

Concrete Batching Plants

Monitoring Programme

Annual Report

2019-2020

Technical Report 2020-22



Taranaki Regional Council
Private Bag 713
Stratford

ISSN: 1178-1467 (Online)
Document: 2474512 (Word)
Document: 2708080 (Pdf)
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Executive summary

This report for the period July 2019 to June 2020 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.

AML Ltd trades under the name of Allied Concrete Ltd and is hereafter referred to as Allied Concrete. They operate a concrete batching plant located on Mould Street, Waitara, in the Waitara catchment. The site operation includes the storage and mixing of cement, aggregate, sand, and builders mix.

Allied Concrete holds one resource consent which includes a total of 10 conditions setting out the requirements that they must satisfy. The consent allows for the discharge of stormwater and washwater into an unnamed tributary of the Waitara River.

During the year, Allied Concrete demonstrated a high level of environmental and administrative performance with their resource consent.

During the monitoring period, Allied Concrete demonstrated an overall high level of environmental performance.

Firth Industries is a division of Fletcher Concrete and Infrastructure Ltd and is hereafter referred to as Firth Industries. They 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, and 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, Firth Industries demonstrated a high level of environmental and administrative performance with their resource consent.

During the year under review, Firth industries demonstrated an overall high level of environmental 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, Fletcher Concrete demonstrated a good level of environmental and a high level administrative performance with their resource consent.

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

The Council's monitoring programme for the year under review included two inspections at each site, and sampling of the site discharges and of the receiving waters in the vicinity of each site.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holders over the last several years, this report shows that the consent holders' performance remains at a high level in the year under review.

This report includes recommendations for the 2020-2021 year.

Table of contents

	Page	
1	Introduction	1
1.1	Compliance monitoring programme reports and the Resource Management Act 1991	1
1.1.1	Introduction	1
1.1.2	Structure of this report	1
1.1.3	The Resource Management Act 1991 and monitoring	2
1.1.4	Evaluation of environmental and administrative performance	2
1.1.5	Resource consents	4
	1.1.5.1 Water discharge permit summary	4
	1.1.5.2 Air emission summary	4
1.2	Monitoring programme	4
1.2.1	Introduction	4
1.2.2	Programme liaison and management	5
1.2.3	Site Inspections	5
1.2.4	Chemical sampling	5
1.3	Investigations, interventions, and incidents	5
2	AML Ltd (trading as Allied Concrete Ltd)	7
2.1	Introduction	7
2.1.1	Process description	7
2.1.2	Water discharge permit	8
2.2	Results	8
2.2.1	Inspections	8
2.2.2	Results of discharge and receiving environment monitoring	8
2.3	Discussion	8
2.3.1	Discussion of site performance	8
2.3.2	Environmental effects of exercise of consents	9
2.3.3	Evaluation of performance	9
2.3.4	Recommendations from the 2018-2019 Annual Report	10
2.3.5	Alterations to monitoring programmes for 2020-2021	10
2.4	Recommendations	10
3	Firth Industries (Division of Fletcher Concrete and Infrastructure Ltd)	11
3.1	Introduction	11
3.1.1	Process Description	11

3.1.2	Water discharge permit	12
3.2	Results	12
3.2.1	Inspections	12
3.2.2	Results of discharge and receiving environment monitoring	12
3.3	Discussion	13
3.3.1	Discussion of site performance	13
3.3.2	Environmental effects of exercise of consents	13
3.3.3	Evaluation of performance	13
3.3.4	Recommendations from the 2018-2019 Annual Report	14
3.3.5	Alterations to monitoring programmes for 2020-2021	14
3.4	Recommendations	15
4	Fletcher Concrete and Infrastructure Ltd	16
4.1	Introduction	16
4.1.1	Process description	16
4.1.2	Water discharge permit	17
4.2	Results	17
4.2.1	Inspections	17
4.2.2	Results of discharge and receiving environment monitoring	18
4.3	Discussion	19
4.3.1	Discussion of site performance	19
4.3.2	Environmental effects of exercise of consents	19
4.3.3	Evaluation of performance	19
4.3.4	Recommendations from the 2018-2019 Annual Report	21
4.3.5	Alterations to the monitoring programme for 2020-2021	21
4.4	Recommendations	21
5	Summary of environmental performance	22
6	Summary of recommendations	23
	Glossary of common terms and abbreviations	24
	Bibliography and references	25
	Appendix I Resource consents held by Allied Concrete, Firth Industries and Fletcher Concrete	

