

Concrete Batching Plants

Monitoring Programme

Annual Report

2020-2021

Technical Report 2021-30



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Taranaki Regional Council
Private Bag 713
Stratford

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Executive summary

This report for the period July 2020 to June 2021 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the environmental performance and consent compliance of three concrete batching plants within the Taranaki Region. The report also details the results of the monitoring undertaken and assesses the environmental effects of their activities. The three concrete batching plants covered by this programme are located in Waitara, Hawera and Stratford.

The concrete batching plant located in Waitara, Allied Concrete Ltd, surrendered their resource consent during the monitoring year and no further monitoring was required of this consent.

The Council's monitoring programme for both the Hawera and Stratford plants included two inspections, and sampling of the discharges and of the receiving waters in the vicinity of each site.

Firth Industries operate a concrete batching plant located on Glover Road, Hawera in the Tangahoe catchment. The site operation involves mixing of cement, aggregate, water and additives in concrete mixing trucks for delivery to end users. Recently it has been used only as a satellite plant. The site is also used for the storage of aggregate, sand and builders mix for retail sale.

Firth Industries holds one resource consent, which includes a total of seven conditions setting out the requirements that they must satisfy. The consent allows for the discharge of treated wastewater onto and into land and into an unnamed tributary of the Tawhiti Stream.

During the year under review, Firth Industries demonstrated an overall high level of environmental and administrative performance.

Fletcher Concrete and Infrastructure Ltd (Fletcher Concrete) operates a concrete batching plant and pre-cast manufacturing plant on a site just north of Stratford on State Highway 3 in the Kahouri catchment. Activities at the site include the storage and mixing of aggregate, cement, water and additives, as well as the manufacturing of pre-cast drainage soak-hole liners and lids, offal hole lids and troughs. The concrete batching plant is operated by their subsidiary Firth Industries, and the pre-cast facility and sales depot is operated by their subsidiary Humes Pipeline Systems (Humes).

Fletcher Concrete holds one resource consent, which includes a total of 13 conditions setting out the requirements that the consent holder must satisfy. The consent allows for the discharge of stormwater and wastewater onto and into land and into an unnamed tributary of the Kahouri Stream.

During the year under review, Fletcher Concrete and Infrastructure Ltd demonstrated an overall good level of environmental performance and high level of administrative performance.

There was a breach of consent conditions due to high suspended solids in the discharge. The effects on the receiving waters were negligible or minor at most and the consent holder was quick to respond and address the issues.

For reference, in the 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% of the consents, a good level of environmental performance and compliance was achieved.

This report includes recommendations for the 2021-2022 year.

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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 2020 to June 2021 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by three concrete batching plants in the Taranaki Region, namely AML Ltd (Allied Concrete) on Mould Street in Waitara, Firth Industries on Glover Road in Hawera, and Fletcher Concrete and Infrastructure Ltd (Fletcher Concrete) on Mountain Road in Stratford.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Allied Concrete, Firth Industries, and Fletcher Concrete that relate to discharges of stormwater and/or wastewater onto and into land and/or into water within the Waitara, Tangahoe, and Patea catchments respectively.

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of the consent holders' use of water, land and air, and is the fifteenth combined annual report by the Council for the consent holders.

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 RMA and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by Allied Concrete, Firth Industries, and Fletcher Concrete in the Waitara, Tangahoe and Patea catchments;
- the nature of the monitoring programme in place for the period under review; and

Each consent holder is covered in a separate section of the report (**Section 2, 3, and 4**). The subsections within each section of the report cover the following content:

Subsection 1 provides a description of the activities and operations conducted in the consent holders' site/catchment.

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

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

Subsection 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 consent holder's environmental and administrative performance during the period under review.

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 consent holder'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.

For reference, in the 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% of the consents, a good level of environmental performance and compliance was achieved.

