Waitaha Catchment Monitoring Programme Annual Report 2016-2017

Technical Report 2017-5

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Executive summary

This 2016-2017 annual compliance monitoring report is the 23rd report by the Taranaki Regional Council (the Council) to be prepared for the monitoring programme in the Waitaha Stream catchment. The monitoring programme was established in 1994 to integrate the monitoring associated with the air and water monitoring of the formaldehyde resin manufacturing plant now owned by AICA (NZ) Ltd (formerly owned by Dynea NZ Ltd) and Taranaki Sawmills Ltd with other discharges in the catchment. Twelve industrial premises were monitored under this programme during the year under review. The monitoring reflects an on-going process of identifying and improving discharges into the catchment in a similar manner to the management of those in the neighbouring Mangati Stream catchment.

A total of 17 consents were included in the monitoring programme during the 2016-2017 monitoring period. Of these, 10 licence discharges to water, one licence a discharge to land, and six licence discharges to air. These consents include a total of 203 special conditions.

Overall, a good level of environmental performance was achieved by the consent holders in the industrial area of the Waitaha Stream catchment.

The Council's monitoring included 39 inspections, 48 discharge samples and 11 receiving water samples collected for physicochemical analysis, a review of consent holder monitoring data, odour surveys, ambient air quality analyses, ambient PM_{10} monitoring, and deposition gauging.

During the year under review, inspection found that the sites were generally well managed, with only transient non-compliances found at some sites, most of which were addressed in a timely manner. Non-compliant levels of suspended solids continue to be a persistent issue and enforcement action has been taken to resolve this.

Chemical monitoring of the stream found that although there were measurable changes in some parameters, most of these would have resulted in only minor transient effects at most. In terms of guidelines, no exceedances of guidelines copper, ammoniacal nitrogen, or biochemical oxygen demand were noted. Zinc was found to be elevated with three samples exceeding median values and the United States Environmental Protection Agency (USEPA) guidelines for short term exposure.

Overall the consented discharges in the Waitaha catchment achieved a good level of environmental compliance and Council is continuously working with consent holders to apply best practice. The Council, in cooperation with New Plymouth District Council (NPDC) as the consented reticulation owners, is also educating and engaging with non-consent holders in the catchment who may be unaware of their environmental and regulatory obligations.

There were a total of 10 unauthorised incidents recorded in this catchment during the period under review, seven of which were substantiated at the time of investigation by Council Officers. All of the substantiated incidents were related to consent holders monitored under this programme (C&O Concrete Ltd – 1, Taranaki Sawmills Ltd – 5, Symons Property Development Ltd - 1).

During the year, AICA (NZ) Ltd demonstrated an overall high level of environmental performance and a good level of administrative performance and compliance.

During the year, C&O Concrete Products Ltd demonstrated a good level of environmental performance and a high level administrative performance. There was one exceedance of suspended solids limits in the discharge; however subsequent sampling showed that the site had become compliant.

During the year, Energyworks Ltd demonstrated a high level of environmental performance and a high level of administrative performance.

During the year, Greymouth Facilities Ltd demonstrated a high level of environmental performance and a high level of administrative performance.

During the year, Intergroup Ltd demonstrated a high level of environmental performance and a high level of administrative performance.

During the year, Meredith Metals Ltd demonstrated a high level of environmental performance and a high level of administrative performance.

During the year, NPDC demonstrated a good level of environmental performance. Although the suspended solids limit on the consent was exceeded on one occasion, there were no significant increases of stream turbidity recorded and subsequent sampling returned compliant results.

During the year, in regard to stormwater discharges, Symons Property Development Ltd demonstrated a good level of environmental performance and a good level of administrative performance.

During the year, Taranaki Sawmills demonstrated a good level of administrative performance and an improvement is required in Taranaki Sawmills level of environmental performance. There are persistent issues in regards to suspended solid concentrations at the site and the two infringement fines were issued for breaching the terms of that abatement notice and consent conditions. An abatement notice was also issued for a waste stream not being diverted as per consent conditions.

During the year, TBS Coatings Ltd demonstrated a high level of environmental performance and a high level of administrative performance.

During the year, Weatherford New Zealand Ltd a demonstrated good level of environmental performance and a good level of administrative performance.

During the year, Woodwards 2008 Ltd demonstrated a high level of environmental performance and high level of administrative performance.

During the year, Zelam Ltd demonstrated a high level of environmental performance and high level of administrative performance.

For reference, in the 2016-2017 year, consent holders were found to achieve a high level of environmental performance and compliance for 74% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 21% of the consents, a good level of environmental performance and compliance was achieved.

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

This report includes recommendation for the 2017-2018 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 the Annual Report for the period July 2016 to June 2017 by the Taranaki Regional Council (the Council) on the monitoring programme associated with 17 resource consents held by 12 consent holders in the Waitaha catchment.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of these consents, which relate to discharges to water and emissions to air within the Waitaha catchment.

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 water and air discharges by companies within the Waitaha catchment, and is the 23rd combined annual report by the Council for this catchment.

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 though annual programmes;
- the resource consents held by the companies in the Waitaha catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at each site.

Sections 2 -14 Each company's activity is discussed in detail in a separate section.

In each subsection 1 (e.g. section 2.1) there is a general description of the industrial activity and its discharges, a photograph or map showing the location of the activity, and an outline of the matters covered by the company's permit/s.

Subsection 2 presents the results of monitoring of the company's activities during the period under review, including scientific and technical data, and any information on the Council's Register of Incidents.

Subsection 3 discusses the results, their interpretation, and their significance for the environment in the immediate vicinity of the sites under discussion.

Subsection 4 presents recommendations to be implemented in the 2017-2018 monitoring year.

Section 15 presents a summary of the information on file about any unauthorised incidents logged on the Council's database that occurred within the Waitaha catchment.

Section 16 discusses the results of the monitoring of the Waitaha Stream, their interpretation and their significance.

Section 17 presents a summary of all the recommendations made in relation to the monitoring of each company's activities.

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 *Resource Management Act 1991* (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. Investigations, interventions, and incidents

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

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

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

1.1.5. Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the consent holder/s during the period under review, this report also assigns a rating as to each Company's environmental and administrative performance.

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

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

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

Environmental Performance

High: No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving significant 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 in response to unauthorised incident reports, 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 in response to unauthorised incident reports. 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 in response to unauthorised incident reports. 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 2015-2016 year, 71% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 24% demonstrated a good level of environmental performance and compliance with their consents.

1.2. Resource consents

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.

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.

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.

The resource consents covered by the Waitaha Catchment Joint Monitoring programme are shown in Table 1 and their locations are shown in Figure 1. A total of 17 consents were included in the monitoring programme during the 2016-2017 monitoring period. Of these, 10 licence discharges to water, one licence a discharge to land, and six licence discharges to air. These consents include a total of 203 special conditions. There are a small number of other consented discharges in the catchment, such as agricultural discharges, which are not covered directly by this monitoring programme.

Outlines of the companies' activities and the special conditions on their consents are presented in Sections 2- 14 of this report, and copies of the full consents are given in alphabetical order in Appendix I.

Most stormwater discharge consents have the most recent standardised special conditions that;

- require the consent holder to adopt best practice;
- limit the area from which stormwater can be discharged;
- require the use of a stormwater treatment system;
- limit constituents of the discharge, with specific regard to pH, suspended solids and oil and grease;
- require that the discharge does not cause certain effects in the receiving waters;
- require that the consent holder maintain a spill contingency plan;

- require that the consent holder maintain and adhere to a management plan;
- require the consent holder to notify Council prior to making any changes to the site or site processes;
- set a lapse date (where applicable); and
- set dates for optional review.

Table 1 Resource consents covered by this report

Consent Holder	Consent No	Description	Conditions	Expiry Date	Next Review Date
AICA (NZ) Ltd	2367-3	To discharge stormwater from a chemical manufacturing complex into a wetland at the headwaters of an unnamed tributary of the Waitaha Stream	13	01 Jun 2032	June 2020
AICA (NZ) Ltd	4021-3	To discharge emissions into the air from the manufacture of formaldehyde solution and urea formaldehyde resin, together with emissions from associated activities at the plant premises	12	01 Jun 2032	June 2020
C&O Concrete Products Ltd	4777-2	To discharge stormwater from a concrete products manufacturing premises into the Waitaha Stream	9	01 Jun 2032	June 2020
Energyworks Ltd	9606-1	To discharge emissions into the air associated with abrasive blasting operations, spray painting and associated activities at a permanent site and during mobile operations.	19	01 Jun 2020	
Energyworks Ltd	9962-1	To discharge stormwater via the New Plymouth District Council reticulated stormwater system into an unnamed tributary of the Waitaha Stream	8	01 Jun 2032	June 2020
Greymouth Facilities Ltd	9868-1.1	To discharge untreated stormwater from a yard used for storage and maintenance of hydrocarbon exploration drilling equipment directly onto and into land, and to discharge treated stormwater into the Waitaha Stream	15	01 Jun 2032	June 2020
Intergroup Ltd	4776-2	To discharge treated stormwater from a liquid wastes processing and chemical consolidation facility onto and into land and into the Waitaha Stream via the New Plymouth District Council reticulated stormwater system	9	01 Jun 2032	June 2020
Meredith Scrap Metals Ltd	9911-1	To discharge contaminants onto and into land associated with scrap metal storage and processing	9	01 Jun 2032	June 2020
Meredith Scrap Metals Ltd	9912-1	To discharge stormwater from scrap metal storage and processing into the Waitaha Stream and into an unnamed tributary of the Mangaoraka	9	01 Jun 2032	June 2020

New Plymouth District Council	0609-3	To discharge stormwater from industrial land in the Waitaha catchment via multiple outfalls	7	01 Jun 2032	June 2018
Symons Property Developments Ltd	7805-1	To discharge stormwater from a truck depot and pipe cleaning facility into the Waitaha Stream	13	01 Jun 2026	June 2020
Taranaki Sawmills Ltd	2333-4	To discharge stormwater and to temporarily discharge kiln condensate from a sawmill site onto and into land and into the Waitaha Stream and an unnamed tributary of the Waitaha Stream	9	01 Jun 2032	June 2020
Taranaki Sawmills Ltd	4096-2	To discharge emissions into the air from sawmilling and untreated timber processing and associated activities including the combustion of wood and/or coal within boilers and wastes in an open firepit	21	01 Jun 2032	June 2020
TBS Coatings Ltd	4056-2	To discharge emissions into the air from abrasive blasting operations and associated processes at a permanent site and during mobile operations	20	01 Jun 2020	
Weatherford New Zealand Ltd	4775-2	To discharge treated and untreated stormwater from an oilfield engineering services premises onto land and into an unnamed tributary of the Waitaha Stream and into the Waitaha Stream	9	01 Jun 2032	June 2018
Woodwards 2008 Ltd	7881-1	To discharge emissions into air from the combustion of untreated timber wastes	9	01 Jun 2026	June 2020
Zelam Ltd	4059-5	To discharge emissions into the air from industrial agri-chemical formulation processes and associated processes	12	01 Jun 2026	June 2020

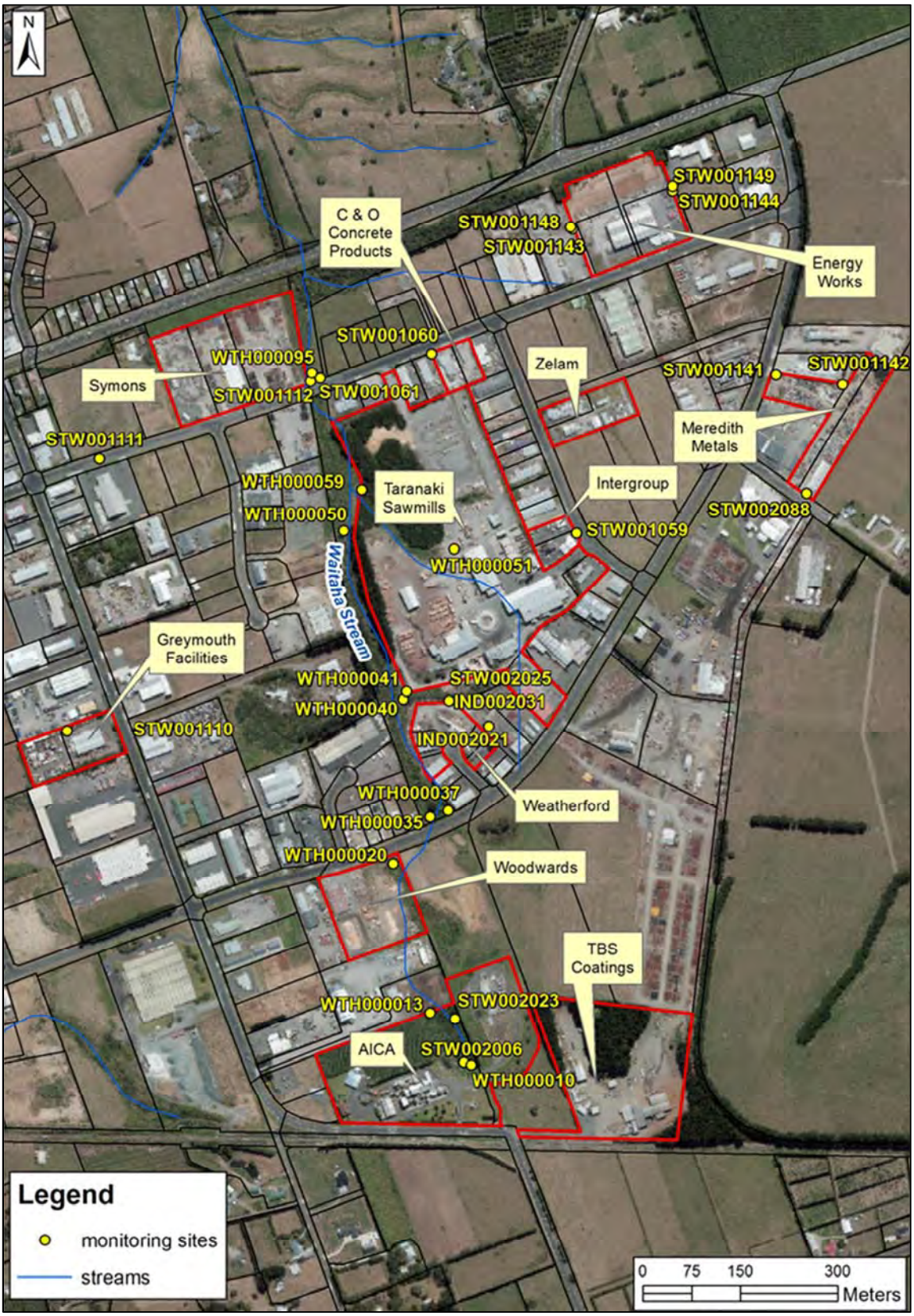

Figure 1 Location of consent holder sites and associate sampling sites

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 industries in the Waitaha catchment consisted of six 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 resource consent holders over consent conditions and their interpretation and application;
- in 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

Council officers undertook 39 routine site inspections of the consent holder's sites. With regard to consents for discharges to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. During inspections at sites with air discharge consents, ambient monitoring of suspended particulate and other emissions (as appropriate) were undertaken.

1.3.4. Discharge sampling

The Council took 48 stormwater samples either via integrated wet weather runs or individually during wet weather inspections. Each sample was analysed for the expected contaminants and other physical characteristics of the discharges from each site.

1.3.5. Receiving water samples

The Council took 11 receiving water samples during two integrated wet weather surveys. Each sampling site is located to serve as either an upstream control or downstream impact assessment site for any given discharge.

1.3.6. Air monitoring

Council undertook one 48 hour suspended particulate survey (at Taranaki Sawmills Ltd) and one 20-day dust deposition survey (at TBS Coatings Ltd).

1.3.7. Provision of company data

The consents held by AICA (NZ) Ltd require the collection of data in regards to stormwater quality and volumes and also require the provision of stack testing reports. A report on new air emissions treatment technology is required annually.

The air discharge consent held by Zelam Ltd requires the consent holder to measure the pH and amine content of the air scrubber liquor and provide the results to Council.

2. AICA (NZ) Ltd

2.1. Introduction

2.1.1. Process description

AICA (NZ) Ltd (AICA) manufactures synthetic resins for the production of wood products at their plant situated above a wetland area at the headwaters of the Waitaha Stream.

Photo 1 AICA (NZ) Ltd site

There have been a number of changes at the site over the years in order to meet market demands. There are two processing areas on site, Plant 1 predominantly for formaldehyde based products, and Plant 2 which was primarily for phenol based products. In early 2009, due to the economic downturn it was decided that Plant 2 would be decommissioned and phenol production was moved to Nelson.

In 1999 a two tonne mixing vessel was installed at Plant 1 to take advantage of an increase in wood glue sales. This was piped up to the existing utilities and scrubbers.

2.1.1.1. Water

The site has an enclosed stormwater system that directs all road drains to two holding ponds which are lined with butyl rubber. These ponds (pond 1 and pond 2) are 300 m^3 and 100 m^3 respectively. Analysis of the stormwater is carried out by AICA prior to discharge. Should the stormwater be outside the limits given in the consent, it is discharged to the NPDC sewer system as trade waste, or is re-circulated through the on-site system for further mixing, aeration and biological attenuation. At times, the stormwater is also used to dilute the trade wastes from the plant.

The car park drains directly to the receiving waters of the Waitaha Stream. Roof water from the decommissioned phenolic resins plant (Plant 2) drains to the stormpond.

Areas likely to be contaminated, such as bunds around storage tanks and loading facilities, are directed to the NPDC sewer system.

2.1.1.2. Air

The primary source of emissions to the atmosphere is from the 22 metre high formaldehyde absorption tower. The emissions contain formaldehyde, resorcinol, and other gases (including water vapour) from a gas-fired boiler flue, and some steam from the plant's cooling tower, together with minor emissions from storage tanks and the laboratory fume cupboard.

Formaldehyde solution is produced at the plant by the catalytic oxidation and dehydrogenation of methanol in a continuous process. This is then used in the production of urea-formaldehyde and melamine-urea-formaldehyde resins.

There are also traces of formaldehyde, methanol and various reaction by-products.

The World Health Organisation notes that there is variability in human formaldehyde responses, with significant increases in signs of irritation occurring at levels above 0.1 mg/m^3 and a progression of symptoms occurring above 1.2 mg/m^3. No lung function alterations were noted in healthy non-smokers and asthmatics exposed to formaldehyde levels up to 3.7 mg/m^3.

In the national Ambient Air Quality Guidelines (Ministry for the Environment, 2002) a formaldehyde limit of 100 µg/m^3 (0.1 mg/m^3) was given. It should be noted that the primary consideration by the Ministry for the Environment in setting this guideline, has been to ensure that ambient (outdoor) air can be used to dilute indoor concentrations of formaldehyde. This limit protects against tissue irritation of the eyes, nose and throat.

2.1.2. Water discharge permit

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. The stormwater discharge from the site has been consented since 11 November 1987.

AICA holds water discharge permit 2367-3 to discharge stormwater from a chemical manufacturing complex into a wetland at the headwaters of an unnamed tributary of the Waitaha Stream. This consent was granted on 24 April 2015 under Section 88 of the RMA and expires on 1 June 2032. It contains 13 special conditions.

These conditions include the standard special conditions set out in section 1.2 and several additional special conditions, as specified below.

Special condition 3 requires that a flow meter be installed to record discharge rates.

Special conditions 4, 5 and 7 require the consent holder to analyse the discharge from the stormponds for contaminants prior to release and limit contaminant concentrations in discharges from the stormponds, and other discharges. In addition to the standard constituents, limits are given for formaldehyde, oil and grease and ammoniacal nitrogen.

Special condition 6 requires the consent holder to notify the Council prior to discharge.

Special condition 9 requires records of discharge volume and analysis of constituent contaminants to be maintained.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

2.1.3. Air discharge permit

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.

AICA holds air discharge permit **4021-3** was issued to AICA by the Council on 26 May 2015 under Section 87(e) of the RMA to discharge emissions into the air from the manufacture of formaldehyde solution and urea formaldehyde resin, together with emissions from associated activities at the plant premises. It is due to expire on 1 June 2032.

Discharge permit 4021-3 has 12 special conditions;

Special condition 1 requires the consent holder to adopt the best practical option.

Special condition 2 requires that the discharge must not give rise certain effects beyond the boundary.

Special condition 3 requires that formaldehyde emissions from the stacks not exceed 1.0 kg/hour.

Special conditions 4 and 5 require the consent holder to undertake stack testing to certain standards.

Special conditions 6, 7, and 8 limit the ambient concentration of formaldehyde, phenol and resorcinol at the boundary.

Special condition 9 places limits on carbon monoxide, nitrogen dioxide, PM10 and sulphur dioxide.

Special condition 10 requires the consent holder to notify Council prior to undertaking any changes at the site.

Special condition 11 requires that consent holder provide an annual report on technological advances in emission control.

Special condition 12 is a review condition.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

2.2. Results

2.2.1. Inspections

AICA's site was inspected on four occasions. These were on 1 September 2016, 28 November 2016, 28 February 2017 and 27 June 2017

These inspections focussed on evidence of spills, the condition of the stormwater system and receiving water, discharge logs, odour and general housekeeping. Ambient formaldehyde and phenol monitoring were undertaken during the inspections using portable detection equipment.

Generally the site was found to be well managed. The inspection of 28 February 2017 noted that work was being undertaken around the old plant, specifically the removal of solidified resin from a containment vessel. Some minor spillage of red resin powder was noted (likely phenolic resin), however no phenol was detected in the stormwater in storm pond 2.

2.2.2. Results of discharge monitoring

Council staff sampled the storm ponds during discharge on several occasions during the year under review. The results are presented in Table 2 and

Table 3.

Table 2 Results of AICA discharge monitoring -site STW002006

Parameter	Unit	TRC Lab Results	AICA Lab results	TRC Lab Results	AICA Lab results	TRC Lab Results	AICA Lab results	TRC Lab Results	AICA Lab results	*Consent limit*
Date	-	**02 Aug 2016**	**02 Aug 2016**	**02 Sep 2016**	**02 Sep 2016**	**05 Oct 2016**	**05 Oct 2016**	**04 Apr 2017**	**04 Apr 2017**	-
NZST		15:00	15:00	12:40	09:27	06:26	00:45	0826	0820	-
Conductivity @ 20°C	mS/m	8.4	47.7	9.6	26	16.1	43.3	1.6	2	-
Formaldehyde	g/m^3	0.1	0	<0.1	0	0.4	0.3	0.1	0	*2*
Un-ionised ammonia	g/m^3-N	0.00357	-	0.62	0.31	0.60	0.29	0.00094	-	-
Ammoniacal nitrogen	g/m^3-N	1.64	1.9	5.57	6	**12.8**	8.5	0.376	0	*10*
pH	pH	6.9	8.34	8.6	8.18	8.1	8.0	6.9	7.3	*6-9*
Phenol	g/m^3	<0.02	0	<0.02	0	<0.02	0	<0.02	0	*1*
Suspended solids	g/m^3	-	-	17	-	6	-	5	-	*100*
Temperature	Deg.C	12.5	-	14.2		17.3	-	14.4	15.0	-
Urea	g/m^3	5.86	-	0.98		4.45	-	0.17	-	-
Oil and Grease	g/m^3	b	-	b	-	*b*	-	b	-	*15*

Table 3 Results of discharge monitoring at stormpond 2 -site STW002023

Parameter	Unit	TRC Lab Results	AICA Lab Results	TRC Lab Results	AICA Lab Results	Consent limit
Date	-	**2 Aug 2016**	**2 Aug 2016**	**4 Apr 2017**	**4 Apr 2017**	-
Time		15:06	08:52	08:30	07:18	-
Conductivity @ 20°C	mS/m	9.8	4.77	1.3	1.15	-
Formaldehyde	g/m^3	<0.1	0	0.1	0	*2*
Un-ionised ammonia	g/m^3-N	0.01665	-	0.00084	-	-
Ammoniacal nitrogen	g/m^3-N	4.08	1.9	0.405	0	*10*
pH	pH	7.2	8.34	6.8	7.38	*6-9*
Phenol	g/m^3	<0.02	0	<0.02	0	*1*
Suspended solids	g/m^3	5	-	20	-	*100*
Temperature	Deg.C	11.7	-	15.0	15.0	-
Urea	g/m^3	0.57	-	0.22	-	-
Oil and Grease	g/m^3	b	-	b	-	*15*

KEY: Results in bold within a table indicate that a consent limit for a particular parameter has been exceeded

b no visible hydrocarbon sheen and no odour

The renewed consent (2367-3) requires email notification be made prior to stormwater discharges ensuring that there is more opportunity for in-stream receiving environment monitoring and comparative lab analysis of the discharge quality. Noted is some variation in some of the results when comparing the results from AICA and the Council taken at similar times. These samples are not true interlab comparisons as they were not from split samples. Council and AICA will ensure proper interlab samples are taken during the 2017-2018 period.

On one occasion (on 5 October 2016) it was noted that the sample taken by the Council showed a non compliant concentration of ammoniacal nitrogen in the discharge when compared to compliant level found in a sample analysed by AICA earlier of the same day. Receiving environment analysis showed that the ambient pH and temperature conditions at the time did not result in an exceedance of the consented limit of unionised ammonia on the Waitaha Stream.

All other parameters in all other samples were found to be compliant.

2.2.2.1. Results of receiving environment monitoring

Receiving water sampling was undertaken during discharges four occasions during the period under review. The results are given in Table 4.

Table 4 Results of receiving water sampling downstream of AICA - site WTH000013

Parameter NZST	Unit	02 Aug 2016	02 Sep 2016	05 Oct 2016	08 Dec 2016	*Consent limits*
		15:30	13:00	06:33	11:20	
Conductivity @ 20°C	mS/m	10.7	10.9	13.4	16.3	-
Formaldehyde	g/m^3	<0.1	<0.1	<0.1	0.1	*2*
Un-ionised ammonia	g/m^3-N	0.00279	0.00322	0.01002	0.00262	*0.025*
Ammoniacal nitrogen	g/m^3-N	1.52	2.51	3.80	1.41	-
pH	pH	6.8	6.6	6.9	6.7	*6-9*
Phenol	g/m^3	<0.02	<0.02	<0.02	<0.02	*0.6*
Temperature	Deg.C	13.3	14.7	15.1	16.6	-
Urea	g/m^3	1.76	0.39	1.10	0.68	-
Oil and grease	g/m^3	b	b	b	b	-

All samples were found to be to be compliant with the consent conditions in regard to pH and unionised ammonia, formaldehyde and phenol concentrations.

2.2.2.2. Provision of company data- discharge sampling

The data provided by AICA in relation to their stormwater discharges complied with the majority of the requirements of consent 2367. Temperature data was not being provided, however this has now being rectified.

The data provided showed that all stormwater discharges recorded during the year under review complied with the component concentration limits in AICA's consent. A summary of the data is presented in Table 5.

Table 5 Summary of AICA provided storm pond self monitoring relating to pond discharges to the Waitaha Stream, 2016-2017

	Pond 1- (44 discharges)					Pond 2 (41 discharges)				
	pH	Condy mS/m @ 25°C	NH_4 g/m³	Form g/m³	Phenol g/m³	pH	Condy mS/m @ 25°C	NH_4 g/m³	Form g/m³	Phenol g/m³
Minimum	7.38	1.0	0	0	0	6.27	1.15	0	0	0
Maximum	8.95	48.7	8.5	0.3	0	8.9	40.5	1	0.25	0.03
Consent limit	*6-9*	-	*10*	*2*	*1*	*6-9*	-	*10*	*2*	*1*

2.2.2.3. Provision of company data - discharge flow recording

AICA provided telemetered flow data for discharges from the storage ponds. This data in conjunction with pre-release chemical analysis and downstream flow monitoring will provide further data on expected mixing and assimilation rates in the Waitaha Stream. A hydrograph of data collected to date is given in Figure 2.

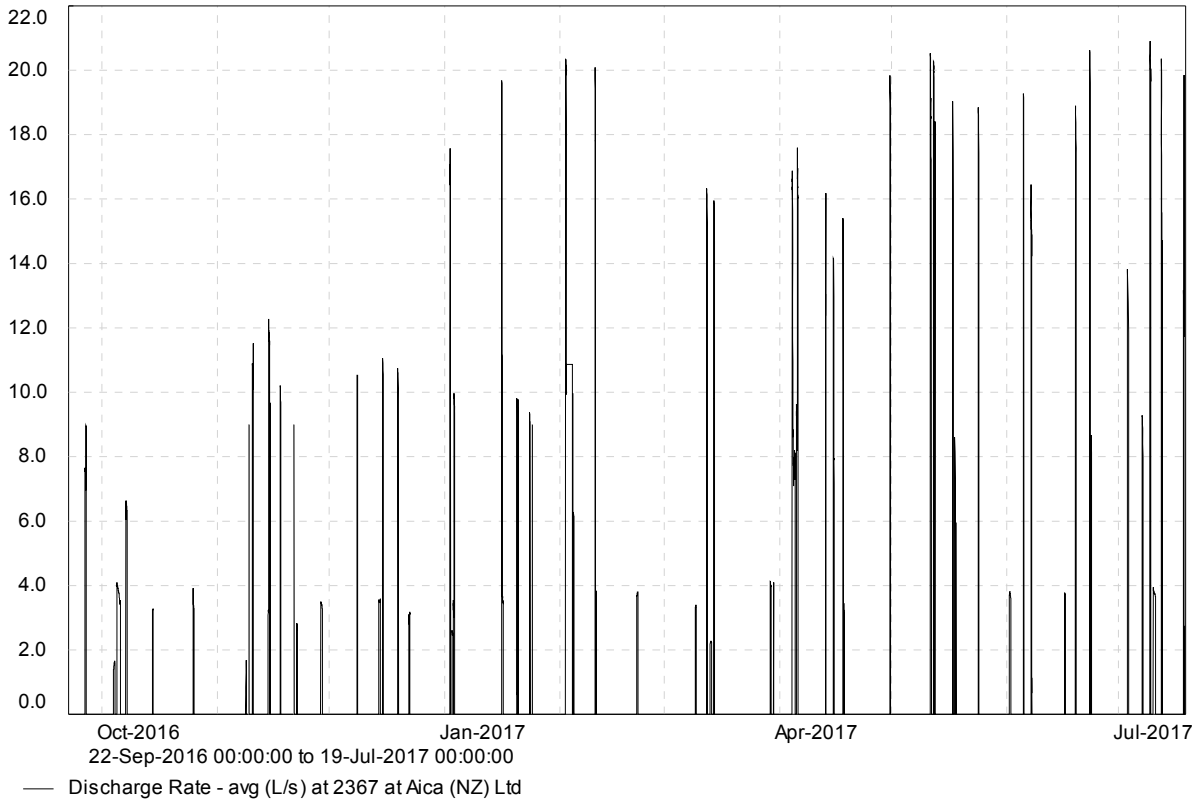

Figure 2 AICA discharge hydrograph

2.2.3. Air

2.2.3.1. Inspections

Air inspections were carried out in conjunction with general site inspections. During these inspections no issues were noted.

