

# Civil Quarries Ltd - Everett Road Quarry

Monitoring Programme

Annual Report

2021-2022

Technical Report 2022-102



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Taranaki Regional Council  
Private Bag 713  
Stratford

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## Executive summary

Civil Quarries Ltd (the Company) operates a quarry located on Everett Road at Everett Park, in the Kurapete catchment. Aggregate is extracted and washed onsite. The quarry is passively dewatered, with intercepted groundwater and stormwater treated through a series of settlement ponds before being discharged to surface water. This report for the period July 2021 to June 2022 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of the Company's activities.

**During the monitoring period, Civil Quarries Ltd demonstrated an overall level of environmental and administrative performance that required improvement.**

The Company holds two resource consents, which include a total of 25 conditions setting out the requirements that the Company must satisfy. The Company holds consents that allow it to take and use groundwater and discharge stormwater and treated groundwater into an unnamed tributary of the Kurapete stream.

The Council's monitoring programme for the year under review comprised four scheduled inspections, which included stormwater discharge and stream samples collected for physicochemical analysis. A biomonitoring survey of receiving waters was also carried out.

During the year under review, the Company breached best practice as oil was found in a stormwater pond; an abatement notice was issued. There was also one incident recording non-compliance in regards to turbidity limits in the receiving waters, indicating further improvements in stormwater management are still required. An abatement notice was issued in relation to this non-compliance. The biomonitoring survey showed that quarry discharges did not have a significant effect on the macroinvertebrate community immediately downstream of the point of discharge to the Kurapete Stream. There were no impacts evident further downstream. Overall however, the Kurapete Stream was considered to be in better condition than in the previous survey.

There were also ongoing issues with the positioning of flowmeters. Water take and discharge rates are now being telemetered to the Council, but a review of the placement of the flowmeters is still required. The separate groundwater and surface water monitoring programme has commenced and a report shall be provided to the Council in the next monitoring year.

For reference, in the 2021-2022 year, consent holders were found to achieve a high level of environmental performance and compliance for 88% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 10% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance remains at a level that requires improvement.

This report includes recommendations for the 2022-2023 year, including a recommendation relating to the optional review of consents 1113-5.1 and 10247-1.1.





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# 1 Introduction

## 1.1 Compliance monitoring programme reports and the Resource Management Act 1991

### 1.1.1 Introduction

This report is for the period July 2021 to June 2022 by the Council describing the monitoring programme associated with resource consents held by Civil Quarries Ltd (the Company). The Company operates a quarry situated on Everett Road at Everett Park, near Inglewood.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by the Company that relate to abstractions and discharges of water in the Kurapete catchment. This is the 27<sup>th</sup> annual report to be prepared by the Council to cover the water discharges from the site and their effects. It is the fifth report produced under the current Company's management.

### 1.1.2 Structure of this report

**Section 1** of this report is a background section. It sets out general information about:

- consent compliance monitoring under the *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by the Company in the Kurapete catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted in the Company's site/catchment.

**Section 2** presents the results of monitoring during the period under review, including scientific and technical data.

**Section 3** discusses the results, their interpretations, and their significance for the environment.

**Section 4** presents recommendations to be implemented in the 2021-2022 monitoring year.

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

### 1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural and social-economic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' in as much as is appropriate for each

activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

#### 1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the consent holders, this report also assigns a rating as to each Company's environmental and administrative performance during the period under review. The rating categories are high, good, improvement required and poor for both environmental and administrative performance. The interpretations for these ratings are found in Appendix II.

For reference, in the 2021-2022 year, consent holders were found to achieve a high level of environmental performance and compliance for 88% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 10% of the consents, a good level of environmental performance and compliance was achieved.<sup>1</sup>

## 1.2 Process description

The Company's quarrying operation is located adjacent to the true right bank of the Kurapete Stream at Everett Road, near Inglewood. The current site is approximately 10 ha in total area, encompassing active excavation areas, stormwater treatment ponds, stockpiling and processing areas. Processing facilities include machinery for dry crushing and a washing and screening plant. Some aggregate washing is performed at the site, generating washwater that must be managed as part of the site operations. Photo 1 shows the newly opened excavation area. Photo 2 shows the process area, including the washwater treatment ponds, and the first settlement pond (Pond A). Photo 3 shows the second and third settlement ponds (B and C). Photo 4 shows the sixth settlement pond (Pond F).

Figure 1 shows the quarry location and discharge points; a more detailed overview of the stormwater and washwater ponds can be found in Appendix III.

The washwater treatment system is a series of ponds in the quarry basin (Ponds A1-A3), beside the sand wash plant. Washwater is pumped back to the sand wash plant via a pump station from pond A3. The system is closed loop and does not discharge to the tributary.

The site has both a primary and a secondary 'emergency' stormwater system. The quarrying area is contoured and bunded so that stormwater is directed to the first of the settling ponds (Pond A) in the base of the quarry floor. Groundwater from the lowest point of the quarry is pumped to Pond A and water to be used for washing is pumped from here to the sand wash plant. Unused water then continues through the primary treatment system - Ponds B, C, D and E before reaching the final Pond F. In an emergency, water is pumped directly from Pond A to Pond D, and then continues through to Pond F. Discharge from Pond F is via a steel pipe access culvert to the tributary, which flows approximately 600 m before joining the Kurapete Stream, upstream of the Everett Road Bridge. Gravel filtered surface runoff from the entrance to the quarry,

<sup>1</sup> The Council has used these compliance grading criteria for more than 18 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

off Everett Road, and the upstream farm drainage enter the northern boundary drain, which also discharges into the unnamed tributary.



Photo 1 Excavation area west of the washwater ponds, January 2021



Photo 2 Washwater ponds and stormwater Pond A in the foreground, October 2021





Photo 3 Stormwater Ponds B and C, July 2021



Photo 4 Final Pond F before flow through culvert piping into unnamed tributary, June 2022

### 1.3 Resource consents

The Company holds two resource consents the details of which are summarised in Table 1. Summaries of the conditions attached to each permit are set out in Section 3 of this report.

A summary of the various consent types issued by the Council is included in Appendix II, as are copies of all permits held by the Company during the period under review.

Table 1 Resource consents held by the Company during the 2021-2022 monitoring period

Consent number	Purpose	Granted	Review	Expires
<i>Water abstraction permits</i>				
<b>10247-1.1</b>	To take groundwater incidental to quarry operations and for aggregate washing purposes	11 Jun 2019	Jun 2023	1 Jun 2033
<i>Water discharge permits</i>				
<b>1113-5.1</b>	To discharge treated stormwater and treated groundwater into an unnamed tributary of the Kurapete Stream	11 Jun 2019	Jun 2023	1 Jun 2033

## 1.4 Monitoring programme

### 1.4.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for the Everett Road Quarry site consisted of four primary components.