1.2 Resource consents

1.2.1 Water discharge permit summary

Allied Concrete, Firth Industries, and Fletcher Concrete hold water permits 1273-4, 1274-3 and 5026-2, the details of which are summarised in the table below. Summaries of the conditions attached to Firth Industries and Fletcher Concrete's permits are set out in Section 3.3.3 and 4.3.3 of this report.

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

Table 1 Summary of the concrete batching plants' resource consents

Consent holder	Consent no.	Purpose	Review	Expiry
AML Ltd (Trading as Allied Concrete Ltd)	1273-4	To discharge stormwater and treated washwater from a concrete batching plant site onto and into land into an unnamed tributary of the Waitara River	June 2021	1 June 2033
Firth Industries (Division of Fletcher Concrete and Infrastructure Ltd)	1274-3	To discharge treated wastewater from a concrete batching plant via settling ponds onto and into land and into an unnamed tributary of the Tawhiti Stream in the Tangahoe catchment	June 2022	1 June 2028
Fletcher Concrete and Infrastructure Ltd	5026-2	To discharge stormwater and wastewater from a concrete product manufacturing and storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea catchment	June 2022	1 June 2028

1.2.2 Air emission summary

The air emissions from each of the three sites have previously been assessed as a permitted activity as the activities at the sites comply with the requirements of Rule 13 of the *Regional Air Quality Plan for Taranaki* (RAQP).

Although not mandatory, Firth Industries and Fletcher Concrete had previously chosen to apply for certificates of compliance, which confirm that, at the time the applications were considered, the emissions to air from the sites complied with the RAQP, and that no resource consents were required to cover emissions to air from the sites at that time.

1.3 Monitoring programme

1.3.1 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 Allied Concrete, Firth Industries and Fletcher Concrete sites consisted of three primary components.

1.3.2 Programme liaison and management

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

- ongoing liaison with the resource consent holder 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.

1.3.3 Site Inspections

The annual inspection schedule under this programme is for two site inspections per site. Firth Industries was visited a third time to collect a sample. With regard to consents for the discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was also surveyed for environmental effects.

1.3.4 Chemical sampling

During the year under review Council undertook sampling of both the discharges from the site and/or the water quality upstream and downstream of the discharge point and mixing zone, if discharges were occurring from the site at the time of inspection.

The number and type of samples collected at each of the sites during the year under review are shown in Table 2.

The samples were analysed primarily for contaminants typical of this type of industry, that is, pH, oil and grease, and suspended solids.

Table 2 Summary of the number and type of surface water samples collected at each site

Consent holder	Number of discharge samples	Number of receiving water samples
Allied Concrete	-	-
Firth Industries	1	-
Fletcher Concrete	2	1

1.4 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 holders. 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).

2 AML Ltd (trading as Allied Concrete Ltd)

2.1 Results

2.1.1 Inspections

08 December 2020

Inspection undertaken to assess compliance with stormwater and wastewater discharge consent. The inspection found that the site was still not operating. No issues were noted.

2.1.2 Discussion of site performance

The Council received a surrender of consent form in February 2021. This has been processed by the Council and the water permit 1273-4 has now been surrendered. The letter was received during the 2020/2021 scheduled monitoring program. No further monitoring is required for this consent.

3 Firth Industries (Division of Fletcher Concrete and Infrastructure Ltd)

3.1 Process Description

Firth Industries operate a concrete batching plant on a site at Glover Road, Hawera in the Tangahoe catchment.

The operation primarily involves the mixing of aggregate, cement, water and additives in a concrete truck mixing bowl in order to produce concrete which is then delivered to the end user. Builder's mix and aggregate are also retailed from the site.

A concreting operation was established on this site prior to 1967. Firth Industries have been operating at the site since the 1980's.

Wastewater on the site consists of stormwater from around the concrete batching plant and aggregate storage areas, as well as water from washing the concrete trucks. Therefore, the wastewater typically contains some cement deposits and other sediments. Wastewater is treated in a three pond settling system, with water recycled from the third pond for truck washing and use in the concrete making process.