List of tables

Table 1	Summary of the concrete batching plants' resource consents	4
Table 2	Summary of the number and type of surface water samples collected at each site	5
Table 3	Incidents, investigations, and interventions summary table	6
Table 4	Allied Concrete resource consent	8
Table 5	Summary of performance for Allied Concrete consent 1273-4	9
Table 6	Firth Industries resource consent	12
Table 7	Monitoring results of Firth Industries receiving water sampling, 15 June 2020	12
Table 8	Summary of performance for Firth Industries consent 1274-3	14
Table 9	Fletcher Concrete resource consent	17
Table 10	Monitoring results of Fletcher Concrete receiving water sampling, 15 June 2020	18
Table 11	Summary of performance for Fletcher Concrete's consent 5026-2	20
Table 12	Evaluation of environmental performance over time for all sites.	22

List of figures

Figure 1	Location of Allied Concrete and associated sampling sites, Mould Street, Waitara	7
Figure 2	Location of Firth Industries site, Glover Road, Hawera	11
Figure 3	Location of Firth Industries sampling sites	13
Figure 4	Location of the Fletcher Concrete site (Firth Industries and Humes Pipeline Systems), Stratford	17
Figure 5	Fletcher Concrete (Firth Industries and Humes Pipeline Systems) sampling sites, Stratford	19

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 2019 to June 2020 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 Company's use of water, land and air, and is the fourteenth combined annual report by the Council for the Concrete Batching Plants.

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 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
- a description of the activities and operations conducted in the Company's site/catchment.

There is a section on each of the three facilities, divided into sub-sections.

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

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

Sub-Section 4 presents recommendations to be implemented in the 2020-2021 monitoring year.

Section 5 summarises the environmental performance of all 3 sites, and

Section 6 summarises the recommendations performing to each site.

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' inasmuch 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.

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.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

1.1.5 Resource consents

1.1.5.1 Water discharge permit summary

Table 1 Summary of the concrete batching plants' resource consents

Consent holder	Abbreviated name	Consent no.	Purpose	Review	Expiry
AML Ltd (Trading as Allied Concrete Ltd)	Allied Concrete	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)	Firth Industries	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	Fletcher Concrete	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

1.1.5.2 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.

1.2 Monitoring programme

1.2.1 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.

1.2.2 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.

1.2.3 Site Inspections

The annual inspection schedule under this programme is for two site inspections per site, however under this monitoring period the sites were only visited once due to staffing changes. 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.

1.2.4 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	1	1

1.3 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent 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).

Table 3 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to the consent holder's activities during the 2019-2020 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 3 Incidents, investigations, and interventions summary table

Date	Company	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
15 June 2020	Fletcher Concrete & Infrastructure Limited	Discharge of contaminant, sediment laden water, onto or into land in circumstances which may have resulted in that contaminant entering water.	N	Abatement Notice	Cessation of truck wash, clean out and complete maintenance on the two soak holes. Install a wedge pit system in the aggregate yard to divert yard water to the stormwater settlement pond; install a holding tank to pump water from the stormwater sump and batching area for reuse in concrete manufacture to reduce draw of freshwater.

2 AML Ltd (trading as Allied Concrete Ltd)

2.1 Introduction

2.1.1 Process description

Allied Concrete operates a concrete batching plant on a site at Mould Street, Waitara in the Waitara 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.

Wastewater on the site consists of potentially contaminated stormwater from around the concrete batching plant and aggregate storage areas, and water from washing the concrete trucks. Therefore, the discharges typically contain some cement deposits and other sediments. The wastewater is treated in a four pond settling system, with water recycled from the fourth pond for use in truck washing and in the concrete making process.