### 1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

### 1.4.3 Site inspections

The Everett Road site was visited four times during the monitoring period. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Flowmeters measuring the amount of groundwater abstracted and the rate at which water is discharged from the quarry were also inspected. Sources of data being collected by the Company 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.

#### 1.4.4 Chemical sampling

The Council undertook sampling of both the discharges from the site and the water quality upstream and downstream of the discharge point and mixing zone.

The stormwater discharge was sampled on four occasions, and the samples analysed for electrical conductivity, pH, total hydrocarbons and total suspended solids. The Kurapete Stream was sampled on four occasions, and the samples analysed for electrical conductivity, pH, total hydrocarbons, total suspended solids and turbidity.

#### 1.4.5 Biomonitoring surveys

A biological survey was performed on the Kurapete Stream to determine whether or not the discharge of treated stormwater and groundwater has had a detrimental effect upon the macroinvertebrate communities of the stream.

#### 1.4.6 Separate groundwater and surface water monitoring

A separate monitoring programme is undertaken by the consent holder to monitor groundwater levels and groundwater quality, taking into consideration rainfall data. Annual low flow monitoring of the Kurapete Stream is also part of this monitoring programme. A report summarising the results will be available in the next monitoring year.



## 2 Results

### 2.1 Water

#### 2.1.1 Site inspections

27 October 2021

The weekend prior to the inspection, approximately 20ml of rainfall had occurred. During the inspection the discharge was running very turbid. Samples were taken of the downstream, discharge, upstream and unnamed tributary sites. In this instance the variation in turbidity was just within the consent limits.

Additionally, hydrocarbons were found in the pond that groundwater was pumped from (Photo 5) and staff onsite were not aware of its presence. This was concerning as these hydrocarbons would have eventually been pumped in to the pond system and on to the stream if the Council had not noticed it. Infringement notice (EAC-24318) was issued, as this was a breach of best practice (see Section 2.2).



Photo 5 Hydrocarbons on quarry pit pond surface, 27<sup>th</sup> October 2021

18 January 2022

In the two weeks leading up to the inspection no significant rainfall had occurred. The wash water plant was in operation but was not discharging to the ponds during the inspection. All ponds showed improvement in turbidity before reaching the final pond. Groundwater was pumped into the treatment ponds and some changes had been made to reduce the amount of sediment being pumped to the ponds. No hydrocarbons were noted during this visit. The flow meter read 21.7 L/s, which was slightly over consent limits. The sample taken from the discharge was only slightly turbid. Further samples were taken from upstream, downstream

and unnamed tributary sites. The downstream sample results exceeded consent limits for turbidity, however no enforcement actions were taken at this time due to sampling methodology errors.

#### 01 April 2022

No rain proceeded prior to inspection. At the time of inspection, the stormwater ponds were full and turbid, while the washwater ponds were full and reticulating. The washwater plant was not in use. The ring drain was deepened on the quarry pit floor and a new weir was added half way through the pond (Photo 6). The flowmeter within the stormwater system read 20.2 L/s. The stream cleared up after about 15 m and the upstream and downstream sites were clear. Samples were taken from discharge, tributary, upstream and downstream sites. Sample results of the downstream site slightly exceeded the turbidity limits, however compliance was given at the time as the exceedance was only minor.



Photo 6 Site changes, April 2022

#### 30 June 2022

Inspection was undertaken during fine weather following a recent heavy rain event. The three reticulation ponds had not been used for some time and no washing occurred at the time of the inspection. Several measures had been put in place to control and direct sediment around the site (Photo 7). Following a recent heavy rain event, water from pond A was pumped directly to pond D via the emergency overflow system. All ponds, including the final pond, as well as the downstream site appeared very turbid. An abatement notice (EAC-24687) was issued as the downstream sample exceeded the turbidity limits (see Section 2.2).





Photo 7 Site sediment control, June 2022

### 2.1.2 Chemical sampling

Sampling locations are described in Table 2 and indicated on the map in Figure 1.

Discharge and surface water results from 2021-2022 monitoring period are presented in Table 3 to Table 6. The range of historical results at each site are also presented for comparison.

During the monitoring period, the stormwater discharge from the quarry was compliant with the constituent limits for discharge prior to entering the receiving water (Table 3).

Table 2 Locations and details of sampling sites

Site	Location	GPS coordinates	Site code
Quarry stormwater	At discharge outlet	1710431E 5668301N	IND002022
Kurapete Stream	100 m upstream of Everett Road bridge (upstream of quarry tributary)	1710640E 5668709N	KRP000960
Unnamed tributary	5 m upstream of the Kurapete Stream confluence (600 m downstream of discharges at quarry)	1710658E 5668713N	KRP000975



Site	Location	GPS coordinates	Site code
Kurapete Stream	At the Everett Road bridge (approximately 100 m downstream of quarry tributary)	1710695E 5668758N	KRP000980

