Graham Harris (2000) Limited
Hydro Road
Quarry Monitoring Programme
Annual Report
2012-2013

Technical Report 2013–13

ISSN: 0114-8184 (Print)
ISSN:1178-1467 (Online)
Document: 1160053 (Word)
Document: 1296100 (Pdf)

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February 2014

Executive summary

The Graham Harris (2000) Limited quarry is located on the true left bank of the Waiwhakaiho River, approximately 3.5 km south east of New Plymouth on Hydro Road. The quarry was formerly owned and operated by New Plymouth Quarries Ltd until consents and ownership were transferred in April 2008. This report for the period July 2012-June 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 holds three resource consents for the Hydro Road site that include a total of 32 special conditions setting out the requirements that the consent holder must satisfy. The site operator holds consents to discharge treated washwater and stormwater into the Waiwhakaiho River, and cleanfill into land at the quarry site.

The Council's monitoring programme for the year under review included four inspections. No water samples were collected for physicochemical analysis as inspections of the site found there were no visible effects on the receiving waters.

The monitoring showed that the site was generally tidy. The cleanfill looked good, there was no unauthorised materials noted during inspections of the site.

During the year, the Company demonstrated a high level of environmental performance and compliance with the resource consents. There were no incidents recorded that were associated with operations at the Graham Harris quarry site.

This report includes recommendations for the 2013-2014 year.

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1. Introduction

This report is the Annual Report for the period July 2012-June 2013 by the Taranaki Regional Council describing the monitoring programme associated with resource consents held by Graham Harris (2000) Limited (Graham Harris). The Company operates a quarry situated on Hydro Road, Mangorei, New Plymouth.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Graham Harris that relate to abstractions and discharges of water in the Waiwhakaiho catchment. This is the twentieth Annual Report to be prepared by the Taranaki Regional Council to cover the discharge of stormwater and washwater, and the discharge of cleanfill to land and their environmental effects at this site.

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 Graham Harris in the Waiwhakaiho catchment, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at the Hydro Road 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.

Section 4 presents recommendations to be implemented in the 2013-2014 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 programme reports 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 (eg, recreational, cultural, or aesthetic);
(e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Taranaki Regional Council is recognising the comprehensive meaning of `effects' inasmuch as is appropriate for each 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 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 (administrative compliance)** (as appropriate) indicates that the Council may have been obliged to record a verified unauthorised incident involving measurable environmental impacts, and/or, there were measurable environmental effects arising from activities and intervention by Council staff was required and there were matters that required urgent intervention, took some time to resolve, or remained unresolved at the end of the period under review, and/or, there were on-going issues around meeting resource consent conditions even in the absence of environmental effects. Abatement notices may have been issued.

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

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

For reference, in the 2012-2013 year, 35% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 59% demonstrated a good level of environmental performance and compliance with their consents.

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).

Twenty-five operating quarries presently supply aggregate in Taranaki. These quarries are generally located in a reasonable proximity to urban areas, from which the greatest demand for aggregate stems.

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

Quarrying and extraction of gravel in NZ is regulated by two statutory processes. Allocation and protection of priority rights to extract gravel is obtained under the Crown Minerals Act from the NZ Petroleum and Minerals, a division of the Ministry of Economic Development.

Regulatory responsibility for control of environmental effects of quarrying and extraction is under the RMA 1991 as applied by respective regional councils. In some cases these controls may act as a constraint or limitation on allocation decisions.

Sections 15 and 30 of the 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, 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 Graham Harris, Hydro Road Quarry

The Hydro Road quarry site is located on the true left bank of the Waiwhakaiho River (Figures 1 and 2 below).

The site has aggregate washing facilities. Machinery includes a dry crusher, screens and washers, excavators and trucks. Worked or exposed areas are required to be contoured and bunded so that stormwater is directed to settling ponds within the site for treatment, prior to discharge. Reinstatement of excavated areas at the quarry is carried out using cleanfill.