Sludge from the settling ponds is removed periodically and stored on site to dry. Excess concrete from the returning trucks is also off loaded at the site, and is then made into large blocks and sold to farmers and local contractors.



Figure 1 Location of Firth Industries site, Glover Road, Hawera

3.2 Results

3.2.1 Inspections

08 December 2020

An inspection was undertaken to assess compliance with the wastewater discharge consent. A prolonged period of rain occurred prior to the inspection. The yard was relatively clean and tidy. No evidence of spills. The discharge of stormwater onsite into the roadside drain looked much improved from the last inspection. A sample of the settling pond discharge into the wetland was unable to be collected due to a new security fence and gate that had been erected. No issues were noted, the site was compliant at the time of inspection.

20 May 2021

An inspection was undertaken to assess compliance with the wastewater discharge consent during fine weather. There was product spilled in the yard and muddy product was evident at the exit point. Some tracking was noted on the road. Sediment was located in the road side gutter and the inspecting officer requested that this be cleaned up. A regular sweeping schedule may be required as this had been noted before. No evidence of spills were evident on the site. The sample of the settling pond discharge into the wetland was not taken again as a key was not held on site.

28 June 2021

A sample was collected from the discharge as a key was gained to site.

3.2.2 Results of discharge and receiving environment monitoring

The monitoring sites associated with the Firth Industries depot are shown in Figure 2.

During the year under review, discharge samples were not collected at the first inspection. A discharge sample was collected during the inspection on 28 June 2021. The results of this sampling are shown in Table 3.

Table 3 Monitoring results of Firth Industries receiving water sampling, 28 June 2021

Parameters	Unit	IND001054 Discharge	TWH000257 100 m Downstream	Consent limit on Discharge
Temperature	Deg. C	10.2	-	-
Conductivity	mS/m	44.2	-	-
pH	-	11.2	-	-
Oil and Grease	g/m ³	<4	-	15
Suspended solids	g/m ³	113	-	200