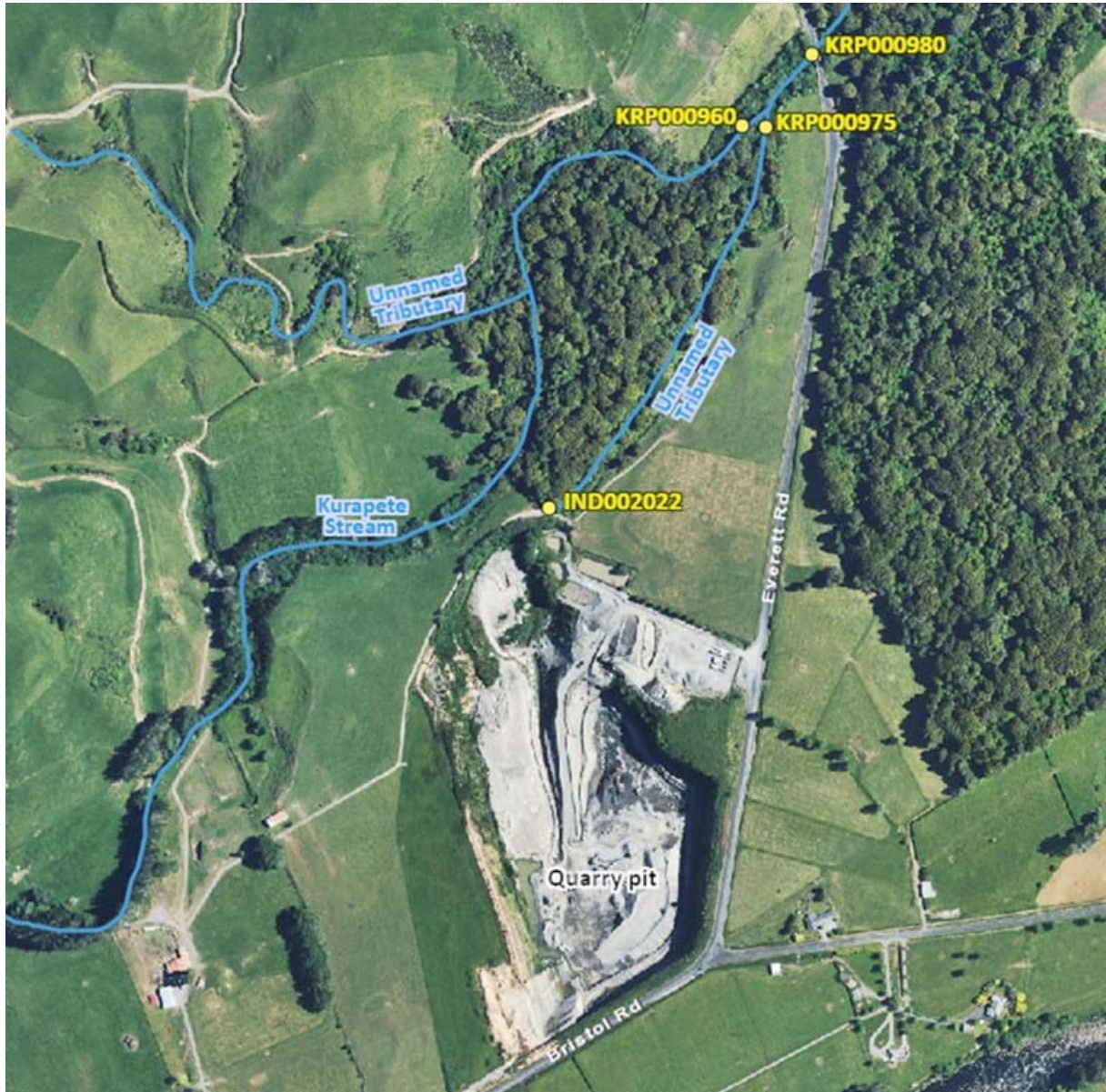


Figure 1 Sampling site locations, Everett Road Quarry

Table 3 Stormwater discharge monitoring results

			Discharge (IND002002)					
Parameter	Unit	Consent limits	Minimum	Maximum	TRC213602	TRC224871	TRC226162	TRC226944
			July 2000 to June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
			-	-	11:46	11:37	08:50	14:02
Electrical conductivity	mS/m	-	8.8	60.2	41.6	38.0	37.2	43.6
pH	pH	<b>6-9</b>	6.3	7.9	7.6	8.0	7.7	7.4

Discharge (IND002002)								
Parameter	Unit	Consent limits	Minimum	Maximum	TRC213602	TRC224871	TRC226162	TRC226944
			July 2000 to June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
			-	-	11:46	11:37	08:50	14:02
Suspended solids	g/m <sup>3</sup>	<b>100</b>	< 3	650	29	12	8	8
Total hydrocarbons	g/m <sup>3</sup>	<b>15</b>	-	-	<4	<4	<4	<4

Table 4 Kurapete Stream monitoring results for the upstream site

Kurapete Stream Upstream (KRP000960)							
Parameter	Unit	Minimum	Maximum	TRC213603	TRC224872	TRC226163	TRC226945
		July 2000- June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
		-	-	11:20	12:18	07:35	12:56
Electrical conductivity	mS/m	7.3	31.2	12.5	14.0	14.9	11.4
pH	pH	7.0	7.9	7.3	7.7	7.3	7.4
Suspended solids	g/m <sup>3</sup>	2	650	<3	<3	<3	<3
Turbidity	FNU	0.8	710	2.7	1.1	1.05	1.96
Total hydrocarbons	g/m <sup>3</sup>	-	-	<0.7	<0.7	<0.7	<0.7

Table 5 Monitoring results for the confluence of the Kurapete Stream and unnamed tributary

Downstream - tributary confluence (KRP000975)							
Parameter	Unit	Minimum	Maximum	TRC213604	TRC224873	TRC226164	TRC226946
		July 2000- June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
		-	-	11:17	12:24	07:35	13:00
Electrical conductivity	mS/m	11.1	48.8	37.4	35.6	35.9	36.5
pH	pH	6.8	7.8	7.2	7.6	7.5	6.9
Suspended solids	g/m <sup>3</sup>	3	79	16	9	7	5
Turbidity	FNU	1.9	65	11.7	8.4	4.5	10.9
Total hydrocarbons	g/m <sup>3</sup>	-	-	<0.7	<0.7	<0.7	<0.7

Table 6 Kurapete Stream monitoring results for the downstream site

Downstream - bridge (KRP000980)							
Parameter	Unit	Minimum	Maximum	TRC213605	TRC224874	TRC226165	TRC226947
		July 2000- June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
		-	-	11:04	12:08	07:18	13:04
Electrical conductivity	mS/m	7.9	37.6	16.4	19.0	20.9	16.4

Downstream - bridge (KRP000980)							
Parameter	Unit	Minimum	Maximum	TRC213605	TRC224874	TRC226165	TRC226947
		July 2000- June 2022		27-Oct-21	18-Jan-22	01-Apr-22	30-Jun-22
		-	-	11:04	12:08	07:18	13:04
pH	pH	7	7.8	7.3	7.7	7.5	7.2
Suspended solids	g/m <sup>3</sup>	2	170	4	<3	<3	<3
Turbidity	FNU	0.93	150	3.6 (4.06)*	<b>2.6 (1.65)*</b>	<b>1.95 (1.58)*</b>	<b>3.3 (2.94)*</b>
Total hydrocarbons	g/m <sup>3</sup>	-	-	<0.7	<0.7	<0.7	<0.7

\*Turbidity limit based on upstream result (Table 4)

Consent conditions require the downstream sample to have a turbidity level no more than 50% greater than the upstream sample (KRP000960, Table 4). On 27 October 2021, monitoring results from all sampling points were compliant with consent conditions at the time of sampling. All other downstream samples taken on 18 January 2022, 01 April 2022 and 30 June 2022 (KRP000980, Table 6) exceeded the turbidity limit. The downstream result in January, April and June 2022 were 0.95, 0.37 and 0.36 FNU over the 50% exceedance threshold, respectively. The result of the sample taken on 30 June 2022 is further discussed in Section 2.2 and 3.