2.2.3.2. Results of receiving environment monitoring

Odour surveys

Odour surveys were undertaken in conjunction with site inspections on 1 September 2015, 28 November 2016, 28 February 2017 and 20 June 2017.

There were no odours detected from the plant on any of these monitoring occasions.

Gastec monitoring

Ambient Gastec monitoring for phenol and formaldehyde was carried out in conjunction with two of the site inspections. The sampling was conducted at two downwind sites. There were no detectable levels of either resorcinol or phenol found during these surveys.

2.2.3.3. Provision of company data

Emissions testing

Special conditions 3, 4, and 5 of consent 4021-3 relate to the standard to which formaldehyde emissions from the plant site must be treated, and outline the frequency and conditions under which formaldehyde emissions testing must be performed to confirm compliance. The timing of the testing, and reporting of the results to Council are also specified.

Testing must be undertaken by a party independent from AICA and as specified in USEPA[1] Method 0011, which is an isokinetic method ensuring a fully representative sample is collected. Acidified dinitrophenyl hydrazine (DNPH) is used to trap the formaldehyde present in the sample. This testing must be undertaken before 1 June each year, comprise not less than three samples taken under production conditions that give rise to maximum emissions, and the results (including all raw data) are to be reported to Council within 20 working days of the testing.

AICA also undertook stack testing on 14 June 2017 which was, due to an oversight by AICA, 14 days later than required by consent conditions. The stack testing report found the emissions to be compliant with consent conditions. A copy of the report may be obtained from Council.[2]

Emission technology report

Condition 11 of consent 4021-3 requires that the consent holder provide an annual report in the month of June reviewing the technology available for reduction of emissions. This report was received and it noted that;

"On April 4th 2016 the AICA New Plymouth operation was deemed to be an upper tier Major Hazard Facility (MHF) under the new Worksafe Major Hazard Facility regulations. A requirement of the regulations is to

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[1] United States Environmental Protection Agency

2 Document no. 1905277

develop and provide a safety case to Worksafe detailing AICA's operations with evidence that they are safe to operate.

Safety assessments have been carried out on all operations that have the potential to cause a Major Incident, including the Formalin process. These more stringent regulations will ensure an increase in process safety and reduce the risk of plant failure and subsequent environmental damage"

A copy of the report may be obtained from Council.[3]

2.2.4. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to record incidents or undertake significant additional investigations, interventions in respect of the site operated by AICA (NZ) Ltd.

2.3. Discussion

2.3.1. Discussion of plant performance

Inspections of the AICA site found that housekeeping and general site management were good. There was some minor tracking and spillage noted on the site, however improvement was noted in a later inspection.

The stack testing was undertaken later than required however the stack testing report showed that contaminant limits were being met.

The site contingency plan was last reviewed and updated during the 2016-2017 year.

2.3.2. Environmental effects of exercise of consents

Analysis of the receiving water sample undertaken during a discharge event was compliant with consent conditions on all but one occasion and receiving water limits were met on all occasions. It has been outlined that AICA calculates the unionised ammonia content of the discharge to further assess its suitability for discharge in regard to the unionised ammonia limit at the boundary.

AICA has also expressed interest in a land based disposal system that would allow for discharges with elevated levels of ammoniacal nitrogen to be diverted for irrigation. This would also provide for a reduction of ammonia and other contaminants entering the stream.

Ambient odour surveys found no chemical odours downwind of the plant site, and no complaints were reported during the year under review. Gastec monitoring found no detectable levels of phenol (and therefore resorcinol) or formaldehyde off site and stack testing indicated compliant levels of formaldehyde in the discharge.

3 Document no. 1890461

2.3.3. Evaluation of performance

A tabular summary of the AICA's compliance record for the year under review is set out in Table 6 and Table 7.

Table 6 Summary of performance for AICA: Consent 2367-3

Purpose: ***To discharge stormwater from a chemical manufacturing complex into a wetland at the headwaters of an unnamed tributary of the Waitaha Stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Inspection/Liaison with consent holder	Yes
2. Limit on catchment size	Inspection	Yes
3. Installation of discharge flow meters by 20 September 2016	Inspection	Yes
4. Analysis of stormwater prior to discharge	Review of data provided	Yes
5. Limits of stormpond discharge constituents	Sampling/review of data	One non compliant sample
6. Notification prior to discharge	Notification received	Yes
7. Limits of other stormwater discharge constituents	Inspection	Yes
8. Limits on effects in receiving water	Inspection/sampling	Yes
9. Provision of data	Review of data	Yes
10. Provision of a contingency plan	Review of plan	Yes
11. Provision of management plan	Review of plan	Yes
12. Notifications of changes in site activity	No changes this period	N/A
13. Review of consent	Next option to review in June 2020	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Good** **High**

Table 7 Summary of performance for AICA: Consent 4021-3

Purpose: ***To discharge emissions into the air from the manufacture of formaldehyde solution and urea formaldehyde resin, together with emissions from associated activities at the plant premises***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Site inspection	Yes
2. No objectionable effects beyond boundary	Inspection	Yes
3. 1.0 kg/hr formaldehyde limit on point source emissions	Stack testing	Yes

Purpose: *To discharge emissions into the air from the manufacture of formaldehyde solution and urea formaldehyde resin, together with emissions from associated activities at the plant premises*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
4. Conduct emission stack testing	Stack testing report received	Yes- but survey undertaken late
5. Use approved method for stack testing	Stack testing report received	Yes-but report provided late.
6. 0.1 mg/m^3 ambient formaldehyde limit at boundary	Gastec sampling during inspection	Yes
7. 0.63 mg/m^3 ambient phenol limit at boundary	Gastec sampling during inspection	Yes
8. 1.5 mg/m^3 ambient resorcinol limit at boundary	Gastec sampling during inspection	Yes
9. Minimisation of emissions through control of processes	Discussion and liaison with consent holder	Yes
10. Consultation before alterations to plant or processes	Discussion and liaison with consent holder	Yes
11. Formulation of a written report	Report received	Yes
12. Optional review provision re environmental effects	No further review provisions, consent expired	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **Good**

During the year, AICA (NZ) Ltd demonstrated an overall high level of environmental performance and a good level of administrative performance and compliance as defined in Section 1.1.5.

2.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of AICA in the 2016-2017 period continue at a similar level to that of the 2015-2016 period.

This recommendation was implemented.

2.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for air and water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the Act in terms of monitoring emissions and discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere and discharging to the environment.

It is proposed that the monitoring programmed for consented activities of AICA in the 2017-2018 year continues at a similar level programmed for 2016-2017.

2.4. Recommendation

THAT monitoring programmed for consented activities of AICA in the 2017-2018 period continue at a similar level to that of the 2016-2017 period.

3. C&O Concrete Products Ltd

3.1. Introduction

3.1.1. Process description

C&O Concrete Products Ltd (C&O Concrete) manufactures concrete products. Their site is located on Connett Road East, Bell Block. The site comprises of 1,926 m^2 of industrial land dominated by a central building and includes outdoor construction and storage areas. The stormwater enters the New Plymouth District Council (NPDC) system and is discharged to the nearby Waitaha Stream.

The potential exists for the contamination of stormwater around the site. At the time the consent was issued the discharge was treated as that of contaminated stormwater, and appropriate special conditions were set on the permit.

The discharge from C&O Concrete is expected to potentially contain elevated suspended solids, high pH and alkalinity. The discharge is to the NPDC stormwater system where it mixes with stormwater from roads and other developed sites before discharging to the Waitaha Stream.

Photo 2 C&O Concrete site

3.1.2. Water discharge permit

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.

C&O Concrete holds water discharge permit **4777-2** to cover the discharge of stormwater from a concrete products manufacturing premises into the Waitaha Stream. This permit was issued by the Council on 9 December 2014 under Section 87(e) of the RMA. It expires on 1 June 2032.

This consent contains the standardised conditions as set out it section 1.2.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent(s) which is/are appended to this report.

3.2. Results

3.2.1. Inspections

The site was inspected on 5 August 2016 and 2 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, loading and unloading, general housekeeping and operation and maintenance of treatment systems.

The site was generally found to be clean and tidy. The wire basket filters were working well, and discharges were found to be relatively to be clear. It was noted that works continue to be undertaken to improvement stormwater management and treatment at the site.

3.2.2. Results of discharge monitoring

The requirements for the discharge are that the suspended solids concentration must not exceed 100 g/m^3 and the oil and grease concentration must not exceed 15 g/m^3. The pH must be between 6 and 9.

The discharge from the C&O Concrete site on Connett Road was sampled on three occasions during the period under review. The results of this monitoring are shown in Table 8, along with a summary of the historical results for this site.

Table 8 Results of C&O Concrete discharge monitoring (STW001060)

Parameter	Conductivity @ 20° C	Oil & grease (g/m^3)	pH	Suspended solids	Temperature
Unit	**mS/m**	**(g/m^3)**	**pH**	**g/m^3**	**Deg.C**
Minimum	2.6	<0.5	7.2	4	10.7
Maximum	118	4.0	11.6	400	20.5
Median	14.5	1.1	8.8	43	14.5
Number	23	10	23	21	21
05 Aug 2016	4.6	b	7.4	6	11.5
07 Nov 2016	10.2	b	9.0	**340**	14.2
04 Apr 2017	3.7	b	8.6	22	13.9
Consent Limits	-	*15*	*6-9*	*100*	-

Key: Results in bold within a table indicate that a consent limit for a particular parameter has been exceeded
b= hydrocarbons not visible or detected by odour

All results with the exception of the suspended solid concentration found in the sample taken on 7 November 2016 were within consented limits. The breach of suspended solids is discussed in section 3.2.3 and it is noted that a subsequent sample taken from this site was compliant with consent conditions.

3.2.3. Investigations, interventions, and incidents

In the 2016-2017 period, the Council was required to record an incident, in relation to C&O Concrete's conditions in their resource consents or provisions in Regional Plans.

7 November 2016

During analysis of samples taken during routine compliance monitoring it was found that the concentration of suspended solids in the stormwater discharge exceeded resource consent parameters at the C & O Concrete plant

An abatement notice was issued requiring works to be undertaken on site to ensure that resource consent conditions are complied with at all times. Re-inspection found that the abatement notice was being complied with at the time of inspection.

3.3. Discussion

3.3.1. Discussion of plant performance

Inspection found that general housekeeping was good throughout the year. One non-compliant sample was collected, indicating that suspended solids control needed improvement. This was addressed by the consent holder and all subsequent samples were compliant.

3.3.2. Environmental effects of exercise of consents

Inspections and discharge monitoring showed no adverse effects upon the receiving waters as a result of the activities of C&O Concrete. In particular, no effects were noted as a result of the non-compliant sample of 7 November 2016.

3.3.3. Evaluation of performance

A tabular summary of the C&O Concrete's compliance record for the year under review is set out in Table 9.

Table 9 Summary of performance for C&O Concrete: Consent 4777-2

Purpose: ***To discharge stormwater from a concrete products manufacturing premises into the Waitaha Stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Observation at inspection	Yes
2. Limits stormwater catchment to 0.415 Ha	Observation at inspection	Yes
3. Stormwater to be directed to treatment system	Observation at inspection	Yes
4. Contaminants in discharge not to exceed certain limits	Sampling	No – One SS exceedance
5. Discharge cannot cause specified adverse effects beyond mixing zone	Observation at inspection and sampling	Yes
6. Maintenance of a contingency plan	Contingency plan received	Yes

Purpose: *To discharge stormwater from a concrete products manufacturing premises into the Waitaha Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
7. Maintenance of a management plan	Management plan received	Yes
8. Notification of changes at site	No notification received or changes noted	Yes
9. Optional review provision re environmental effects	Options for review; June 2020 and 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**Good**
Overall assessment of administrative performance in respect of this consent		**High**

During the year, C&O Concrete Products Ltd demonstrated a good level of environmental performance and a high level administrative performance as defined in Section 1.1.5. There was one exceedance of suspended solids limits in the discharge; however subsequent sampling showed that the site had become compliant.

3.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of C&O Concrete Products Ltd in the 2016-2017 year continues at a similar level programmed for 2015-2016.

This recommendation was implemented.

3.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that the monitoring programmed for consented activities of C&O Concrete Products Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

3.4. Recommendation

1. THAT monitoring programmed for consented activities of C&O Concrete Products Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

4. Energyworks Ltd

4.1. Introduction

4.1.1. Process description

Energyworks Ltd (Energyworks) operates a blasting and painting facility on Connett Rd Bell Block. Blasting occurs within a fully enclosed dedicated blast chamber within the main building. The blasting medium is mainly steel grit, with the use of blasting garnet as a secondary option. Emissions from the blast shed are managed internally via a media reclaimer and recycling system and emissions from the spray painting will be from vents on the downstream side of the purpose built filters. Two outdoor wash pads are used to wash blasted parts and these are directed to sewer.

Stormwater from the site discharges at points which flow into the Waitaha catchment via the NPDC reticulation system.

4.1.2. Water discharge permit

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.

Energyworks holds water discharge permit **9962-1** to discharge stormwater via the NPDC reticulated stormwater system into an unnamed tributary of the Waitaha Stream. This permit was issued by the Council on 11 November 2014 under Section 87(e) of the RMA. It is due to expire on June 2020.

The consent contains the standard special conditions set out in Section 1.2.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which are appended to this report.

4.1.3. Air discharge permit

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.

Energyworks holds air discharge permit **9606-1** to discharge emissions into the air associated with abrasive blasting operations, spray painting and associated activities at a permanent site at Connett Road East, Bell Block and from mobile operations throughout the Taranaki region. This consent was issued by the Council on 15 May 2014 under Section 87(e) of the RMA. It is due to expire on 1 June 2032.

Discharge permit 4021-3 has 19 special conditions;

Special condition 1 specifies which conditions apply to the permanent blasting facility and which to mobile blasting operations.

Special condition 2 requires the consent holder adopt the best practical option.

Special condition 3 requires that the discharge must not give rise certain effects beyond the boundary.

Special condition 4 requires that blasting be done in conjunction with an assessment of wind conditions.

Special condition 5 requires that surrounding area be cleared of accumulated blasting media at the end of each day.

Special conditions 6 sets a limit of dust contained in blasting media.

Special condition 7 requires that all staff be informed of consent conditions.

Special condition 8 requires that all blasting at the permanent facility be carried out in an enclosed booth.

Special conditions 9 and 10 deal with treatment and allowable dust deposition rates.

Special condition 11 requires the maintenance and adherence to a management plan.

Special condition 12 requires that a log of complaints be maintained.

Special condition 13 requires that only items that are unable to be moved be blasted in place.

Special condition 13-18 deal with mitigation and effects of mobile blasting.

Special condition 19 is a review condition.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

4.2. Results

4.2.1. Site inspections

Inspections were carried out on 7 November 2016 and 28 February 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, general housekeeping, air emissions and the operation and maintenance of treatment systems.

During the inspections no visible emissions or odour were noted and all treatment systems were found to be in good order.

4.2.2. Mobile blasting inspections

No notification of mobile blasting was received during the monitoring period.

4.2.3. Results of discharge monitoring

Stormwater discharges from the Energyworks site were sampled on two occasions during the period under review, and the results are presented in Table 10 and Table 11.

Table 10 Results of Energyworks discharge (site STW001144)

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Units	**mS/m**	**g/m³**	**pH**	**g/m³**	**Deg.C**
07 Nov 2016	1.4	b	7.0	12	14.9
04 Apr 2017	0.3	<0.5	6.6	7	14.2
Consent limits	-	*15*	*6-9*	*100*	-

Table 11 Results of Energyworks discharge (site STW001149)

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Units	**mS/m**	**g/m³**	**pH**	**g/m³**	**Deg.C**
07 Nov 2016	1.5	b	7.0	30	15.0
04 Apr 2017	nd	nd	nd	nd	nd
Consent limits	-	*15*	*6-9*	*100*	-

Key: nd = no discharge at time of sampling b= no odour or sheen observed

All results were found to be compliant with consent conditions.

4.2.4. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to record an incident in respect of Energyworks.

4.3. Discussion

4.3.1. Discussion of plant performance

Inspection found that activities at the site were well managed. Stormwater management, air emission and contingency plans are in place for the site.

4.3.2. Environmental effects of exercise of consent

Monitoring and inspections undertaken during the year indicate that the activities at the site were having little, if any, effects on the receiving environment. The stormwater discharges were found to have very low levels suspended solids and hydrocarbons and no visible emissions, odours or dust deposition were noted during inspections.

4.3.3. Evaluation of performance

A tabular summary Energyworks compliance record for the year under review is set out in Table 12 and Table 13 .

Table 12 Summary of performance for Energy Works: Consent 9962-1

Purpose: ***To discharge stormwater via the New Plymouth District Council reticulated stormwater system into an unnamed tributary of the Waitaha Stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Inspection	Yes
2. Stormwater catchment not to exceed 2.5	Inspection	Yes
3. Discharge quality standards	Sampling	Yes
4. Receiving quality standards	Sampling	Yes

Purpose: *To discharge stormwater via the New Plymouth District Council reticulated stormwater system into an unnamed tributary of the Waitaha Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
5. Contingency Planning	Plan received	Yes
6. Stormwater management planning	Plan received	Yes
7. Notification of changes on site	No changes made	N/A
8. Review condition	Review options in June 2020 and June 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 13 Summary of performance for Energyworks: Consent 9606-1

Purpose: *To discharge emissions into the air associated with abrasive blasting operations, spray painting and associated activities at a permanent site at Connett Road East, Bell Block and from mobile operations throughout the Taranaki region*		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Specifies that conditions 2-7 and 18 apply to all operations, 8-12 to the permanent facility and 13-17 to mobile operations	N/A	N/A
2. Adopt the best practicable option	Inspection	Yes
3. No effects beyond boundary	Inspection	Yes
4. All abrasive blasting is to be conducted in conjunction with wind assessment	Inspection	N/A
5. Clean up of blasting media	Inspection	N/A
6. Blasting media used for dry abrasive blasting to meet certain specifications	Visual inspection of dust emissions	N/A
7. The consent holder shall ensure that all operators of abrasive blasting equipment understand and comply with the all the conditions of this consent	Inspection	N/A

Purpose: *To discharge emissions into the air associated with abrasive blasting operations, spray painting and associated activities at a permanent site at Connett Road East, Bell Block and from mobile operations throughout the Taranaki region*		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
8. All abrasive blasting on the consent holder's permanent site at Connett Road, East, Bell Block shall be carried out in an enclosed booth or shed	Inspection	N/A
9. All emissions from abrasive blasting be treated to a certain standard.	Inspection of emissions	N/A
10. The dust deposition rate beyond the property boundary of the permanent site at Connett Road East, Bell Block arising from the discharge, shall be less than 0.13 g/m2/day	Visual inspection of dust emissions	N/A
11. Adhere to and maintain an operations and management plan	Plan received	Yes
12. Keep records of complaints	Consent holder liaison	Yes
13. All items blasted in a mobile facility shall be those that cannot be moved to a permanent facility (e.g. bridges)	No mobile blasting this period	N/A
14. Mobile blasting mitigation requirements	No mobile blasting this period	N/A
15. Public notification if dwellings within 200 m of mobile blasting	No mobile blasting this period	N/A
16. Limitation on effects of mobile blasting	No mobile blasting this period	N/A
17. No blasting in coastal marine area.	No mobile blasting this period	N/A
18. Lapse Condition	Consent exercised	N/A
19. Review condition	Next review option June 2020	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

During the year, Energyworks Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

4.3.4. Recommendation from the 2015-2016 Annual Report

This the first report on Energyworks activities and therefore there is no recommendation from the 2015-2016 Annual report.

4.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the Act in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that monitoring programmed for consented activities of Energyworks in the 2017-2018 year continues at a similar level programmed for 2016-2017.

4.4. Recommendation

1. THAT monitoring programmed for consented activities of Energyworks Ltd in the 2017-2018 year continue at a similar level programmed for 2016-2017.

5. Greymouth Facilities Ltd

5.1. Introduction

5.1.1. Process description

Greymouth Facilities Ltd (Greymouth Facilities), operate storage and maintenance yard on Corbett Road, Bell Block. Stormwater generated at the 0.47 ha site is discharged into the NPDC stormwater system, which flows north along Corbett Road then east along Connett Road before discharging to the Waitaha Stream. Small quantities of wash down water were also generated in the cleaning bay, as provided for in the purpose of the consent. This water was treated in an oil separator, and then was also discharged via the stormwater system into the unnamed tributary of the Waitaha Stream, which is now piped (along with the stormwater). The flow from the pipe enters the Waitaha Stream immediately downstream of the Connett Road bridge on the true left bank. It is noted that this wash bay had not been utilised for a number of years.

Figure 3 Aerial view of Greymouth Facilities yard and sampling site

5.1.2. 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.

Greymouth Facilities currently holds water discharge permit **9868-1.1** to cover the discharge of treated stormwater from a yard used for storage and maintenance of hydrocarbon exploration drilling equipment into the Waitaha Stream via the NPDC reticulated stormwater system, and onto and into land from an interceptor. This permit was issued by the Council on 8 May 2014 under Section 87(e) of the RMA. It is due to expire on 1 June 2032.

Consent 9868-1 contains the standard special conditions set out in section 1.2 as well some additional conditions specific to the Greymouth site;

Special conditions 1 and 2 clarify the circumstances under which discharges to land can occur.

Special condition 11 prohibits discharges of contaminants beyond the site boundary.

Special condition 12 limits contaminant concentrations in the soil on site.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

5.2. Results

5.2.1. Inspections

Inspections were carried out on 23 August 2016, 7 November 2016, 20 February 2017, and 11 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, general housekeeping, and operation and maintenance of treatment systems.

On all occasions, the site was found to be in a satisfactory state with no significant issues noted. No sheens or stains were observed in the discharge structures and it was noted that the surface drains were becoming vegetated and this would help improve sediment filtering. Filter socks and silt fences were also noted to be used in the perimeter drains. A small oil leak was noted during one inspection which was addressed by staff at the time.

5.2.2. Results of discharge monitoring

Stormwater from this storage facility exits the site at the north east corner of the property, flows along Corbett Road and then down Connett Road where it discharges into the Waitaha Stream. The discharge is sampled from within the NPDC reticulated network on Corbett Road before it mixes with stormwater from roadside drains or other properties.

The requirements for the discharge are that the suspended solids concentration must not exceed 100 g/m^3, oil and grease concentration must not exceed 15 g/m^3, and pH must lie in the range 6-9. The discharge from this Corbett Road site was sampled on two occasions during the period under review, the results and a summary of all data to date are provided in Table 14.

Table 14 Results of Greymouth Facilities' discharge monitoring (STW001110)

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Unit	mS/m	g/m^3	pH	g/m^3	Deg.C
Minimum	1.4	0.5	6.5	2	10.1
Maximum	22.4	4.9	7.1	210	18.5
Median	5.2	0.2	6.9	18	14.8
Number	12	11	12	12	12
07 Nov 2016	7.1	2.1	6.8	6	14.9
04 Apr 2017	2.3	<0.5	6.8	21	14.2
11 May 2017	3.4	1.1	7.1	41	15.1

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Unit	mS/m	g/m³	pH	g/m³	Deg.C
Consent Limits	-	*15*	*6-9*	*100*	-

All results in the period under review were found to be within consented limits.

5.2.3. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of the Greymouth Facilities site.

5.3. Discussion

5.3.1. Discussion of plant performance

General housekeeping of the site was found to have been good during the year under review, and the site was well managed.

The ring drains were found to have good grass growth and no non-compliant discharge results were recorded. The level of activity at the site was found to be elevated; despite this no performance issues were noted. A small oil leak was noted during one inspection which was addressed by staff at the time.

5.3.2. Environmental effects of exercise of consents

Inspections and catchment monitoring showed no adverse effects upon the receiving waters as a result of the activities of Greymouth Facilities.

5.3.3. Evaluation of performance

A tabular summary of Greymouth Facilities compliance record for the year under review is set out in Table 15.

Table 15 Summary of performance for Greymouth Facilities: Consent 9868-1.1

Purpose: ***To discharge untreated stormwater from a yard used for storage and maintenance of hydrocarbon exploration drilling equipment directly onto and into land, and to discharge treated stormwater into the Waitaha Stream via the NPDC reticulated stormwater system, from an interceptor***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Clarification of circumstances under which discharges to land can occur	Inspection	Yes
2. Records to be kept of discharges to land	No such discharges have occurred	N/A
3. Adoption of best practicable option to minimise adverse effects on the environment	Inspection and liaison with consent holder. Best practicable option re-evaluated during the year under review, with revised treatment system proposed	Yes

Purpose: *To discharge untreated stormwater from a yard used for storage and maintenance of hydrocarbon exploration drilling equipment directly onto and into land, and to discharge treated stormwater into the Waitaha Stream via the NPDC reticulated stormwater system, from an interceptor*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
4. Catchment area limited to 1.065 ha	Inspection	Yes
5. Treatment of all stormwater by 31 October 2015	Inspection and liaison with consent holder	Yes
6. Limits on component concentrations in the discharge	Sampling	Yes
7. Installation and maintenance of discharge sampling point	Inspection and liaison with consent holder	Yes
8. Discharge cannot cause specified adverse effects beyond mixing zone	Visual assessment at inspection and chemical sampling of the stream	Yes
9. Maintenance of contingency plan	Review of Council records and documents submitted	Yes
10. Provision and maintenance of stormwater management plan	Review of Council records and documents submitted	Yes
11. No contaminants beyond the boundary from skimmer pit spillway discharges	Inspection	Yes
12. Soil component concentrations	Visual assessment at inspection	Yes
13. Notification of changes	Review of Council records and liaison with consent holder. Notification of proposed changes to treatment system	Yes
14. Provision for lapse of consent	Consent has been exercised	N/A
15. Optional review provision re environmental effects and/or notification of changes	Next opportunity for review June 2017	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A: Not applicable or not assessed

During the year, Greymouth Facilities Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

5.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT the monitoring programmed for consented activities of Greymouth Facilities in the 2016-2017 year continues at a similar level programmed for 2015-2016.

This recommendation was implemented.

5.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that the monitoring programmed for consented activities of Greymouth Facilities in the 2017-2018 year continues at a similar level programmed for 2016-2017.

A recommendation to this effect is attached to this report.

5.4. Recommendation

1. THAT monitoring programmed for consented activities of Greymouth Facilities Ltd in the 2017-2018 year continues at a similar level programmed in the 2016-2017 period.

6. Intergroup Ltd

6.1. Introduction

6.1.1. Process description

Intergroup Ltd operates a waste disposal company from their site on Hudson Road, Bell Block. The site comprises of 3,903 m^2 of industrial land including buildings and mainly sealed areas. The site is used as a transit depot and temporary storage facility for waste materials collected from throughout the Taranaki region prior to transportation on to an appropriate disposal site.

The majority of the waste collected is waste oil, which is stored in tanks located in a bunded area. An open concrete pit contains a series of separators and is used for the separation of sludge and water from the waste oil. The waste water from this process is directed to trade waste and the oily sludge is taken to an off-site location for weathering/bioremediation prior to final disposal. The waste oil is transported up to a sister company in Auckland, which undertakes the disposal.

Photo 3 Intergroup Ltd oil treatment facility

A second open pit is a drive-in facility for the transfer of domestic septic tank effluent from the trucks to the trade waste system.

Stormwater from the yard area enters the NPDC system and is then discharged to the Waitaha Stream. Potential therefore exists for minor amounts of sewage effluent, petroleum products or other contaminants to enter the stormwater system via drains on site.

6.1.2. Water discharge permit

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.

Intergroup held water discharge permit **4776-2** to cover the discharge of stormwater from a truck depot premises into the Waitaha Stream. This consent was issued under section 87(e) of the RMA and expires on 1 June 2032.

Consent 4776-2 contains the standard special conditions set out in section 1.2.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent(s) which is/are appended to this report.

6.2. Results

6.2.1. Inspections

Inspections were undertaken on 5 August 2016, 7 November 2016, 30 January 2017 and 2 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, loading and unloading, general housekeeping, and the operation and maintenance of treatment systems.

In general the site was found to be in reasonable order, however some minor issues were noted. The inspection on 5 August 2016 noted that holes were developing in the hot mix asphalt in and around the trade waste catchment area. Concerns were raised that this may result in a contamination pathway to soil and groundwater. The inspection of 30 January 2017 noted that this had been rectified with the construction of a concrete pad in the affected area.

6.2.2. Results of discharge monitoring

The main stormwater discharge point at Intergroup Ltd was sampled on four occasions during the period under review, with the results presented in Table 16, along with a summary of historical monitoring results.

Table 16 Results of Intergroup discharge sampling (STW001059)

Parameter	Conductivity	Oil and grease	pH	Suspended solids	Temperature
Unit	**mS/m@20°C**	**g/m³**	**pH**	**g/m³**	**Deg.C**
Minimum	0.5	0.5	6.2	2	9.1
Maximum	47.8	180	8.7	740	22.7
Median	5.3	5.3	7.3	46	14.9
Number	69	65	70	40	67
05 Aug 2016	6.5	5.8	7.1	96	12.8
04 Apr 2017	0.5	2.6	6.8	49	14.1
11 May 2017	3.0	4.8	7.1	22	15.4
Consent Limits	-	*15*	*6-9*	*100*	-

Key: a = no visible sheen or noticeable odour in sample

All results in the period under review were found to be within consented limits.