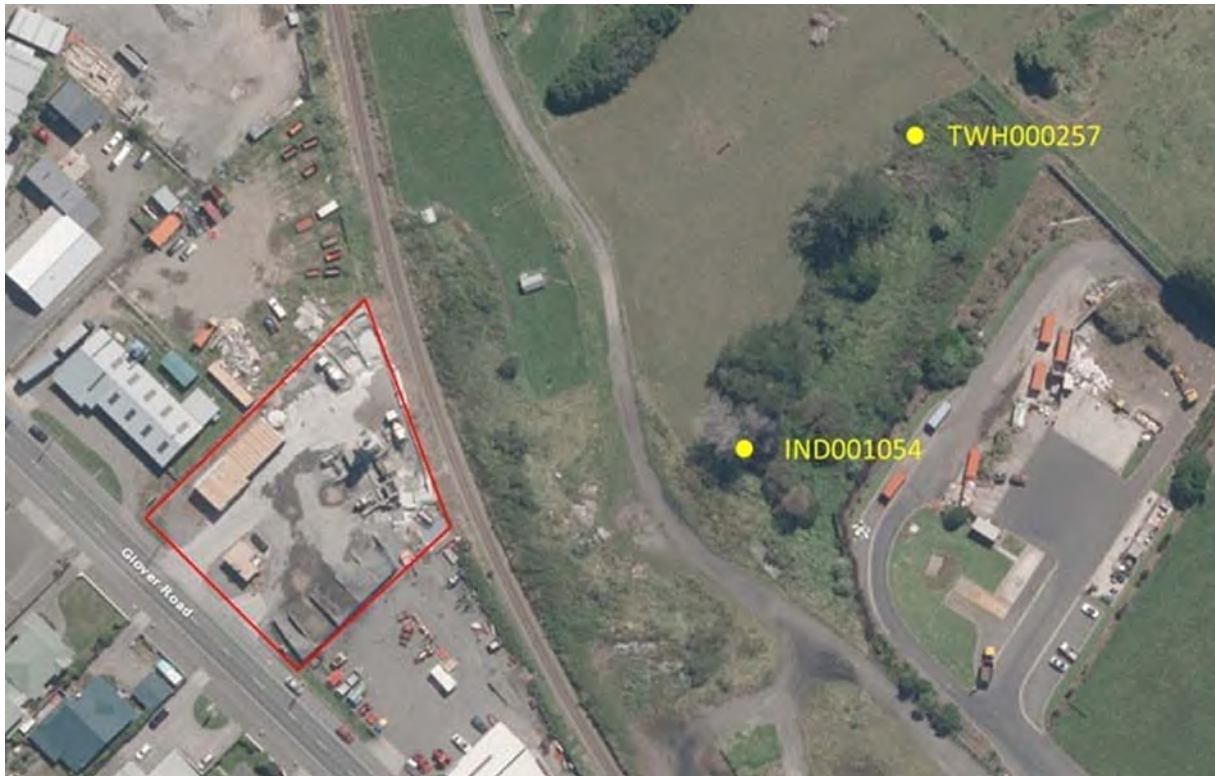


Figure 2 Location of Firth Industries sampling sites

During the year under review, one discharge sample was taken but no surface water samples were taken from the unnamed tributary of the Tawhiti Stream due to low flows.

3.3 Discussion

3.3.1 Discussion of site performance

Firth Industries concrete plant site in Hawera has continued to be well managed and well maintained throughout the period under review. There was only minor contaminants observed around the site at the time of inspections.

One discharge sample was taken during the year under review and was compliant with consent conditions, and there were no visible effects found at the time of inspection.

No air related matters were noted during the period under review.

3.3.2 Environmental effects of exercise of consents

Inspections support that operations at the Firth Industries site were unlikely to have any significant adverse effects on the receiving environment during the 2020-2021 monitoring period. It was noted that there was no evidence of sediments being discharged from the site into the tributary at the time of inspection.

3.3.3 Evaluation of performance

A summary of Firth Industries' compliance record for the year under review is set out in Table 4.

Table 4 Summary of performance for Firth Industries consent 1274-3

Purpose: To discharge treated wastewater from a concrete batching plant via settling ponds onto and into land and into an unnamed tributary of the Tawhiti Stream in the Tangahoe catchment		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspections of the site and systems	Yes
2. Discharge volume limit	Inspections of the site	Yes
3. Washwater to be directed for treatment prior to discharge	Inspections of the site	Yes
4. Maintain silt and sediment system	Inspections of site and records	Yes
5. Concentration limits	No discharge at time of inspection	N/A
6. Mixing zone effects	Inspections of site and receiving water	Yes
7. Optional review of conditions	Next optional review date June 2022	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

During the 2020-2021 monitoring year, Firth Industries demonstrated a high level of both environmental performance and administrative compliance with their resource consent as defined in Section 1.1.4.

3.3.4 Recommendations from the 2019-2020 Annual Report

In the 2019-2020 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of discharges from Firth Industries in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was undertaken. Recommendation two did not require implementing.

3.3.5 Alterations to monitoring programmes for 2021-2022

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 is proposed that for 2021-2022, the programme remains unchanged.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site 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 2021-2022.

3.4 Recommendations

1. THAT in the first instance, monitoring of discharges from Firth Industries in the 2021-2022 year continues at the same level as in 2020-2021.
2. THAT should there be issues with environmental or administrative performance in 2021-2022, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

4 Fletcher Concrete and Infrastructure Ltd

4.1 Process description

Fletcher Concrete operates a concrete batching plant and pre-cast manufacturing plant, including storage and retail of concrete product, on a site just north of Stratford on State Highway 3 (Mountain Road). The site is run by two divisions of Fletcher Concrete, namely Firth Industries and Humes Pipeline Systems (Humes).