### 2.1.3 Groundwater abstraction and water discharge data

The consent holder is to provide data on groundwater abstraction and water discharge via telemetry. The discharge flowmeter is currently set up between Ponds C and D, whilst it gives some indication of the flow rate through the system, it doesn't accurately show the discharge rate from the site (Figure 2). Similarly, there is no flow meter on the main groundwater abstraction pump, so no accurate data is available. A flow meter is set up on the emergency pump between Pond A and Pond D, this data is presented in Figure 3 in the interim. The flowmeters are to be addressed in the coming year.

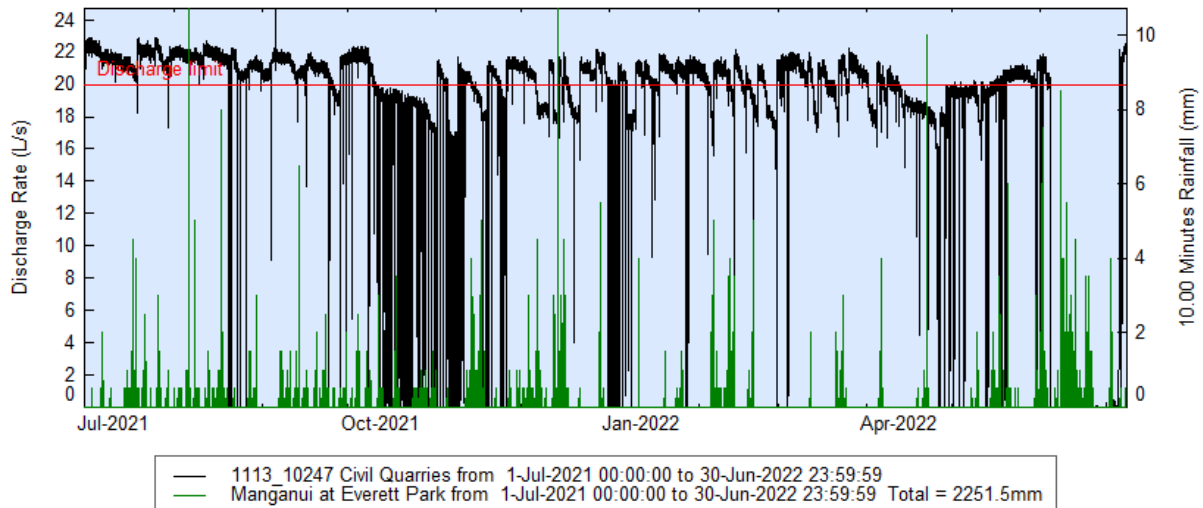


Figure 2 Discharge rates from Civil Quarries stormwater system, plotted against rainfall in 10 minute interval totals. The red line is the consented discharge rate limit

Figure 2 above shows discharge rates plotted against rainfall at Everett Park in 10 minute intervals during the monitoring period. This is to assess compliance against special conditions 1 and 2 of consent 1113-5.1, which state a discharge rate limit of 20 L/s unless during times of "heavy rainfall". The rainfall in Figure 2 is shown in 10 minute intervals with a maximum of 10.7 mm to align with "heavy rainfall" limits set in special

condition 4 of consent 1113-5.1. As the graph indicates, discharge is continuously well over the consented limit. The discharge was already above 20 L/s in two out of three occasions where rainfall was high enough to allow for increased discharge rate (the spikes in the green rainfall line shown in the graph).

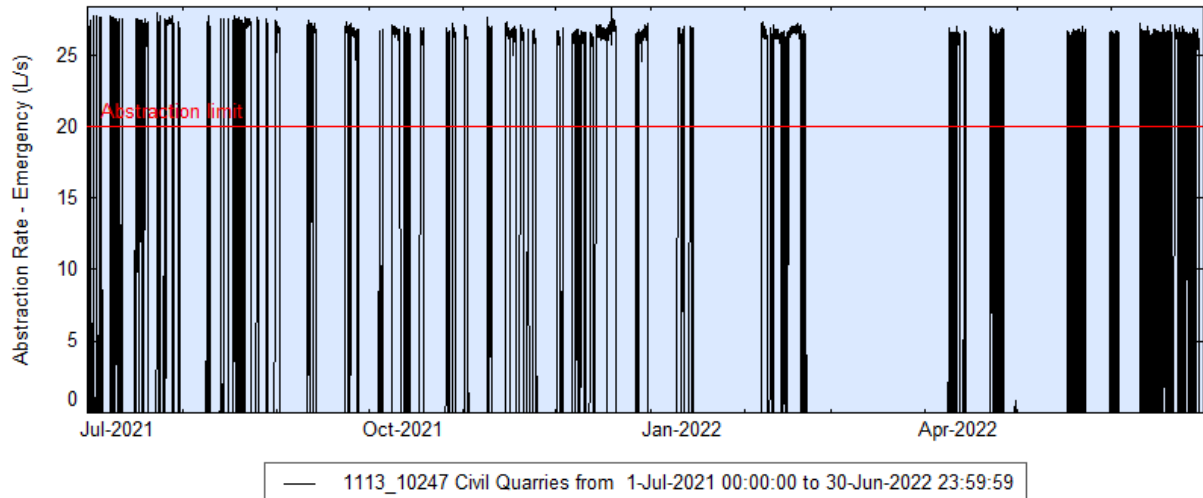


Figure 3 Abstraction rates from Civil Quarries Emergency pump. The red line is the consented abstraction rate limit

Figure 3 above shows groundwater abstraction rates from the quarry via the emergency pump during the monitoring period. Special condition 1 of consent 10247-1.1 states that abstraction is limited to 20 L/s at all times. During high rainfall, the Company can abstract groundwater for longer (increase the volume), but the flow rate should remain the same. The graph shows that abstraction has exceeded the limit at every instance. This data gives an indication that the true abstraction rate is much higher, when the main abstraction pump is also added to the equation.

#### 2.1.4 Biomonitoring survey

The Council's standard 'kick-sampling' technique was used at three established sites to collect streambed macroinvertebrates from an unnamed tributary of the Kurapete Stream. Samples were processed to provide number of taxa (richness), MCI and SQMCI<sub>s</sub> scores, and EPT taxa for each site.

Taxa richness is the most robust index when ascertaining whether a macroinvertebrate community has been exposed to toxic discharges. It can also be a reflection of limited food or habitat availability which might be expected if suspended or settled silt was an issue at a site. The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of organic pollution in stony streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to environmental conditions. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in communities. It may also provide more relevant information than the MCI in relation to non-organic impacts. Differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored. EPT taxa (mayflies, stoneflies and caddisflies) are generally more sensitive to fine suspended sediment (Clapcott, et al. 2011) compared with other macroinvertebrate taxa and are therefore particularly useful indicators of potentially harmful sediment discharges

Sites 1 and 2 had moderate taxa while site 3 had moderately low taxa richness. There was only a minor decrease in taxa richness between the 'control' and 'secondary' impact site of four taxa indicating no significant differences among sites. Taxa richness was lower than historic medians for all three sites (including the control site), and has been lower than the historic median for at least the last four surveys at all three sites. This decrease in richness would be unrelated to quarry activities.