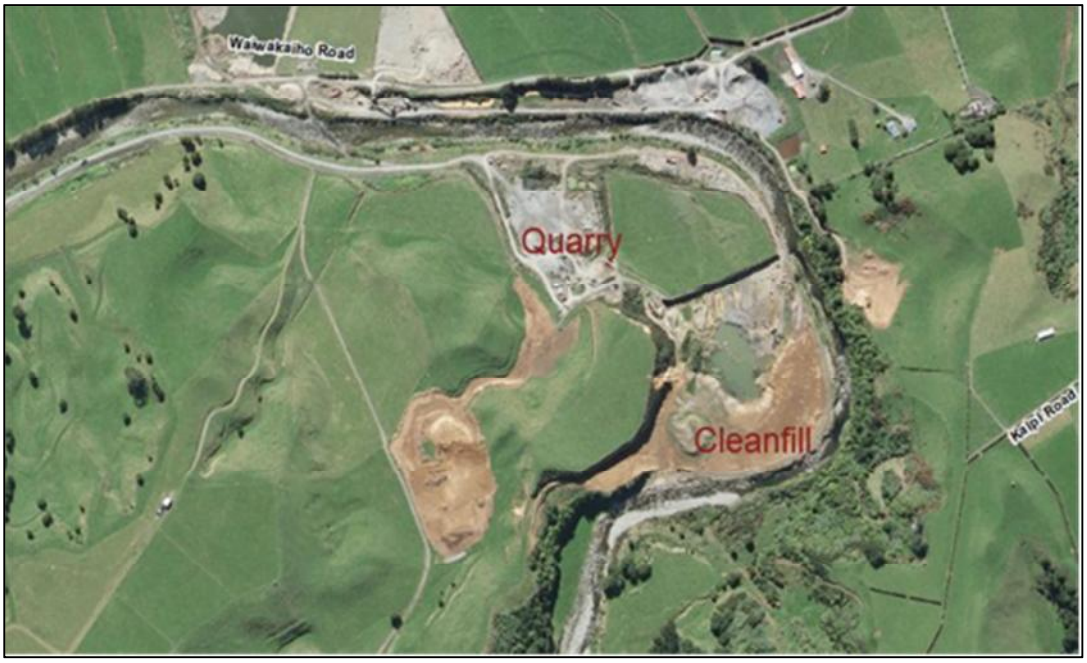

Figure 1 Graham Harris Quarry and cleanfill site

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.

Sufficient volumes of water within streams and rivers to protect the 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 (RFWP) for Taranaki.

Graham Harris (2000) Limited holds no water abstraction permit. The water volume and abstraction rate required to service the Company's operations are less than 50 cubic metres per day and 1.5 litres per second respectively, therefore the activity is permitted under Rule 15 of the RFWP.

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.

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

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

The Company holds water discharge permit **3912-3** to discharge treated washwater from the quarry site onto and into land and into the Waiwhakaiho River. This permit was issued by the Taranaki Regional Council on 19 March 2002 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2014.

There are seven special conditions attached to the permit.

Conditions 1, 2, and 3 deal with containments and recirculation of the wastewater discharge.

Conditions 4, 5, and 6 deal with effects of the discharge on receiving waters.

Condition 7 deals with review of the consent conditions.

The Company holds water discharge permit **3888-3** to discharge treated stormwater from the quarry site onto and into land and into the Waiwhakaiho River. This permit was issued by the Taranaki Regional Council on 19 March 2002 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2014.

There are twelve special conditions attached to the permit.

Conditions 1, 2, 3, and 4 deal with the stormwater discharge.

Conditions 5 and 6 deal with silt control structures.

Conditions 7, 8, and 9 deal with effects on receiving water.

Condition 10 requires the site to be reinstated on cessation of quarrying operations.

Condition 11 requires the consent holder provide a contingency plan for the site.

Condition 12 deals with review of the consent.

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 Quality Plan for Taranaki (July 2011) allows the discharge of emissions from quarrying operations as a permitted activity, subject to compliance with various environmental performance conditions.

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.

The Company holds discharge permit **4912-2** to discharge cleanfill onto and into land at the site for quarry reinstatement purposes.

This permit was issued by the Taranaki Regional Council on 21 February 2008 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2026.

There are thirteen special conditions attached to the consent.

Condition 1 requires that exercise of the consent is undertaken in accordance with the application.

Conditions 2, 3, and 4 deal with types of waste that are acceptable for cleanfill.

Conditions 5 and 6 deal with the placement of discharges.

Conditions 7, 8, and 11 are to ensure that unauthorised material is not dumped.

Condition 9 requires a management plan for the site.