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



Figure 1 Location of Allied Concrete and associated sampling sites, Mould Street, Waitara

Allied Concrete have made a number of improvements to their stormwater and wastewater management system. In the instances when the pond system overflows, a silt trap and a rock lined basin have been installed to further treat the discharge. This will optimise treatment efficiency prior to the flow reaching the wetland (referred to as the soakage basin in Allied Concrete's water management plan). A dish channel was cut near the main entrance to redirect all stormwater from the front yard into the wetland. It has been confirmed by Council that there is an obstructed outlet in this wetland that connects to the New Plymouth District Council reticulated stormwater system and enters a tributary of the Waitara River adjacent to 86 Mould Street.

A dish drain has also been cut in the rear yard to direct all stormwater from this elevated area into a soakage pond that has been enlarged.

During a consent investigation visit, it was discovered that a small area of the site was not integrated into either of the catchments from which the flows are treated prior to discharge. Accordingly, Allied Concrete has advised the Council that no vehicles or chemicals will be stored in this stormwater catchment in order to avoid the potential for contamination in the stormwater discharging from this area.

An open tributary runs along the southern perimeter of the site and enters a culvert at the access way between the rear and front yards. To prevent untreated stormwater entering the tributary, a block wall barrier flanked by earth bunding has been constructed around the culvert inlet area.

2.1.2 Water discharge permit

The Company holds water permit **1273-4**, the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 2.3.3 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 Company during the period under review.

Table 4 Allied Concrete resource consent

Consent number	Purpose	Granted	Review	Expires
<i>Water discharge permits</i>				
1273-4	To cover the discharge of stormwater and treated washwater from a concrete batching plant site onto and into land and an unnamed tributary of the Waitara River.	9 May 2016	June 2021	1 June 2033

2.2 Results

2.2.1 Inspections

15 June 2020

The site was unmanned and no longer operating. Settlement ponds were clear. No discharge to the receiving environment was observed.

2.2.2 Results of discharge and receiving environment monitoring

The quality of the discharges were visually assessed at the time of the inspections. Visual assessments of these discharges indicated that they were compliant with consent conditions.

2.3 Discussion

2.3.1 Discussion of site performance

The Allied Concrete site at Waitara was found to be well maintained while unmanned and no longer operating. In the previous monitoring year a consent surrender form was discussed however this has not been received by Council.

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

2.3.2 Environmental effects of exercise of consents

There were no significant environmental effects found that were associated with Allied Concrete's operations.

Receiving water monitoring found no adverse environmental effects associated with discharges from the site during the year under review.

2.3.3 Evaluation of performance

A summary of the Allied Concrete's compliance record for the year under review is set out in Table 5.

Table 5 Summary of performance for Allied Concrete consent 1273-4

Purpose: To discharge stormwater and treated wastewater from a concrete batching plant site onto and into land and into an unnamed tributary of the Waitara River		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder to adopt best practicable option	Inspections of the site	Yes
2. Limits the maximum stormwater catchment area	Inspections of the site and receiving water	Yes
3. Stormwater and wastewater system plans submitted	Received and reviewed April 2015	Yes
4. Notify the council prior to undertaking any works in the soakage trench	No notified works	Yes
5. Limits the discharge concentration	Sampling	Yes
6. The discharge, after reasonable mixing in the receiving waters, shall meet a variety of standards	Sampling and visual assessment	Yes
7. Maintain a contingency plan	Received and reviewed April 2015	Yes
8. Maintain a stormwater management plan	Received and reviewed 2015	N/A
9. Consent holder to notify the council prior to making any changes to the processes or operations	No notified changes	N/A
10. Provides options for review	Next optional review date June 2021	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 2019-2020 monitoring year, Allied Concrete demonstrated a high level of both environmental performance and administrative compliance with their resource consent as defined in Section 1.1.4.