Based on MCI scores sites 1 and 3 were in 'good' health while site 2 was in 'fair' health. MCI scores were not significantly different to each other, and were higher than their historic medians and previous scores, significantly so for site 3, suggesting better than typical health. The SQMCI takes into account abundances as well as tolerance values and is therefore more sensitive than the MCI. The SQMCI score for site 1 and 3 indicated that they were in 'very good' health and site 2 was in 'good' health.

There was a decrease in percentage of total EPT taxa between sites 1 and 2 of 8% but no change in actual EPT number (8 taxa). There was another very small decline between sites 2 and 3 of only two percent but with a decrease of three EPT taxa. However, the overall decline between site 1 and 2 and 3 was negligible.

Overall, the survey indicated that quarry discharges entering the stream from a small tributary draining the quarry area was not having a significant effect on the macroinvertebrate community immediately downstream of the quarry discharge.

Copies of biomonitoring reports for this site are available from the Council upon request.

## 2.2 Incidents, investigations, and interventions

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 Company. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council maintains a database record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

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

Table 7 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to the Company's activities during the 2021-2022 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 7 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
27/10/2021	Oil in pond/Breach of Abatement	N	Yes – Infringement Notice	The Company was issued an infringement notice (EAC-24318) as this was a breach of best practice.
30/06/22	Turbidity limits exceeded in the downstream sample	N	Yes – abatement notice	The Company was issued an abatement notice (EAC-24687) as the turbidity limits were exceeded on three consecutive occasions.



## 3 Discussion

### 3.1 Discussion of site performance

Groundwater level loggers have been installed in monitoring bores as per the groundwater monitoring programme; groundwater quality testing has begun. Additionally, surface water flow gauging to monitor the effects of dewatering on summer low-flows has also commenced. The results of this monitoring will be available in the following monitoring year.

As mentioned in section 2.1.3, the position of the flowmeters needs to be re-evaluated as the reconfiguring of the stormwater ponds and planned changes to the outlet has meant there is no direct measuring of the flow at the point of take or discharge from the site. The Company has been directed to improve management of their discharge and take rates to ensure they remain within the consented limit (20 L/s). This may aid in reduction of turbidity in the receiving environment as a lower flow rate will reduce stirring up of sediment in the unnamed tributary leading to the Kurapete Stream. It is acknowledged that the Company had excessive amounts of water to deal with as it was flowing directly off Bristol Road into the quarry excavation area. This has since been dealt with in conjunction with New Plymouth District Council to divert water away from the quarry through roadside drains.

The Company is planning to install a turbidity sensor at the point of discharge to continuously monitor the clarity of the water leaving the site.

### 3.2 Environmental effects of exercise of consents

The main potential environmental effect of quarrying activities on waterways is associated with discharges of stormwater containing fine silt particles and high suspended solids concentrations. These discharges can result in discolouration of the receiving waters, smother benthic life forms and form a barrier to fish movement and affect fish spawning habitats. This has been shown to be particularly relevant in the lower reaches of the Kurapete Stream, near its confluence with the Manganui River (Sutherland, 2019). The Civil Quarries site is particularly important as it is immediately upstream of the DoC Everett Park Scenic Reserve, which is a popular location for swimming and fishing.

The MCI and SQMCI indexes are indicators of organic pollution but are also usually correlated with deposited sediment so that sites with high levels of silt tend to have lower MCI and SQMCI scores. This makes them useful for determining impacts of discharges that contain predominately fine sediment such as quarry discharges. However, macroinvertebrate sampling occurs in riffles which have high flow velocities compared with runs and pools and are therefore far less likely to accumulate deposited sediment. During the current survey no differences in deposited fine sediment were evident; all sites had no deposited silt and minor levels of sand (5%). No silt coating was observed at either impact site and the water was not significantly cloudier downstream of the quarry tributary with all sites recording a clarity of clear though site 3 was noted to have some fine sediment when the substrate was disturbed. In general, the Kurapete Stream was considered to be in better condition than in the previous survey, with site 3 recording the highest SQMCI score to date (Sutherland, 2022). Since 2016, when Civil Quarries took ownership of the quarry, the overall effect on the macroinvertebrate community of the Kurapete Stream has been minor at worst.

Over the 2021-2022 monitoring period there were three instances of discharge causing potential adverse effects on the receiving environment, observed by an increase in measured turbidity and visual clarity downstream of the site.

Due to the extensive nature of the quarry operation, there is potential that groundwater levels in the surrounding area are being effected by the dewatering operation onsite. This effect is now being monitored and will be reported on in the coming monitoring period.

### 3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 8 and Table 9.

Table 8 Civil Quarries Ltd summary of performance for consent 1113-5.1

<b>Purpose: To discharge treated stormwater and treated groundwater from quarry activities into an unnamed tributary of the Kurapete Stream</b>		
<b>Condition requirement</b>	<b>Means of monitoring during period under review</b>	<b>Compliance achieved?</b>
1. Maximum discharge rate to not exceed 20 L/s	Inspections and supply of water meter data – slightly exceeded during the inspection on 18 January 2022. Additionally, telemetered discharge rate continuously exceeded the consent limit (Figure 2)	No
2. Exception of exceedance of condition 1 due to 'heavy rain'	Inspections and supply of water meter data	No
3. Provision of stormwater management plan by 1 August 2019	Plan accepted by Council. Updated December 2020	Yes
4. No washwater to enter stormwater unless due to 'heavy rain'	Inspections of stormwater and washwater treatment systems	Yes
5. Location of discharge point	Inspections of treatment system and discharge point	Yes
6. Company to adopt best practicable option	Hydrocarbons were found in the pond that groundwater was pumped from	No
7. Limits quarry catchment area	Inspections of site	Yes
8. Company to install and maintain water meter and datalogger on discharge	Flowmeters require moving	No
9. Specifications on discharge records	Auditing of discharge records	Yes
10. Measuring and recording equipment to be accessible for data retrieval	Inspection	Yes
11. Active quarry site to be contoured and bunded to direct water into treatment system	Inspections of treatment system and site	Yes
12. Discharge concentration limits	Physicochemical sampling	Yes
13. Discharge to not adversely affect receiving waters	Inspection and physicochemical sampling of receiving waters, biological sampling	Yes
14. Turbidity limit for receiving waters relative to discharge	Physicochemical sampling – Exceedance of turbidity limits	No
15. Contingency plan maintained	Plan received – Requires updating	Yes

