE FROM
QUARRY OPERATIONS INTO AN UNNAMED TRIBUTARY OF
THE MANGANUI RIVER IN THE WAITARA CATCHMENT AT
OR ABOUT GR: Q20:118-119**

Expiry Date: **1 June 2011**

Review Date[s]: **June 1999 and June 2005 and twelfth month following exercise of
this consent**

Site Location: **YORK ROAD, MIDHIRST, STRATFORD**

Legal Description: **PT SEC 21 SO889 EGMONT SD**

Catchment: **WAITARA 395.000**

Tributary: **MANGANUI 395.040
UNNAMED TRIBUTARY**

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

TRK985218

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), 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. THAT there shall be no direct discharge of untreated stormwater, or groundwater, from the Active quarry site into any unnamed tributary, or the Manganui River as a result of the exercise of this consent.
- 2. THAT 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.
- 3. 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 licensed by this consent.
- 4. THAT the consent holder shall operate and progressively reinstate the quarry site in a manner which minimises the quarry stormwater catchment area, and ensures that the area of exposed unvegetated earth within the quarry's stormwater catchment is kept to a minimum at all times.
- 5. THAT the consent holder shall properly and efficiently maintain and operate the silt control structures in such a manner that any discharge which may occur shall not breach the conditions of this consent. The silt control structures shall be operated, as far as practicable, so as to maximise the treatment of the stormwater, and to minimise the duration, frequency, and rate of the discharge.
- 6. THAT the following concentrations shall not be exceeded in any discharge

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

This condition shall apply prior to the entry of any discharge into the receiving waters of the unnamed tributary of the Manganui River, at a designated sampling point approved by the General Manager, Taranaki Regional Council.

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7. THAT after allowing for reasonable mixing, within a mixing zone extending 50 metres downstream of the confluence of the unnamed tributary with the Manganui River, the discharge shall not give any rise to any of the following effects in the receiving waters of the Manganui 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.
8. THAT after allowing for reasonable mixing, within a mixing zone extending 50 metres downstream of the confluence of the unnamed tributary with the Manganui River, the discharge shall not give rise to an increase in turbidity of more than 33% in the receiving waters of the Manganui River.
9. THAT on cessation of quarrying operations at the site licensed by this consent, the Active quarry area, including the silt control structures, and surrounding areas shall be reinstated to the satisfaction of the General Manager, Taranaki Regional Council, prior to the surrender or lapsing of this consent.
10. THAT prior to 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.
11. THAT this consent shall lapse on the expiry of six years after the date of commencement 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(b) of the Resource Management Act 1991.
12. 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 and/or in the twelfth month following the exercise of this consent 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 it was not appropriate to deal with at that time.

Signed at Stratford on 5 August 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



GENERAL MANAGER