6.2.3. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of Intergroup Ltd.

6.3. Discussion

6.3.1. Discussion of plant performance

Inspection found that activities at the site were generally well managed. However, some minor issues were noted in regard to the surface integrity of the yard around the trade waste catchment. This was addressed by the consent holder with construction of a concrete pad.

It was also found that the stormwater interceptor was inspected and maintained on a regular basis throughout the year under review.

6.3.2. Environmental effects of exercise of consent

Monitoring and inspections undertaken during the year indicate that the activities at the site were having little, if any, effects on the receiving environment.

6.3.3. Evaluation of performance

A tabular summary of Intergroup Ltd's compliance record for the year under review is set out in Table 17.

Table 17 Summary of performance for Intergroup Ltd: Consent 4776-2

Purpose: ***To discharge treated stormwater from a liquid wastes processing and chemical consolidation facility onto and into land and into the Waitaha Stream via the NPDC reticulated stormwater system (in force from 31 March 2016)***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practicable option	Inspection	Yes
2. Bund for unwashed vessels storage	Inspection	Yes
3. Limit stormwater catchment area	Inspection	Yes
4. Limits on chemical composition of discharge	Sampling and visual assessment at inspection	Yes
5. Discharge cannot cause specified adverse effects beyond mixing zone	Visual assessment at inspection and receiving water sampling	Yes
6. Maintain contingency plan	Consent holder liaison and inspection	Yes
7. Maintain management plan	Consent holder liaison and inspection	Yes
8. Notification of changes in site processes	Consent holder liaison and inspection	N/A
9. Optional review provision re environmental effects	No option to review this period. Next review option in June 2020	N/A

Purpose: *To discharge treated stormwater from a liquid wastes processing and chemical consolidation facility onto and into land and into the Waitaha Stream via the NPDC reticulated stormwater system (in force from 31 March 2016)*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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**

N/A = not applicable

During the year, Intergroup Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

6.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring of the stormwater discharge from the Intergroup Ltd site in the 2015-2016 year continues at the same level as programmed for 2014-2015.

This recommendation was implemented.

6.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that the monitoring programmed for consented activities of Intergroup Ltd in the 2017-2018 year continue at a similar level programmed for 2016-2017.

6.4. Recommendation

1. THAT monitoring programmed for consented activities of Intergroup Ltd in the 2017-2018 year continue at a similar level programmed for 2016-2017.

7. Meredith Metals Ltd

7.1. Introduction

7.1.1. Process description

Meredith Metals Ltd (Meredith Metals) operates a scrap metal and car recycling yard on Catalina Place, Bell Block. Fluids are drained from the cars on a concrete pad prior to being crushed and sold for scrap.

Stormwater from the site discharges at three points, two of which flow into the Waitaha catchment via the NPDC reticulation and the third to the Waiongana catchment.

7.1.2. 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.

Meredith Metals holds water discharge permit **9912-1** to cover the discharge stormwater from scrap metal storage and processing into the Waitaha Stream and into an unnamed tributary of the Mangaoraka Stream via the NPDC reticulated stormwater system. This permit was issued by the Council on 10 July 2014 under Section 87(e) of the RMA.

The consent contains the standard special conditions set out in Section 1.2.

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

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from a trade or industrial premise onto or into land, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Meredith Metals holds water discharge permit **9911-1** to cover the discharge of contaminants onto and into land associated with scrap metal storage and processing. This permit was issued by the Council on 4 June 2014 under Section 87(e) of the RMA.

Special condition 1 requires the consent holder to adopt the best practical option.

Special condition 2 requires that the discharges do not result in the contaminants reaching adjacent property.

Special condition 3 limits effects on groundwater.

Special conditions 4 and 5 limits metals and hydrocarbons in soil.

Special condition 6 deals with notification of changes in site processes.

Special condition 7 and 8 deal with allowable limits of contaminants in soil prior to surrender of the consent.

Special condition 9 is a review condition.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent(s) which is/are appended to this report.

7.2. Results

7.2.1. Inspections

Inspections were carried out on 23 August 2016, 7 November 2016, 31 January 2017, and 2 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, general housekeeping, and the operation and maintenance of treatment systems.

One minor issue noted was the tracking of fine sediment on the processing pad which may contribute to sediment loads in the stormwater, otherwise the discharge appeared clean an clear and drains were free of sheens.

7.2.2. Results of discharge monitoring

The discharge to the Mangaoraka Stream was sampled on two occasions during the period under review, and the results are presented in Table 18.

Table 18 Results of Meredith Metals discharge sampling (STW002088)

Parameter	Unit	07 Nov 2016	04 Apr 2017	11 May 2017	*Consent limit*
Conductivity @ 20°C	mS/m	6.8	1.5	4.7	-
Acid soluble copper	g/m³	0.05	0.03	0.03	-
Dissolved copper	g/m³	0.02	<0.01	0.017	
Acid soluble lead	g/m³	<0.05	<0.05	<0.05	-
Oil and grease	g/m³	11.9	3.8	2.3	*15*
pH	pH	7.7	7.3	7.6	*6.0-9.0*
Suspended solids	g/m³	30	12	7	*100*
Temperature	Deg.C	14.6	14.0	15.6	-
Turbidity	NTU	-	12	11	-
Acid soluble zinc	g/m³	0.250	0.152	0.150	-
Dissolved zinc	g/m³	0.071	0.080	0.104	-

All samples were in compliance with consent conditions in regard to suspended solids, oil and grease and pH.

The discharges to the Waitaha Stream were visited for sampling on two occasions during the period under review. These results are given in Table 19 and Table 20.

Table 19 Results of Meredith Metals discharge sampling (STW001141)

Parameter	Unit	07 Nov 2016	04 Apr 2017	11 May 2017	*Consent limit*
Conductivity @ 20°C	mS/m	9.3	3.7	6.0	-
Acid soluble copper	g/m³	0.01	<0.01	0.02	-
Dissolved copper	g/m³	0.01	<0.01	0.011	
Acid soluble lead	g/m³	<0.05	<0.05	<0.05	-
Oil and Grease	g/m³	1.5	0.6	1.2	*15*
pH	pH	7.6	7.3	7.5	*6.0-9.0*
Suspended solids	g/m³	8	18	27	*100*
Temperature	Deg.C	14.2	14.2	15.7	-
Turbidity	NTU	-	26	65	-

Parameter	Unit	07 Nov 2016	04 Apr 2017	11 May 2017	*Consent limit*
Acid soluble zinc	g/m³	0.483	0.197	0.332	-
Dissolved zinc	g/m³	0.415	0.146	0.199	-

Key: Results in bold within a table indicate that a consent limit for a particular parameter has been exceeded
b = no discharge at time of sampling

Table 20 Results of Meredith Metals discharge sampling (STW001142)

Parameter	Unit	07 Nov 2016	04 Apr 2017	11 May 2017	*Consent limit*
Conductivity @ 20°C	mS/m	13.2	4.6	9.9	-
Acid soluble copper	g/m³	0.02	<0.01	0.04	-
Dissolved copper	g/m³	0.01	<0.01	0.010	
Lead acid soluble	g/m³	<0.05	<0.05	0.5	-
Oil and Grease	g/m³	1.1	0.8	1.4	*15*
pH	pH	7.5	7.3	7.4	*6.0-9.0*
Suspended solids	g/m³	6	27	37	*100*
Temperature	Deg.C	14.2	14.2	15.5	-
Turbidity	NTU	-	42	72	-
Acid soluble zinc	g/m³	0.460	0.432	1.10	-
Dissolved zinc	g/m³	0.387	0.257	0.595	-

During the monitoring period all parameters in the discharges sampled were within consented limits. Elevations in zinc were noted in the discharges from the main scrap storage area, however the results for zinc in receiving waters below the final discharge from this site was below the USEPA chronic and exposure limit of 0.058 g/m³.

7.2.3. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to record an incident in respect of Meredith Metals.

7.3. Discussion

7.3.1. Discussion of plant performance

Inspection found that activities at the site were generally well managed. A stormwater management plan and contingency plan is in place for the site.

7.3.2. Environmental effects of exercise of consent

Monitoring and inspections undertaken during the year indicate that the activities were not having a significant adverse effect on the Waitaha Stream. Whilst elevation in zinc in the discharges was noted, the concentration found in the receiving water below the discharge point were found to be under the 0.064 g/m³ USEPA guideline for acute exposure.

7.3.3. Evaluation of performance

A tabular summary of Meredith's compliance record for the year under review is set out in Table 21 and Table 22.

Table 21 Summary of performance for Meredith Metals: Consent 9912-1

Purpose: ***To discharge stormwater from scrap metal storage and processing into the Waitaha Stream and into an unnamed tributary of the Mangaoraka Stream via the NPDC reticulated stormwater system***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Inspection	Yes
2. Stormwater catchment not to exceed 1.7 Ha	Inspection	Yes
3. Discharge quality standards	Sampling	Yes
4. Receiving quality standards	Sampling	Yes
5. Contingency Planning	Plan received	Yes
6. Stormwater management planning	Plan received	Yes
7. Notification of changes on site	No changes made	N/A
8. Lapse condition	Consent exercised	N/A
9. Review condition	Review options in June 2020 and June 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

Table 22 Summary of performance for Meredith Metals: Consent 9911-1

Purpose: *To discharge contaminants onto and into land associated with scrap metal storage and processing*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Inspection	Yes
2. Discharge not effect adjacent properties	Inspection	Yes
3. Groundwater not to be affected	Assessed via periodic soil sampling - not assessed this period	N/A
4. Metal limits in soils	Assessed via periodic soil sampling - not assessed this period	N/A
5. Hydrocarbon limits in soils	Assessed via periodic soil sampling - not assessed this period	N/A
6. Notification of changes on site	No changes made	N/A
7. Pre-surrender contaminant limits in soils	N/A	N/A
8. Surrender of consent not to occur without compliance with condition seven	N/A	N/A
9. Review condition	Review options in June 2020 and June 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable

During the year, Meredith Metals Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

7.3.4. Recommendation from the 2015-2016 Annual Report

The 2015-2016 Annual report recommended that;

1. THAT monitoring programmed for consented activities of Meredith Metals Ltd in the 2016-2017 year continues at a similar level programmed for 2015-2016.

This recommendation was implemented

7.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the Act in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that monitoring programmed for consented activities of Meredith Metals Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

7.4. Recommendation

1. THAT monitoring programmed for consented activities of Meredith Metals Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

8. New Plymouth District Council

8.1. Introduction

8.1.1. Process description

The New Plymouth District Council (NPDC) stormwater system carries discharges from the roads and industrial subdivisions in the Corbett Road, Connett Road and De Havilland Drive areas to the Waitaha Stream.

Figure4 NPDC stormwater catchment, reticulation, and discharge points

The consented discharge points were on the eastern side of the stream at the end of Connett Road (consent 0608) and previously into an unnamed tributary/open drain through farm land on the western side of the stream (consent 0609). However, Connett Road has been extended to meet at the Waitaha Stream, and the discharge point for consent 0609-2 is now just below the culvert where Connett Road crosses the stream.

During the monitoring period consent 0609-2 was renewed and the renewed consent (0609-3) was issued to cover the entire industrial stormwater catchment, thus superseding consent 0608-3.

8.1.2. Water discharge permit

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.

NPDC held water discharge permit **0608-3** to cover the discharge of stormwater from the Connett Road industrial subdivision into the Waitaha Stream. This permit was originally issued on 20 November 1979 as a water right pursuant to Section 21(3) of the *Soil and Water Conservation Act 1967*. Permit 0608-2 was issued by the Council on 2 December 1992 under Section 87(e) of the RMA. It expired on 1 June 2008. The renewed consent, **0608-3,** was issued to NPDC on 10 June 2008 and is due to expire on 1 June 2026. During the period under review this consent was superseded by consent 0609-3 and was surrendered.

There are five special conditions attached to this consent:

Special condition 1 requires the adoption of the best practicable option to prevent or minimise effects on the environment.

Special conditions 2 and 3 control erosion and prohibit a number of specific effects on the water quality of the stream beyond a 10 metre mix zone.

Special conditions 4 and 5 contain standard provisions for the lapsing of the consent and review of the consent conditions.

NPDC also held water discharge permit **0609-2** to cover the discharge of up to 1,200 L/s of stormwater from an industrial subdivision (on Corbett Road) into an unnamed tributary of the Waitaha Stream. This permit was originally issued on 20 November 1979 as a water right pursuant to Section 21(3) of the *Soil and Water Conservation Act 1967*. The current permit was issued by the Council on 6 December 1995 under Section 87(e) of the RMA. It expired on 1 June 2014. The application to renew **0609-2** was lodged more than three months before expiry, therefore as per Section 124 of the RMA, the Council has exercised its discretion, allowing the activity to continue under the conditions of the expired consent until a decision is made on the renewal.

An application to renew this consent was received by Council on 12 December 2013. The application covers the discharge of stormwater from multiple outlets in the industrial area of the Waitaha catchment, with the intent being that consent 0608 will be surrendered once the renewal of this consent has been granted.

Special conditions 1 and 2 placed limits on the quality of the discharge, and limit the effects of the discharge on receiving water quality beyond a 10 metre mix zone.

Special condition 3 contained review provisions.

Consent 0609-2 was renewed during the monitoring period. NPDC now hold consent 0609-3 to cover the discharge of stormwater from the entire Waitaha industrial area. It was issued on 22 March 2017 under Section 87(e) of the RMA and it expires on 1 June 2032.

There are seven special conditions attached to this consent:

Special condition 1 requires the adoption of the best practicable option to prevent or minimise effects on the environment.

Special condition 2 specifies the area for which stormwater is permitted to be discharged.

Special conditions 3 and 4 control erosion and prohibit a number of specific effects on the water quality of the stream beyond a 10 metre mix zone.

Special condition 5 prohibits any increase in flooding of adjacent land.

Special condition 6 requires the consent to provide a catchment management plan.

Special condition 7 is a review condition.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consents which are appended to this report.

8.2. Results

8.2.1. Inspections

Specific inspections are undertaken in relation to the NPDC consents, and any issues found whilst the inspecting officer was in the area are also noted on file.

Inspections were carried out on 4 August 2016, 7 November 2016, 30 January 2017 and 2 May 2017. Inspections focused on the receiving environment, evidence of staining or sheens on discharge structures and the quality of the discharge.

There were generally found to be no adverse effects occurring. In the inspection of 7 November 2016 noted a sheen in the mixing zone, however no effects were noted beyond the mixing zone.

8.2.2. Results of discharge monitoring

The Connett Road stormwater drains receive stormwater from Connett Road, Corbett Road and from a number of adjacent industries. The flow that discharges from the stormwater outlet on the eastern bank of the Waitaha Stream includes discharges from C&O Concrete and Intergroup. The flow that discharges from the outlet on the western bank of the Waitaha Stream includes the discharge from Greymouth Facilities. The discharges from both the Connett Road eastern and western drains to the Waitaha Stream were sampled on two occasions, with the results presented in Table 23 and Table 24.

There are no numerical contaminant limits given on consent 0608, however the discharge quality at site STW001061 can be compared to the standards given for permitted activities in Rule 23 of the Regional Freshwater Plan (Appendix III), which have also been incorporated as limits on the consents issued for industrial sites in the catchment discharging via this outlet. Consent 0609-2, which is was in force until 22 March 2017 had standards of suspended solids 100 g/m^3, a pH of between six and nine and oil and grease of less than 15 g/m^3. The renewed consent, does not have discharge standards which brings it into line with other existing NPDC industrial catchment consents.

Table 23 Connett Rd eastern drain sampling results (site STW001061)

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Units	mS/m@20C	g/m^3	pH	g/m^3	Deg.C
Minimum	3.4	0.5	6.4	2	11.5
Maximum	51.1	230	10.3	680	20.2
Median	8.8	2.4	7.1	68	15

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Units	**mS/m@20C**	**g/m³**	**pH**	**g/m³**	**Deg.C**
Number	45	40	45	42	42
15 Sep 2016	9.8	0.6	6.9	**120**	14.8
07 Nov 2016	3.4	1.5	7.4	**130**	14.9
04 Apr 2017	5.8	b	7.1	62	14.1
RFWP guideline	-	*15*	*6-9*	*100*	-

Table 24 Connett Rd, western drain sampling results (site STW001112)

Parameter	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature
Units	**mS/m@20C**	**g/m³**	**pH**	**g/m³**	**Deg.C**
Minimum	1.6	1	6.4	2	11.6
Maximum	18.3	102	9.1	890	20.9
Median	9.6	2	6.8	98	15
Number	20	15	20	20	19
15 Sep 2016	9.5	1.2	6.8	**130**	14.9
07 Nov 2016	3.6	1.6	7.6	**130**	15.0
04 Apr 2017	1.6	a	7.1	99	14.0
*Consent limit**	-	*15*	*6-8.5*	*100*	-

Key: Results in bold within a table indicate that a RFWP guideline for a particular parameter has been exceeded
a = no visible sheen or noticeable odour in sample *Consent 0609-2 in force until 22 March 2017

Both discharges were found to have an elevated level of suspended solids on 15 September 2016 and 7 November 2017. It is noted that subsequent results from both sites were found to have dropped back to below the RFWP guideline and consent limits for suspended solids.

8.2.3. Investigations, interventions, and incidents

In the period under review, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of the stormwater discharges of NPDC in the Waitaha catchment.

8.2.4. Discussion of plant performance

It is recognised that NPDC has limited control over the actions of third parties making inappropriate discharges into the stormwater network. During the year under review there were unsourced and/or unauthorised discharges via the NPDC reticulated stormwater network from each of the discharge points on two of the monitoring occasions.

In regards to the general maintenance and operation of the stormwater network, NPDC performed satisfactorily.

8.2.5. Environmental effects of exercise of consents

Inspections and sampling of the Waitaha Stream below the mixing zone found that there was little, if any, adverse effects as a result discharges from the stormwater system, or from any maintenance undertaken by NPDC of the outlets themselves.

8.2.6. Evaluation of performance

A tabular summary of NPDC's compliance record for the year under review is set out in Table 25 and

Table 26.

Table 25 Summary of performance for NPDC: Consent 0608-3 (to 22 March 2017)

Purpose: ***To discharge stormwater from the Connett Road industrial subdivision into the Waitaha Stream (true right bank - east)***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adoption of best practicable option to minimise effects	Inspection	Yes
2. Mitigation of erosion where possible	Inspection. No erosion issues found	Yes
3. Discharge cannot cause specified adverse effects beyond mixing zone	Visual assessment at inspection, and receiving water sampling	Yes
4. Provision for consent to lapse if not exercised	Consent exercised	N/A
5. Provision for review of consent conditions	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **N/A**

N/A = not applicable

Table 26 Summary of performance for NPDC: Consent 0609-2 (to 22 March 2017)

Purpose: ***To discharge stormwater from the Connett Road industrial subdivision into the Waitaha Stream (true left bank - west)***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Limits on chemical composition of discharge	Sampling	Two suspended solid exceedances due to unsourced unauthorised discharges
2. Discharge cannot cause specified adverse effects beyond mixing zone	Visual assessment at inspection and receiving water sampling	Yes
3. Optional review provision re environmental effects	Option for review in June 2008 not exercised. No further review provisions prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Good** **N/A**

N/A = not applicable

Table 27 Summary of performance for NPDC: Consent 0609-3 (from March 22 2017)

Purpose: ***To discharge stormwater from industrial land in the Waitaha catchment via multiple outfalls between De Havilland Drive and State Highway 3 into the Waitaha Stream and various unnamed tributaries of the Waitaha Stream.***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Inspection/ liaison with consent holder	Yes
2. Size and location of catchment	Inspection/ liaison with consent holder	Yes
3. Limits effects in receiving water	Inspection/sampling	Yes
4. Mitigation of erosion	Inspection	Yes
5. Not to cause increase in depth or frequency of flooding	Inspection/ Review of hydrological data	Yes
6. Provision of a management plan by 2020	Not yet due	N/A
7. Review	Options to review in June 2018, 2020, 2023, 2026 and 2029.	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **N/A**

During the year, NPDC demonstrated a good level of environmental performance. Although the suspended solids limit on the consent was exceeded on one occasion, there were no significant increases of stream turbidity recorded and subsequent sampling returned compliant results.

8.2.7. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of NPDC in this catchment in the 2016-2017 year continues at a similar level programmed for 2015-2016.

This recommendation was implemented.

8.2.8. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that monitoring programmed for consented activities of NPDC in the 2017-2018 year continues at a similar level programmed for 2016-2017.

8.3. Recommendation

1. THAT monitoring programmed for consented activities of NPDC in the 2017-2018 year continues at a similar level programmed for 2016-2017.

9. Symons Property Development Ltd

9.1. Introduction

9.1.1. Process description

Symons Property Developments Ltd (Symons Property) holds a consent to discharge stormwater from their truck depot and pipe washing facility on Connett Road East, Bell Block. The site was recently developed, and formal drainage was being established. The companies operating from the site are: Symons Transport Ltd, who operate road tankers that are used to transport bulk liquids between processing plants; and Symons Energy Ltd, who provide support services to the oil and gas industry including transportation and cleaning of drilling pipes, and storage and distribution of products such as those used in drilling mud. Collectively, these companies are known as the Symons Group.

The Symons Property site has three main sections; the upper yard is occupied by Symons Transport and is used for truck washing and truck storage. The middle yard has amenities block, and administration building and pipe storage areas. The lower yard is used for pipe storage and pipe preparation /washing.

Figure 5 Symons Property's site layout

9.1.2. Water discharge permit

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.

Symons Property Ltd holds water discharge permit **7805-1** to discharge stormwater from a truck depot and pipe cleaning facility into the Waitaha Stream. This permit was issued by the Council on 9 May 2011 under Section 87(e) of the RMA. It is due to expire on 1 June 2026.

This consent has the standard special conditions as set out in section 1.2. It also has four conditions which are specific to the site.

Special condition 3 requires stormwater for one section of the site be treated to certain specifications.

Special condition 4 sets out requirements for hazardous substances storage.

Special condition 10 requires the consent holder to review and update the management and contingency plans prior to making any significant changes at the site.

Special condition 11 requires that the consent holder make any data gathered on stormwater detention tanks at site available to Council.

The permit is attached to this report in Appendix I.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

9.2. Results

9.2.1. Inspections

Inspections were undertaken on 5 August 2016, 28 November 2016, 28 February 2017 and 11 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, site operations, general housekeeping, and the operation and maintenance of treatment systems.

The site was generally found to be clean, and well managed. No spills were noted and grass was observed to be growing in the ring drain. The discharge structure was inspected and found to be free of stains and sheens. Samples were taken during the inspections of 5 August 2016 and 11 May 2017.

9.2.2. Results of discharge monitoring

The stormwater from the central section of the site combines with the stormwater from the eastern section of the site, after the eastern stormwater has passed through the detention tanks. This combined flow is sampled at site STW002083 (Figure 6).

Figure 6 Symons Property Developments Ltd property and monitoring site locations

Three discharge samples were obtained during the year under review. The results of this sampling are presented in Table 28, along with the limits imposed on the consent and a summary of all data.

Table 28 Results of Symons Property discharge monitoring (STW002083)

Parameter	Conductivity	Oil and grease	pH	Suspended solids	Temperature	Turbidity
Units	**mS/m@20°C**	**g/m³**	**pH**	**g/m³**	**Deg.C**	**NTU**
Minimum	2.6	0.5	5.8	2	10.5	0.66
Maximum	17.1	2.3	7.7	290	18.8	740
Median	8.7	0.2	7.2	34	14.3	54
Number	12	10	12	12	11	11
05 Aug 2016	8.5	2.3	7.3	64	11.2	97
04 Apr 2017	2.6	<0.5	7.2	19	14.2	17
11 May 2017	5.3	<0.5	7.6	**290**	15.2	420
Consent limits	-	*15*	*6-9*	*100*	-	-

Key: Results in bold within a table indicate that a consent limit for a particular parameter has been exceeded

With the exception of one suspended solid result, all results collected during the period under review were within consented limits. As a result of the exceedance an incident was raised (see Section 9.2.3).

9.2.3. Investigations, interventions, and incidents

In the period under review, it was necessary for the Council to record incidents in respect of the Symons Property's stormwater discharges.

18 May 2017

Following analysis of stormwater samples, taken during routine compliance monitoring (on 11 May 2017), it was found that there was an exceedance in allowable suspended solid limits at a transport yard at Connett Road, Bell Block.

A letter requiring explanation was issued and the reply received was accepted by the Council. Investigation found that silt and sediment from the energy services yard was being entrained within the stormwater system. Positive changes were undertaken on site by Symons Property to address the issues including the installation of further silt and sediment controls. Council will monitor the effectiveness of the modifications during further routine monitoring.

9.3. Discussion

9.3.1. Discussion of plant performance

On the whole, general housekeeping of the site was found to have been good during the year under review, and the site was generally well managed. One discharge sample was found to be non compliant in regards to suspended solids, however this was addressed by Symons Property in positive and timely manner. Updated management and contingency plans were provided for this site in August 2016.

9.3.2. Environmental effects of exercise of consent

In relation to the exercise of Symons Property's stormwater consent and general management of activities in the stormwater catchment, no significant adverse effects were noted during the inspections of the site, or sampling of the stream. No significant rises in turbidity were noted in the receiving waters as result of the discharges from this site.

9.3.3. Evaluation of performance

A tabular summary of Symons Property's compliance record for the year under review is set out in Table 29.

Table 29 Summary of performance for Symons Property; Consent 7805-1

Purpose: ***To discharge of stormwater into the Waitaha Stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practicable option	Inspection and programme supervision	No- improved silt control required
2. Catchment not to exceed 3.14 ha	Inspection	Yes
3. Stormwater from Lot 24 DP376382 to be treated	Inspection	Yes
4. Hazardous substance to be stored correctly	Inspection	Yes
5. Discharge parameters not to exceed certain limits	Sampling	One non compliant result

Purpose: *To discharge of stormwater into the Waitaha Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
6. Discharge not to give rise to certain effects in receiving waters	Observations at inspection and during sampling	Yes
7. Prepare and maintain a contingency plan	Review of Council records	Plan provided
8. Prepare and maintain a stormwater monitoring plan	Review of Council records	Plan provided
9. Notify Council of changes at the site	Observations at inspection and review of Council records	Council informed of changes during inspections and liaison
10. Review and update plans to suit any changes at the site	Observations at inspection and review of Council records. No changes made	Plan provided, update required
11. Provide Council data on stormwater tank investigations	Investigation is optional and not yet undertaken	N/A
12. Lapse conditions	N/A	N/A
13. Review condition	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Good** **Good**

N/A = not applicable or not assessed

During the year, in regard to stormwater discharges, Symons Property Development Ltd demonstrated a good level of environmental performance and a good level of administrative performance as defined in Section 1.1.5.

9.3.4. Recommendations from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for the consented activities of Symons Property Development Ltd in the 2016-2017 year continues at the same level as programmed for 2015-2016.

This recommendation was implemented.

9.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under

the RMA, the obligations of the RMA in terms of monitoring discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki discharging to the environment.

It is proposed that monitoring programmed for consented activities of Symons Property Development Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

9.4. Recommendation

1. THAT monitoring programmed for consented activities of Symons Property Development Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

10. Taranaki Sawmills Ltd

10.1. Introduction

10.1.1. Process description

Photo 4 Taranaki Sawmills site

10.1.1.1. Stormwater

Taranaki Sawmills Ltd's (Taranaki Sawmills) sawmilling and timber processing site is situated on the banks of the Waitaha Stream. The majority of the site is gravelled or undeveloped. Stormwater generally soaks to ground; however, overland flow occurs during heavy rain. The site has a stormwater drainage system where stormwater is channelled and contoured into underground stormwater pipes and open stormwater drains (Figure 7).

Stormwater near the southern boundary of the site flows into and over land and into an unnamed tributary of the Waitaha Stream. Stormwater from neighbouring sites also flows into this tributary.

The area between the administration building and sorting table is contoured so that stormwater flows into an underground stormwater pipe system. The underground system has an outlet into the top of a second open stormwater wetland drain in the headwaters of unnamed tributary 2 of the Waitaha Stream. This tributary is approximately 100 m long and drains from approximately the middle of the site in a north-westerly direction.

Stormwater from the northern area of the site flows over and into land and into unnamed tributary 3. The third tributary is approximately 100 m long and drains in a westerly direction.

Car parks and vehicle working areas are mostly unsealed, so that any fuel leaks or spillages will soak into the ground rather than run into the stormwater system. To reduce yard dust problems, the site is routinely sprayed with water, and historically, oil was placed on the access tracks.

10.1.1.2. Air discharges

Sawmilling activities at the site generate wood waste. The sawdust, wood shaving, and wood chip components of this waste are reused on site for generating energy for the timber drying kilns. No timber tanalising occurs on site, so no tanalised timber wastes are incinerated. Incineration occurs in either an open fire-pit, or in boilers.

The open fire-pit is approximately 10 m wide x 10 m long x 2 m deep. The material incinerated in the open pit is dried untreated timber off-cuts, and occasionally other non-toxic materials such as paper, cardboard, and timber strapping.

There are boilers operated on the site, which run 24 hours a day, seven days a week, with emissions discharged via stacks. Emissions from the original 2 megawatt (MW) Entec Boiler discharge through a 12 m tall stack, which achieves dust/smoke emissions containing less than 500 mg/m^3 of particulate. The second and third boilers are 4 MW Vekos Boilers, and the single stack for these boilers is 24 m high.