<b>Purpose: To discharge treated stormwater and treated groundwater from quarry activities into an unnamed tributary of the Kurapete Stream</b>		
<b>Condition requirement</b>	<b>Means of monitoring during period under review</b>	<b>Compliance achieved?</b>
16. Optional review of consent	Optional annual review for 5 years, 2-yearly intervals afterwards. Next review June 2023	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		<b>Improvement required</b> <b>Improvement required</b>

N/A = not applicable

**Table 9 Civil Quarries Ltd summary of performance for consent 10247-1.1**

<b>Purpose: To take groundwater incidental to quarry operations and for aggregate washing purposes</b>		
<b>Condition requirement</b>	<b>Means of monitoring during period under review</b>	<b>Compliance achieved?</b>
1. Abstraction rate shall not exceed 20 L/s	Inspections and data review – continuously exceeded abstraction rate from emergency pump (Figure 3)	No
2. Installation and maintenance of water meter and datalogger at water take	Inspections – Abstraction flowmeter requires moving	No
3. Abstraction data formatting and supply requirements	Abstraction data review	Yes
4. Flow meter to be verified	Inspection and certification to be supplied at least once every 5 years	Yes
5. Company to notify if recording equipment repairs are required	Notification if and when required – flowmeters were not working	N/A
6. Company to undertake groundwater monitoring programme	Monitoring programme has been supplied and commenced during the monitoring period. However, no report has been received.	Yes
7. Water meters to be accessible for data retrieval	Inspections	Yes
8. Company to adopt best practicable option to minimise adverse effects on groundwater	Inspections, data review, groundwater level monitoring – report to be received	No
9. Optional review of consent	Optional annual review for 5 years, 2-yearly intervals afterwards. Next review June 2023.	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		<b>Improvement required</b> <b>Improvement required</b>

Table 10 Evaluation of environmental performance over time

Year	Consent no	High	Good	Improvement req	Poor
2017	1113-5	-	-	1	-
	10247-1	-	-	1	-
2018	1113-5	-	-	1	-
	10247-1	-	-	1	-
2019	1113-5.1	-	-	1	-
	10247-1.1	-	-	1	-
2020	1113-5.1	-	-	1	-
	10247-1.1	-	-	1	-
2021	1113-5.1	-	-	1	-
	10247-1.1	-	-	1	-
Totals	-	0	0	10	0

During the year, the Company demonstrated a level of environmental and administrative performance with the resource consents that required improvement, as defined in Appendix II. During the year under review the company was non-compliant on one occasion as hydrocarbons were found in a stormwater pond, which is not best practice. On another occasion the company was non-compliant as the receiving waters were exceeding turbidity limits. Further, there were ongoing issues with the flowmeters being installed in incorrect locations. The Company will provide a monitoring report summarising the results of the separate groundwater and surface water monitoring programme in the following monitoring year.

### 3.4 Recommendations from the 2020-2021 Annual Report

In the 2020-2021 Annual Report, it was recommended:

1. THAT in the first instance, the monitoring of consented activities at Everett Road quarry in the 2021-2022 year continue at the same level as in 2021-2022.
2. THAT should there be ongoing issues with environmental or administrative performance in 2021-2022, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the position of the flowmeters be relocated to fit the requirements of the resource consent, in agreement with the Council.
4. THAT the Environmental Monitoring Programme submitted by the Company be carried out in full, as agreed.
5. THAT the option for a review of resource consent(s) in June 2022, as set out in condition 16 of consent 1113-5.1 and condition 9 of consent 10247-1.1 not be exercised, on the grounds that aspects of the monitoring programme still need to be implemented to enable a full assessment of effects to be made.

The third recommendation had not been fulfilled at the end 2021-2022 review period.

### 3.5 Alterations to monitoring programmes for 2022-2023

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site(s) in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2022-2023.

### 3.6 Exercise of optional review of consent

Resource consent 1113-5.1 provides for an optional review of the consent in June 2023. Condition 16 allows the Council to review the consent for the purposes of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of the 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, specifically including the turbidity limits set in condition 14.

Resource consent 10247-1.1 provides for an optional review of the consent in June 2023. Condition 9 allows the Council to review the consent for the purposes of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of the 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; and/or requiring continuous measuring and recording of the flow immediately downstream of the take site.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review to be pursued or grounds to exercise the review option.

## 4 Recommendations

1. THAT in the first instance, the monitoring of consented activities at Everett Road quarry in the 2022-2023 year continue at the same level as in 2021-2022.
2. THAT should there be ongoing issues with environmental or administrative performance in 2022-2023, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the position of the flowmeters be relocated to fit the requirements of the resource consent, in agreement with the Council.
4. THAT the flow rate from the discharge and groundwater take pumps be closely monitored to ensure compliance with resource consents.
5. THAT the Environmental Monitoring Programme submitted by the Company be carried out in full, as agreed.
6. THAT the option for a review of resource consent(s) in June 2023, as set out in condition 16 of consent 1113-5.1 and condition 9 of consent 10247-1.1 not be exercised, on the grounds that aspects of the monitoring programme still need to be implemented to enable a full assessment of effects to be made.

## Glossary of common terms and abbreviations

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

Biomonitoring	Assessing the health of the environment using aquatic organisms.
Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in mS/m.
EMP	Environmental Monitoring Programme
EPT (taxa)	Ephemeroptera, Plecoptera, Tricoptera Index (mayflies, stoneflies and caddisflies).
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.
Incident Register	The 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.
L/s	Litres per second.
m <sup>2</sup>	Square Metres.
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.
MPN	Most Probable Number. A method used to estimate the concentration of viable microorganisms in a sample.
mm	Millimetre.
mS/m	Millisiemens per metre.
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).

RMA	<i>Resource Management Act 1991</i> and including all subsequent amendments.
SMP	Stormwater Management Plan.
SS	Suspended solids.
SQMCI	Semi quantitative macroinvertebrate community index.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.

For further information on analytical methods, contact an Environment Quality Manager.



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# Appendix I

## Resource consents held by Civil Quarries Ltd

(For a copy of the signed resource consent  
please contact the TRC Consents department)

### Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14. Permits authorising the abstraction of water are issued by the Council under Section 87(d) of the RMA.

### Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations. Permits authorising discharges to water are issued by the Council under Section 87(e) of the RMA.

### Air discharge permits

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising discharges to air are issued by the Council under Section 87(e) of the RMA.

### Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA 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. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

### Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Land use permits are issued by the Council under Section 87(a) of the RMA.