2.3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of discharges from Allied Concrete in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

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

2.3.5 Alterations to monitoring programmes for 2020-2021

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 2020-2021 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 2019-2020.

2.4 Recommendations

1. THAT in the first instance, monitoring of discharges from Allied Concrete in the 2020-2021 year continues at the same level as in 2019-2020, unless the consent for the site is surrendered.
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.

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

3.1 Introduction

3.1.1 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 2 Location of Firth Industries site, Glover Road, Hawera

3.1.2 Water discharge permit

The Company holds water permit **1274-3**, the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 3.3.3 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 Company during the period under review.

Table 6 Firth Industries resource consent

Consent number	Purpose	Granted	Review	Expires
<i>Water discharge permits</i>				
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.	14 July 2010	June 2022	1 June 2028

3.2 Results

3.2.1 Inspections

15 June 2020

A compliance monitoring inspection was undertaken in still overcast weather conditions to assess compliance with resource consent conditions. The settling ponds looked to be working well. The discharge into the receiving water was occurring at the time of the inspection. A sample was taken of the discharge. No downstream sample was taken due to low flow. Tracking offsite was evident on the road, sediment laden water pooled onsite near exit and there was ponding of sediment laden water in the roadside gutter. TRC inspecting officer Celeste Bevins requested these matters be addressed and cleaned up as soon as possible in the inspection notice.

3.2.2 Results of discharge and receiving environment monitoring

The monitoring sites associated with the Firth Industries depot are shown in Figure 3.

During the year under review, discharge samples were not collected at the first inspection. Discharge and receiving water samples were taken during the inspection on 15 June 2020. The results of this sampling are shown in Table 7.

Table 7 Monitoring results of Firth Industries receiving water sampling, 15 June 2020

Parameters	Unit	IND001054 Discharge	TWH000257 100m Downstream
Temperature	Deg. C	14.2	-
Conductivity	mS/m	37.3	-
pH	-	7.7	-
Oil and Grease	g/m ³	<4	-
Suspended solids	g/m ³	13	-



Figure 3 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 were no visible contaminants observed around the site at the time of inspections.

No discharge samples were taken during the year under review, 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 2019-2020 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 8.

Table 8 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 2019-2020 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 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT in the first instance, monitoring of discharges from Firth Industries in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, 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 2020-2021

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 2020-2021, 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 2020-2021.

3.4 Recommendations

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.

4 Fletcher Concrete and Infrastructure Ltd

4.1 Introduction

4.1.1 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 has proposed the following upgrades to the site heading following this year's inspection:

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



Figure 4 Location of the Fletcher Concrete site (Firth Industries and Humes Pipeline Systems), Stratford

4.1.2 Water discharge permit

The Company holds water permit **5026-2**, the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 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 Company during the period under review.

Table 9 Fletcher Concrete resource consent

Consent number	Purpose	Granted	Review	Expires
<i>Water discharge permits</i>				
5026-2	To discharge stormwater and wastewater from a concrete product and manufacturing storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea catchment.	7 May 2009	June 2022	1 June 2028

4.2 Results

4.2.1 Inspections

15 June 2020

Inspection undertaken by TRC officers Celeste Bevins and Richard Corry. Samples of the discharge point, upstream and downstream were taken. The discharge into the receiving water was turbid. Downstream of the discharge point the receiving waters were clear. Sediment laden run off from the site into the stream was occurring. Settlement ponds at the back of the site (truck wash) looked to be working well.

A load out was occurring at the time of inspection. The sand trap had collected aggregate and runoff from the load out area. The soak holes had a small clear discharge. The ponds at the wash down area were full and looked clear. The sludge containment area looked good with nothing visually escaping this area. Samples were taken to ensure compliance with consent conditions at the time of inspection. The site looked to be compliant with consent conditions, pending sample results.