There are a number of potential contaminants which could be discharged into the air from the combustion of wood products. Modelling of the stack emissions undertaken by Taranaki Sawmill's has shown that contaminant concentrations at ground level are well below guideline levels

The potential contaminant and effects area;

- Visibility and visual/aesthetic impacts
- Nitrogen oxides
- Dust
- Odour
- Sulphur dioxide
- Carbon monoxide (CO)
- Particulates

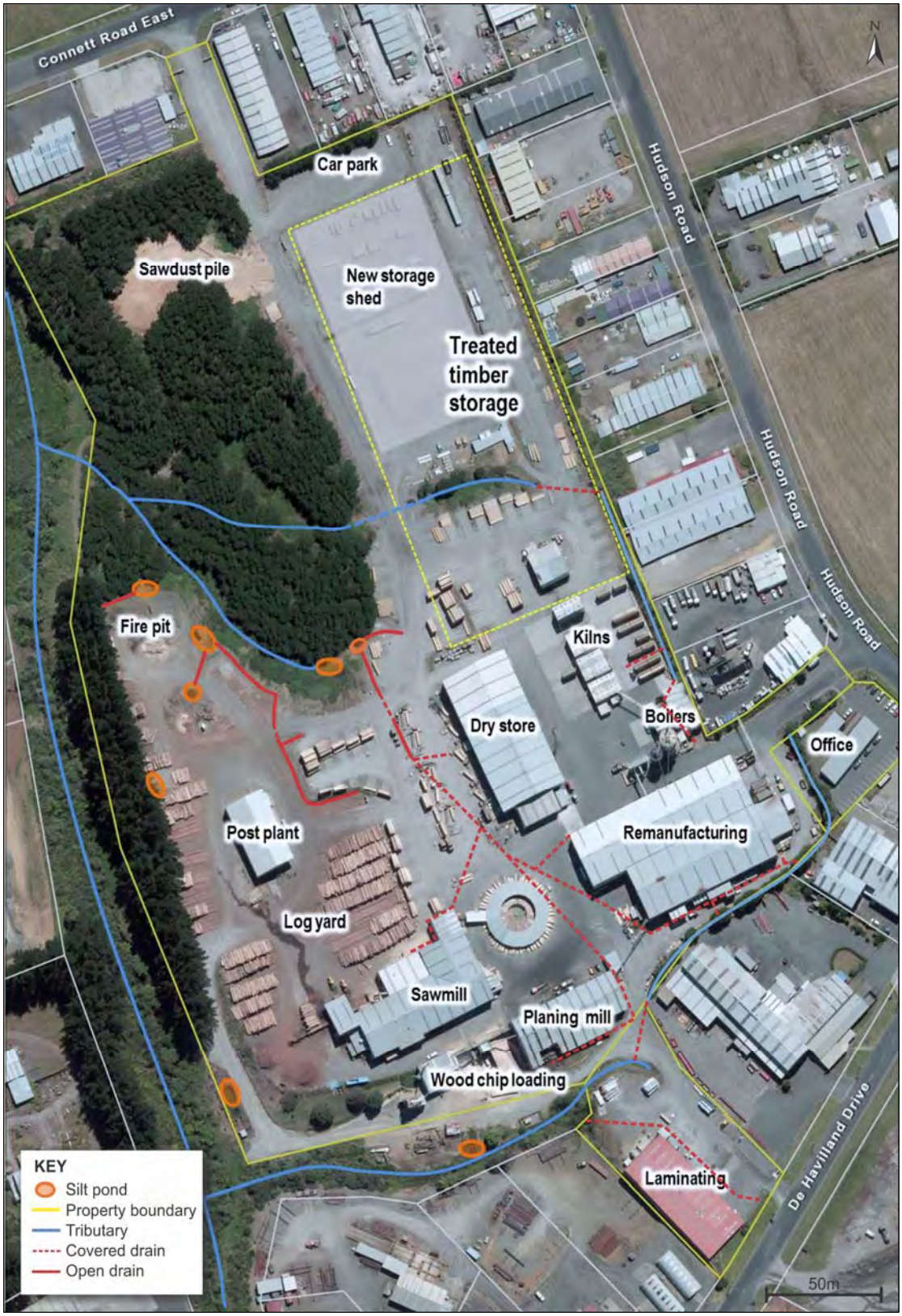

Figure 7 Taranaki Sawmills site drainage systems

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10.1.2. Water discharge permit

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.

Taranaki Sawmills holds water discharge permit **2333-4** to cover the discharge of stormwater from a sawmill site onto and into land and into the Waitaha Stream. This permit was issued by the Council on 11 November 1987 as a water right pursuant to section 21(3) of the *Water and Soil Conservation Act 1967*. A renewed permit was issued by the Council on 7 February 1996 under Section 87(e) of the RMA, which was renewed again on 8 December 2000 and 20 May 2015. The current consent also allows for the temporary discharge of kiln condensate to land and into the Waitaha Stream.

It contains the standard consent conditions and one additional consent condition specific to the site.

Special condition 3 requires that kiln condensate and associated contaminants shall not be included in the discharge after 31 October 2016.

A copy of the consent is attached to this report in Appendix 1.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

10.1.3. Air discharge permit

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.

Taranaki Sawmills holds air discharge permit **4096-2** to cover discharge of emissions into the air from sawmilling and untreated timber processing and associated activities including the combustion of wood and/or coal within boilers and wastes in an open fire-pit. The Council originally issued this permit on 29 July 1992 as a resource consent under Section 87(e) of the RMA. The consent was varied on 14 September 1993 to allow for a second boiler, and was renewed removing the limit on the number of boilers on 27 January 2004. It is due to expire on 1 June 2032.

Special conditions 1 and 2 require the consent holder to adopt the best practicable option to prevent or minimise effects and to minimise emissions and their effects by selection, operation and management of the best practicable equipment and processes.

Special conditions 3 and 4 require that the activity is undertaken in accordance with documentation provided in support of the two renewals of this consent.

Special condition 5 requires consultation with the Council prior to significant changes to the emissions from the site.

Special conditions 6 and 7 contain notification and record keeping requirements that relate to the use of coal as a fuel for the boilers.

Special conditions 8 and 9 relate to the provision and adherence to a management plan for the combustion of materials in the fire-pit.

Special condition 10 requires the consent holder to keep an incident log.

Special condition 11 prohibits significant adverse ecological effects.

Special conditions 12 to 14 deal with odour and dust considerations.

Special conditions 15 and 16 impose limits on the ground level concentration of sulphur dioxide and particulate matter of less than 10 microns diameter in line with the National Environmental Standard.

Special condition 17 prohibits noxious or toxic levels of contaminants at or beyond the site boundary.

Special condition 18 imposes limits on the emission of dark smoke from the boiler stacks.

Special condition 19 specifies a minimum height for stack discharges.

Special condition 20 gives the circumstances under which the consent may lapse, and special condition 21 contains provision for review of the conditions on the consent.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

10.2. Results

10.2.1. Inspections

Inspections were undertaken on 1 September 2016, 7 November 2016, 21 February 2017, and 11 May 2017.

The inspections focussed on the maintenance of the treatment systems, condition of the discharges, general housekeeping, the fire pit, and any evidence of spills. Air emissions were also measured using hand held equipment on two occasions.

Generally it was found that the fire pit was well maintained and that the maintenance of silt control measures had improved. Ambient dust measurements taken on 1 September 2016 and 21 February 2017 found that dust levels were in acceptable ranges.

During the inspection of 21 February it was noted that sediment control may be an issue due to the capacity of treatment systems, high sediment producing areas, and the large volume of clean roof water being passed through the sediment treatment systems. During the inspection of 11 May 2017 it was requested that the consent holder remove wood chips from a drain to ensure they were not entrained in the discharge.

10.2.2. Results of stormwater discharge monitoring

The stormwater discharge from Taranaki Sawmills is sampled from an unnamed tributary of the Waitaha Stream (WTH000059). The headwaters sampling site (WTH000051) is situated in the middle of the sawmill site and emanates from a stormwater drain adjacent to the dry store. This stormwater system drains the sawmill site from between the administration building and the sorting table. However, other inflows to the system have been identified. The monitoring locations are shown in Figure 8. Discharge sampling was undertaken at two sites (WTH000051 and WTH00059) on up to three occasions, the results of which are presented in Table 30 and Table 31.

Observations and results of the sampling in the Waitaha Stream upstream and downstream of the confluence of the tributary that are relevant to the monitoring of the Taranaki Sawmills site are summarised and discussed in section 10.3.2, with the full receiving water monitoring results presented and discussed in section 16.

The special conditions of resource consent 2333 require that the oil and grease and suspended solids concentrations in the discharge must not exceed 15 g/m^3 and 100 g/m^3 respectively, and that the pH shall lie in the range 6.0-9.0. The consent also specifies that BOD in the discharge shall not exceed 10 g/m^3.

For the purpose of assessing compliance against these limits, Council has previously designated the tributary, just upstream of the confluence with the Waitaha Stream, as the discharge point (WTH000059).

Table 30 Results of sampling at Taranaki Sawmills – tributary headwaters (WTH000051)

Parameter	BOD	Boron	Conductivity @ 20°C	Oil and grease	pH	Suspended solids	Temperature	Turbidity
Units	g/m³	g/m³	mS/m@20C	g/m³	pH	g/m³	Deg.C	NTU
Minimum	-	0.02	2.9	<0.5	6.3	8	11	13
Maximum	-	0.8	25.4	530	7.7	3600	22.5	1400
Median	-	0.15	11.8	1.4	6.8	190	15	185
Number	1	37	36	29	37	22	34	22
15 Sep 2016	6.7	0.15	11.0	a	6.6	240	15.1	340
04 Apr 2017	-	0.14	6.6	a	6.7	100	14.9	130

Key: a = odour or no visible sheen detected

Table 31 Results of stormwater sampling at Taranaki Sawmills – tributary upstream of confluence with Waitaha Stream (WTH000059)

Parameter	BODCF	BOD	Boron	Conductivity	Oil and grease	pH	Suspended solids	Temp.	Turbidity
Unit	g/m³	g/m³	g/m³	mS/m	g/m³	pH	g/m³	Deg.C	NTU
Minimum	-	1.8	0.04	3.8	0.5	5.8	10	12.1	14
Maximum	-	21	1.1	25.8	110	7.4	1600	21.5	1300
Median	-	9.2	0.23	14.9	0.6	6.6	190	15.5	190
Number	2	14	47	49	36	50	34	49	31
19 Aug 2015	-	13	0.22	14.6	a	6.8	**250**	15.5	360
15 Sep 2016	-	3.7	0.15	10.5	a	7.4	**180**	15.9	260
07 Nov 2016	6.6	9.2	0.28	11.8	a	7.0	100	15.5	180
04 Apr 2017		4.8	0.14	8.0	a	6.6	**230**	16.0	360
Consent limit	-	*10*	-	-	*15*	*6-9*	*100*	-	-

Key: Results in bold within a table indicate that a consent limit for a particular parameter has been exceeded

a = odour or no visible sheen detected

During the monitoring period there were three samples at site WTH000059 that did not comply with the consented limit of 100 g/m^3 suspended solids. Is noted that this has been a persistent issue at this site over the past three years. These non-compliances are discussed in more detail in Section 10.2.4.

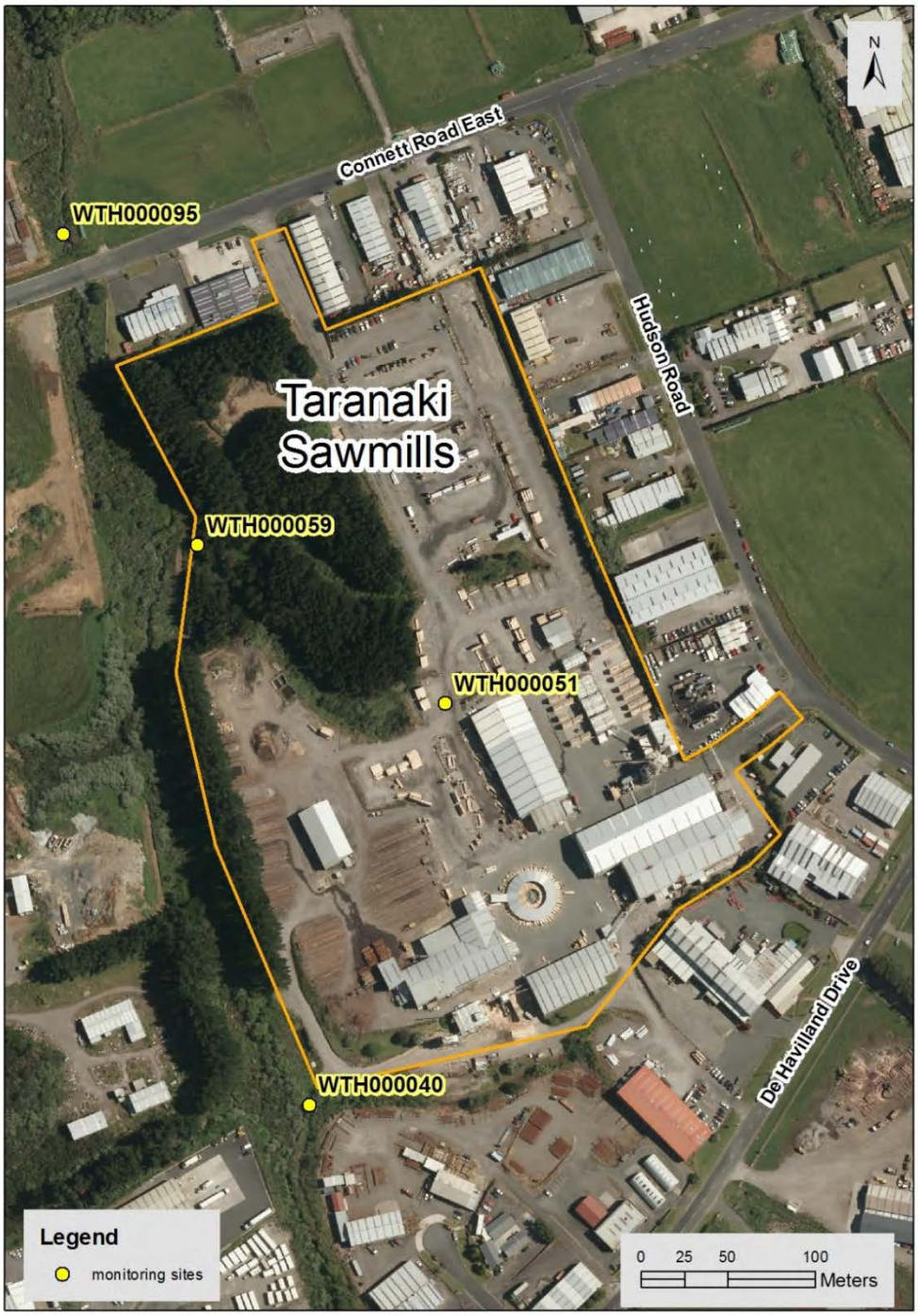

Figure 8 Taranaki Sawmills Ltd stormwater and receiving water monitoring sites

10.2.3. Air discharge monitoring

10.2.3.1. Inspections

Air inspections were carried out in conjunction with general site inspections. During each inspection a Dust-Trak dust monitor was used to measure dust both up and downwind of the site. During the monitoring year no non-compliant dust readings were recorded.

Each site inspection also included an inspection of the fire pit and during the year it was found that improvements had been made to the pit and that no issues in regard to smoke discharges were noted.

10.2.3.2. Results of receiving environment monitoring

Particulates can derive from many sources, including motor vehicles (especially diesels), solid and oil-burning processes for industry and power generation, incineration and waste burning, photochemical processes, and natural sources such as pollen, abrasion and sea spray.

PM_{10} particles are linked to adverse health effects that arise primarily from the ability of particles of this size to penetrate the defences of the human body and enter deep into the lungs. Health effects from inhaling PM_{10} include increased mortality and the aggravation of existing respiratory and cardiovascular conditions such as asthma and chronic pulmonary diseases.

Taranaki Sawmill's air discharge consent limits the maximum ground level concentration of particulate of effective diameter of less than 10 micron (PM_{10}) so that it does not exceed 50 µg/m^3 (one hour average exposure), on more than five occasions per year cumulative across any and all monitoring sites, and does not exceed 120 µg/m^3 (one hour average exposure) at any time, at or beyond the boundary of the site.

In addition to this, in September 2004 the Ministry for the Environment introduced National Environmental Standards (NES) relating to certain air pollutants. The NES for PM_{10} is 50 µg/m^3 (24-hour average). This standard must also be met irrespective of any conditions on the consent holders.

Continuous ambient PM_{10} monitoring was conducted in the vicinity of the Taranaki Sawmills site from 6 April 2017 at 18:28 to 8 April 2017 at 00:36, one day after any significant rainfall. The PM_{10} monitor was located on the north boundary of the site. Fifteen minute wind direct data obtained from the New Plymouth waste water treatment plant weather station is given in Figure 10. The wind direction and strength, is presented in Figure 11. The PM_{10} data expressed in terms of a one hour average, as per Taranaki Sawmill's consent condition, is shown in Figure 12, and the 24 hour average PM_{10} is shown in Figure 13. The PM_{10} monitor was downwind of the activities occurring on the Taranaki Sawmills site for close to 100% of the time it was deployed. The results show that neither the consent limit of 120 µg/m^3 (1 hour average), nor the NES standard of 50 µg/m^3 (24 hour average) were exceeded during the monitoring period.

Figure 9 Location of air monitoring site (Taranaki Sawmills)

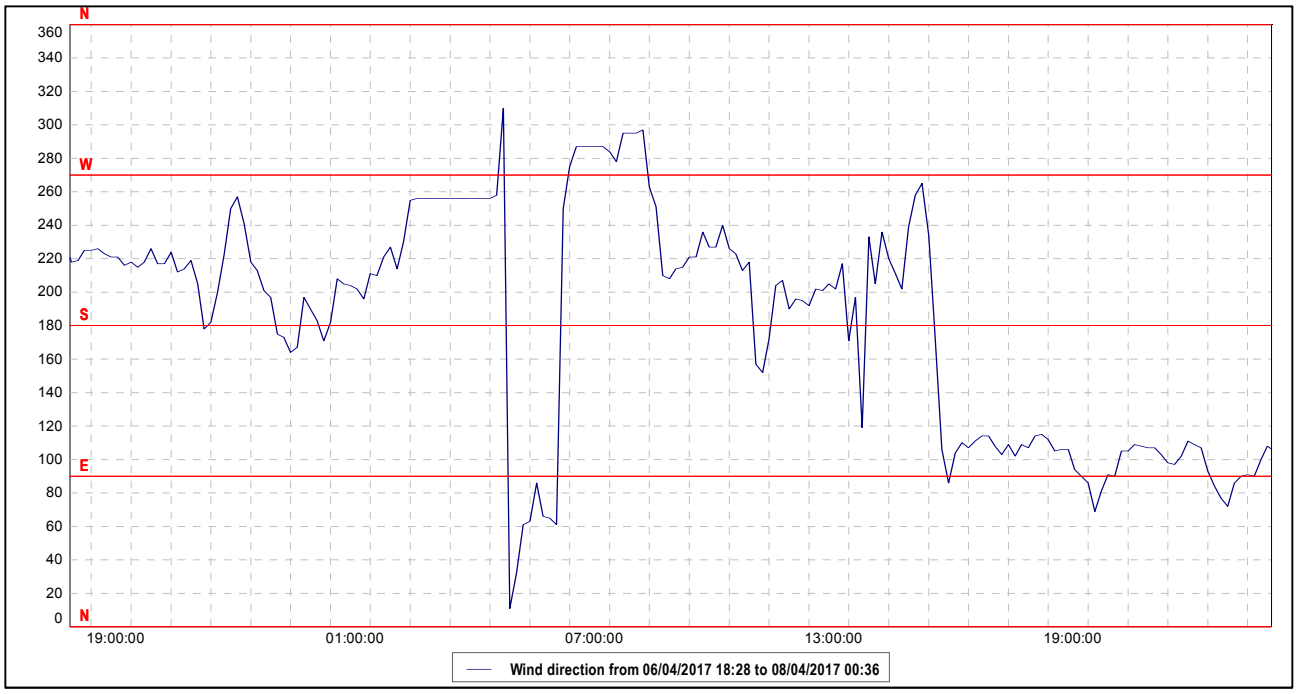

Figure 10 15 minute wind direction data (Taranaki Sawmills)

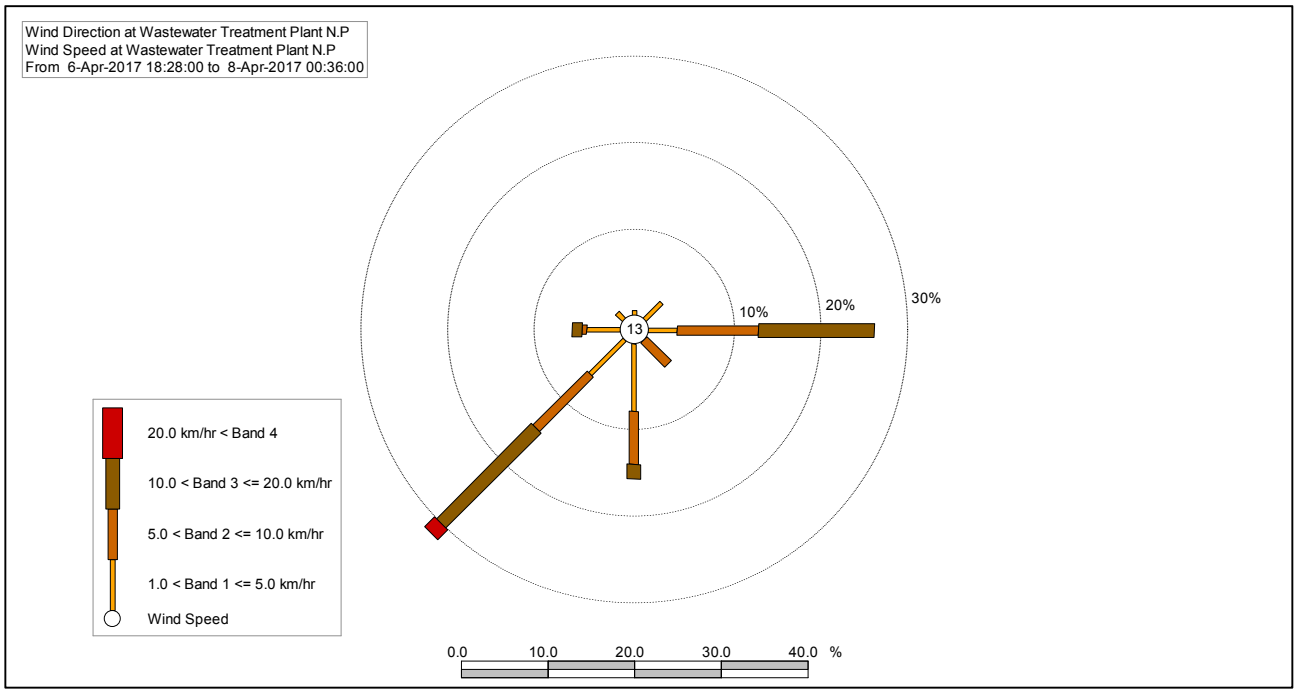

Figure 11 Prevailing wind direction during air monitoring (Taranaki Sawmills)

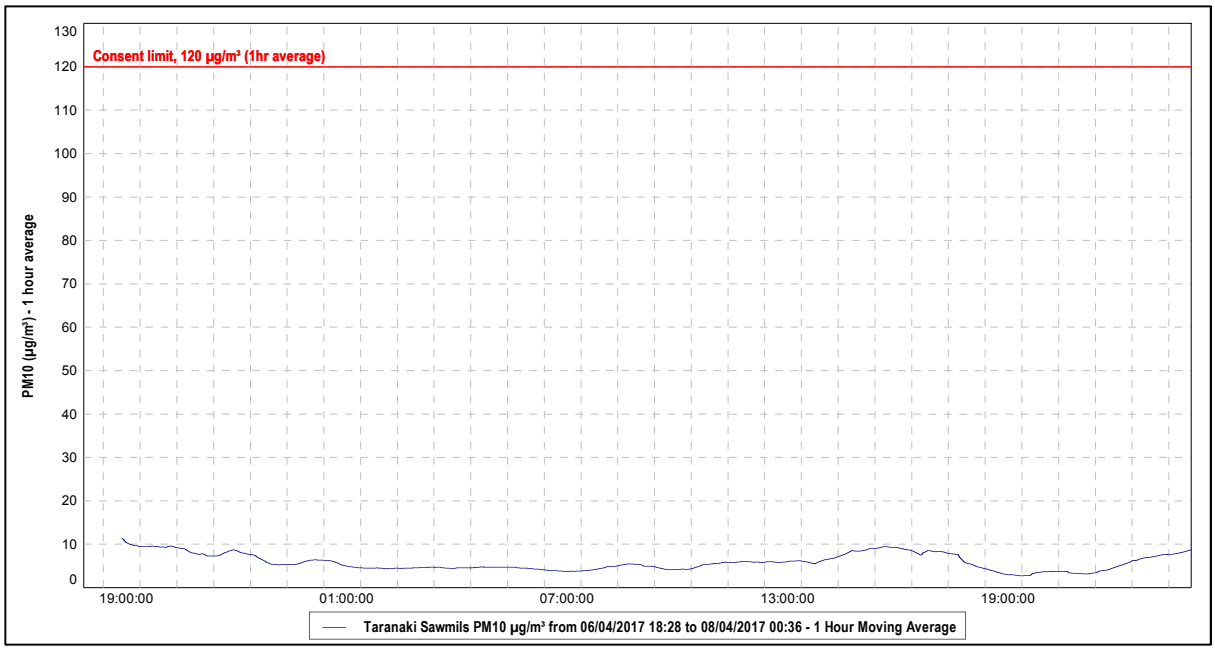

Figure 12 Graph of PM10 µg/m3 one hour average (Taranaki Sawmills)

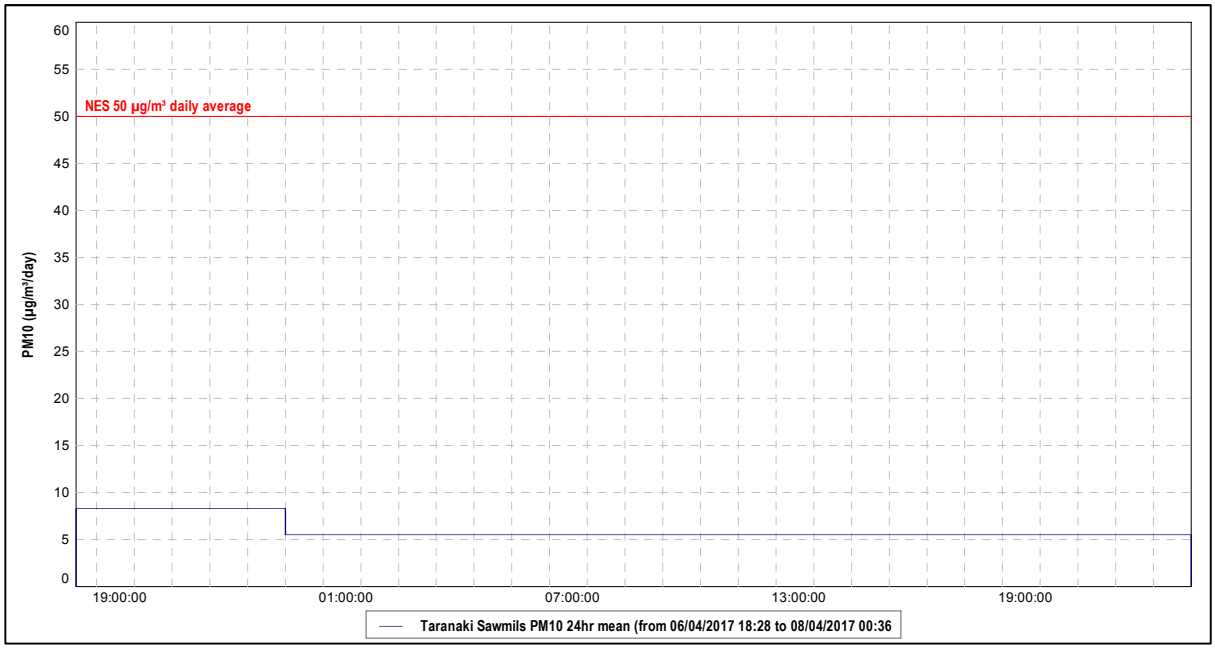

Figure 13 Graph of PM10 µg/m3 24 hour averages (Taranaki Sawmills)

10.2.4. Investigations, interventions, and incidents

In the period under review, it was necessary for the Council to record incidents in respect of Taranaki Sawmill's site in the Waitaha catchment. Four incidents were raised relating to breaches in consent conditions.

15 September 2016

During analysis of samples taken during routine compliance monitoring (15 September 2016), it was found that the stormwater discharge from the Taranaki Sawmill site on Hudson Road, Bell Block, had non compliant concentrations of suspended solids and BOD. A letter of explanation was received and an

infringement notice was issued as an existing abatement notice relating to issue was not being complied with.

7 November 2016

During analysis of samples, taken during routine compliance monitoring, it was found that the concentration of suspended solids within the discharge breached the consent limit at Taranaki Sawmills, Hudson Road, Bell Block. The discharge was in contravention of Abatement Notice No.1379516. As the site has been the subject of a number of non-compliances a meeting was held with Taranaki Sawmill's representatives. An infringement notice was issued in regards to the non-compliance.

15 December 2016

During routine compliance monitoring it was found that kiln condensate discharge had not been removed from the stormwater system as required by special condition three of Resource Consent 2333-4 at a timber processing and treatment site at Hudson Road, Bell Block. As the site has been the subject of a number of non-compliances, a meeting was held with Taranaki Sawmill's. Abatement Notice EAC-21446 was issued requiring works to be undertaken to ensure compliance with special condition 3 of Resource Consent 2333-4 by 31 March 2017. An extension for this timeframe was applied and granted and the kiln waste was diverted by July 2017.

18 May 2017

During analysis of stormwater samples, taken during routine monitoring (11 May 2017), it was found that the suspended solid concentration (of 230 g/m^3) was above the allowable consented limit (100g/m^3) at Taranaki Sawmill's, Hudson Road, Bell Block. Investigation found that silt and sediment issues are continuing on the site and that the current stormwater treatment systems utilised may not be adequate to treat the stormwater discharge to the required standard. Enforcement action was considered but not pursued as works had been undertaken at the site.