### Coastal permits

Section 12(1)(b) of the RMA stipulates that no person may erect, reconstruct, place, alter, extend, remove, or demolish any structure that is fixed in, on, under, or over any foreshore or seabed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Coastal permits are issued by the Council under Section 87(c) of the RMA.

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

Name of  
Consent Holder:                      Civil Quarries Limited  
   PO Box 108  
   Inglewood 4347

Decision Date                          11 June 2019  
(Change):

Commencement Date                11 June 2019                          (Granted Date: 1 December 2016)  
(Change):

**Conditions of Consent**

Consent Granted:                      To discharge treated stormwater and treated groundwater  
   from quarry activities into an unnamed tributary of the  
   Kurapete Stream

Expiry Date:                            1 June 2033

Review Date(s):                        June 2020, June 2021, June 2022, June 2023, June 2024,  
   June 2026, June 2028, June 2030, June 2032

Site Location:                          Everett Road, Inglewood

Grid Reference (NZTM)                1710454E-5668324N

Catchment:                              Waitara

Tributary:                                Manganui  
   Kurapete

*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 all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

### Special conditions

1. Subject to condition 2 the discharge rate shall not exceed 20 litres per second
2. The rate of discharge may exceed 20 litres per second if:
  - a) it is initiated no more than 15 hours after 'heavy rain', as defined in condition 4 below; and
  - b) it reduces to no more than 20 litres per second within 36 hours of the most recent 'heavy rain' event; and
  - c) it is reasonably necessary to return the quarry to an operational state.
3. From 1 August 2019, the site shall be operated in accordance with a 'Stormwater Management Plan' (SMP) approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The SMP shall detail how the site is managed to achieve compliance with the conditions of this consent and shall include, as a minimum, details of:
  - a) the treatment of stormwater, washwater and groundwater, including the pond configuration;
  - b) management/ recycling of washwater on site;
  - c) disposal of recycled washwater;
  - d) management of the pond treatment systems; and
  - e) maintenance programme for the treatment system;
4. No washwater shall enter the stormwater treatment system, unless it is due to heavy rain within the previous 24 hours. For the purposes of this consent 'heavy rain' refers to rainfall recorded at the 'Manganui at Everett Park' rain gauge that exceeds any of the rainfall intensities listed below:

Rainfall Intensity
10.7 mm in 10 minutes
15.7 mm in 20 minutes
19.2 mm in 30 minutes
25.8 mm in 1 hour
41.5 mm in 3 hours
88.0 mm in 12 hours
109 mm in 24 hours
146 mm in 72 hours

5. The discharge into the unnamed tributary of the Kurapete Stream shall be located at (NZTM) 1710454E-5668324N.



## Consent 1113-5.1

6. At all times, the consent holder shall adopt the best practicable option (as defined in Part 2 of the Resource Management Act 1991) to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge, including by preventing the flow of uncontaminated water into the quarry.
7. The active quarry stormwater catchment shall be no more than 13.5 hectares.
8. Before 31 July 2019 the consent holder shall install, and thereafter maintain, a meter and a datalogger at the site of discharge into the unnamed tributary of the Kurapete Stream. The meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of the discharge to an accuracy of  $\pm 5\%$ , at intervals not exceeding 15 minutes. Records of the date, the time and the rate and volume the discharge, shall be made available to the Chief Executive, Taranaki Regional Council on request.

*Note: Meters must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance water meters have a limited lifespan.*

9. The discharge records required by condition 8 shall:
  - a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
  - b) specifically record the discharge as 'zero' when no discharge is occurring; and
  - c) be transmitted to the Taranaki Regional Council's computer system within 2 hours of being recorded.
10. All measuring and recording equipment required by this consent shall be accessible to Taranaki Regional Council Officers at all reasonable times for inspection and/or data retrieval.
11. The site shall be contoured and bunded so that all water is directed to the pond system for treatment prior to discharge. No water shall be discharged unless it has passed through the treatment pond system as detailed in the 'Stormwater Management Plan' required by condition 3 above.
12. Constituents of the discharge shall meet the standards shown in the following table.

<b>Constituent</b>	<b>Standard</b>
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than $100 \text{ gm}^{-3}$
total recoverable hydrocarbons	Concentration not greater than $15 \text{ gm}^{-3}$

These standards shall apply prior to the entry of any discharge into the receiving waters of the unnamed tributary of the Kurapete Stream, at a designated sampling point approved by the Chief Executive.

## Consent 1113-5.1

13. Beyond 25 metres downstream of the confluence of the unnamed tributary with the Kurapete Stream, the discharge shall not give rise to any of the following effects in the receiving waters of the Kurapete Stream:
  - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; and/or
  - b) any conspicuous change in the colour or visual clarity; and/or
  - c) any emission of objectionable odour; and/or
  - d) the rendering of fresh water unsuitable for consumption by farm animals; and/or
  - e) any significant adverse effects on aquatic life.
14. Beyond 25 metres downstream of the confluence of the unnamed tributary with the Kurapete Stream, the discharge shall not give rise to an increase in turbidity of the Kurapete Stream of more than 50%, as determined using NTU (nephelometric turbidity units).
15. The consent holder shall maintain and regularly update a 'Contingency Plan' that details measures and procedures to be undertaken to prevent, and to avoid environmental effects from a spillage or any discharge of contaminants not authorised by this consent. The plan and any amended versions shall be provided to the Chief Executive of the Taranaki Regional Council.
16. 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 annually for the first 5 years and at 2-yearly intervals thereafter for the purposes 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, specifically including the turbidity limits set in condition 14.

Signed at Stratford on 11 June 2019

For and on behalf of  
Taranaki Regional Council

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A D McLay  
**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: Civil Quarries Limited  
PO Box 108  
Inglewood 4347

Decision Date  
(Change): 11 June 2019

Commencement Date  
(Change): 11 June 2019 (Granted Date: 1 December 2016)

**Conditions of Consent**

Consent Granted: To take groundwater incidental to quarry operations and for aggregate washing purposes

Expiry Date: 1 June 2033

Review Date(s): June 2020, June 2021, June 2022, June 2023, June 2024,  
June 2026, June 2028, June 2030, June 2032

Site Location: Everett Road, Inglewood

Grid Reference (NZTM) 1710429E-5668228N

Catchment: Waitara

Tributary: Manganui  
Kurapete

*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 all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

### Special conditions

1. The rate of taking shall not exceed 20 litres per second.
2. Before 31 July 2019 the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking (or a nearby site in accordance with Regulation 10 of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010). The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of  $\pm 5$ , at intervals not exceeding 15 minutes. Records of the date, the time and the rate and volume of water taken shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

*Note: Water meters must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance water meters have a limited lifespan.*

3. The records of water taken shall:
  - a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
  - b) specifically record the water taken as 'zero' when no water is taken; and
  - c) be transmitted to the Taranaki Regional Council's computer system within 2 hours of being recorded.
4. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring equipment required by the conditions of this consent ('the equipment'):
  - a) has been installed and/or maintained in accordance with the manufacturer's specifications; and/or
  - b) has been tested and shown to be operating to an accuracy of  $\pm 5\%$ .