Condition 10 requires the site is stabilised and revegetated.

Conditions 12 and 13 deal with lapse and review of the consent.

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 Graham Harris quarry site generally consists 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 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 Graham Harris site was visited four times during the monitoring period. With regard to consents for the discharge to water and land, the main points of interest

were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and washwater. Air inspections focused on 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 Chemical sampling

Sampling at the Graham Harris quarry was scheduled to be undertaken only when warranted, at the discretion of the inspecting officer, and was deemed unnecessary during inspections carried out during the monitoring period under review.

2. Results

2.1 Water

2.1.1 Inspections

During the 2012-2013 monitoring period the Council carried out four compliance monitoring inspections of the Graham Harris, Hydro Road Quarry site. Inspection notes are summarised below.

28 September 2012
Inspection of the site was carried out during overcast and windy weather. No dust was found beyond the boundary of the property. There was no processing or washing occurring at the time of inspection. Trucks were loading out. The silt ponds had been cleaned out. The sediment was in a holding pond to dry and was then to be transferred into the cleanfill. The extraction area was tidy with the ring drains clean and clear. No discoloration was found in the Waiwhakaiho River. The cleanfill area was very tidy. It had been contoured. There was no unauthorized material found on site. The material mainly consisted of dirt, clay and a small amount of concrete.

12 December 2012
There was no dust discharging beyond the boundary of the property at the time of inspection. There was no processing occurring and the silt ponds looked good. The first pond had been cleaned out. There was no discharge from the final pond into the Waiwhakaiho River, which was flowing clean and clear above and below the quarry. The extraction area was tidy and the cleanfill area looked good.

1 May 2013
At the time of inspection processing was occurring on the top plant; no washing of material was being undertaken. The silt ponds looked good, the final pond was clean and clear. The Waiwhakaiho River was flowing clean above and below the site. There was a small amount of material stockpiled onsite. The extraction area was very tidy. The cleanfill area looked satisfactory. The site was stockpiling material for a large area of re-instatement. Overall the site was tidy at the time of inspection.

27 June 2013
Inspection of the site were carried out during overcast weather and there had been recent showers. Processing was occurring at the time of inspection. It appeared that no washing had occurred for some time on the site. The silt ponds and ring drains looked good. The receiving waters were clean and clear below the quarry site. The extraction area was tidy. The re-instatement area had extended and looked good. Overall the site was tidy at the time of inspection.

2.1.2 Results of discharge monitoring

No discharge monitoring was undertaken during the period under review. Inspections found the discharge from the site to be visibly clear and therefore no sampling was warranted.

2.1.3 Results of receiving environment monitoring

No receiving environment monitoring was undertaken during the period under review. Inspections found the discharge was having no visible effect on the receiving waters therefore sampling was not warranted.

2.2 Air

2.2.1 Inspections

Air monitoring inspections were carried out in conjunction with routine compliance monitoring inspections. There were no issues noted with regard to discharges to air. No dust, odour or other emissions were observed discharging during inspections.

2.3 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council eg provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

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

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2012-2013 period, it was not necessary for the Council to undertake significant additional investigations and interventions, or record incidents, in association with Graham Harris' conditions in resource consents or provisions in Regional Plans in relation to the Company's activities during the monitoring period.

3. Discussion

3.1 Discussion of site performance

During the 2012-2013 monitoring period, the Council carried out four inspections of the Graham Harris quarry and cleanfill site. The site was found to be tidy and well managed. No unauthorised materials had been disposed of to the cleanfill area during the monitoring period. The ponds and bunding generally looked good; there was no discolouration of the receiving waters noted during inspections of the site.

3.2 Environmental effects of exercise of consents

The main environment effect that quarries can have is the discharge of washwater containing high concentration of suspended solids into nearby waterways. Such discharges may result in discolouration of the waterway near the discharge point and can result in smothering of benthic life forms, form 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 when warranted.

Inspections of the site found the site to be tidy and well managed. There were no visible adverse effects noted in the discharge on any occasion during the period under review.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 1-3.