10.3. Discussion

10.3.1. Discussion of plant performance

There were three incidents logged as a result of discharge samples not being compliant with suspended solids. This site has had persistent issues over the past three years in regard to compliance with suspended solid concentrations in discharges to the Waitaha Stream. At the beginning of the monitoring period Taranaki Sawmill's was operating under an abatement notice for pervious suspended solids exceedances and two infringement fines were issued during the monitoring period for further breaches this abatement notice and consent conditions.

During the monitoring period TSM also failed to divert kiln condensate from the stormwater system by 31 October 2016 as required by consent. The consent holder applied for a change in consent conditions to remove the requirement for kiln condensate diversion, however the application was found to not meet the requirements of Section 88 of the RMA and was not accepted. An abatement notice was issued directing Taranaki Sawmill's to comply with consent conditions and the waste stream was subsequently diverted from the stormwater discharge.

10.3.2. Environmental effects of exercise of consents

There were three breaches of the suspended solids concentration limit in the Taranaki Sawmill's consent conditions however only small increases turbidity in the Waitaha Stream was noted as a result.

It is noted that no hydrocarbons were found in the discharges or observed in the receiving waters immediately downstream of Taranaki Sawmills discharge point.

Although the discharge exhibited an elevated dissolved biochemical oxygen demand on one of the three monitoring occasions, no sewage fungus was reported to have been present in the stream at the time the sample was collected.

The PM_{10} monitoring indicated the emissions from the site are continuing to comply with consent conditions and national environmental guidelines for particulates, and no smoke, dust or odour complaints were received by Council.

10.3.3. Evaluation of performance

A tabular summary of Taranaki Sawmill's compliance record for the year under review is set out in Table 32 and Table 33.

Table 32 Summary of performance for Taranaki Sawmills: Consent 2333-4

Purpose: ***To discharge of stormwater onto land and into the Waitaha Stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adoption of best practicable option to minimise adverse effects on the environment	Inspection and discussion with consent holder	No
2. Limit on catchment size	Inspection	Yes
3. Diversion of kiln condensate by 31 October 2016	Inspection	No-diversion not undertaken until mid 2017
4. Limits on chemical composition of discharge	Chemical sampling of discharges	No- Suspended solids limit exceeded in three samples
5. Limit of effects on receiving waters	Inspection and sampling	Yes
6. Contingency planning	Plan received May 2016	Yes
7. Maintain and adhere to a stormwater management plan	Plan received January 2014	Yes
8. Notifications of changes in processes	Inspection and liaison with consent holder	Yes
9. Review condition	Next review date June 2020	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**Improvement Required**
Overall assessment of administrative performance in respect of this consent		**Good**

Table 33 Summary of performance for Taranaki Sawmills: Consent 4096-2

Purpose: *Discharge of emissions into the air*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adoption of best practicable option to minimise adverse effects on the environment	Inspection and discussion with consent holder	Yes
2. Minimisation of emissions due to control of plant and processes	Inspection and discussion with consent holder	Yes
3. Exercised in accordance with application	Inspection and discussion with consent holder	Yes
4. Boiler and stack operated in accordance with application	Inspection and discussion with consent holder	Yes
5. Consultation prior to alterations to plant and processes	Inspection and discussion with consent holder	Yes
6. Notification in the event of coal usage for more than 72 hours in 14 days	No notifications received	N/A
7. Records of coal usage	No notifications received	N/A
8. Preparation and adherence to management plan	Observation at inspection	Yes
9. Level of environmental performance for fire-pit to be commensurate with management plan	Observation at inspection	Yes
10. Notification in the event of an incident having offsite effects	Observation of the surrounding area on inspection or when in the area on other business; any complaints received by Council	Yes
11. Adverse ecological effects in Taranaki from discharge not permitted	Observation of the surrounding area on inspection or when in the area on other business; any complaints received by Council	Yes
12. Objectionable odour at boundary not permitted	Observation of the surrounding area on inspection or when in the area on other business; any complaints received by Council	Yes
13. Definition of factors constituting an objectionable odour	N/A	N/A
14. Limits on objectionable suspended or deposited dust	Observation and/or ambient suspended particulate monitoring at inspection	Yes
15. Limit for ground level ambient concentration of sulphur dioxide	Not measured during the year under review. Only applicable when coal is used in the boilers	N/A

Purpose: *Discharge of emissions into the air*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
16. Limit for ground level ambient concentration of suspended particulate matter <10 microns	Two day deployment of 'Dust Trak' PM_{10} monitor	Yes
17. Noxious or toxic discharges not permitted at boundary	Observation of the surrounding area on inspection or when in the area on other business; any complaints received by Council	Yes
18. Limit on duration of emission of dark smoke	Observation of the surrounding area on inspection or when in the area on other business; review of any complaints received by Council	Yes
19. Minimum height of discharge	Observation during inspection. No decrease in stack height	Yes
20. Lapsing of consent	Consent exercised	N/A
21. Optional review provision re environmental effects	Provision for review in June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

During the year, Taranaki Sawmills demonstrated a good level of administrative performance and an improvement is required in Taranaki Sawmills level of environmental performance as defined in Section 1.1.5. There are persistent issues in regards to suspended solid concentrations at the site and the two infringement fines were issued for breaching the terms of that abatement notice and consent conditions. An abatement notice was also issued for a waste stream not being diverted as per consent conditions.

10.3.4. Recommendations from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of Taranaki Sawmills Ltd in the 2016-2017 year continues at the same level as programmed for 2015-2016.

This recommendation was implemented.

10.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for air and water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and discharges and their effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere and discharging to the environment.

It is proposed that the monitoring programmed for consented activities of Taranaki Sawmills in the 2017-2018 year continues at a similar level to that programmed for 2016-2017.

10.4. Recommendation

1. THAT monitoring programmed for consented activities of Taranaki Sawmills in the 2017-2018 year continues at a similar level to that programmed for 2016-2017.

11. TBS Coatings Ltd

11.1. Introduction

11.1.1. Process description

Abrasive blasting is used at TBS Coating Ltd's (TBS) site to clean and prepare surfaces for painting. The process involves blasting an abrasive substance onto the surface of the object in question.

Material from the blasting process becomes airborne due to the release of high pressure air used to accelerate the abrasive media to the required cleaning velocities. Spray painting is also carried out on the site. All blasting and painting is carried out in enclosed areas.

There are emissions into the air from the operations associated with blasting and coating. The blasting medium is usually dust-free, however after being propelled against surfaces to be treated, clouds of detritus are typically created. Paint fragments, rust particles, and shattered blast media may be carried several hundred metres if air, pollution suppression equipment is not used. Paints are predominantly industrial zinc, primers, epoxies intermediate and acrylic epoxy finishes.

The enclosed blasting facilities at this site are designed for control of emissions and recovery of blasting material. The larger blasting booth is a side draught booth connected to two dust collectors (both 550 m^3/minute capacity wet scrubbers) in parallel.

The smaller grit blast booth has been recently upgraded over the last eighteen months and the previous wet scrubber fan and conveyor recycling system has been replaced with a vacuum unit coupled to a reverse pulse dry bag dust control system located fully indoors with zero emissions.

Over the last year TBS has also dug out areas of the metal yard and laid bidum cloth underlay prior to reinstating heavy rolled metal mixed with used road millings as a trial to reduce metalled yard dust. Early indications are that this process has provided a less dusty more robust heavy traffic surface and is preventing fines from surfacing and becoming wind-blown dust. TBS has recently committed to completing a further trial area of metal upgrading. It is estimated that total dust emission from the site has been reduced by a third as a result of recent upgrades.

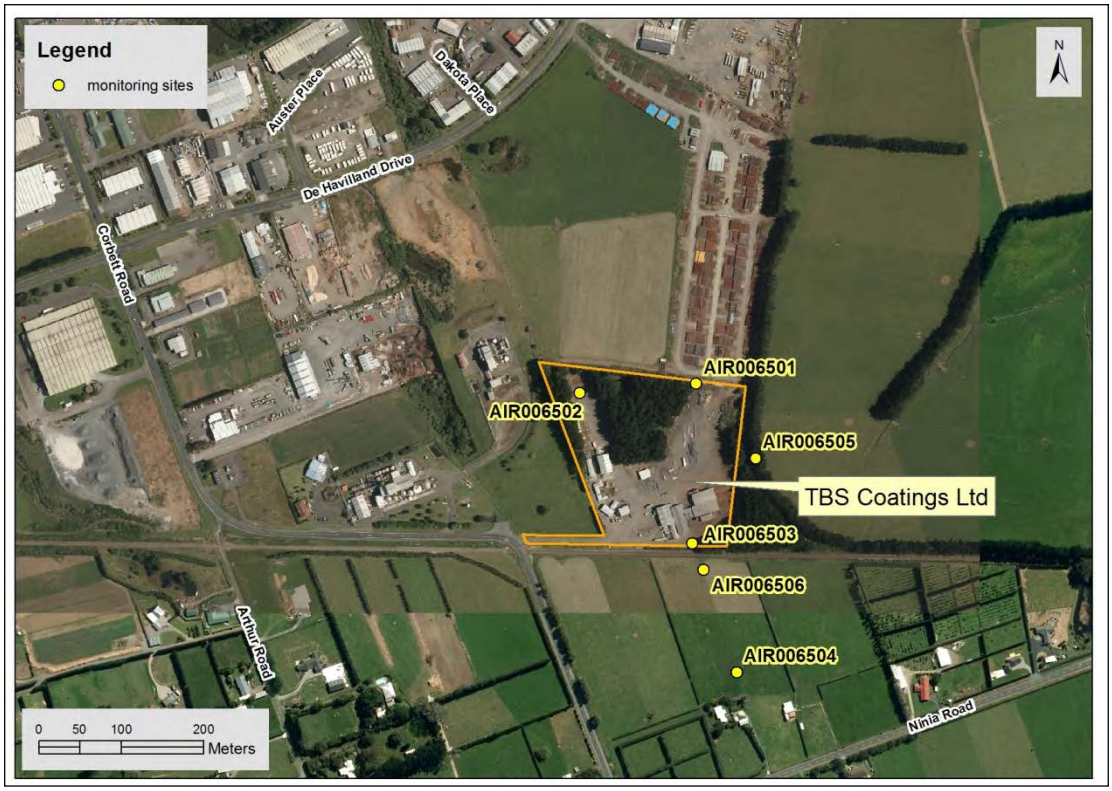

Figure 14 Property of TBS Coatings Ltd, and related monitoring sites

TBS also undertakes mobile blasting operations throughout Taranaki. Portable equipment is used for the blasting and coating of fixed structures such as bridges, water tanks, pipelines, buildings and steel structures. Temporary screens are constructed around the items being worked on to contain dust emissions and depositions, and to restrict the spread of blasting debris.

Where mobile blasting is to be done in residential or urban areas, NPDC is given prior notification. In cases where the material to be removed or applied is likely to contain toxic substances such as lead, arsenic, chromium or zinc, the Taranaki Health Board is informed.

11.1.2. Air discharge permit

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.

TBS holds air discharge permit **4056-2** to cover discharge of emissions into the air from abrasive blasting operations and associated activities at their permanent site and from mobile abrasive blasting operations at various locations. The Council originally issued this permit to TBS on 6 May 1992 as resource consent under Section 87(e) of the RMA for mobile blasting only. The consent was renewed on 9 August 2002 and is due to expire on 1 June 2020. The current consent also provides for blasting operations at TBS's permanent.

Special condition 1 states that the consent holder shall at all times adopt the best practicable option, as defined in Section 2 of the RMA, to prevent or minimise any adverse effect on the environment.

The remaining special conditions on the consent are intended to reduce the quantity, control the quality, and minimise the potential for adverse effects from the emissions from the blasting activities and associated processes. This is achieved by:

Limiting the locations at which blasting may be undertaken and ensuring that consideration is given to weather conditions (special conditions 2, 4, and 12). In general the blasting must be undertaken within the

permanent facilities where the discharge must be contained and treated to meet specific discharge limits (special conditions 9 and 11).

Ensuring that adequate screening is in place (special conditions 9, 14, and 15).

Controlling the blasting media used (special conditions 3 and 7).

Requiring that certain notifications are made and/or permissions sought prior to undertaking blasting when certain "higher risk" blasting activities are undertaken (special conditions 13, 16, 17 and 18). In the case of the Council, this allows for additional requirements to be placed on the consent holder in certain circumstances, and ensures the opportunity for Council to undertake monitoring specific to those activities.

Limiting the effects at or beyond the boundary of the property in relation to dust and odour issues (special conditions 6, 10 and 19), and surface water quality issues (special condition 20).

Addressing housekeeping issues (special condition 5).

Requiring that the consent holder ensures that all operators understand and comply with the conditions of the consent (special condition 8).

11.2. Results

11.2.1. Inspections

11.2.1.1. Site inspections

The site was inspected on 1 September 2016, 30 January 2017 and 27 June 2017.

The inspections focused on dust levels, emissions from dust scrubbers, odour and general house keeping.

The site was found to be generally clean and tidy. Ambient dust levels with handheld devices were taken during two of the occasions and were found to be within consented limits in both instances.

11.2.1.2. Mobile blasting inspections

TBS is required to notify the Council when undertaking certain types of mobile blasting activities. No notifications were received in regard to mobile blasting in monitoring period.

11.2.2. Results of receiving environment monitoring

Many industries emit dust from various sources during operational periods. In order to assess the effects of the emitted dust, industries have been monitored using deposition gauges.

Deposition gauges are basically buckets elevated on a stand to about 1.6 metres. The buckets have a solution in them to ensure that any dust that settles out of the air is not re-suspended by wind.

Gauges are placed around the site and within the surrounding community. The gauges were deployed in the vicinity of the TBS site on one occasion during the year under review.

The rate of dust fall is calculated by dividing the weight of insoluble material (grams) collected by the cross-sectional area of the gauge (m^2) and the number of days over which the sample was taken. The units of measurement are grams/m^2/day (g/m^2/day).

Guideline values used by the Council for dust deposition are 4 g/m^2/30 days or 0.13 g/m^2/day deposited matter. Consideration is given to the location of the industry and the sensitivity of the surrounding community, when assessing results against these values. However, TBS have a condition on their consent that limits the dust deposition rate beyond the boundary of their property to 4 g/m^2/30 days.

Material from the gauges was sifted to remove any incidental organic debris and insects, and then analysed for solid particulates.

The number and position of deposition gauges is governed by the location of potential dust emission sources, the direction of predominant winds, and the position of sensitive areas in the surrounding environment. The sites monitored for TBS's facility are shown in Figure 14 and site descriptions are given in Table 34.

Table 34 TBS - particulate deposition monitoring sites

Site code	NZTM Coordinates	Location
AIR006501	1701416E – 5678078N	NE boundary, outside white gates - near scrubber sludge disposal area
AIR006502	1701275E – 5678067N	Inside boundary. Yard in NW corner, N of secondary blasting shed
AIR006505	1701488E – 5677988N	E boundary, at gap in shelter belt opposite blasting shed, near spent media disposal area
AIR006503	1701411E – 5677885N	S boundary, outside fabric screen at railway line
AIR006504	1701465E – 5677729N	Paddock beside house of nearest neighbour, ~ 150m S on Ninia Road

Site AIR006502 is positioned inside the property boundary screenings, and so the consent limit and guideline cannot be applied. However, measurements made at this site are useful for determining the potential for offsite effects and for assessing the source of particulates. The consent limit and guideline is applicable at sites AIR006501, AIR006503, AIR006504 and AIR006505.

Results of the monitoring for the period under review are given in Table 35.

Table 35 Deposition gauging results for sampling sites around the TBS Coatings Ltd location 3 April 2017-26 April 2017

Site	Retrieval Date	Number of days deployed	Deposited particulate $g/m^2/30days$	*Consent limit $gm/m^2/30$ days*
AIR006501	26 April 2017	23	0.034	*4*
AIR006502	26 April 2017	Sample lost to due to overturned deposition gauge		-
AIR006503	26 April 2017	23	0.0491	*4*
AIR006504	26 April 2017	23	0.0509	*4*
AIR006505	26 April 2017	23	0.0670	*4*

Key: Results in italics are indicative only, from site AIR006502 as it is well within the Company's boundary.

The monitoring found that the deposited particulate collected at one of the monitoring locations at or beyond the site boundary complied with the limit set in special condition 10 of consent 4056 (4 g/m^2/30 days).

11.2.3. Investigations, interventions, and incidents

In the 2016-2017 year, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of TBS.

11.3. Discussion

11.3.1. Discussion of plant performance

Site inspections found that the permanent blasting facilities were kept in a good state of repair and the treatment systems were found to be well maintained. No complaints were received during the period under review.

It is noted that TBS is currently undertaking trials with the yard surface to provide for a more permanent solution to dust suppression at the site.

11.3.2. Environmental effects of exercise of consents

Atmospheric particulate matter can arise from a number of sources, both natural and from human activity for example, vegetation pollen, smoke and ash, sea spray, dust from soils and paved surfaces, and manufacturing processes. While extremely fine particles may remain floating in the atmosphere for weeks or months, coarser dust may settle out within timeframes ranging from a few seconds to minutes.

The amount of dust and detritus generated at any industrial site is influenced by many factors. From past results of deposition gauging it is likely that factors including seasonal weather variations, vehicle traffic about the site and the type of work being conducted will have some effect on the results.

The environmental effects of dusts include loss of visibility, loss of the amenity and aesthetic values of a 'clear sky', irritation to breathing, and soiling of surfaces. It has been found that background rates of dust deposition in rural areas of New Zealand are typically 0.1-1.5 g/m^2/30 days, while in urban areas rates are generally higher, in the range of 0.6-3.0 g/m^2/30 days. From experience, rates above 3-4 g/m^2/30 days tend to lead to complaints by neighbours over the objectionable or offensive nature of dust emissions from particular sources.

Deposition gauging was conducted around the TBS site for the 39th time during the period under review.

The gauging period from 3 April 2017 to 26 April 2017 found that the site was compliant with consent conditions and not likely to having an adverse effect on the environment.

11.3.3. Evaluation of performance

A tabular summary of TBS's compliance record for the year under review is set out in Table 36.

Table 36 Summary of performance for TBS: Consent 4056-2

Purpose: ***To discharge emissions into the air***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adoption of best practicable option to minimise effects on the environment	Inspection and discussion with consent holder	Yes
2. Blasting in enclosed facility	Inspection and discussion with consent holder	Yes

Purpose: *To discharge emissions into the air*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
3. Sand to have low active silica content and percentage of fine particles	Sand not used during the year under review	N/A
4. Consideration of wind conditions to minimise of off-site emissions	Inspection. No complaints received	Yes
5. Clearance of blasting material	Inspection	Yes
6. Offensive and objectionable odours and dust beyond boundary not permitted	Inspection and incident investigation	Yes
7. Avoidance of dry sand blasting for yard and mobile blasting	Inspection and liaison with consent holder	Yes
8. Compliance of operators with conditions	Inspection	Yes
9. Treatment of emissions prior to discharge at permanent facilities	Suspended particulate monitoring at inspection	Yes.
10. Dust deposition rate limit beyond boundary	Deposition gauge monitoring	Yes
11. Maximum concentrations of lead, chromium and zinc	Not measured. Discussions with consent holder about materials blasted	N/A
12. Infrequent allowance of yard operations	No notification of yard blasting received. No yard blasting found at inspections	Yes
13. Notification prior to yard operations	Inspection and observation when inspecting officer is in the vicinity of the site on other business. No yard blasting noted during year under review	N/A
14. Screening to contain emissions	No yard blasting noted during year under review	N/A
15. Screening of items to be blasted	Inspection	Yes
16. Notification to New Plymouth District Council prior to blasting in urban areas	No urban mobile blasting noted during the year under review	N/A
17. Notification to Council prior to blasting in close proximity to water course	Notification received	Yes
18. Written Council approval and notification of affected parties prior to blasting close to boundaries	No mobile blasting close to boundaries during the year under review	N/A
19. Ambient suspended particulate limit for public amenity areas	No mobile blasting at public amenity areas noted during the year under review	N/A
20. Effects on surface water bodies not permitted	Inspection	Yes

Purpose: *To discharge emissions into the air*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
21. Optional review provision re environmental effects	Provision for review in June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = Not applicable

During the year, TBS Coatings Ltd demonstrated a high level of environmental performance and a high level of administrative performance with the resource consents as defined in Section 1.1.5.

11.3.4. Recommendations from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of TBS Coatings Ltd in the 2016-2017 year continues at a similar level as in 2015-2016.

This recommendation was implemented.

11.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for air discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and their effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere.

It is proposed that for 2017-2018, the monitoring of TBS remain at a similar level as the 2016-2017 period. A recommendation to this effect is attached to this report.

11.4. Recommendation

1. THAT monitoring programmed for consented activities of TBS Coatings Ltd in the 2017-2018 year continues at a similar level as in 2016-2017.

12. Weatherford New Zealand Ltd

12.1. Introduction

12.1.1. Process description

Weatherford New Zealand Ltd (Weatherford) has a 1.7 ha yard on Dakota Place for storage and maintenance of drill pipe, down-hole tools and other miscellaneous equipment used in the oil industry. New casing and drill pipe is cleaned to remove protective grease, which until the 1980's contained some copper and zinc, and a high proportion of lead. Kerosene is brushed onto the threads and the oil/kerosene mix is washed off with a water blaster. Kerosene is only used when oil and grease can not be removed by water alone. A phosphate bath is used for the etching of pipes in the lower yard. Minor amounts of waste from this process may be discharged to the stream via the lower wash pad interceptor. During the year under review it was identified that the phosphating chemical used also contains nickel and manganese.

There are two wash pads at the site. The wash pad in the upper catchment drains to a small three stage interceptor which discharges onto land just over 50 m from the tributary. There is no bunding around either of the wash pads, so a significant volume of stormwater from the upper and lower yards flows through the interceptors during rainfall events.

The property slopes towards the Waitaha Stream where it runs along the western boundary and towards the unnamed tributary that runs along the northern boundary. The site is mostly metalled, with only the wash pad areas sealed. Recent works have been undertaken on site to direct overland flow to settling ponds for treatment.

Figure 15 Aerial view of Weatherford's site

12.1.2. Water discharge permit

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.

Weatherford holds water discharge permit **4775-1** to cover the discharge of up to 180 L/s of treated stormwater and minor treated wash-down water from an oilfield engineering services premises onto land and into an unnamed tributary of the Waitaha Stream. This permit was originally issued to Austoil Drilling Services Pty Ltd for the discharge of treated stormwater by the Council on 5 September 1995 under Section 87(e) of the RMA. A variation to consent was granted on 30 June 1997 to also allow for the discharge of minor treated wash-down water onto land. The permit was transferred to Weatherford on 15 April 2002. It was reviewed in August 2008 for the purpose of ensuring that the special conditions of the consent were adequate to deal with potential adverse effects of the discharge on the receiving environment. Consent 4775-1 expired on 1 June 2014 and is now exercised under Section 124 of the RMA.

Special condition 1 places limits on the quality of the discharges. There is an oil and grease limit of 25 g/m^3 for the interceptor discharging to land and 15 g/m^3 for the stormwater and wash water to the Waitaha Stream.

Special condition 2 requires the construction of bunding.

Special condition 3 limits the effects of the discharge on receiving water quality beyond a 10 metre mixing zone.

Special condition 4 contains review provisions.

Special condition 5 requires the provision of a management plan to ensure that the consent holder is operating activities at the site in a manner that is consistent with the best practicable option to minimise contamination in the discharges from the site.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

12.2. Results

12.2.1. Inspections

Inspections were undertaken on 23 August 2016, 7 November 2016, 30 January 2017, and 1 May 2017.

Inspections focused on the presence and storage of hazardous substances, evidence of spills, general housekeeping, and the operation and maintenance of treatment systems.

No significant issues were noted during the inspections and samples taken during inspections were found to be compliant with consent conditions.

12.2.2. Results of discharge monitoring

The discharge to land from the interceptor servicing the top wash pad (IND002021) and stormwater runoff from the yard area (STW002025) were sampled during the year under review.

The results for the sampling undertaken in the period under review are presented in Table 37 and Table 38, along with a summary of all data from the site.

Special condition 1 of resource consent 4775 requires that the oil and grease concentration of the discharge to the Waitaha Stream tributary must not exceed 15 g/m^3, the oil and grease concentration of the interceptor discharge to land must not exceed 25 g/m^3, the pH of all discharges must be in the range 6.0 – 9.0, and the suspended solids concentration of all discharges must not exceed 100 g/m^3.

Table 37 Results of sampling at Weatherford – upper interceptor to land (IND002021)

Parameter	Units	Min	Max	Med	N	19 Aug 2015	17 Mar 2016	*Consent Limit*
Conductivity @ 20°C	mS/m	3.3	23	8.3	29	3.3	4.4	-
Acid soluble copper	g/m^3	0.01	0.03	0.01	14	<0.01	<0.01	*0.05*
DRP	g/m^3	0.003	30.6	0.005	26	<0.003	0.031	-
Acid soluble lead	g/m^3	0.05	0.05	0.02	14	<0.05	<0.05	*0.1*
Oil and grease	g/m^3	0.5	120	11	29	a	a	*25*
pH	pH	6.2	7.8	7.2	29	7.3	7.3	*6-9*
Suspended solids	-	-	-	-	-	b	b	*100*
Temperature	Deg.C	10.3	20.5	13.3	27	15.4	15.8	-
Acid soluble zinc	g/m^3	3.3	23	8.3	29	0.182	0.488	*0.65*

Key: a =No visual sheens or odour b= Sample visually clear and uncoloured

The samples from the upper interceptor onto land showed that this discharge was in compliance with consent conditions at the time the surveys were undertaken.

The acid soluble zinc concentration found in the discharge, whilst higher than that found in the last period, it still appears to be declining in the long term. It is noted that the wash pad draining via this interceptor is no longer in use, and there is also only a limited amount of activity that occurs in this area of the site that has the potential to result in stormwater contamination.

Phosphating has been carried out exclusively at the lower wash pad area for a number of years.

Table 38 Results of sampling at Weatherford NZ Ltd – site STW002025

Parameter	Units	Min	Max	Med	N	7 Nov 2016	4 Apr 2017	11 May 2017	*Consent Limit*
Conductivity @ 20°C	mS/m	0.1	19.8	5	26	3.1	1.0	3.2	-
Acid soluble copper	g/m^3	0.01	0.07	0.02	20	0.01	0.01	0.01	-
Dissolved copper	g/m^3	-	-	-	2	<0.01			*0.05*
Dissolved reactive phosphorus	g/m^3 P	0.003	0.061	0.009	26		0.003	0.018	-
Acid soluble lead	g/m^3	0.05	0.07	0.02	20	<0.05	<0.05	<0.05	*0.1*
Acid soluble manganese	g/m^3	0.01	0.77	0.1	9	0.05	0.02	0.01	-
Acid soluble nickel	g/m^3	0.02	0.06	0.01	9	<0.02	<0.02	<0.02	*0.1*
Oil and Grease	g/m^3	0.5	56	0.9	21	b	b	b	*15*
pH	pH	6.4	9.8	7.1	27	7.5	7.0	7.2	*6-9*
Suspended solids	g/m^3	6	420	68	23	22	23	8	*100*
Temperature	Deg.C	10.2	21.3	15.5	27	15.9	14.3	15.8	-

Parameter	Units	Min	Max	Med	N	7 Nov 2016	4 Apr 2017	11 May 2017	*Consent Limit*
Acid soluble zinc	g/m^3	0.082	1.08	0.346	20	0.119	0.105	0.110	*0.65*

Key: b =No visual sheens or odour

The stormwater discharge from the site was found to comply with component concentrations given in the consent on all occasions

12.2.3. Investigations, interventions, and incidents

In the 2016-2017 year, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of Weatherfords.

12.3. Discussion

12.3.1. Discussion of plant performance

Inspections found that the housekeeping at the site was generally of a high standard and operations were well managed. Works were also undertaken in preparation to divert all wash water to sewer and these works have now being completed. Further works on the stormwater treatment pond may be required to ensure compliance with the consented suspended solids limits. A stormwater management plan and contingency plan has been supplied for this site.

12.3.2. Environmental effects of exercise of consent

Observation of the Waitaha Stream and its tributary during inspection and sampling found no significant effects in the receiving water related to the Weatherford discharges. There two exceedances of the suspended solids limit found in the stormwater discharging to the tributary that flows between the Weatherford and Taranaki Sawmills sites, however no increase in turbidity was found in the Waitaha Stream as a result.

The level of metals in the discharge will continue to be monitored and their potential effects assessed in more detail once sufficient data has been collected. The addition of dissolved metals analysis will assist in determining if the metals are immediately bioavailable or pose a longer term risk via accumulation in stream sediments.

In the meantime, as the source of metal contamination is likely to be from the soils on site, the ongoing silt control measures being undertaken at the site will assist in reducing the levels of these contaminants.

12.3.3. Evaluation of performance

A tabular summary of Weatherford's compliance record for the year under review is set out in Table 39.

Table 39 Summary of performance for Weatherfords: Consent 4775-2

Purpose: ***To discharge of treated stormwater and wash down water onto land and into a stream***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practice	Site inspection	Yes
2. Catchment area limit	Site inspection	Yes

Purpose: *To discharge of treated stormwater and wash down water onto land and into a stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
3. Stormwater to be treated	Inspections and chemical sampling	Yes
4. Limits on contaminants in discharge	Inspections and chemical sampling	Yes
5. Limits on effects	Inspections and chemical sampling	Yes
6. Preparation and maintenance of contingency plan	Review of documentation submitted to Council	Yes- but provided late
7. Preparation and maintenance of stormwater management plan	Review of documentation submitted to Council	Yes- but provided late
8. Notification of changes	None received	N/A
9. Review condition	Next option to review June 2018	A review is not required.
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **Good**

N/A = not applicable

During the year, Weatherford New Zealand Ltd demonstrated a high level of environmental performance and a good level of administrative performance as defined in Section 1.1.5.

12.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities of Weatherford New Zealand Ltd in the 2016-2017 year continues at a similar level programmed for 2015-2016.

This recommendation was implemented.

12.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for water discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and discharges and their effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere and discharging to the environment.