The documentation shall be provided:

- i) within 30 days of the installation of a water meter;
- ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
- iii) no less frequently than once every five years.

## Consent 10247-1.1

5. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person.
6. The consent holder shall undertake a monitoring programme that monitors the effects of this consent on the surrounding aquifer. The monitoring programme shall be submitted to the Chief Executive, Taranaki Regional Council for certification before 31 July 2019 and shall include the drilling and monitoring of a minimum of three bores at locations determined after consultation with the Chief Executive, Taranaki Regional Council.
7. All measuring and recording equipment required by this consent shall be accessible to Taranaki Regional Council Officers at all reasonable times for inspection and/or data retrieval.
8. At all times, the consent holder shall adopt the best practical option to prevent or minimise any actual or likely adverse effect on the environment associated with the abstraction of groundwater.
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 annually for the first 5 years and at 2-yearly intervals thereafter for the purposes of:
  - a) 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; and/or
  - b) requiring continuous measuring and recording of the flow immediately downstream of the take site.

Signed at Stratford on 11 June 2019

For and on behalf of  
Taranaki Regional Council

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A D McLay  
**Director - Resource Management**





## Appendix II

Categories used to evaluate environmental and administrative performance

## Categories used to evaluate environmental and administrative performance

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

### Environmental Performance

**High:** No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

**Good:** Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

**Improvement required:** Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

**Poor:** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

### Administrative performance

**High:** The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

**Good:** Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively

adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

**Improvement required:** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

**Poor:** Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.



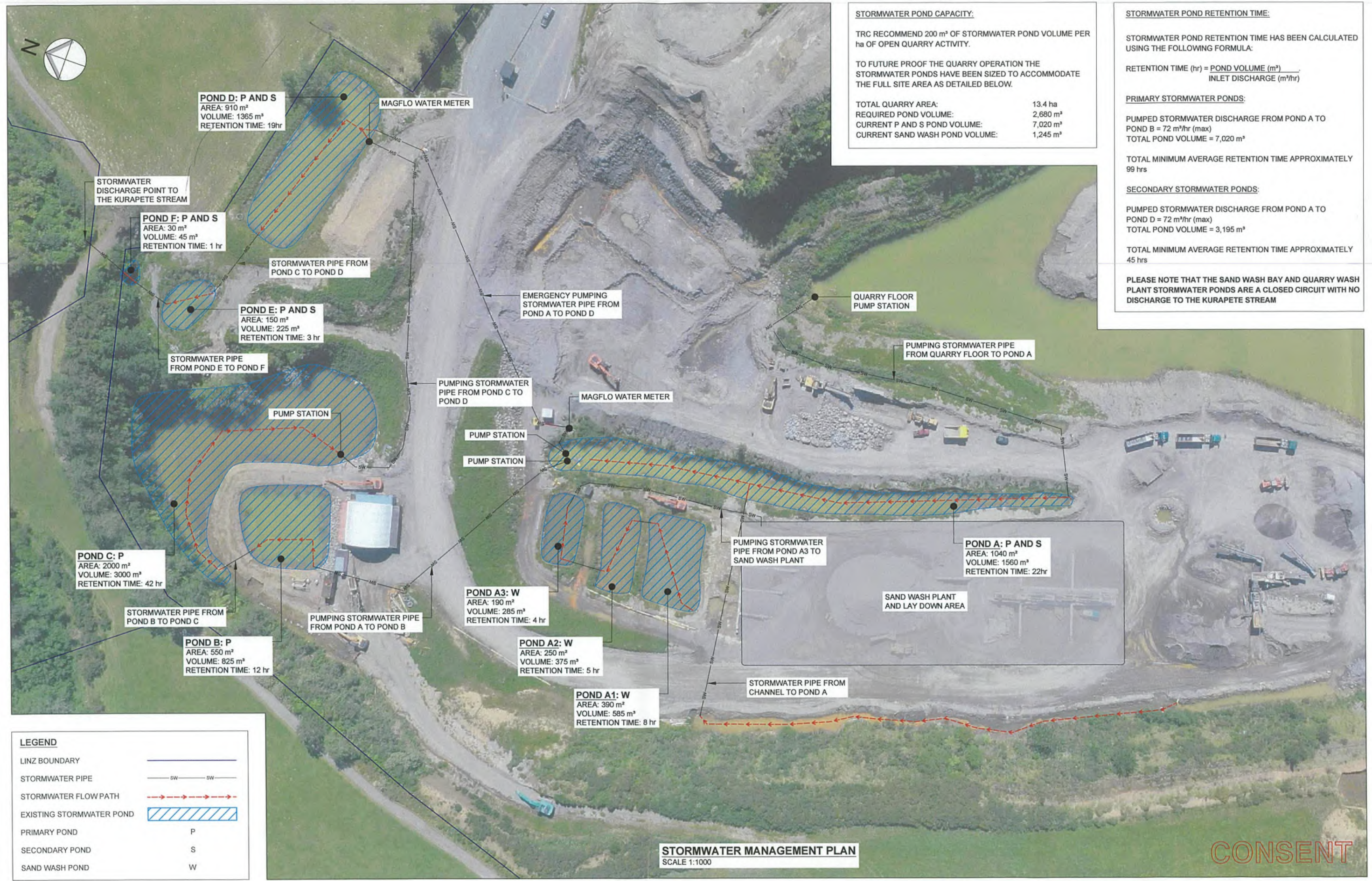
## Appendix III

Map of stormwater and washwater  
treatment system December 2020





File Name: \\192.168.1.253\Red Jacket Data\JCBSh 4001-4500\4101-4150\4147 Everett Road Quarry - Stormwater Report\Drawing\100-441.dwg - C1-1 Plot Date: 21/12/2020 Plot Time: 15:59



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DATE	REV	REV RECORD	BY	CHD	VER	APP

Client  
**TARANAKI CIVIL CONSTRUCTION LIMITED**

Project  
**STORMWATER MANAGEMENT EVERETT ROAD QUARRY INGLEWOOD**

Sheet Title  
**STORMWATER MANAGEMENT PLAN**

Drawing No.	<b>100-441</b>	A3 REV.
Job No.	<b>4147</b>	
Sheet No.	<b>C1-1</b>	A