Table 1 Summary of performance for Consent 3888-3 discharge of stormwater

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. No direct discharge to surface water	Inspections of the site and discharge	Yes
2. Contour and bund to ensure all water directed for treatment	Inspections of the site	Yes
3. Control erosion of exposed areas to minimise silt and sediment run off	Inspections of the site	Yes
4. Progressive reinstatement	Inspections of the site	Yes
5. Properly and efficiently maintain silt control structures	Inspections of the site and silt control structures	Yes
6. Silt control structure to have sufficient capacity	Inspections of the site and silt control structures	Yes
7. Concentration limits	Sampling undertaken when warranted – no sampling 2012-2013 period	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
8. Discharge shall not give rise to: oil, grease, colour or clarity changes, etc.	Inspections of site and sampling of discharge when warranted	Yes
9. Discharge shall not increase suspended solids or turbidity	Inspections of the site and sampling of discharge and receiving waters if warranted	Yes
10. Reinstatement on cessation of quarrying	N/A – quarry still operating	N/A
11. Provide and maintain a contingency plan	Updated contingency plan received 2010	Yes
12. Review of consent	N/A – consent expires June 2014	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 3912-3 discharge treated washwater from shingle washing

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. No discharge of untreated washwater	Inspections of the site	Yes
2. Washwater area to be bunded and separate from stormwater treatment area	Inspections of the site	Yes
3. Implement appropriate recirculatory systems	Inspections of the site	Yes
4. Concentration limits	Inspections of the site and sampling of the discharge if warranted	Yes
5. Discharge shall not give rise to: oil, grease, change of colour or clarity etc	Inspections of the site and sampling of the discharge if warranted	Yes
6. Discharge shall not increase suspended solids or turbidity	Inspections of the site and sampling of the discharge and receiving water if warranted	Yes
7. Review of consent	N/A – consent expires June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**

N/A = not applicable

Table 3 Summary of performance for Consent 4912-2 to discharge cleanfill into and onto land

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Operation undertaken in accordance with documentation submitted	Inspections of the site	Yes
2. Discharged contaminants limited to cleanfill or inert materials	Inspections of the site	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. No discharge of: food wastes, paper, cardboard, grass clippings, garden waste, paint, fillers, steel, etc.	Inspections of the site	Yes
4. If consent holder is uncertain as to acceptability of material obtain written approval from the TRC	No written approval sought	Yes
5. No cleanfill to be discharged within 20 metres of the bank of the Waiwhakaiho	Inspection of the site	Yes
6. Discharge shall not result in any cleanfill material entering surface water	Inspections of the site and waterway	Yes
7. The consent-holder shall monitor all material dumped to ensure suitability	Inspections of the site	Yes
8. The site shall be locked during non-quarrying hours	Unknown – However no unauthorised materials noted during inspections of the site	Yes
9. Detailed management plan	Received	Yes
10. Stabilisation and revegetation of the site on completion of works	N/A – site still operating	N/A
11. List of approved materials provided to all people depositing material onsite	Unknown – However no unauthorised materials noted during inspections of the site	Yes
12. Lapse of consent	N/A	N/A
13. Review of consent	Next optional review date June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**

N/A = not applicable

During the year, the Company demonstrated a high level of environmental performance and compliance with the resource consents. During the year under review there were no incidents recorded that were associated with operations at the Graham Harris quarry or cleanfill site. The site was tidy and well managed. The bunding and ponds appeared to be well maintained. No unauthorised material was disposed of at the cleanfill site.

3.4 Recommendations from the 2011-2012 Annual Report

In the 2011-2012 Annual Report, it was recommended:

1. THAT monitoring of discharges from Graham Harris (2000) Limited quarry at Hydro Road in the 2012-2013 year continue at the same level as in 2011-2012.

3.5 Alterations to monitoring programmes for 2013-2014

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.

In the case of Graham Harris Quarry, the programme for 2012-2013 was unchanged from that for 2011-2013. On the grounds that the programme is adequate for monitoring of the site, it is proposed that for 2013-2014, the monitoring of discharges from the Graham Harris quarry site remain unchanged from the 2012-2013 programme.

A recommendation to this effect is attached to this report.

3.6 Exercise of optional review of consent

Consent 4912-2 to discharge to cleanfill into and onto land for quarry reinstatement purposes provides for an optional review of conditions in June 2014

Both consents 3912-3 and 3888-3 are due to expire in June 2014

4. Recommendations

1. THAT monitoring of discharges from Graham Harris (2000) Limited quarry at Hydro Road in the 2013-2014 year continue at the same level as in 2012-2013.