It is proposed that monitoring programmed for consented activities of Weatherford New Zealand Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

12.4. Recommendation

1. THAT monitoring programmed for consented activities of Weatherford New Zealand Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

13. Woodwards 2008 Ltd

13.1. Introduction

13.1.1. Process description

Woodwards 2008 Ltd (Woodwards) operates a firewood business which generates woodwaste such as sawdust, bark and offcuts. These are burnt in a fire pit on the site for which a consent was required.

The site is located at 124 De Havilland Drive, Bell Block; approximately 6.5 km east of New Plymouth city centre. The surrounding land use is predominantly industrial or trade premises; there is also pasture bordering the site to the east which is currently used for grazing livestock.

An open fire-pit is located at the eastern side of the site approximately 75 m south of De Havilland Drive (Figure 16). Industrial premises are currently located to the north, west and south of the property. The closest industrial premises are approximately 115 m north of the fire pit across De Havilland Drive.

The Waitaha Stream flows through a pipe underneath the site and resurfaces on the northern side of De Havilland Drive.

Figure 16 Woodward's property and fire pit location

Woodwards generates wood wastes which include timber blocks, bark and sawdust. They aim to burn the wood wastes daily, as it is generated, to prevent the waste from becoming saturated, which would make the potential for offsite effects harder to manage. The effects are managed by taking into account wind direction and strength and by also taking into account the amount of material within the pit, before it is lit.

The material incinerated in the open-pit is untreated timber off-cuts/sawdust. No tanalised timber wastes or plastics are incinerated.

There are a number of potential contaminants that are discharged into the air from the combustion of wood products, however in this case these are primarily:

- particulates
- odour and dust
- carbon monoxide

13.1.2. Air discharge permit

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.

Woodwards holds air discharge permit **7881-1** to cover discharge of emissions into the air from the combustion of untreated timber wastes. This permit was issued by the Council on 17 August 2011 under Section 87(e) of the RMA. It is due to expire on 1 June 2026.

There are nine special conditions attached to the consent.

Special condition 1 requires the consent holder to adopt the best practicable option having regard to particular aspects of the management of the operation and wind conditions.

Special condition 2 restricts the material that can be combusted to untreated timber only, and limits the proximity of the fire pit to the property boundary.

Special condition 3 prohibits objectionable or offensive odours beyond the property boundary.

Special condition 4 requires that the activity is supervised at all times and limits the time of day at which the fire may be lit.

Special conditions 5, 6 and 7 control dust deposition, ambient suspended particulates and noxious or toxic contaminants beyond the property boundary.

Special condition 8 is a lapse condition.

Special condition 9 contains provisions for review.

A copy of the consent is attached in Appendix I.

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

13.2. Results

13.2.1. Inspections

The site was inspected on 11 August 2016 and 20 February 2017.

The inspections focussed on material being burnt in the fire-pit, the effects from smoke, general housekeeping and the fuel filling facility.

During the period under review it was found that the fire pit was being well managed and effects were noted from burning. In the inspection of 20 February 2017 it was noted that small oil spill had occurred and staff were directed to clean it up.

13.2.2. Investigations, interventions, and incidents

In the 2016-2017 year, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of the activities of Woodwards.

13.3. Discussion

13.3.1. Discussion of plant performance

The site was found to be well managed during the year under review. No prohibited wastes were found in the fire pit, and staff were found to be well aware of the requirements of the consent with regard to permitted materials and taking wind conditions into consideration before commencing exercise of the consent.

13.3.2. Environmental effects of exercise of consent

No adverse environmental effects were found during the year under review.

13.3.3. Evaluation of performance

A tabular summary of the Woodward's compliance record for the monitoring period is set out in Table 40.

Table 40 Summary of performance for Woodwards: Consent 7881-1

Purpose: ***To discharge emissions into the air***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Adopt best practicable option. Controls over management practices and consideration of wind conditions	Inspection and discussion with consent holder	Yes
2. Combustion of only untreated wood and wood wastes. Fire pit 20 m from boundary	Inspection and discussion with consent holder. Observation of materials in fire pit	Yes
3. Offensive and objectionable odour at site boundary not permitted	Odour surveys during inspection	Yes
4. Supervision of fire. No fires to be lit after 12 noon	Inspection and observation while council officers in the area	Yes
5. Maximum dust deposition rate of 0.13/ m^2/day	No visible dust emissions reported at the time of inspection. Deposition rate not measured	N/A
6. Maximum suspended particulates of 3 mg/m^3	No visible dust emissions reported at the time of inspection	Yes
7. Prohibits noxious and toxic levels of contaminants beyond the boundary	Periodic inspection of log during inspection and review of documentation submitted to Council	Yes
8. Consent lapses if not exercised by 30 Sept 2016	Consent exercised	N/A
9. Optional review provision re environmental effects	Provision for review in June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A Not applicable or not assessed

During the year, Woodwards 2008 Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

13.3.4. Recommendations from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities at Woodwards 2008 Ltd in the 2016-2017 year continue at a similar level as programmed in 2015-2016.

This recommendation was implemented.

13.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for air discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and discharges and their effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere and discharging to the environment.

It is proposed that for 2017-2018, the monitoring of Woodwards continue at a similar level to that programme for the 2016-2017 year. A recommendation to this effect is attached to this report.

13.4. Recommendation

1. THAT monitoring programmed for consented activities at Woodwards 2008 Ltd in the 2017-2018 year continue at a similar level as programmed in 2016-2017.

14. Zelam Ltd

14.1. Introduction

14.1.1. Process description

Zelam Ltd (Zelam) and the company before it, Taranaki NuChem Ltd, has manufactured a range of specialised chemical products for the agricultural, horticultural and timber industries at a plant in the Bell Block industrial estate, New Plymouth since 1992. The size of the operation is small and many of the processes are considered to be unprofitable for the larger chemical companies to undertake.

Zelam manufactures a range of chemicals that include 18 plant protectants and growth promotants, 23 herbicides, seven insecticides, seven additives (surface active agents), four sanitation products, and ten wood protection fungicides.

Production is largely by formulation (blending active ingredients and other agents), and the production is based on batch processes (i.e. not continuous).

Three wet scrubbers are the only significant point sources that discharge emissions directly to air.

14.1.2. Air discharge permit

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.

Zelam holds air discharge permit **4059-5** to cover discharge of emissions into the air from industrial agri-chemical formulation processes and associated activities. The Council originally issued this permit to Taranaki NuChem Ltd on 8 February 1995 as a resource consent under Section 87(e) of the RMA. The consent was renewed on 20 December 2000, was transferred to Zelam on 30 November 2006, and renewed again on 13 February 2008 with the same purpose and conditions as consent 4059-4. An application to vary the consent was received on 24 August 2009 to better reflect the monitoring and control of an improved emission abatement system already in place for the control of benzyl chloride emissions. The varied consent was issued on 1 September 2009. It will expire on 1 June 2026.

Special condition 1 requires that the consent holder adopts the best practicable option to minimise emissions from the site.

Special condition 2 requires consultation with the Council prior to significant changes to operations at the site that may alter the quantity or nature of contaminants emitted from the site.

Special conditions 3 and 11 limit effects and contaminant concentrations at or beyond the boundary of the site.

Special conditions 4 and 5 limit the concentration of contaminants in the discharge.

Special condition 6 requires the consent holder to keep an incident log.

Special condition 7 controls the pH of the liquor in the “forced draft” scrubbers and special condition 9 controls the free amine concentration of the “air displacement” scrubber so that they continue to be effective.

Special conditions 8 and 10 require the consent holder to monitor the pH of the “forced draft” scrubber liquors and the free amine concentration of the “air displacement” scrubber liquor.

Special condition 12 (formerly condition 10) contains a provision for reviewing the conditions of the consent.

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

This summary of consent conditions may not reflect the full requirements of each condition. The consent conditions in full can be found in the resource consent which is appended to this report.

14.2. Results

14.2.1. Inspections

The site was inspected 11 August 2016 and 20 February 2017.

The inspections focussed on odours and emissions, the bio-beds, dust scrubbers, bunding, evidence of spills, new treatment measures and general housekeeping.

No significant issues were noted during the period under review and the site was found to be well managed.

14.2.2. Results of receiving environment monitoring

Prior to site inspections the inspecting officer conducts a survey around the plant perimeter to check for any off-site odours, visible emissions or evidence of effects on the foliage of plants in the vicinity of the site.

During these inspections no objectionable or offensive odour or other effects were detected at or beyond the boundary.

14.2.3. Data review

Zelam's consent contains requirements for the consent holder to monitor the pH of the forced draft scrubbers on a weekly basis (special condition 8) and free amine concentration of the air displacement scrubber prior to each production run (special condition 10), and to send this information through to the Council in the form of a written report on request.

A summary of the information provided that covers the year under review is shown in Table 41. During the 2011-2012 year, Council was informed that the air displacement scrubber was no longer in use at the site. As the process had been discontinued, results were only provided for the pH of the forced draft scrubbers during the year under review.

Table 41 Summary of Zelam's scrubber liquor monitoring

	Forced draft scrubber liquors		
	Shed 2 - pH	**Shed 3 - pH**	**Shed 5 pH**
Consent limit	**Minimum of 9.0 pH**		
Minimum	9.13	9.3	9.07
Maximum	12.66	11.23	11.05
Percentage compliance	100%	100%	100%

14.2.4. Investigations, interventions, and incidents

In the 2016-2017 year, it was not necessary for the Council to undertake significant additional investigations, interventions, or record incidents in respect of the site operated by Zelam.

14.3. Discussion

14.3.1. Discussion of plant performance

Inspections found that general housekeeping were consistently good during the year under review.

14.3.2. Environmental effects of exercise of consent

No significant adverse effects were found as a result of Zelam's activities. No odours were noted during the off-site odour surveys, and no effects were noted on the foliage of the surrounding vegetation during the year under review.

14.3.3. Evaluation of performance

A tabular summary of Zelam's compliance record for the year under review is set out in Table 42.

Table 42 Summary of performance for Zelam: Consent 4059-5

Purpose: ***To discharge emissions into the air***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Minimisation of emissions to air	Inspection and discussion with consent holder	Yes
2. Consultation prior to alterations to plant or processes	Liaison during visits and consultation regarding the installation of a new granulation plant	Yes
3. Objectionable odour at site boundary not permitted	Odour surveys	Yes
4. Maximum concentration of benzyl chloride	Process not undertaken	N/A
5. Concentration of discharge of particulate matter	No visible emissions at the time of inspection	Yes
6. Immediate notification in the event of incident affecting off-site location	No incidents reported. No incidents found at inspection. No complaints received	Yes
7. pH of forced draft scrubber liquor	Periodic inspection of log during inspection and review of documentation submitted to Council	Yes
8. Monitoring of forced draft scrubber liquor pH	Periodic inspection of log during inspection and review of documentation submitted to Council	Yes
9. Free amine concentration of air displacement scrubber liquor	Process not undertaken	N/A
10. Monitoring of air displacement scrubber liquor free amine concentration	Process not undertaken	N/A

Purpose: *To discharge emissions into the air*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
11. Maximum ground-level concentrations of contaminants beyond boundary	Not monitored during year under review	N/A
12. Optional review provision re environmental effects	Provision for review in June 2014	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

During the year, Zelam Ltd demonstrated a high level of environmental performance and a high level of administrative performance as defined in Section 1.1.5.

14.3.4. Recommendation from the 2015-2016 Annual Report

In the 2015-2016 Annual Report, it was recommended:

1. THAT monitoring programmed for consented activities at Zelam Ltd in the 2016-2017 year continues at the same level as in 2015-2016.

This recommendation was implemented.

14.3.5. Alterations to monitoring programmes for 2017-2018

In designing and implementing the monitoring programmes for air discharges in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA, the obligations of the RMA in terms of monitoring emissions and discharges and their effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere and discharging to the environment.

It is proposed that for 2017-2018, the programme continue at a similar level as that programmed for the 2016-2017 year.

A recommendation to this effect is attached to this report.

14.4. Recommendation

1. THAT monitoring programmed for consented activities at Zelam Ltd in the 2017-2018 period continue at a similar level as in 2016-2017.

15. Catchment unauthorised incidents

In the Waitaha catchment during the year under review, there were seven water-related, and three air-related incidents logged on the Council database. Of these twelve incidents, only five could be substantiated at the time of investigation. A summary of all incidents is given in Table 43. An outline of those incidents not already detailed in this report is given in Table 44.

Table 43 Summary of the number of incidents investigated in the Waitaha Catchment

Company	Number of substantiated unauthorised discharges	Number of unsubstantiated unauthorised discharges
Waitaha catchment joint monitoring programme		
C & O Concrete Ltd	1 (water)	0
Symons Property Developments Ltd	1 (water)	1 (air)
Taranaki Sawmills Ltd	5 (water)	0
Permitted activities/other		
Unsourced	0	1 (air)
Edward Whiting	0	1 (air)
Total	7	3

Table 44 Details of incidents in the Waitaha Catchment not otherwise reported in previous sections

Incident source	Incident date and time	Incident description	Incident details
Edward Whiting	29 Sep 2016 09:03 AM	A complaint was received regarding poultry type odours on Airport Drive, New Plymouth.	Poultry odours were from an organic fertilizer application on nearby land and not associated with the Airport Farm Ltd poultry farm. The complainant was advised accordingly.
Unsourced	08 Jan 2017 10:03 AM	A complaint was received about dust on Devon Road, Bell Block.	An inspection found no dust at any site in the area.

16. Waitaha Stream receiving environment monitoring

16.1. Results of wet weather surveys

During the monitoring period a wet weather survey of all discharges and seven instream water quality sites was conducted by the Council. All samples were tested for pH, conductivity, oil and grease, and turbidity. Further tests for metals, phosphorus, nitrogen, formaldehyde, and/or phenol were carried out on particular samples depending on the expected potential pollutants from industries in the vicinity of the sampling points. The results of this sampling are presented in Table 45.

Table 45 Results of receiving environment, 4 April 2017 with median values from all data

Parameter		Waitaha Stream													
		Below AICA WTH000013		At De Havilland Drive WTH000035		Trib at De Havilland Drive WTH000037		~ 120m d/s De Havilland Drive WTH000040		Weatherfords trib u/s confluence WTH000041		At old farm access bridge WTH000050		30m d/s Connett Road WTH000095	
19 August 2015	Time (NZST)	08:55	**median**	09:10	**median**	09:20	**median**	09:35	**median**	09:30	**median**	09:50	**median**	07:38	**median**
Boron	g/m^3	-	-	-	-	-	-	-	-	-	-	0.10	0.06	0.05	0.07
BOD	g/m^3	-	-	-	-	-	-	-	-	-	-	3.1	-	3.4	
BODCF	g/m^3	-	-	-	-	-	-	-	-	-	-	1.6	-	1.5	
Conductivity	mS/m	7.4	13.4	9.5	12.5	5.8	13.4	7.6	13.0	4.3	14.7	8.8	14.2	3.8	12.7
Copper (dissolved)	g/m^3	0.002	0.0011	0.0011	0.004	0.007	0.002	0.004	0.004	0.004	0.002	0.005	0.004	0.004	-
Dissolved reactive phosphorus	g/m^3 P	-	-	0.024	0.114	-	-	0.016	0.076	-	-	0.015	0.026	0.028	0.068
Formaldehyde	g/m^3	0.1	<0.1	-	-	-	-	-	-	-	-	-	-		-
HC-VIS	-	Pass	-	Pass	-	Pass	-	Pass	-	Pass	-	Pass	-	Pass	-
Manganese (dissolved)	g/m^3	-	-	0.07	0.07	0.07	0.16	0.08	0.11	-	-	0.10	0.16		-
Unionised ammonia	g/m^3 N	0.00319	0.00015	0.00084	0.00078		-	0.00053	0.00079	-	-		-	0.00018	0.00106
Ammoniacal nitrogen	g/m^3 N	1.20	0.039	0.615	0.3126		-	0.313	0.308	-	-		-	0.057	0.421
Nickel (dissolved)	g/m^3	-	-	<0.02	0.010	<0.02	0.010	<0.02	0.010	-	-	<0.02	0.01		-
Lead (acid soluble)	g/m^3	-	-	<0.05	0.02	-	-	<0.05	0.02	-	-	<0.05	0.02	<0.05	-
pH	pH	6.9	6.7	6.6	6.8	6.9	6.8	6.7	6.8	6.6	6.6	7.1	6.9	7.0	6.9
Temperature	Deg.C	15.2	15	15.5	15	15.0	15.0	15.4	15.1	15.2	15.4	15.1	15.1	14.3	15.2
Turbidity	NTU	25	22	31	52	52	65.5	46	76.5	69	94	41	78	86	125.1
Zinc (dissolved)	g/m^3	-	-	0.050	0.081	0.042	0.099	0.114	0.104	0.224	0.082	0.102	0.086	0.032	0.0435

Key: HC-VIS = Hydrocarbon visual assessment; Pass =no visible hydrocarbon sheen and no odour

The boron concentrations recorded during the year under review were lower than the respective historical medians and well below the high reliability trigger value of 0.37 g/m^3 given in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) for slightly to moderately disturbed ecosystems. As in previous years, lead and formaldehyde were below or equal to detection limits during the year under review. Monitoring also found no significant changes in the pH or temperature of the stream.

Historically the dissolved reactive phosphorus (DRP) concentration has generally been elevated in the upper to middle catchment, reducing at the site below the Connett Road bridge. This is likely to be due to farming activities above the headwaters of the catchment, and the presence of a horticultural supply business upstream of De Havilland Drive. All of the samples retrieved during the wet weather survey exceeded the ANZECC trigger value[4] of 0.01 g/m^3 that may cause algal or macrophytic growths. However no such growths were noted during period under review.

During the wet weather surveys none of the unionised ammonia results exceeded the 0.025 g/m^3 RFWP guideline value.

No sheens, odours or any other physical evidence of hydrocarbon contamination was found in any of the receiving environment samples during either survey.

There are several guidelines for zinc and copper for assessing water quality in terms of suitability for sustaining aquatic life. The United States Environmental Protection Agency (USEPA), in defining metals criteria for protection of freshwater aquatic life, has adopted the use of dissolved metals as most closely approximating the bio available fraction of metal in the water column. Previously, water quality criteria were based on total recoverable metal concentration. Metal monitoring has been recently expanded to new sites to assist in determining potential sources (consented or otherwise) in the Waitaha Catchment.

The water quality criteria for dissolved copper (Cu) and zinc (Zn), for water of hardness 50 g/m^3 $CaCO_3$, are 0.005 g/m^3 for Cu and 0.058 g/m^3 for Zn respectively as a four day average, for chronic (long term) exposure. The corresponding criteria for acute (four -hour) exposure are 0.007 g/m^3 for Cu and 0.064 g/m^3 for Zn. Only the acute criteria are applicable to wet weather sampling results, whereas both chronic and acute exposure criteria would be applicable to dry weather sampling results.

Three of the seven wet weather samples taken in the Waitaha Stream system were found to be below the USEPA acute guideline for zinc, however all the dissolved copper results were below the USEPA chronic and acute guidelines.

The wet weather survey was under moderate to high flow conditions however on this occasion turbidity in the stream was below median values at all stream sites. It is noted that there were no non-compliant discharges in regard to suspended solids during the survey.

Council staff will continue to monitor suspended solids in discharges in the catchment, encourage better silt management by consent holders and also continue to investigate any unauthorised discharges that contribute to sediment loads.

The Waitaha Stream has a small catchment area and is coming under increasing pressure, as the land upstream of Devon Road is further developed. In order to improve the water quality of the stream, the Council will be focusing on ensuring special conditions on existing consents are adequate; identifying any sites that require discharge consents; and educating site operators in the catchment to ensure that they are aware of their obligations under Rule 23 of the RFWP for permitted stormwater discharges (see Appendix II).

[4] Table 3.3.10 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)

17. Summary of recommendations

1 THAT monitoring programmed for consented activities of AICA in the 2017-2018 period continue at a similar level to that of the 2016-2017 period.

2 THAT monitoring programmed for consented activities of C&O Concrete Products Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

3 THAT monitoring programmed for consented activities of Greymouth Facilities Ltd in the 2017-2018 year continues at a similar level programmed in the 2016-2017 period.

4 That monitoring programmed for consented activities of Intergroup Ltd in the 2017-2018 year continue at a similar level programmed for 2016-2017.

5 THAT monitoring programmed for consented activities of Meredith Metals Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

6 THAT monitoring programmed for consented activities of NPDC in the 2017-2018 year continues at a similar level programmed for 2016-2017.

7 THAT monitoring programmed for consented activities of Symons Property Development Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

8 THAT monitoring programmed for consented activities of Taranaki Sawmills in the 2017-2018 year continues at a similar level to that programmed for 2016-2017.

9 THAT monitoring programmed for consented activities of TBS Coatings Ltd in the 2017-2018 year continues at a similar level as in 2016-2017.

10 THAT monitoring programmed for consented activities of Weatherford New Zealand Ltd in the 2017-2018 year continues at a similar level programmed for 2016-2017.

11 THAT monitoring programmed for consented activities at Woodwards 2008 Ltd in the 2017-2018 year continue at a similar level as programmed in 2016-2017.

12 THAT monitoring programmed for consented activities at Zelam Ltd in the 2017-2018 period continue at a similar level as in 2016-2017.

Glossary of common terms and abbreviations

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

Biomonitoring	Assessing the health of the environment using aquatic organisms.
BOD	Biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate.
BODF	Biochemical oxygen demand of a filtered sample.
Bund	A wall around a tank to contain its contents in the case of a leak.
CBOD	Carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate.
COD	Chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a sample by chemical reaction.
Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m.
Cu*	Copper.
DRP	Dissolved reactive phosphorus.
Fresh	Elevated flow in a stream, such as after heavy rainfall.
g/m^3	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
HCVIS	An inspection of a water sample for hydrocarbon contamination based on visible scums /sheens and odour.
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.
IR	Unauthorised Incident Register – contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.
l/s	Litres per second.
MCI	Macroinvertebrate community index; a numerical indication of the state of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats.
mS/m	Millisiemens per metre.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NH_4	Ammonium, normally expressed in terms of the mass of nitrogen (N).
NH_3	Unionised ammonia, normally expressed in terms of the mass of nitrogen (N).

NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
Pb*	Lead.
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
PM_{10}	Relatively fine airborne particles (less than 10 micrometre diameter).
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	*Resource Management Act* 1991 and including all subsequent amendments.
SS	Suspended solids.
SQMCI	Semi quantitative macroinvertebrate community index.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.
UI	Unauthorised Incident.
Zn*	Zinc.

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

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

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Appendix I

Resource consents held by companies in the Waitaha catchment (alphabetical order)

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

Discharge Permit

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

Name of Consent Holder:	AICA (NZ) Limited Private Bag 2055 New Plymouth 4342
Decision Date:	24 September 2015
Commencement Date:	24 September 2015

Conditions of Consent

Consent Granted:	To discharge stormwater from a chemical manufacturing complex into a wetland at the headwaters of an unnamed tributary of the Waitaha Stream
Expiry Date:	1 June 2032
Review Date(s):	June 2020, June 2026 and/or within 3 months of receiving notification under special condition 12
Site Location:	149 Corbett Road, Bell Block
Legal Description:	Lot 4 DP 417775 & Lot 2 DP 417775 (Discharge source & site)
Grid Reference (NZTM)	1701127E – 5678004N (discharge point 1) 1701107E – 5678066N (discharge point 2) 1701133E – 5677996N (discharge point 3) 1701120E – 5678022N (discharge point 4) 1701122E – 5678050N (discharge point 5)
Catchment:	Waitaha

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. Including as a minimum:

    a) Within 12 months of the granting this consent, providing the ability to control the rate of discharge from each retention pond;
    b) minimising the rate of discharge as far as practical to ensure effects are minimised;
    c) the preferential use of any available and authorised land based disposal methods.

2. The stormwater discharged shall be from an area not exceeding 2.5 Ha.

3. By 20 September 2016, the consent holder shall install flow meters and data loggers capable of measuring the discharge rates and volumes from each stormwater retention pond. The discharge flow meters and data loggers shall be tamper-proof and shall measure and record the rate and volume of water discharge to an accuracy of ± 5%. Records of the date, the time and the rate and volume of water shall be taken at intervals not exceeding 15 minutes.

4. Prior to discharge from each stormwater retention pond the stormwater shall be analysed by the consent holder for;

    a) pH;
    b) ammoniacal nitrogen;
    c) formaldehyde;
    d) phenol;
    e) temperature.

5. Prior to discharge, the constituents of the discharges from stormpond 1 and stormpond 2 shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
formaldehyde	Concentration not greater than 2 gm^{-3}
phenol	Concentration not greater than 1 gm^{-3}
ammoniacal nitrogen	Concentration not greater than 10 gm^{-3}

6. Prior to each discharge event from either stormwater retention pond, the consent holder shall notify the Taranaki Regional Council and provide the following information:

   a) which pond is discharging;
   b) an estimate of the times that discharges will occur and cease;
   c) estimated volume of discharge; and
   d) the results of the discharge analysis.

   Notifications shall be made at any time by emailing worknotfication@trc.govt.nz and shall include in the subject line of the email the consent number and the consent holders' name.

7. Discharges other than those from a stormwater retention pond shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
formaldehyde	Concentration not greater than 2 gm^{-3}
phenol	Concentration not greater than 1 gm^{-3}
ammoniacal nitrogen	Concentration not greater than 10 gm^{-3}

8. The discharges 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 NZTM 1701073E - 5678076N (at the site boundary):

   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 concentration of unionised ammonia of greater than 0.025 g/m^3; and
   g) a concentration of phenol greater than 0.6 g/m^3.

9. The consent holder shall maintain and update a spreadsheet that contains the following data;

   a) Until 20 September 2016, the estimated discharge volumes from both stormwater retention ponds';
   b) Results of analysis required by condition two;
   c) From 20 September 2016, the discharge rates and volumes from both stormwater retention ponds' as recorded by the flow meters required under condition three.

   The consent holder shall forward a copy of the spreadsheet to the Chief Executive, Taranaki Regional Council every 3 months, or upon request.

10. The consent holder shall maintain and regularly update a 'Contingency Plan' that details 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.

11. The site shall be operated in accordance with a 'Management Plan' prepared by the consent holder 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 details loading and unloading of materials;
    b) maintenance of conveyance systems;
    c) general housekeeping;
    d) minimising the rate of discharge as far as practical to ensure effects are minimised.

12. 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.

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 2020 and/or June 2026;
    b) within 3 months of receiving a notification under special condition 12 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 24 September 2015

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:	Aica (NZ) Limited Private Bag 2055 New Plymouth 4342
Decision Date:	26 May 2015
Commencement Date:	26 May 2015

Conditions of Consent

Consent Granted:	To discharge emissions into the air from the manufacture of formaldehyde solution and urea formaldehyde resin, together with emissions from associated activities at the plant premises
Expiry Date:	1 June 2032
Review Date(s):	June 2020, June 2026 and in accordance with special condition 12
Site Location:	149 Corbett Road, Bell Block
Legal Description:	Lots 2 & 4 DP 41775 (Discharge source & site)
Grid Reference (NZTM)	1701038E-5677959N

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. Any discharge to air from the exercise of this consent shall not give rise to any offensive, objectionable or toxic levels of dust or odour at or beyond the boundary of the property.

3. The total emissions of formaldehyde from either the main stack of the multi-purpose plant or the vent of the formaldehyde absorber tower of the formaldehyde synthesis plant shall not exceed 1.0 kg/hr as formaldehyde.

4. The consent holder shall have emissions tests conducted on discharges from the "formaldehyde absorber tower" to demonstrate compliance with special conditions 3, unless advised by the Chief Executive, Taranaki Regional Council, that the tests are not required due to the clear evidence that no emission is being breached. These tests shall;

    a) be conducted annually by 1 June each year, and

    b) comprise not less than three separate samples taken during operating conditions that give rise to maximum emissions from the stack, and

    c) be reported to the Chief Executive, Taranaki Regional Council, within 20 working days of the samples being taken. The report shall include the results of the tests, the relevant plant operating parameters over the period of each test, all the raw data and all the calculations.

5. The emissions tests referred to in special condition 4 shall be carried out in accordance with USEPA Method 0011, or any other equivalent method subject to the written approval of the Chief Executive, Taranaki Regional Council, and these tests shall be performed by a party independent from the consent holder, appropriately qualified and experienced in such testing to the satisfaction of the Chief Executive, Taranaki Regional Council.

6. The consent holder shall control all emissions of formaldehyde to the atmosphere to ensure that maximum ground level concentration of formaldehyde at any point beyond the site boundary does not exceed 0.10 mg/m^3 (ambient conditions) at any time.

7. The consent holder shall control all emissions of phenol to the atmosphere to ensure that maximum ground level concentration of phenol at any point beyond the site boundary does not exceed 0.63 mg/m^3 (ambient conditions) at any time.

8. The consent holder shall control all emissions of resorcinol to the atmosphere to ensure that maximum ground level concentration of resorcinol at any point beyond the site boundary does not exceed 1.5 mg/m^3 (ambient conditions) at any time.

9. The consent holder shall control all emissions of carbon monoxide, nitrogen dioxide, fine particles (PM10) and sulphur dioxide to the atmosphere from the site, in order that the maximum ground level concentration of any of these contaminants arising from the exercise of this consent measured under ambient conditions does not exceed the relevant ambient air quality standard as set out in the Resource Management (National Environmental Standards for Air Quality Regulations, 2004) at or beyond the boundary of the property on which the site is located.

10. Prior to undertaking any alterations to the plant, processes or operations, which may significantly change the nature or quantity of contaminants emitted to air from the site, the consent holder shall first consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991.

11. The consent holder shall provide to the Taranaki Regional Council during June of each year, for the duration of this consent, a report reviewing any technological advances in the reduction or mitigation of emissions, how these might be applicable and/or implemented at the plant, and the costs and benefits of these advances.

12. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

    a) during the month of June 2020 and/or June 2026; and/or
    b) within 3 months of any consultation 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 26 May 2015

For and on behalf of
Taranaki Regional Council

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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:	C & O Concrete Products Limited PO Box 7141 New Plymouth 4341
Decision Date:	09 December 2014
Commencement Date:	09 December 2014

Conditions of Consent

Consent Granted:	To discharge stormwater from a concrete products manufacturing premises into the Waitaha Stream
Expiry Date:	01 June 2032
Review Date(s):	June 2020, June 2026
Site Location:	194 Connett Road East, Bell Block
Legal Description:	Lot 25 DP 12988 (Discharge source)
Grid Reference (NZTM)	1701106E-5679098N (sump) 1700897E-5679053N (Discharge point in the Waitaha Stream)
Catchment:	Waitaha

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 a catchment area not exceeding 0.415 hectares.

3. All stormwater shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this permit.

4. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
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.

5. After allowing for reasonable mixing, within a mixing zone extending 10 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.

6. The consent holder shall maintain a contingency plan that details measures and procedures to be undertaken to prevent spillage or any discharge of contaminants not authorised by this consent. The contingency plan shall be followed in the event of a spill or unauthorised discharge and shall be certified by the Chief Executive, Taranaki Regional Council as being adequate to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.

7. The consent holder shall maintain an up to date stormwater management plan that documents how the site is to be managed to minimise the contaminants that become entrained in the stormwater. This plan shall be followed at all times, shall be certified by the Chief Executive, Taranaki Regional Council, and shall include but not necessarily be limited to:

   a) the loading and unloading of materials;
   b) maintenance of conveyance systems;
   c) general housekeeping;
   d) management of the interceptor system; and
   e) names and contact details of relevant staff.

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

8. 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 consents@trc.govt.nz.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2020 and/or June 2026, 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 09 December 2014

For and on behalf of
Taranaki Regional Council

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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:	Energyworks Limited PO Box 346 NEW PLYMOUTH 4340
Decision Date (Change):	15 May 2014
Commencement Date (Change):	15 May 2014 (Granted: 2 October 2013)

Conditions of Consent

Consent Granted:	To discharge emissions into the air associated with abrasive blasting operations, spray painting and associated activities at a permanent site at Connett Road East, Bell Block and from mobile operations throughout the Taranaki region
Expiry Date:	01 June 2020
Review Date(s):	June 2016
Site Location:	221A Connett Road East, Bell Block and various locations thoroughout the Taranaki region
Legal Description:	Lots 80 & 82 DP 14600 (Discharge source & site)
Grid Reference (NZTM)	1701318E-5679335N and various locations throughout the Taranaki region

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 conditions of this consent shall apply to the various operations of the consent holder as follows:

    - Special Conditions 2-7, 18 and 19 apply to all operations.
    - Special Conditions 8-12 apply to operations conducted within the permanent facility at Connett Road East, Bell Block.
    - Special Conditions 13-17 apply to operations conducted at any other site other than the permanent facility at Connett Road East, Bell Block.

All operations

2. 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.

3. Any discharge to air from the exercise of this consent shall not give rise to any offensive, objectionable or toxic levels of dust or odour at or beyond the boundary of the property on which the abrasive blasting or associated activity is occurring.

4. All abrasive blasting is to be conducted with taking into account wind direction and wind strength, such that off-site emissions are kept to a practicable minimum.

5. As far as is practicable, work areas and surrounding areas shall be cleared of accumulations of blasting material at the end of each blasting session and by the end of each working day.

6. Blasting media used for dry abrasive blasting shall contain less than 2% by dry weight dust able to pass through a 0.15 mm sieve and sand used for dry abrasive blasting shall contain less than 5% by dry weight free silica.

7. The consent holder shall ensure that all operators of abrasive blasting equipment understand and comply with the all the conditions of this consent prior to the commencement of any work for which this consent is required.

Operations conducted within the permanent facility at Connett Road East, Bell Block

8. All abrasive blasting on the consent holder's permanent site at Connett Road, East, Bell Block shall be carried out in an enclosed booth or shed.

9. All emissions from abrasive blasting, surface preparation or surface coating operations and all other associated emissions from abrasive blasting at the permanent site at Connett Road East, Bell Block shall be contained and treated, as far as is practicable, prior to discharge from any operations enclosure. All gas steams ventilated or otherwise emitted form an enclosure shall be treated so that the concentration of total particulate matter of less than 125 mg/m^3 (natural temperature & pressure) corrected to dry gas basis, at any time.

10. The dust deposition rate beyond the property boundary of the permanent site at Connett Road East, Bell Block arising from the discharge, shall be less than 0.13 $g/m^2/day$.

11. Within three months of the granting of this consent, the consent holder shall prepare and maintain an operation, management and maintenance plan that documents the consent holder procedures within the permanent site at Connett Road East, Bell Block. This plan shall be followed at all times, shall be certified by the Chief Executive, Taranaki Regional Council, and shall include but not necessarily be limited to:

    a) staff training;
    b) general housekeeping and yard maintenance;
    c) blasting operations;
    d) handling of toxic substances;
    e) monitoring and maintenance of the blasting buildings and air discharge treatment systems;
    f) the recording of training, monitoring and maintenance undertaken;
    g) the recording of complaints made directly to the consent holder, and
    h) the frequency of review of the plan.

12. The monitoring, maintenance and complaints records required by special condition 11 shall be made available to the Chief Executive, Taranaki Regional Council upon request.

Operations conducted at any site other than the permanent facility at Connett Road East, Bell Block

13. All items blasted in a mobile facility shall be those that cannot be moved to a permanent facility (e.g. bridges).

14. All items or premises to be blasted shall be screened by means of covers, tarpaulins, cladding, or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris and materials to the satisfaction of the Chief Executive, Taranaki Regional Council.

15. Dry abrasive blasting that is to be conducted within 200 metres of any dwelling place or property boundary may only take place after either public notice or individual notice to all affected owners or occupiers has been given.

16. The suspended particulate matter shall not exceed 3 mg/m^3 (measured under ambient conditions), and the deposition of dust shall not exceed 0.13 g/m^2/day beyond the property boundary or beyond 50 metres of the discharge when sited on public amenity areas, whichever is less.

17. This consent provides for the abrasive blasting of structures on land, and does not include the abrasive blasting in the coastal marine area, as defined in section two and Appendix II of the *Regional Coastal Plan for Taranaki*.

Review

18. This consent shall on lapse on 31 March 2019, 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.

19. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2016, 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 15 May 2014

For and on behalf of
Taranaki Regional Council

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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:	Energyworks Limited PO Box 346 New Plymouth 4340
Decision Date:	11 November 2014
Commencement Date:	11 November 2014

Conditions of Consent

Consent Granted:	To discharge stormwater via the New Plymouth District Council reticulated stormwater system into an unnamed tributary of the Waitaha Stream
Expiry Date:	01 June 2032
Review Date(s):	June 2020, June 2026 and in accordance with special condition 8
Site Location:	231 Connett Road, Bell Block
Legal Description:	Lots 79, 81-82 DP 14600 (Discharge source & site)
Grid Reference (NZTM)	1701300E-5679286N & 1701441E-5679341N
Catchment:	Waitaha

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 a catchment area not exceeding 2.5 ha.

3. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
free chlorine	Concentration not greater than 0.2 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.

4. After allowing for reasonable mixing, within a mixing zone extending 10 metres downstream of the point where the discharge enters the Waitaha Stream, 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.

5. The site shall be operated in accordance with the 'Stormwater Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.

6. The consent holder shall maintain and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken in the event of a spill or an unauthorised discharge. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity as being adequate to avoid, remedy or mitigate the environmental effects of such an event.

7. 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.

8. 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 2020 and/or June 2026 and/or
   b) within 3 months of receiving a notification under special condition 7 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 11 November 2014

For and on behalf of
Taranaki Regional Council

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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:	Greymouth Facilities Limited PO Box 3394 Fitzroy New Plymouth 4341
Decision Date (Change):	01 August 2014
Commencement Date (Change):	01 August 2014 (Granted Date: 08 May 2014)

Conditions of Consent

Consent Granted:	To discharge untreated stormwater from a yard used for storage and maintenance of hydrocarbon exploration drilling equipment directly onto and into land, and to discharge treated stormwater into the Waitaha Stream via the New Plymouth District Council reticulated stormwater system, from an interceptor
Expiry Date:	01 June 2032
Review Date(s):	June 2017, June 2020, June 2023, June 2026, June 2029 and/or within 3 months of receiving a notification under special condition 13
Site Location:	58 Corbett Road, Bell Block
Legal Description:	Lots 1 & 2 DP 16891 (Discharge source and site)
Grid Reference (NZTM)	1700523E-5678513N (source) 1700582E-5678541N (discharge from site) 1700889E-5679046N (discharge to stream)
Catchment:	Waitaha

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. This consent authorises the discharge of stormwater onto land only when the capacity of the primary discharge pipe to the New Plymouth District Council reticulated stormwater system is exceeded.

2. The consent holder shall record all occasions on which a discharge authorised by condition 1 occurs. These records shall be retained and be made available to the Chief Executive of the Taranaki Regional Council upon request.

3. 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.

4. The stormwater discharged shall be from a catchment area not exceeding 1.065 ha

5. Before 31 October 2014, the interceptor and bunding shall be installed such that stormwater shall be directed for treatment through the interceptor discharge in accordance with the special conditions of this permit.

6. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
chloride	Concentration not greater than 50 gm^{-3}

This condition shall apply before entry of the treated stormwater into the New Plymouth District Council reticulated stormwater system at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

7. For the purpose of assessing compliance with special condition 6 the consent holder shall install and maintain access to the designated sampling point.

8. After allowing for reasonable mixing, within a mixing zone extending 10 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 that details measures and procedures to be undertaken to prevent spillage or any discharge of contaminants not authorised by this consent. The contingency plan shall be followed in the event of a spill or unauthorised discharge and shall be certified by the Chief Executive, Taranaki Regional Council as being adequate to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.

10. Within three months of the granting of this consent the consent holder shall prepare and maintain a stormwater management plan that documents how the site is to be managed to minimise the contaminants that become entrained in the stormwater. This plan shall be followed at all times, shall be certified by the Chief Executive, Taranaki Regional Council, and 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 structural and procedural controls in place to minimise the concentration of contaminant present in the discharge.
    e) maintenance and cleaning of the interceptor

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

11. The discharge of stormwater either from the interceptor to land, or directly to land, shall not result in the discharge of contaminants beyond the boundary of the site.

12. The concentration of hydrocarbons in the soil shall not exceed the soil acceptance criteria shown in the following table:

Contaminant		**Soil acceptance criteria (mg/kg)**
Total Petroleum Hydrocarbons	C_7-C_9	590
	C_{10}-C_{14}	1400
	C_{15}-C_{36}	NA[1]
Monoaromatic Hydrocarbons	Benzene	0.0054
	Toluene	1.0
	Ethylbenzene	1.1
	Xylenes	0.61
Polycyclic Aromatic Hydrocarbons	Naphthalaene	0.043
	Non-carc. (Pyrene)	1.2
	Benzo(a)pyrene	0.85

[1] *NA indicates contaminant not limiting as estimated health-based criterion is significantly higher than that likely to be encounter on site*

13. 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 consents@trc.govt.nz.

14. This consent shall lapse on 30 June 2019, 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.

15. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

    a) during the month of in June 2017 and/or June 2020 and/or June 2023 and/or June 2026 and/or June 2029 and/or
    b) within 3 months of receiving a notification under special condition 13 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 01 August 2014

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:	Intergroup Limited PO Box 58087 Botany Auckland 2163
Decision Date:	31 March 2016
Commencement Date:	31 March 2016

Conditions of Consent

Consent Granted:	To discharge treated stormwater from a liquid wastes processing and chemical consolidation facility onto and into land and into the Waitaha Stream via the New Plymouth District Council reticulated stormwater system
Expiry Date:	1 June 2032
Review Date(s):	June 2020, June 2026 and/or within 3 months of receiving notification under special condition 8
Site Location:	28 Hudson Road, Bell Block
Grid Reference (NZTM)	1701296E-5678821N
Catchment:	Waitaha

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. Before 31 May 2016 all areas of site used for storing unwashed storage vessels shall be bunded such that any stormwater is captured and directed to the site stormwater treatment system.

3. The stormwater discharged shall be from a catchment area not exceeding 0.4 Ha.

4. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
total recoverable hydrocarbons	Concentration not greater than 15 gm^{-3}

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

5. After allowing for reasonable mixing, within a mixing zone extending 10 metres downstream of the discharge point to the Waitaha Stream, 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.

6. The consent holder shall maintain and regularly update a 'Contingency Plan' that details 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.

7. The site shall be operated in accordance with a 'Management Plan' prepared by the consent holder 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 a minimum:

   a) details of unloading of materials to the central trade waste system;
   b) general housekeeping; and
   c) management of the stormwater treatment system.

8. 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 consents@trc.govt.nz.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

   a) during the month of June 2020 and/or June 2026; and/or
   b) within 3 months of receiving a notification under special condition 8 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 31 March 2016

For and on behalf of
Taranaki Regional Council

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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:	Meredith Scrap Metals Limited 7 Catalina Place RD 3 New Plymouth 4373
Decision Date:	04 June 2014
Commencement Date:	04 June 2014

Conditions of Consent

Consent Granted:	To discharge contaminants onto and into land associated with scrap metal storage and processing
Expiry Date:	01 June 2032
Review Date(s):	June 2020, June 2026
Site Location:	7 Catalina Place, Bell Block
Legal Description:	Lot 2 DP 18719 Lot 2 DP 309386 (Discharge source & site)
Grid Reference (NZTM)	1701643E-5679034N
Catchment:	Waitaha

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 actual or likely adverse effect on the environment associated with the discharge of contaminants from the site.

2. The discharge shall not result in any contaminants reaching any adjacent property.

3. The exercise of this consent shall not result in any contaminant concentration within groundwater, which after reasonable mixing, exceeds the background concentration for that particular contaminant.

4. The concentration of heavy metals in any soil shall not exceed the Intervention Values as shown in the following table:

Metal	Intervention Value (mg/kg dry matter)
Antimony	15
Arsenic	55
Barium	625
Cadmium	12
Chromium	380
Cobalt	240
Copper	190
Mercury	10
Lead	530
Molybdenum	200
Nickel	210
Zinc	720

5. The concentration of hydrocarbons in any soil shall not exceed the Soil acceptance criteria shown in the following table:

Contaminant		Soil acceptance criteria (mg/kg)
Total Petroleum Hydrocarbons	C_7-C_9	590
	C_{10}-C_{14}	1400
	C_{15}-C_{36}	NA[1]
Monoaromatic Hydrocarbons	Benzene	0.0054
	Toluene	1.0
	Ethylbenzene	1.1
	Xylenes	0.61
Polycyclic Aromatic Hydrocarbons	Naphthalaene	0.043
	Non-carc. (Pyrene)	1.2
	Benzo(a)pyrene	0.85

[1] *NA indicates contaminant not limiting as estimated health-based criterion is significantly higher than that likely to be encountered on site*

6. 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 consents@trc.govt.nz.

7. From 1 March 2032 (three months prior to the consent expiry date), constituents in the soil shall not exceed the standards shown in the following table:

Constituent	Standard
Arsenic	20 mg/kg
Cadmium	1 mg/kg
Chromium	600 mg/kg
Copper	100 mg/kg
Lead	300 mg/kg
Mercury	1 mg/kg
Nickel	60 mg/kg
Zinc	300 mg/kg
chloride	700 mg/kg
sodium	460 mg/kg
total soluble salts	2500 mg/kg
MAHs PAHs TPH	Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (Ministry for the Environment, 1999). Tables 4.12 and 4.15, for soil type sand.

MAHs - benzene, toluene, ethylbenzene, xylenes
PAHs - napthalene, non-carc. (pyrene), benzo(a)pyrene eq.
TPH - total petroleum hydrocarbons (C_7-C_9, C_{10}-C_{14}, C_{15}-C_{36})

The requirement to meet these standards shall not apply if, before 1 March 2032, the consent holder applies for a new consent to replace this consent when it expires, and that application is not subsequently withdrawn.

8. This consent may not be surrendered at any time until the standards in condition 7 have been met.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2020 and/or June 2026, 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 04 June 2014

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:	Meredith Scrap Metals Limited 7 Catalina Place RD 3 New Plymouth 4373
Decision Date:	10 July 2014
Commencement Date:	10 July 2014

Conditions of Consent

Consent Granted:	To discharge stormwater from scrap metal storage and processing into the Waitaha Stream and into an unnamed tributary of the Mangaoraka Stream via the New Plymouth District Council reticulated stormwater system
Expiry Date:	01 June 2032
Review Date(s):	June 2020, June 2026
Site Location:	De Havilland Drive, Bell Block
Legal Description:	Lot 1 DP 341109, Lot 2 DP 18719, Lot 2 DP 309386 (Discharge source & site)
Grid Reference (NZTM)	1701605E-5679056N & 1701708E-5679041N
Catchment:	Waitaha Waiongana
Tributary:	Mangaoraka

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 a catchment area not exceeding 1.7 Hectares.

3. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
chloride	Concentration not greater than 50 gm^{-3}

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

4. After allowing for reasonable mixing, within a mixing zone extending 7 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.

5. Within three months of the granting of this consent the consent holder shall prepare and maintain a contingency plan that details measures and procedures to be undertaken to prevent spillage or any discharge of contaminants not authorised by this consent. The contingency plan shall be followed in the event of a spill or unauthorised discharge and shall be certified by the Chief Executive, Taranaki Regional Council as being adequate to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.

6. Within three months of the granting of this consent, the consent holder shall prepare and maintain a stormwater management plan that documents how the site is to be managed to minimise the contaminants that become entrained in the stormwater. This plan shall be followed at all times, shall be certified by the Chief Executive, Taranaki Regional Council, and shall include but not necessarily be limited to:

   a) the loading and unloading of materials;
   b) general housekeeping; and
   c) management of the interceptor system.

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

7. 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 consents@trc.govt.nz.

8. This consent shall lapse on 30 September 2019, 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.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2020 and/or June 2026, 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 10 July 2014

For and on behalf of
Taranaki Regional Council

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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:	New Plymouth District Council Private Bag 2025 New Plymouth 4342
Decision Date:	22 March 2017
Commencement Date:	22 March 2017

Conditions of Consent

Consent Granted:	To discharge stormwater from industrial land in the Waitaha catchment via multiple outfalls between De Havilland Drive and State Highway 3 into the Waitaha Stream and various unnamed tributaries of the Waitaha Stream
Expiry Date:	1 June 2032
Review Date(s):	June 2018, June 2020, June 2023, June 2026, June 2029
Site Location:	Auster Place, Connett Road East, De Havilland Drive, Hudson Road, and Mustang Drive, Bell Block, New Plymouth
Grid Reference (NZTM)	1700890E-5679047N (discharge reference: 1) 1700898E-5679053N (discharge reference: 2) 1701065E-5678369N (discharge reference: 3) 1700876E-5678493N (discharge reference: A) 1701020E-5678500N (discharge reference: B) 1701047E-5678464N (discharge reference: C) 1701092E-5678383N (discharge reference: D) 1701190E-5678585N (discharge reference: E) 1700961E-5679207N (discharge reference: F)
Catchment:	Waitaha

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. Including by the appropriate use of planning and regulatory processes to ensure that sites, connecting to the stormwater network use methods of treatment and disposal of stormwater appropriate to the activity being undertaken on the site.

2. The stormwater discharged shall be from a catchment area not exceeding 110 Ha within the area identified in Appendix 1 (attached).

3. After allowing for reasonable mixing, within a mixing zone extending 10 metres downstream of any 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.

4. The consent holder shall prevent, where practicable, or mitigate any erosion occurring as a result of the exercise of this consent.

5. The activity authorised by this consent shall not cause any increase in depth or frequency of flooding on downstream or adjacent properties.

6. After a date no later than 1 December 2020 the consent shall be exercised in accordance with a 'Catchment Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the catchment will be managed to ensure that the conditions of this consent are met and include as a minimum:

    a) A plan of maintenance activities including but not limited to inspections, sump cleaning, and road sweeping.
    b) A schedule of monitoring and reporting of the increase of semi-pervious and impervious surfacing in the catchment as a result of development.
    c) Long-term planning to provide for the mitigation of any effects arising from any changes in characteristics of the discharge as a result of development within the catchment. This planning shall include as minimum; the identification of potential procedural, regulatory and/or structural mitigation measures to ensure that the flooding, erosion, and receiving water quality provisions of this consent are met for the duration of this consent.

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2018, and/or June 2020, and/or June 2023, and/or June 2026, and/or June 2029, 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 22 March 2017

For and on behalf of
Taranaki Regional Council

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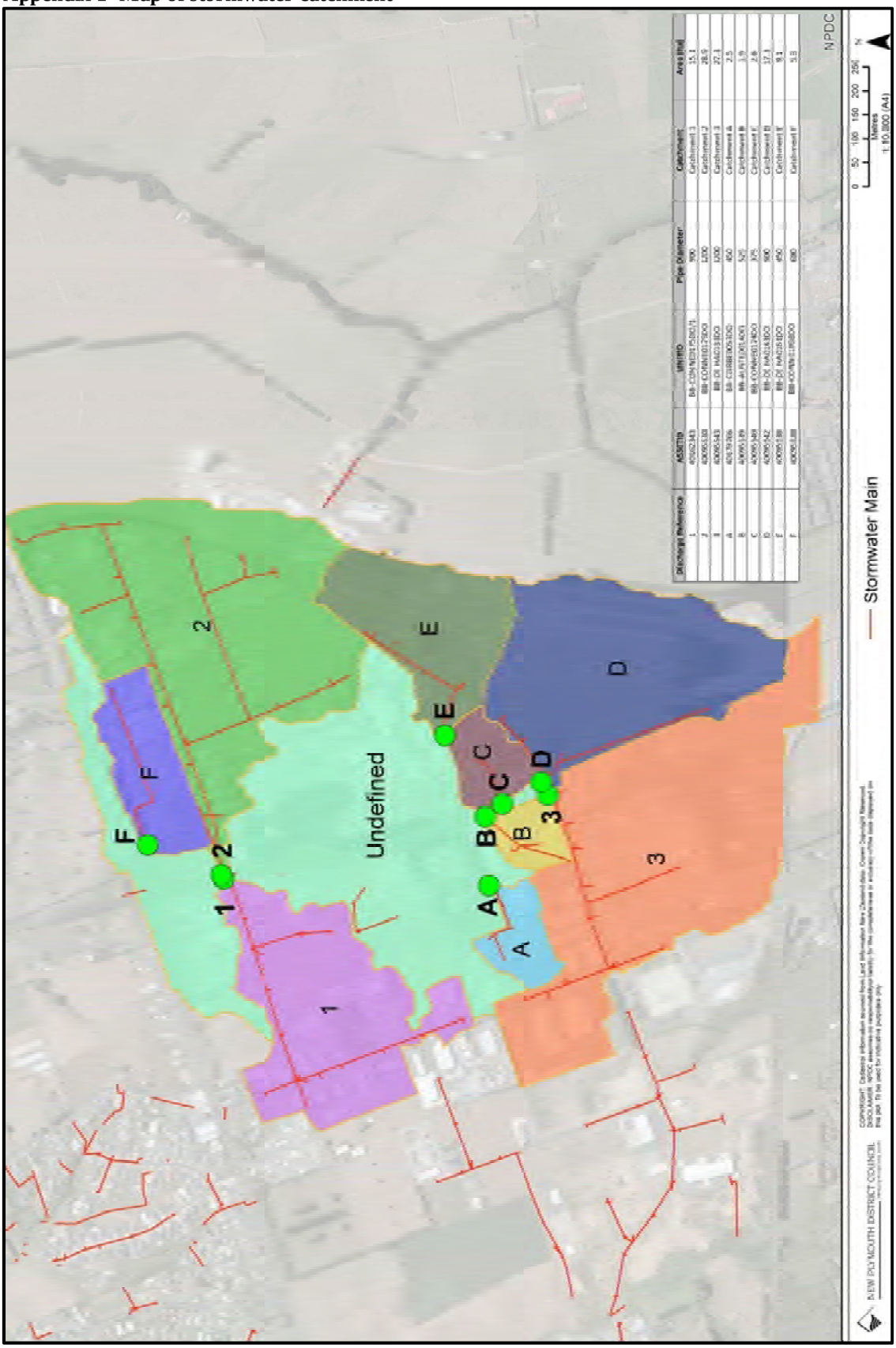
B G Chamberlain
Chief Executive

Appendix 1- Map of stormwater catchment



Discharge Permit

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

Name of Consent Holder:	Symons Property Developments Limited 179 Surrey Hill Road R D 4 NEW PLYMOUTH 4374
Decision Date:	9 May 2011
Commencement Date:	9 May 2011

Conditions of Consent

Consent Granted:	To discharge stormwater from a truck depot and pipe cleaning facility into the Waitaha Stream at or about (NZTM) 1700740E-5678991N and 1700804E-5679014N
Expiry Date:	1 June 2026
Review Date(s):	June 2014, June 2020
Site Location:	141 to 145 Connett Road East, Bell Block, New Plymouth
Legal Description:	Lot 6 DP 373725 Lot 26 DP 376382 and part of Lot 24 DP 376382 subject to survey [Discharge source & site]
Catchment:	Waitaha

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 to section 36 of the Resource Management Act.

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 3.14 ha.

3. By 13 May 2011, all stormwater from part of Lot 24 DP 376382, as identified in Appendix I attached to this consent, shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this permit.

4. Any significant volumes of hazardous substances [e.g. bulk fuel] on site shall be:

   a) contained in a double skinned tank, or
   b) stored in a dedicated bunded area with drainage to sumps, or to other appropriate recovery systems, and not directly to the site stormwater system.

5. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease	Concentration not greater than 15 gm^{-3}
chloride	Concentration not greater than 50 gm^{-3}
BOD	Concentration not greater than 5 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 10 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.

7. 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.

8. 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 systems.

   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. 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.

10. The consent holder shall review the Symons Group Stormwater Management Plan and Symons Spill Contingency Plan prior to making any changes to the processes or operations undertaken at the site and/or on receiving written notice from the Taranaki Regional Council of:

    - the requirement to review the Plans;
    - the matters which shall be addressed within the plan review; and
    - the reasons or anticipated results of the matters requiring review.

    The reviewed Plan(s) shall document all operations, maintenance activities, and mitigation and contingency measures and shall be submitted for approval to the Chief Executive, Taranaki Regional Council, acting in a certification capacity, at least two weeks prior to making any changes to the operations on site and/or within one month of receiving written notice of the requirement to review the Plan.

11. The data obtained from any investigations into the effectiveness of the stormwater detention tanks installed at the site is to be made available to the Chief Executive, Taranaki Regional Council upon request.

12. This consent shall lapse on 30 June 2016, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

13. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

    a) during the month of June 2014 and/or June 2020 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 2011

For and on behalf of
Taranaki Regional Council

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Director-Resource Management

Appendix I


Lot 3 DP 338141
Lot 2 DP 340932
Lot 2 DP 338141
Lot 2 DP 417724
Lot 1 DP 338141
Lot 14 DP 7555
1165
Lot 13 DP 7555
Lot 12 DP 7555
1163
Marked A DP 417724
1159
1161
Lot 11 DP 7555
Lot 10 DP 7555
1157
Lot 1 DP 417724
Devon Road
Lot 9 DP 7555
1155
Lot 8 DP 7555
1153
Lot 7 DP 7555
1151
1149
SH 3
Lot 6 DP 7555
Lot 27 DP 373725
1147
Lot 5 DP 7555
1145
Lot 1 DP 76994
1143
1139
1141
Lot 3 DP 7555
Lot 59 DP 14599
Lot 58 DP 14599
177
Lot 2 DP 16125
1148
Lot 61 DP 14599
Lot 3 DP 16125
Lot 60 DP 14599
Lot 26 DP 376382
179
175
Lot 6 DP 373725
Lot 1 DP 16125
176
143
Marked A DP 376382
Lot 1 DP 12988
Lot 1 DP 361831
141
Lot 24 DP 376382
144
Lot 1 DP 16792
135
Connett Road East
140
Lot 23 DP 376382
138
136
Lot 5 DP 361831
Lot 56 DP 12911
134
Lot 4 DP 361831
Lot 3 DP 361831
Lot 1 DP 14113
Lot 21 DP 376382
Lot 2 DP 361831
7
6
Lot 2 DP 14113
Lot 7 DP 376382
Mustang Drive
Lot 20 DP 376382
9
29A
8
Lot 3 DP 14113
Lot 1 DP 15329
Lot 8 DP 376382
Lot 19 DP 376382
11
Lot 2 DP 15329
Lot 2 DP 428727
Lot 9 DP 376382

Discharge Permit

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

Name of Consent Holder:	TBS Coatings Limited P O Box 7057 Fitzroy NEW PLYMOUTH
Consent Granted Date:	9 August 2002

Conditions of Consent

Consent Granted:	To discharge emissions into the air from abrasive blasting operations and associated processes at a permanent site at Corbett Road, Bell Block at or about GR: Q19:115-397, and from mobile operations at various locations throughout the Taranaki region
Expiry Date:	1 June 2020
Review Date(s):	June 2005, June 2008, June 2011, June 2014, June 2017
Site Location:	Corbett Road, Bell Block, New Plymouth
Legal Description:	Lot 1 DP 11084 Pt Sec 150 Blk II Paritutu SD
Catchment:	Mangati

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 (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.

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

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

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

Special conditions

All operations

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.

2. As far as is practicable all abrasive blasting shall be carried out in a booth, shed or other effectively facility on the consent holders site.

3. Sand used for dry blasting must contain less than 5% by dry weight free silica and less than 2% by dry weight dust able to pass a 0.15 mm sieve.

4. All abrasive blasting is to be conducted with regard to wind direction and wind strength, such that off-site emissions are kept to a practicable minimum.

5. As far as is practicable, work areas and surrounding areas shall be cleared of accumulations of sand and any other blasted material at the end of each blasting session and by the end of each working day.

6. Any discharge to air from the exercise of this consent shall not give rise to any offensive, objectionable or toxic levels of dust or odour at or beyond the boundary of the property on which the abrasive blasting is occurring.

7. Dry sand blasting shall be used in yard and mobile operations only when specified by a client. High pressure water blasting, wet sand blasting, grit blasting, vacuum blasting or an equivalent alternative process must be used when practicable.