The concrete batching plant operation primarily involves the mixing of aggregate, cement, water and additives in a concrete truck mixing bowl in order to produce concrete, which is then delivered to the end user. The Humes operation involves the manufacturing of pre-cast drainage soak-holes and lids, offal hole lids and troughs. Humes was also a sales depot for items manufactured both on and off the site. The business has operated on the site since 1939.

A tributary of the Kahouri Stream runs under the plant site. Washwater from the plant is treated by settlement in two small ponds, followed by soakage in two stone-filled pits. Concrete truck washings are treated separately by settlement in two small ponds in series, followed by two soakage ponds. Washwater may be re-circulated from the fourth pond to increase residence time for settling. Discharges to the stream tributary can occur from both soakage systems.

Sludge from the settling ponds is removed periodically and stored on site to dry. Excess concrete from the returning trucks is also off loaded at the site. Local farmers take the dry material for use as fill material and to maintain driveways.

Stormwater from yard areas and the roof of the main building currently soaks to ground, or drains through soak holes or grit interceptors before discharging to the unnamed tributary of the Kahouri Stream.

Fletcher Concrete made the following upgrades to the site in the 2019-2020 period:

- Installing a wedge pit system in the aggregate yard to divert yard water to the stormwater settlement pond to allow for treatment.
- Installing a holding tank to pump water from the stormwater sump and batching area for reuse in concrete manufacture to reduce draw of freshwater.



Figure 3 Location of the Fletcher Concrete site (Firth Industries and Humes Pipeline Systems), Stratford

4.2 Results

4.2.1 Inspections

08 December 2020

An inspection was undertaken to assess compliance with the stormwater and wastewater discharge consent. Prior to the inspection, a period of prolonged rain had occurred. The discharge into the receiving environment was turbid. A sample was taken of the discharge, upstream and downstream of the discharge point. No visual effects were noted in the receiving water. The yard was relatively clean and tidy with no evidence of spills. There were no issues to note.

11 May 2021

A follow up inspection and wastewater discharge sampling was undertaken by two council officers. Work had been undertaken to improve the treatment system which appeared to be working well. The series of filter cloth with rock appeared to be treating the yard run off adequately. No discharge was occurring to water. A representative sample was undertaken from just prior to the discharge point. Results showed compliance with the resource consent. No other issues were noted. Fletcher Concrete was asked to update the stormwater management plan to include the recent changes to their wastewater treatment system.

4.2.2 Results of discharge and receiving environment monitoring

The monitoring sites associated with the Fletcher Concrete Stratford depot are shown in Figure 4.

Discharge and receiving water samples were collected during the inspection on 08 December 2020. The results of this sampling are shown in Table 5.

Table 5 Monitoring results of Fletcher Concrete receiving water sampling, 08 December 2020

Parameters	Unit	KHI000362 100 m upstream	IND001030 discharge	KHI000363 100 m downstream
Temperature	Deg. C	15.2	15.2	15.1
Conductivity	mS/m	9.3	13.1	11.8
pH	-	6.9	9.1	7.1
Oil and Grease	g/m ³	-	6	-
Suspended solids	g/m ³	7	210	11

The results of this monitoring indicate that the discharge from the Fletcher Concrete depot was breaching the consent conditions (suspended solids limit is 100 g/m³ in the discharge) at the time of sampling.

Follow up sampling was completed in May 2021, following the completion of remediation works. The results are presented in the table below.

Table 6 Monitoring results of Fletcher Concrete discharge, 11 May 2021

Parameters	Unit	IND001030 discharge
Temperature	Deg. C	15.4
Conductivity	mS/m	-
pH	-	9.0
Oil and Grease	g/m ³	-
Suspended solids	g/m ³	33

The results of this monitoring indicate that the discharge from Fletcher Concrete depot was compliant at the time of sampling.