06 August 2020

Inspection undertaken by TRC officer Celeste Bevins due to recent non-compliance. A letter of explanation was received. Fletcher undertook the following actions; cessation of truck wash in the stormwater area; clean out and complete maintenance on the two soak holes with the weekly frequency of inspections enforced as per the Stratford Environmental Management Plan; installed a wedge pit system in the aggregate yard to divert yard water to the stormwater settlement pond to allow for treatment; installed a holding tank to pump water from the stormwater sump and batching area for reuse in concrete manufacture to reduce draw of freshwater. The inspection found that there was no discharge into the stream. The site was compliant at the time of inspection.

4.2.2 Results of discharge and receiving environment monitoring

The monitoring sites associated with the Fletcher Concrete Stratford depot are shown in Figure 5.

During the year under review, discharge samples were not collected at the first inspection. Discharge and receiving water samples were taken during the inspection on 15 June 2020. The results of this sampling are shown in Table 10.

Table 10 Monitoring results of Fletcher Concrete receiving water sampling, 15 June 2020

Parameters	Unit	KHI000362 100m upstream	IND001030 discharge	KHI000363 100m downstream
Temperature	Deg. C	11.6	10.7	11.1
Conductivity	mS/m	10.6	19.4	11.7
pH	-	6.9	10.2	6.8
Oil and Grease	g/m ³	-	<8	-
Suspended solids	g/m ³	3	670	8