2. THAT both consents 3912-3 and 3888-3 are renewed as they are due to expire in June 2014 for the Graham Harris (2000) Limited quarry at Hydro Road.

Glossary of common terms and abbreviations

The following abbreviations and terms are used within this report:

Al*	aluminium
As*	arsenic
Biomonitoring	assessing the health of the environment using aquatic organisms
BOD	biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate
BODF	biochemical oxygen demand of a filtered sample
bund	a wall around a tank to contain its contents in the case of a leak
CBOD	carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate
cfu	colony forming units. A measure of the concentration of bacteria usually expressed as per 100 millilitre sample
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
Cu*	copper
Cumec	A volumetric measure of flow- 1 cubic metre per second (1 m^3s^{-1})
DO	dissolved oxygen
DRP	dissolved reactive phosphorus
E.coli	*escherichia coli,* an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
Ent	enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre of sample
F	fluoride
FC	faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
fresh	elevated flow in a stream, such as after heavy rainfall
g/m^3	grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures
incident	an event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred
intervention	action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring
investigation	action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident

l/s	litres per second
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
mS/m	millisiemens per metre
mixing zone	the zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point
NH_4	ammonium, normally expressed in terms of the mass of nitrogen (N)
NH_3	unionised ammonia, normally expressed in terms of the mass of nitrogen (N)
NO_3	nitrate, normally expressed in terms of the mass of nitrogen (N)
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water
O&G	oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons)
Pb*	lead
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
PM_{10}	relatively fine airborne particles (less than 10 micrometre diameter)
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
SQMCI	semi quantitative macroinvertebrate community index;
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
Zn*	zinc

*an abbreviation for a metal or other analyte may be followed by the letters 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form.

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

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Appendix I

Resource consents held by Graham Harris (2000) Limited

Consent 3888-3

TARANAKI REGIONAL COUNCIL
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www.trc.govt.nz

Please quote our file number on all correspondence

Discharge Permit

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

Name of Consent Holder:	Graham Harris (2000) Limited 380 Junction Road R D 1 NEW PLYMOUTH
Consent Granted Date:	19 March 2002

Conditions of Consent

Consent Granted:	To discharge treated stormwater from a quarry site onto and into land and into the Waiwhakaiho River at or about 2608124E-6233075N
Expiry Date:	1 June 2014
Review Date(s):	June 2008
Site Location:	Hydro Road, Mangorei, New Plymouth
Legal Description:	Pt Secs 1,3 & 4 Hua and Waiwhakaiho Blk X Paritutu SD
Catchment:	Waiwhakaiho

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

www.trc.govt.nz

General conditions

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

b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.

c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:

i) the administration, monitoring and supervision of this consent; and
ii) charges authorised by regulations.

Special conditions

1. There shall be no direct discharge of untreated stormwater from the active quarry site into the Waiwhakaiho River, as a result of the exercise of this consent.

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.

3. 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. 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. 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 and frequency of the discharge.

6. The silt control structures shall have sufficient capacity to hold the volume of water which is likely to arise from a 24-hour 5-year return period rainfall event. The capacity of the silt control structures shall have a minimum volume of 660 cubic metres for every hectare of stormwater catchment.

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

Component	Concentration
pH (range)	6-9
total recoverable hydrocarbons [infrared spectroscopic technique]	15 gm^{-3}
Suspended solids	100 gm^{-3}

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

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

a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material;

b) any conspicuous change in the colour or visual clarity;

c) any emission of objectionable odour;

d) the rendering of fresh water unsuitable for consumption by farm animals;

e) any significant adverse effects on aquatic life.

9. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not give rise to either of the following effects in the receiving waters of the Waiwhakaiho River:

(a) an increase in suspended solids concentration in excess of 10 gm^{-3}, when the stream turbidity as measured immediately upstream of the discharge point is equal to or less than 5 NTU [nephelometric turbidity units]; or

(b) an increase in turbidity of more than 50% when the stream turbidity as measured immediately upstream of the discharge point is greater than 5 NTU [nephelometric turbidity units].

10. 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 satisfactorily, prior to the surrender or lapsing of this consent.