Figure 4 Fletcher Concrete (Firth Industries and Humes Pipeline Systems) sampling sites, Stratford

4.3 Discussion

4.3.1 Discussion of site performance

The Fletcher Concrete site at Stratford was found to be non-compliant due to laboratory analysis of the discharge from samples collected on 08 December 2020. The follow up investigation was carried out following works to improve the treatment system undertaken by the consent holder. This inspection found that the site was compliant and representative sample results of the discharge supported this.

No air related matters were noted during the period under review.

4.3.2 Environmental effects of exercise of consents

The breach of resource consent conditions on discharge limits by Fletcher Concrete was unlikely to have any significant adverse effects on the receiving environment. No other potential impacts were noted during inspections.

4.3.3 Evaluation of performance

A summary of Fletcher Concrete's compliance record for the year under review is set out in Table 7.

Table 7 Summary of performance for Fletcher Concrete's consent 5026-2

Purpose: To discharge stormwater and wastewater from a concrete product manufacturing and storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea catchment.		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspection of the site	Yes
2. Maximum catchment area	Inspection of the site	Yes
3. Discharge volume limit	Inspection of the site and discharge system	Yes
4. System in accordance with information supplied with application	Inspection of the site	Yes
5. Hazardous substances storage bunded	Inspection of the site	Yes
6. Receiving water pH range, 6.0-9.0	Sampling	Yes
7. Concentration limits	Sampling and visual assessment of the discharge	No – high SS result
8. Mixing zone effects	Inspections of the site and receiving water	Yes
9. Contingency planning	Plan on file November 2015	Yes
10. Stormwater management plan	Plan on file November 2015	Yes
11. Notification of any changes to processes	No changes	N/A
12. Consent lapse	Consent has been exercised	N/A
13. Optional review of conditions	Next optional review date June 2022	N/A
Overall assessment of environmental performance and compliance in respect of this consent		Good
Overall assessment of administrative performance in respect of this consent		High

During the 2020-2021 monitoring year, Fletcher Concrete demonstrated a good level of environmental performance and a high level administrative compliance with their resource consent as defined in Section 1.1.4.

Fletcher Concrete's level of environmental performance was determined to be a good level. There was a breach of consent conditions due to high suspended solids in the discharge. However, the effects on the receiving environment were negligible or minor at most. The consent holder was quick to respond and address the minor issues.

4.3.4 Recommendations from the 2019-2020 Annual Report

In the 2019-2020 report it was recommended:

1. THAT in the first instance monitoring of discharges from Fletcher Concrete in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was undertaken. Recommendation two did not require implementing.

4.3.5 Alterations to the monitoring programme for 2021-2022

In designing and implementing the monitoring programmes for 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 is proposed that for 2021-2022, the programme remains unchanged.

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 2021-2022.

4.4 Recommendations

1. THAT in the first instance monitoring of discharges from Fletcher Concrete in the 2021-2022 year continues at the same level as in 2020-2021.
2. THAT should there be issues with environmental or administrative performance in 2021-2022, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

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

Bund	A wall around a tank to contain its contents in the case of a leak.
Conductivity	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 25°C and expressed in $\mu\text{S}/\text{cm}$.
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 ²	Square Metres.
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.
$\mu\text{S}/\text{cm}$	Microsiemens per centimetre.
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.
SS	Suspended solids.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.

*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 a Science Services Manager.