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

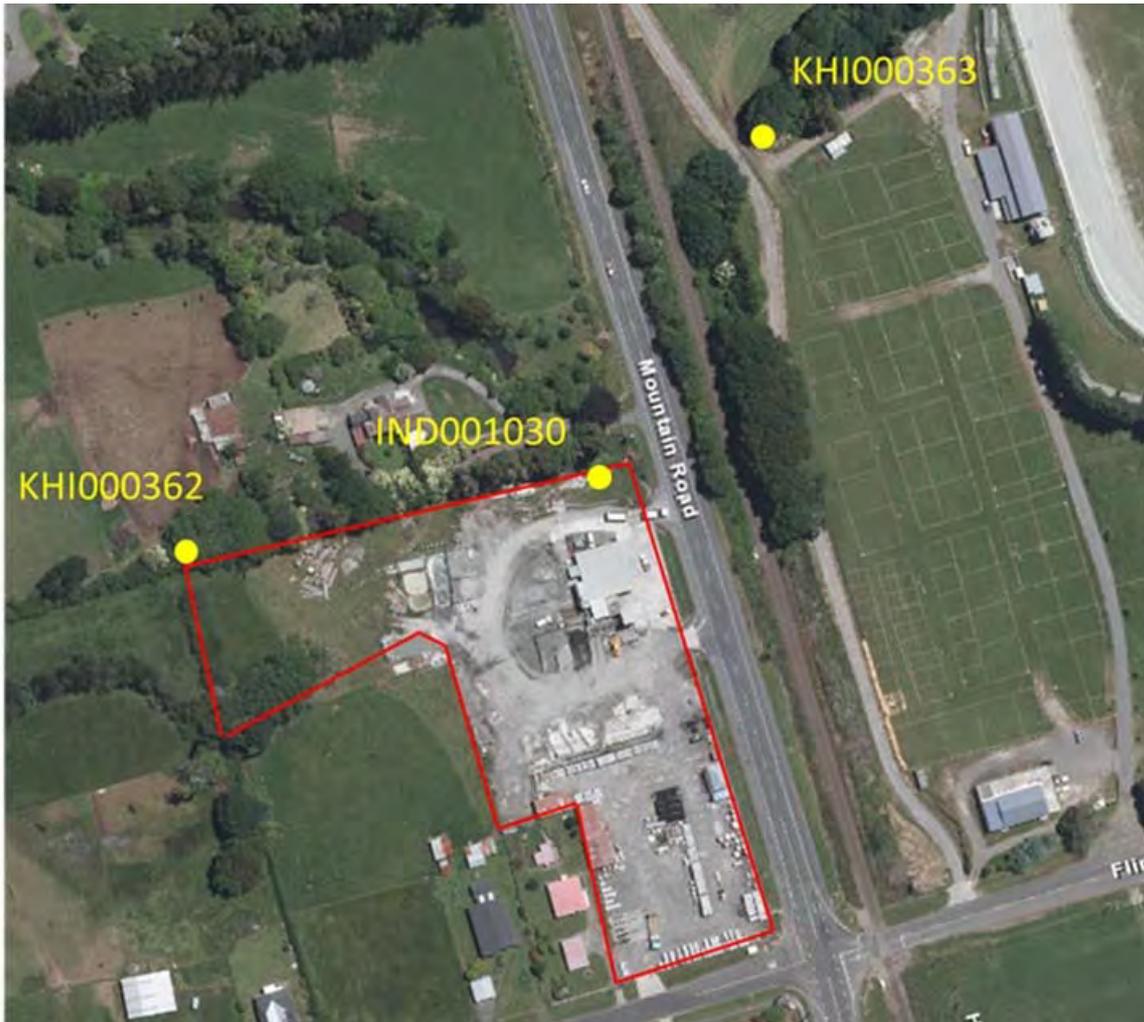


Figure 5 Fletcher Concrete (Firth Industries and Humes Pipeline Systems) sampling sites, Stratford

4.3 Discussion

4.3.1 Discussion of site performance

The Fletcher Concrete site at Stratford was found to be non-compliant at the time of the inspection. The follow up investigation due to the non-compliance found the site was compliant and the letter of explanation detailed sufficient actions had been taken to prevent further non-compliance.

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

4.3.2 Environmental effects of exercise of consents

Operations at the Fletcher Concrete site did not have any significant adverse effects on the receiving environment during the 2019-2020 monitoring period.

4.3.3 Evaluation of performance

A summary of Fletcher Concrete's compliance record for the year under review is set out in Table 11.

Table 11 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
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 High
Overall assessment of administrative performance in respect of this consent		

During the 2019-2020 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. Also, the consent holder was quick to respond and address the minor issues.

4.3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 report it was recommended:

1. THAT in the first instance monitoring of discharges from Fletcher Concrete in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, 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 2020-2021

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 2019-2020, 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 2019-2020.

4.4 Recommendations

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.

5 Summary of environmental performance

A summary of the environmental performance achieved by the three concrete batching plants monitored under this programme in recent years is summarised in the table below.

Table 12 Evaluation of environmental performance over time for all sites.

Company	Year	Consent	High	Good	Improvement req	Poor
Allied Concrete	2013/14	1273-4	1	-	-	-
	2014/15	1273-4	1	-	-	-
	2015/16	1273-4	1	-	-	-
	2016/17	1273-4	1	-	-	-
	2017/18	1273-4	1	-	-	-
	2018/19	1273-4	1	-	-	-
Firth Industries	2013/14	1274-3	1	-	-	-
	2014/15	1274-3	1	-	-	-
	2015/16	1274-3	1	-	-	-
	2016/17	1274-3	1	-	-	-
	2017/18	1274-3	1	-	-	-
	2018/19	1274-3	1	-	-	-
Fletcher Concrete	2013/14	5026-2	1	-	-	-
	2014/15	5026-2	1	-	-	-
	2015/16	5026-2	1	-	-	-
	2016/17	5026-2	1	-	-	-
	2017/18	5026-2	1	-	-	-
	2018/19	5026-2	1	-	-	-
Totals	-	-	18	-	-	-

During the year, two of the Concrete Batching Plants described in this report demonstrated a high level of environmental and high level of administrative performance with the resource consents as defined in Section 1.1.4. However, Fletcher Concrete's performance as good during the year under review.

6 Summary of recommendations

1. THAT monitoring of discharges from Allied Concrete in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT monitoring of discharges from Firth Industries in the 2020-2021 year continues at the same level as in 2019-2020.
3. THAT monitoring of discharges from Fletcher Concrete in the 2020-2021 year continues at the same level as in 2019-2020.
4. THAT should 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.

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 (2019): *Concrete Batching Plants Monitoring Programme Annual Report 2018-2019*, Technical Report 2019-88.
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- 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

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