8. It shall be the responsibility of the consent holder to ensure that all operators of abrasive blasting equipment understand and comply with all of the conditions of this consent prior to the commencement of any work for which this consent is required.

Operations conducted within permanent facilities

9. All emissions from abrasive blasting, surface preparation or surface coating operations and all other associated emissions from abrasive blasting, shall be contained and treated, as far as is practicable, prior to discharge beyond any operations enclosure. All gas streams ventilated or otherwise emitted from an enclosure shall be treated to a concentration of total particulate matter of less than 125 mg/m^3 [natural temperature & pressure] corrected to dry gas basis, at any time.

10. The dust deposition rate beyond the property boundary arising from the discharge, shall be less than 4.0 g/m^2/30 days.

11. The final discharge after any pre-treatment shall not contain lead [Pb] or Pb components at a concentration greater than 0.7 mg/m^3 as Pb, chromium [Cr] or Cr compounds at a concentration of 1.5 mg/m^3 as Cr, or zinc [Zn] or Zn compounds at a concentration of 15 mg/m^3 as Zn [discharge corrected to 0 degrees Celsius and dry gas], at any time.

Yard operations

12. From time to time, the consent holder may receive for abrasive blasting or other surface treatment, an item that, because of its bulk, weight, or other factor, cannot be treated inside the appropriate facility. Such yard operations shall not be permitted on a frequent or continual basis, or other than in exceptional circumstances.

13. Prior to commencing any yard operation as described in special condition 12 above, the consent holder shall specifically provide written notification to the Chief Executive, Taranaki Regional Council.

14. All items which cannot be treated within the properly enclosed facilities shall be screened by means of covers, tarpaulins, cladding or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris.

Mobile operations

15. All items or premises to be blasted from a mobile blasting unit shall be screened by means of covers, tarpaulins, cladding, or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris and materials to the satisfaction of the Chief Executive, Taranaki Regional Council.

16. Prior to undertaking abrasive blasting from a mobile blasting unit within residential areas, the consent holder shall notify the relevant District Council.

17. Where abrasive blasting or surface coating from a mobile blasting unit is to take place within 100 metres of a watercourse, the consent holder shall provide written notification to the Chief Executive, Taranaki Regional Council, prior to any operation commencing. The Chief Executive, Taranaki Regional Council, may require additional measures to prevent, minimise or mitigate any potential for adverse environmental effects. It shall be the responsibility of the consent holder to ascertain such measures prior to commencing an abrasive blasting operation, and to comply with any and all such measures at all times.

18. Dry abrasive blasting from a mobile blasting unit shall be conducted within 200 metres of any dwelling place or property boundary only with the written approval of the Chief Executive, Taranaki Regional Council, and then only after either public notice or individual notice to all affected owners or occupiers has been given.

19. The suspended particulate matter shall not exceed 3 mg/m^3 [measured under ambient conditions], and the deposition of dust shall not exceed 0.13 g/m^2/day beyond the property boundary or beyond 50 metres of the discharge when sited on public amenity areas, whichever is less.

20. The discharge shall not give rise to any of the following effects in any surface watercourse:

    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) an increase in suspended solids of more than 10 g/m^3;
    g) turbidity above 4 nephelometric turbidity units [NTU], except that if the turbidity within the water body is above 3.2 NTU, no more than 25% increase in NTU;
    h) any increase in the concentration of zinc, lead, arsenic, chromium or thorium-based products.

Review

21. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2005 and/or June 2008 and/or June 2011 and/or June 2014 and/or June 2017, 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 August 2002

For and on behalf of
Taranaki Regional Council

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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:	Taranaki Sawmills Limited PO Box 7145 NEW PLYMOUTH 4341
Decision Date:	20 May 2015
Commencement Date:	20 May 2015

Conditions of Consent

Consent Granted:	To discharge stormwater and to temporarily discharge kiln condensate from a sawmill site onto and into land and into the Waitaha Stream and an unnamed tributary of the Waitaha Stream
Expiry Date:	01 June 2032
Review Date(s):	June 2020 and/or June 2026 and in accordance with special condition 9
Site Location:	30-32 Hudson Road, Bell Block
Legal Description:	Lot 2 DP 15755 Lot 1 DP 17946, Lot 18 DP 12911, Lot 1 DP 13792
Grid Reference (NZTM)	1700954E-5678880N (discharge point 1) 1701029E-5678590N (discharge point 2) 1701141E-5678570N (discharge point 3)
Catchment:	Waitaha

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 a catchment area not exceeding 10.75 Ha

3. No kiln condensate or contaminants derived from kiln condensate shall be included in the discharge after 31 October 2016.

4. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
total recoverable hydrocarbons	Concentration not greater than 15 gm^{-3}
biochemical oxygen demand	Concentration not greater than 10 gm^{-3}

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

5. After allowing for reasonable mixing, within a mixing zone extending 15 metres downstream of the discharge points, 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.

6. The consent holder shall maintain and regularly update a 'Contingency Plan' that details 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.

7. The site shall be operated in accordance with the 'Management Plan' supplied in the application. The plan shall be kept up to date and any subsequent versions of the plan shall be 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) an up to date site map
b) the management of wood waste piles to minimise leaching
c) general housekeeping; and
d) maintenance and management of the stormwater drains and ponds

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

8. 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 consents@trc.govt.nz.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

a) during the month of June 2020 and/or June 2026
b) within 3 months of receiving a notification under special condition 8 above
c) within 6 months of diversion of the kiln condensate as required by condition 3;

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 20 May 2015

For and on behalf of
Taranaki Regional Council

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A D McLay
Director - Resource Management

Advice Note
The consent holder's attention is drawn to MPI's "New Zealand Code of Practice for the Design and Operation of Farm Dairies (NZCP1) which restricts:

- *the discharge of specified wastes to land used for grazing of milking animals; and*
- *the use of feed from land which has had specified wastes applied to it.*

*Should you require further information, please contact a Dairy Industry Technical Advisory Group (DITAG) representative **or** visit http://www.foodsafety.govt.nz/elibrary/industry/dairy-nzcp1-design-code-of practice/amdt-2.pdf (specifically section 6.4 Disposal of effluent and other wastes and section 7.8 Purchased Stock Food) **or** contact an operating dairy processing company regarding conditions of supply.*

Discharge Permit

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

Name of Consent Holder:	Taranaki Sawmills Limited P O Box 7145 Fitzroy NEW PLYMOUTH
Consent Granted Date:	27 January 2004

Conditions of Consent

Consent Granted:	To discharge emissions into the air from sawmilling and untreated timber processing and associated activities including the combustion of wood and/or coal within boilers and wastes in an open firepit at or about GR: Q19:110-405
Expiry Date:	1 June 2032
Review Date(s):	June 2008, June 2014, June 2020, June 2026
Site Location:	Hudson Road, Bell Block, New Plymouth
Legal Description:	Lot 1 DP 13792 Blk II Paritutu SD
Catchment:	Waitaha

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 consent holder shall minimise the emission and effects of contaminants discharged to air from the property, by the selection of the best practicable process equipment, process control equipment, contaminant abatement equipment, and methods of control, supervision and operation, and the proper and effective operation, supervision, control and maintenance of all equipment and processes at all times.

3. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of Application 2797. In the case of any contradiction between the documentation submitted in support of application 2797 and the conditions of this consent, the conditions of this consent shall prevail.

4. The Vekos boiler, stack and associated equipment shall be constructed, operated, and maintained generally as specified in the attachments to application 93/337 lodged with the Taranaki Regional Council on 18 August 1993. In the case of any contradiction between the documentation submitted in support of application 93/337 and the conditions of this consent, the conditions of this consent shall prevail.

5. Prior to undertaking any alterations to the plant, processes or operations, as specified in the application, which may significantly change the nature or quantity of contaminants emitted from the site, the consent holder shall consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991 and any amendments.

6. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing as soon as is practicable, and in any case within one working day, of any use of coal as a fuel (whether as a sole fuel or blended with other fuels) on the site in the exercise of this consent. This condition applies when the intended or anticipated cumulative duration of the use of coal is more than 72 hours within any 14 day period.

7. The consent holder shall record all use of coal as a fuel, including the rate of consumption and the time and duration, and shall make this information available to the Chief Executive, Taranaki Regional Council, upon reasonable request.

8. Within three months of the granting of this consent, the consent holder shall prepare and submit to the Chief Executive, Taranaki Regional Council, a management and operations plan for the combustion of wastes in the fire pit on the property. Upon the approval of the Chief Executive, Taranaki Regional Council, the consent holder shall thereafter maintain and comply with the plan. In the case of any contradiction between the plan and the conditions of this consent, the conditions of this consent shall prevail.

9. The plan for the management and operation of combustion of wastes in the firepit shall ensure a level of environmental performance that is to no less a level than that which would be achieved by compliance with the plan submitted in application 2797, and in particular but without exclusion or limitation, section 6.1.4 (B) and Appendix 3 of that application.

10. In the event of any incident having an adverse effect beyond the boundary of the property of the consent holder, the consent holder shall, as immediately as is practicable, notify the Chief Executive, Taranaki Regional Council.

11. The discharges authorised by this consent shall not give rise to any significant adverse ecological effect on any ecosystems in the Taranaki region.

12. The discharges authorized by this consent shall not give rise to an odour at or beyond the boundary of the site that is offensive or objectionable.

13. For the purposes of condition 12, without restriction, an odour shall be deemed to be offensive or objectionable if:

    a) it is held to be so in the opinion of an enforcement officer of the Taranaki Regional Council, having regard to the duration, frequency, intensity and nature of the odour; and/or
    b) an officer of the Taranaki Regional Council observes that an odour is noticeable, and either it lasts longer than three (3) hours continuously, or it occurs frequently during a single period of more than six (6) hours; and/or
    c) no less than three individuals from at least two different properties, each declare in writing that an objectionable or offensive odour was detected beyond the boundary of the site, provided the Council is satisfied that the declarations are not vexatious and that the objectionable or offensive odour was emitted from the site as specified in (b). Each declaration shall include the individuals' names and addresses, the date and time the objectionable or offensive odour was detected, the location of the individual when it was detected and the prevailing weather conditions during the event. The declarations shall be signed and dated.

14. The discharges authorised by this consent shall not give rise to suspended or deposited dust at or beyond the boundary of the site that, in the opinion of at least one enforcement officer of the Taranaki Regional Council, is offensive or objectionable. For the purpose of this condition, ambient levels of dust in excess of the following limits are deemed to be offensive or objectionable:

    a) dust deposition rate 0.13 g/m^2/day; and/or
    b) suspended dust level 1.5 mg/m^3.

15. The consent holder shall control all emissions of sulphur dioxide to the atmosphere from the site, in order that the maximum ground level concentration of sulphur dioxide arising from the exercise of this consent measured under ambient conditions on land does not exceed 350 micrograms per cubic metre [one-hour average exposure] or 125 micrograms per cubic metre [twenty-four hour average exposure] at or beyond the boundary of the site.

16. The consent holder shall control all emissions of particulate of effective diameter of less than 10 micrometres (PM10) to the atmosphere from combustion sources, whether alone or in conjunction with any other emissions from the site, in order that the maximum ground level concentration of PM10 arising from the exercise of this consent measured under ambient conditions does not exceed 50 micrograms per cubic metre [one hour average exposure], on more than 5 occasions per year cumulative across any and all monitoring sites, and does not exceed 120 micrograms per cubic metre [one hour average exposure] at any time, at or beyond the boundary of the site.

17. The discharges authorized by this consent shall not give rise to a level of a contaminant or contaminants at or beyond the boundary of the site that is noxious or toxic.

18. There shall be no emissions of dark smoke from the boiler stack(s) for any continuous period of 2 minutes or for more than 4 minutes cumulative in any 60 minute period, except:

    a) during soot blowing, which may occur up to 4 times per day for a total cumulative duration of 20 minutes in any 24 hour period; and
    b) during the first 30 minutes following the lighting up of any boiler

19. The minimum height of discharge of products of combustion from the boilers shall be 12 metres above the ground level prevailing at the time of lodging the application for this consent.

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

21. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2008 and/or June 2014 and/or June 2020 and/or June 2026, for the purpose or purposes of:

    a) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
    b) to address via a more appropriate condition or conditions any adverse effect on the environment arising from odour emissions or discharges of other contaminants to air; and/or
    c) to further specify 'best practicable option' in terms of the consent holder's management, supervision, maintenance and/or operation of its processes on the property; and/or
    d) to specify numerical values for any operating or environmental effects parameter.

Signed at Stratford on 27 January 2004

For and on behalf of
Taranaki Regional Council

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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:	Weatherford New Zealand Limited P O Box 7162 NEW PLYMOUTH
Review Completed Date:	21 August 2008 [Granted: 5 September 1995]

Conditions of Consent

Consent Granted:	To discharge up to 130 litres/second of treated stormwater and minor treated washdown water from an oilfield engineering services premises onto land and into an unnamed tributary of the Waitaha Stream at or about (NZTM) 1701110E-5678552N
Expiry Date:	1 June 2014
Site Location:	Dakota Place, Bell Block
Legal Description:	Lots 5-7 DP 12035 Lots 2 & 3 DP 11781 Lot 4 DP 12035 Bell Dist Blk II Paritutu SD
Catchment:	Waitaha

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

Condition 1 [changed]

1. Constituents in the discharge shall meet the standards shown in the following table:

Constituent	Standard
pH	Within the range 6.0 to 9.0
Suspended solids	Concentration not greater than 100 gm^{-3}
Oil and grease [to water]	Concentration not greater than 15 gm^{-3}
Oil and grease [to land]	Concentration not greater than 25 gm^{-3}

This condition shall apply prior to the entry of the treated stormwater and wastewater into the receiving waters, and prior to the discharge of wastewater on to land at designated sampling points approved by the Chief Executive, Taranaki Regional Council.

Conditions 2 to 4 [unchanged]

2. That the consent holder shall construct bunding around the oil/petroleum storage area to avoid the contamination of stormwater to the satisfaction of the Chief Executive, Taranaki Regional Council.

3. That allowing for a mixing zone of 10 metres extending downstream of any direct discharge or from the nearest boundary of the consent holder's property, the discharge shall not give rise to all or any of the following effects in the receiving water:

i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
ii) any conspicuous change in the colour or visual clarity;
iii) any emission of an objectionable odour;
iv) any significant adverse effects on aquatic life, habitats, or ecology;
i) any undesirable biological growths.

4. That the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2002 and/or June 2008 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects of the discharge on the receiving environment.

Condition 5 [new]

5. Before 30 November 2008 the consent holder shall prepare and thereafter 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) on site hazardous substance storage;
   b) general housekeeping; and
   c) management of the interceptor systems.

Signed at Stratford on 21 August 2008

For and on behalf of
Taranaki Regional Council

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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:	Weatherford New Zealand Limited PO Box 7162 New Plymouth 4341
Decision Date:	11 July 2016
Commencement Date:	11 July 2016

Conditions of Consent

Consent Granted:	To discharge treated and untreated stormwater from an oilfield engineering services premises onto land and into an unnamed tributary of the Waitaha Stream and into the Waitaha Stream
Expiry Date:	1 June 2032
Review Date(s):	June 2018, June 2020, June 2026 and in accordance with special condition 9
Site Location:	10 Dakota Place, Bell Block
Grid Reference (NZTM)	1701080E-5678556N (discharge point 1) 1701045E-5678464N (discharge point 2) 1701161E-5678515N (discharge point 3)
Catchment:	Waitaha

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 a catchment area not exceeding 2.267 Ha.

3. All stormwater shall be directed for treatment through a stormwater treatment system for discharge in accordance with the special conditions of this permit.

4. Constituents of the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
suspended solids	Concentration not greater than 100 gm^{-3}
oil and grease (to water)	Concentration not greater than 15 gm^{-3}
oil and grease (to land)	Concentration not greater than 25 gm^{-3}
dissolved zinc	Concentration not greater than 0.65 gm^{-3}
dissolved nickel	Concentration not greater than 0.1 gm^{-3}
dissolved copper	Concentration not greater than 0.05 gm^{-3}
acid soluble lead	Concentration not greater than 0.1 gm^{-3}

5. After allowing for reasonable mixing, within a mixing zone extending 10 metres downstream of any 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.

6. The consent holder shall maintain and regularly update a 'Contingency Plan' that details 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.

7. Within 3 months of this consent being granted the site shall be operated in accordance with a 'Management Plan' and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall be updated as required and detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and ensure compliance with the conditions of this consent. It shall include as a minimum:

   a) the loading and unloading of materials;
   b) proposed site remediation activities and timelines;
   c) details, maps, and diagrams of current stormwater treatment measures;
   d) detailed procedures for managing the lower wash pad interceptor to ensure no discharge of wash water to the Waitaha Stream system occurs; and
   e) a timeline for the development of an alternative wash water collection/disposal system that meet best practice requirements.
   f) general housekeeping; and
   g) details of the inspection and maintenance of stormwater treatment measures.

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

8. 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.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

   a) during the month of June 2018 and/or June 2020 and/or June 2026.
   b) within 3 months of receiving a notification under special condition 8 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 11 July 2016

For and on behalf of
Taranaki Regional Council

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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:	Woodwards 2008 Limited P O Box 9036 NEW PLYMOUTH 4351
Decision Date:	17 August 2011
Commencement Date:	17 August 2011

Conditions of Consent

Consent Granted:	To discharge emissions into air from the combustion of untreated timber wastes at or about (NZTM) 1701037E-5678250N
Expiry Date:	1 June 2026
Review Date(s):	June 2014, June 2020
Site Location:	124 De Havilland Drive, Bell Block
Legal Description:	Lot 8 DP 11912 [Discharge site]

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 to section 36 of the Resource Management Act.

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 including [but not limited to]:

    - having regard to the prevailing and predicted wind speed and direction at the time of burning in order to minimise offsite effects;
    - allowing the waste material to dry before burning;
    - starting a small fire with the driest material and adding further material once it is blazing, as opposed to igniting a large stack and leaving it unattended.

2. The materials for combustion are restricted to untreated wood and wood wastes; and shall be combusted only when placed in a pit no closer than 20 metres to any boundary.

3. There shall be no objectionable or offensive odour to the extent that it causes an adverse effect at or beyond the boundary of the site.

    Note: For the purposes of this condition:

    - The site is defined as Lot 8 DP 11912; and
    - Assessment under this condition shall be in accordance with the *Good Practice Guide for Assessing and Managing Odour in New Zealand, Air Quality Report 36, Ministry for the Environment, 2003.*

4. The consent holder, or an authorised agent, shall supervise burning at all times and the fires shall not be lit later than 12 noon on any day.

5. The dust deposition rate beyond the property boundary arising from the discharge shall be less than 0.13 $g/m^2/day$.

6. Any discharge to air from the site shall not give rise to any offensive, objectionable, noxious or toxic levels of dust at or beyond the boundary of the property, and in any case, suspended particulate matter shall not exceed 3 mg/m^3 [measured under ambient conditions] beyond the boundary of the site.

7. The discharges authorised by this consent shall not give rise to a level of a contaminant or contaminants at or beyond the boundary of the site that is noxious or toxic.

8. This consent shall lapse on 30 September 2016, 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.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 17 August 2011

For and on behalf of
Taranaki Regional Council

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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:	Zelam Limited P O Box 7142 NEW PLYMOUTH 4341
Change To Conditions Date:	1 September 2009 [Granted: 13 February 2008]

Conditions of Consent

Consent Granted:	To discharge emissions into the air from industrial agri-chemical formulation processes and associated processes at or about (NZTM) 1701317E-5678995N
Expiry Date:	1 June 2026
Review Date(s):	June 2014, June 2020
Site Location:	13 Hudson Road, Bell Block
Legal Description:	Lot 1 DP 17241 Blk II Paritutu SD

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

Conditions 1 to 6 [unchanged]

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. Prior to undertaking any alterations to the plant, processes or operations, which may significantly alter the nature or quantity of contaminants emitted form the site, the consent holder shall consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991.

3. The discharges authorised by this consent shall not give rise to any offensive or objectionable odour at or beyond the site boundary in the opinion of an enforcement officer of the Taranaki Regional Council.

4. The concentration of benzyl chloride discharge from any vent shall not exceed 1 part per million [vol/vol].

5. The discharge of particulate matter from any vent or source shall not exceed 125 milligrams per cubic metre corrected to 0 degrees Celsius, 1 atmosphere of pressure and a dry gas basis.

6. In the event of any incident arising from the discharge of contaminants to air having an effect beyond the boundary of the site, the consent holder shall contact the Chief Executive, Taranaki Regional Council as soon as is practicable.

Conditions 7 & 8 [changed]

7. The consent holder shall maintain the scrubber liquor of the forced draft scrubbers at or greater than pH 9.

8. The consent holder shall monitor and record the pH of the forced draft scrubber liquors on a weekly basis. The consent holder shall forward this information in the form of a written report to the Chief Executive, Taranaki Regional Council, upon request.

Conditions 9 & 10 [new]

9. The consent holder shall maintain the excess free amine concentration of the scrubber liquor of the air displacement scrubber at or greater than 0.5%.

10. The consent holder shall monitor and record the excess free amine concentration of the scrubber liquor of the air displacement scrubber prior to each quaternary process run. The consent holder shall forward this information in the form of a written report to the Chief Executive, Taranaki Regional Council, upon request.

Conditions 11 & 12 [unchanged, formerly conditions 9 & 10]

11. The consent holder shall control all emissions to the atmosphere from the site so that the maximum ground level concentration for any particular contaminant arising from the exercise of this consent measured at or beyond the boundary of the site shall not exceed:

    a) 1/30th of the relevant Occupation Threshold Value Time Weighted Average as defined in the Department of Labour Workplace Exposure Standards and Biological Indices for New Zealand; or

    b) by more than the Short Term Exposure Limit as defined in the Department of Labour Workplace Exposure Standards and Biological Indices for New Zealand; or

    c) if no Short Term Exposure Limit is set, more than three times the Time Weighted Average at any time.

12. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 1 September 2009

For and on behalf of
Taranaki Regional Council

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Director-Resource Management

Appendix II

Rule 23 of the Regional Freshwater Plan (permitted stormwater rule)

Discharge of stormwater

Activity	Rule	Standards/Terms/Conditions	Classification	Notification	Control/Discretion	Policy Reference
Discharge of stormwater into or onto land or into water (excluding those wetlands listed in Appendix II) that is not provided for by Rules 25-27	23	• The discharge shall not originate from any industrial or trade premise where the active area of the site is greater than 0.5 ha, unless there is an interceptor system in place that is designed and managed so that it will keep stormwater from entraining contaminants; • The discharge shall not originate from any industrial or trade premise where hazardous substances are used, stored or potentially spilt unless: (i) there is an interceptor system in place that is designed and managed so that it will keep stormwater from entraining contaminants; or (ii) there is an interceptor system in place that is designed and managed so that it is capable of capturing contaminated stormwater and either diverting it to trade waste or containing it and/or removing or reducing the contaminants such that: - any spills can be recovered; - the discharge shall not contain any persistent or bioaccumulative substances; - the discharge shall not breach any other specified condition of this rule; and a spill contingency and interceptor system maintenance plan is maintained and regularly updated for the site; • The discharge shall not originate from any industrial or trade premises where the movement of rock, earth or other soil material is taking place, unless that movement is being undertaken in connection with site landscaping, or the installation, construction, maintenance or demolition of buildings, structures or equipment; • The discharge shall not be greater than is able to be discharged from a pipe of 900 mm in diameter;	Permitted			

Discharge of stormwater (continued)

Activity	Rule	Standards/Terms/Conditions	Classification	Notification	Control/Discretion	Policy Reference
		• The discharge shall not cause significant erosion, scour or deposition; • Discharge that will, or is liable to enter surface water, shall not exceed the following: pH 6.0-9.0 oil and grease 15 gm^{-3} suspended solids 100 gm^{-3} BOD 5 gm^{-3} unionised ammonia 0.025 gm^{-3} free chlorine 0.2 gm^{-3} • The discharge shall not give rise to any of the following effects in receiving waters after reasonable mixing: (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.	Permitted			

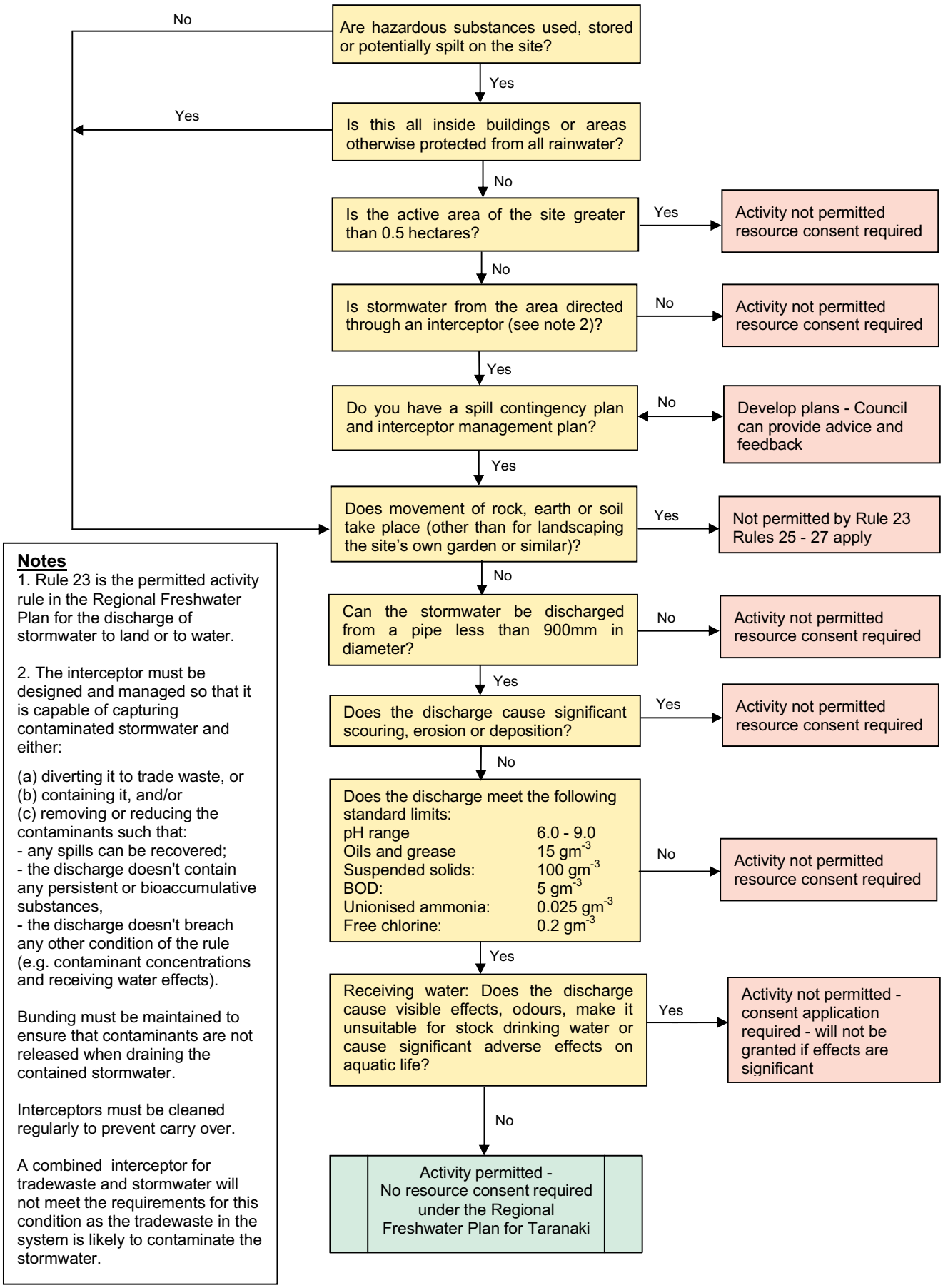
Explanation

Rule 23 provides for the large number of stormwater discharges that have no or only minor adverse effects on the environment. A resource consent is not required for stormwater discharges to either land or water so long as the discharge can comply with the conditions of this rule. The first condition restricts discharges from industrial or trade that are over 0.5 hectares in area, unless the site has a means of ensuring that stormwater will not be contaminated [a roofed site is a good example of this]. The reference to the 'active area' of the site refers to that part of the site where industrial and trade activity is taking place, including areas on site where goods, products, hazardous substances or other materials are stored, used or potentially split, but does not include areas that are grassed; landscaped; or roofed; or carparks which are used exclusively for non-goods vehicles.

Any sites storing and/or using hazardous substances must either ensure that the stormwater cannot be contaminated [for example is the site is roofed] or that an interceptor system is designed and managed so that contaminated stormwater is diverted to trade waste or captured and contained and/or treated so that the contamination is removed and reduced. In this regard the bunding of hazardous substances and the capture and treatment of stormwater would enable the discharge of stormwater from sites under 0.5 hectares to be a permitted activity. The condition also requires that a contingency plan be maintained and regularly updated for the site.

The third condition restricts the discharge of stormwater from any industrial and trade premises where the movement of rock and other earth material is taking place, other than the types of minor works outlined in the condition. This is consistent with other rules in the Plan relating to stormwater discharges from soil disturbance activities.

Rule 23 also contains conditions relating to the receiving environment to ensure that adverse effects are avoided, remedied or mitigated. Conditions relate to both water quality [by specifying discharge limits and receiving water effects] and the quantity of water that is being discharged [to avoid erosion, scour or deposition].



Notes

1. Rule 23 is the permitted activity rule in the Regional Freshwater Plan for the discharge of stormwater to land or to water.

2. The interceptor must be designed and managed so that it is capable of capturing contaminated stormwater and either:

(a) diverting it to trade waste, or
(b) containing it, and/or
(c) removing or reducing the contaminants such that:
- any spills can be recovered;
- the discharge doesn't contain any persistent or bioaccumulative substances,
- the discharge doesn't breach any other condition of the rule (e.g. contaminant concentrations and receiving water effects).

Bunding must be maintained to ensure that contaminants are not released when draining the contained stormwater.

Interceptors must be cleaned regularly to prevent carry over.

A combined interceptor for tradewaste and stormwater will not meet the requirements for this condition as the tradewaste in the system is likely to contaminate the stormwater.