Bibliography and references

- Ministry for the Environment. 2018. *Best Practice Guidelines for Compliance, Monitoring and Enforcement under the Resource Management Act 1991*. Wellington: Ministry for the Environment.
- Taranaki Regional Council (2020): *Concrete Batching Plants Monitoring Programme Annual Report 2019-2020*, Technical Report 2020-22.
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- Taranaki Regional Council (2017): *Concrete Batching Plants Monitoring Programme Annual Report 2016-2017*, Technical Report 2017-29.
- Taranaki Regional Council (2016): *Concrete Batching Plants Monitoring Programme Annual Report 2015-2016*, Technical Report 2016-78.
- Taranaki Regional Council (2016): *Concrete Batching Plants Monitoring Programme Annual Report 2014-2015*, Technical Report 2015-71.
- Taranaki Regional Council (2014): *Concrete Batching Plants Monitoring Programme Annual Report 2013-2014*, Technical Report 2014-75.
- Taranaki Regional Council (2013): *Concrete Batching Plants Monitoring Programme Annual Report 2012-2013*, Technical Report 2013-10.
- Taranaki Regional Council (2012): *Concrete Batching Plants Monitoring Programme Annual Report 2011-2012*, Technical Report 2012-57.
- Taranaki Regional Council (2011): *Concrete Batching Plants Monitoring Programme Annual Report 2010-2011*, Technical Report 2011-97.
- Taranaki Regional Council (2010): *Concrete Batching Plants Monitoring Programme Annual Report 2009-2010*, Technical Report 2010-101.
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- Taranaki Regional Council (2008): *Concrete Batching Plants Monitoring Programme Annual Report 2007-2008*, Technical Report 2008-25.
- Taranaki Regional Council (2007): *Concrete Batching Plants Monitoring Programme Annual Report 2006-2007*, Technical Report 2007-43.
- Taranaki Regional Council (2006): *Concrete Batching Plants Monitoring Programme Annual Report 2005-2006*, Technical Report 2006-78.

Appendix I

Resource consents held by Allied Concrete, Firth Industries and Fletcher Concrete

(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: Allied Concrete Limited
78 Pascoe Street
Annesbrook
Nelson 7011

Decision Date: 9 May 2016

Commencement Date: 9 May 2016

Conditions of Consent

Consent Granted: To discharge stormwater and treated washwater from a concrete batching plant site onto and into land and into an unnamed tributary of the Waitara River

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027 and in accordance with special condition 10

Site Location: 104 Mould Street, Waitara

Grid Reference (NZTM) 1705887E-5682785N

Catchment: Waitara

*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 consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from an area not exceeding 0.956 ha within the area shown on the attached plan.
3. All stormwater shall be directed for treatment through the stormwater treatment systems for discharge in accordance with the documentation provided in support of this application and the special conditions of this permit.
4. The consent holder shall notify Taranaki Regional Council at least 2 working days prior to undertaking any works in the “soakage trench” that may affect the treatment provided by the restriction in the outlet. The notification shall be sent to worknotification@trc.govt.nz and shall include the consent number and details of the mitigations measures to be put in place to ensure there is no reduction in the level of treatment of the discharges from the site.
5. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
suspended solids	Concentration not greater than 100 gm ⁻³
oil and grease	Concentration not greater than 15 gm ⁻³

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

6. After allowing for reasonable mixing, within a mixing zone extending to the outlet of the culvert at approximately 1705977E-5682691N, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in 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;
 - f) a pH outside the range 6.0 to 9.0;
 - g) a change in pH of more than 0.5 pH units.

Consent 1273-4.0

7. The consent holder shall maintain and regularly update the 'Contingency Plan' supplied with this application that details the measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.
8. The site shall be operated in accordance with the 'Management Plan' prepared by the consent holder in support of this application and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of any treatment and interceptor systems.

Note: A Stormwater Management Plan template is available in the Environment section of the Taranaki Regional Council's web site www.trc.govt.nz.

9. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act, 1991. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
10. 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:
 - a) during the month of June 2021 and/or June 2027; and/or
 - b) within 3 months of receiving a notification under special condition 9 above;

for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 9 May 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management



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

Name of
Consent Holder: AML Limited (trading as Allied Concrete Limited)
PO Box 3318
New Plymouth 4341

Decision Date: 9 May 2016

Commencement Date: 9 May 2016

Conditions of Consent

Consent Granted: To discharge stormwater and treated washwater from a concrete batching plant site onto and into land and into an unnamed tributary of the Waitara River

Expiry Date: 1 June 2033

Review Date(s): June 2021, June 2027 and in accordance with special condition 10

Site Location: 104 Mould Street, Waitara

Grid Reference (NZTM) 1705887E-5682785N

Catchment: Waitara

*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 consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from an area not exceeding 0.956 ha within the area shown on the attached plan.
3. All stormwater shall be directed for treatment through the stormwater treatment systems for discharge in accordance with the documentation provided in support of this application and the special conditions of this permit.
4. The consent holder shall notify Taranaki Regional Council at least 2 working days prior to undertaking any works in the “soakage trench” that may affect the treatment provided by the restriction in the outlet. The notification shall be sent to worknotification@trc.govt.nz and shall include the consent number and details of the mitigations measures to be put in place to ensure there is no reduction in the level of treatment of the discharges from the site.
5. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
suspended solids	Concentration not greater than 100 gm ⁻³
oil and grease	Concentration not greater than 15 gm ⁻³

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

6. After allowing for reasonable mixing, within a mixing zone extending to the outlet of the culvert at approximately 1705977E-5682691N, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in 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;
 - f) a pH outside the range 6.0 to 9.0;
 - g) a change in pH of more than 0.5 pH units.

Consent 1273-4.0

7. The consent holder shall maintain and regularly update the 'Contingency Plan' supplied with this application that details the measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.
8. The site shall be operated in accordance with the 'Management Plan' prepared by the consent holder in support of this application and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of any treatment and interceptor systems.

Note: A Stormwater Management Plan template is available in the Environment section of the Taranaki Regional Council's web site www.trc.govt.nz.

9. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act, 1991. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
10. 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:
 - a) during the month of June 2021 and/or June 2027; and/or
 - b) within 3 months of receiving a notification under special condition 9 above;

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 27 June 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management



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

Name of
Consent Holder: Fletcher Concrete & Infrastructure Limited
Private Bag 99904
Newmarket
AUCKLAND

Consent Granted
Date: 7 May 2009

Conditions of Consent

Consent Granted: To discharge stormwater and wastewater from a concrete product manufacturing and storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea catchment at or about (NZTM) 1710131E-5646578N

Expiry Date: 1 June 2028

Review Date(s): June 2016, June 2022 and/or within 3 months of receiving notification under special condition 11

Site Location: 3524 Mountain Road, Stratford

Legal Description: Lots 1 & 2 DP 6111 Lot 1 DP 5823 Blk I Ngaere SD

Catchment: Patea

Tributary: Kahouri

*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 consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from a catchment area not exceeding 13,700 m².
3. The discharge of wastewater shall not exceed 5 m³/day.
4. The wastewater and stormwater system shall be as indicated in the drawings provided with application 6133 titled *Fletcher Concrete and Infrastructure Ltd Stratford Site Mountain Road* (SH3) S1-00, S1-01, S1-02, S1-03, and S1-03 Diagram 1.
5. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not directly to the stormwater catchment.
6. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to a pH level in the receiving waters outside of the range 6.0-9.0.
7. Constituents of the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
suspended solids	Concentration not greater than 100 gm ⁻³
total recoverable hydrocarbons	Concentration not greater than 15 gm ⁻³ [as determined by infrared spectroscopic technique]
Chloride	Concentration not greater than 50 gm ⁻³

Consent 5026-2

This condition shall apply before entry of the treated stormwater into the receiving waters 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, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in 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. The consent holder shall maintain a contingency plan. The contingency plan shall be adhered to in the event of a spill or emergency and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.
10. The consent holder shall maintain a stormwater management plan. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
11. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site, that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
12. This consent shall lapse on 30 June 2014, 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.

Consent 5026-2

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:
- a) during the month of June 2016 and/or June 2022; and/or
 - b) within 3 months of receiving a notification under special condition 11 above;

for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 7 May 2009

For and on behalf of
Taranaki Regional Council

Director-Resource Management