11. The consent holder shall provide and maintain a contingency plan, to the satisfaction of the Chief Executive, Taranaki Regional Council, outlining measures and procedures to be undertaken to prevent the spillage or accidental discharge of contaminants, and the procedures to be carried out should such a spillage occur.

12. 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, 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.

Transferred at Stratford on 11 April 2008

For and on behalf of
Taranaki Regional Council

Director-Resource Management

Consent 3912-3

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Please quote our file number on all correspondence

Discharge Permit

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

Name of Consent Holder:	Graham Harris (2000) Limited 380 Junction Road R D 1 NEW PLYMOUTH
Consent Granted Date:	19 March 2002

Conditions of Consent

Consent Granted:	To discharge treated washwater from shingle washing operations onto and into land and into the Waiwhakaiho River at or about 2608124E-6233075N
Expiry Date:	1 June 2014
Review Date(s):	June 2008
Site Location:	Hydro Road, Mangorei, New Plymouth
Legal Description:	Pt Secs 1,3 & 4 Hua and Waiwhakaiho Blk X Paritutu SD
Catchment:	Waiwhakaiho

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

General conditions

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

b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.

c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:

i) the administration, monitoring and supervision of this consent; and
ii) charges authorised by regulations.

Special conditions

1. There shall be no direct discharge of untreated washwater from the active quarry site into the Waiwhakaiho River, as a result of the exercise of this consent.

2. The area used for the washing of aggregate shall be bunded/contoured to ensure separation from the stormwater catchment. Washwater discharge shall only take place via soakage, or overflow to the stormwater silt control structure for further treatment prior to final discharge.

3. The consent holder shall implement appropriate recirculatory systems, so as to minimise the volume of the washwater discharge.

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

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

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

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

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

6. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not give rise to either of the following effects in the receiving waters of the Waiwhakaiho River:

   a) an increase in suspended solids concentration in excess of 10 gm^{-3}, when the stream turbidity as measured immediately upstream of the discharge point is equal to or less than 5 NTU [nephelometric turbidity units]; or
   b) an increase in turbidity of more than 50% when the stream turbidity as measured immediately upstream of the discharge point is greater than 5 NTU [nephelometric turbidity units].

7. 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, 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.

Transferred at Stratford on 11 April 2008

For and on behalf of
Taranaki Regional Council

Director-Resource Management

Consent 4912-2

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Please quote our file number on all correspondence

Discharge Permit

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

Name of Consent Holder:	Graham Harris (2000) Limited 380 Junction Road R D 1 NEW PLYMOUTH
Consent Granted Date:	21 February 2008

Conditions of Consent

Consent Granted:	To discharge clean-fill onto and into land for quarry reinstatement purposes in the vicinity of the Waiwhakaiho River at or about 2608147E-6233086N
Expiry Date:	1 June 2026
Review Date(s):	June 2014, June 2020
Site Location:	Hydro Road, New Plymouth
Legal Description:	Pt Sec 3 Hua & Waiwhakaiho Hun Blk Paritutu SD
Catchment:	Waiwhakaiho

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

General conditions

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

b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.

c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:

i) the administration, monitoring and supervision of this consent; and
ii) charges authorised by regulations.

Special conditions

1. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of the application 5101. In the case of any contradiction between the documentation submitted in support of application 5101 and the conditions of this consent, the conditions of this consent shall prevail.

2. The contaminants to be discharged shall be limited to clean-fill 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 condition 3] 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.

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.

5. No clean-fill shall be discharged within 20 metres of the bank of the Waiwhakaiho River.

6. The discharge to land shall not result in any clean-fill material entering surface water.

7. The consent holder shall monitor all material dumped to ensure it only contains clean-fill and inert materials.

8. The site shall be locked during non-quarrying hours and when the consent holder or an authorised agent is not on-site.

9. Within sixty days of the granting of this consent, the consent holder shall produce a detailed updated 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) Clean-fill boundaries and planned future use of the site.
   g) Environmental controls and monitoring
   h) Emergency procedures

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

10. Upon completion of the works associated with the exercise of this consent, the discharge site covered by this consent shall be stabilised and revegetated.

11. The consent holder shall provide any person depositing material in the site with a list of the materials approved for dumping at the clean-fill.

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

13. 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 2014 and June 2020, 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.

Transferred at Stratford on 11 April 2008

For and on behalf of
Taranaki Regional Council

Director-Resource Management