

Mangati Catchment
Joint Monitoring Programme
Annual Report
2018-2019

Technical Report 2019-10

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Executive summary

This report is the Annual Report for the period July 2018 to June 2019 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with 16 industries within the catchment of the Mangati Stream, Bell Block.

The Mangati catchment has, in the past, been heavily utilised for the disposal of stormwater and wastewaters from a large number of industrial sites. As a consequence of inadequate treatment and management of discharges and minimal dilution capacity in the past, the water quality and aquatic ecosystems of the stream were significantly impacted. The Mangati Stream catchment is listed in the Regional Freshwater Plan for Taranaki (Appendix II) as having been identified for enhancement of natural, ecological and amenity values, and life supporting capacity. The Council has addressed this by requiring consents for discharges from every industrial site within the catchment that has significant potential for contamination. A combined monitoring programme has been implemented by Council to monitor these discharges, and since the 2002-2003 year a holistic approach has been applied to the monitoring of abstractions and discharges to all media.

During the 2018-2019 monitoring period a total of one water abstraction consent, 17 water discharge consents (one of these was surrendered during the monitoring period), four air discharge consents and one discharge to land consent were held by industries in this catchment. This report covers the results and findings during this monitoring period for these 23 consents, which contain a total of 236 special conditions that the consent holders must satisfy¹. It represents the 22nd report produced by Council to cover water discharges by industries within the catchment and their effects, and is the twelfth combined report to cover abstractions and discharges to all media.

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

Monitoring during the year under review included 46 site inspections, 67 discharge samples, 13 receiving water samples, 16 macroinvertebrate samples, several point source/ambient air particulate surveys, discussions with site operators over site management, and odour surveys.

Historically, chemical and biological monitoring results for the Mangati catchment have shown there to be a two-stage reduction in water quality, one below the main stormwater outlet from Tegel Foods poultry processing plant, the other below the industrial drain which joins the stream at the main highway.

During the period under review there were several instances of biochemical oxygen demand (BOD) concentrations in excess of consented limits, with an associated elevation in levels of BOD found in the receiving waters during one of the wet weather surveys.

In the period under review the instream dissolved zinc and copper concentrations met the appropriate USEPA acute or chronic exposure guidelines in all 18 samples. None of the 18 instream samples taken during the period under review exceeded the 0.025 g/m³ Regional Freshwater Plan unionised ammonia guideline or the 0.9 g/m³ total ammonia national guideline.

Overall, the results of macroinvertebrate surveys indicated that macroinvertebrate health was generally 'poor' for the surveyed sites in the Mangati Stream and that there was likely to have been discharges from within the

¹ Subsequent to consent 2337-1 being surrendered in September 2018 there were 22 consents with 224 conditions monitored

industrial area which had had a significant negative impact on the macroinvertebrate communities present in the lower reaches of the stream.

There were 19 substantiated non-compliances recorded in the Mangati catchment during the period under review, 13 of which were related to the consented companies monitored under this catchment programme. All incidents or non-compliances (substantiated or otherwise) were investigated and appropriate enforcement action was taken as required.

During the year, an improvement was required from Barton Holdings Ltd in both the level of environmental and administrative performance and compliance. Numerous persistent issues at the site resulted in two abatement notices being issued. Site visits since the 2018 2019 monitoring year have found the site to be compliant.

During the year, First Gas Ltd demonstrated a good level of environmental performance and a high level of administrative performance and compliance with their resource consent. A minor discharge of greywater was noted during inspection and promptly resolved by the consent holder.

During the year, Greymouth Petroleum Acquisition Company Ltd demonstrated a high level of both environmental and administrative performance and compliance with their resource consent.

During the year, Halliburton New Zealand Ltd demonstrated a good level of environmental performance and compliance with their resource consents and a high level of administrative performance. Some minor matters around site housekeeping including the lack of bunding of hazardous substances were identified during inspection. This was promptly resolved thereafter.

During the year, J Swap demonstrated a good level of environmental performance and compliance with their resource consents and a high level of administrative performance. Some minor matters around site housekeeping including tracking of contaminants and a lack of bunding of hazardous substances were identified during inspection. This was promptly resolved thereafter.

During the year, an improvement was required from McKechnie Aluminium Solutions Ltd in regards to environmental performance. The company demonstrated a high level of administrative performance. Chemicals and waste product were stored in an unbunded area and overhanging the bund, posing the potential for contaminants to enter stormwater. An infringement notice was issued. The consent holder has removed the unbunded chemicals and waste product from site.

During the year, NPDC demonstrated a poor level of environmental performance and a high level of administrative performance and compliance with their resource consent conditions. While unrelated to the stormwater consent, it is noted that there were three sewage overflows to the Mangati Stream during the year, two were minor and dealt with in a timely manner. The third was a large overflow resulting in significant effects in the stream and NPDC and their contractor, City Care, are currently being prosecuted over this.

During the year, Nexans New Zealand Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consents.

During the year, OMV New Zealand Ltd demonstrated a high level of environmental performance and administrative performance and compliance with their resource consent.

During the year, Schlumberger New Zealand Ltd demonstrated a high level of environmental performance and compliance with their resource consents. However, an improvement was required in their administrative performance. An updated contingency plan and stormwater/wastewater plan is required for the site and was not provided during the period under review despite numerous requests. This was provided early in the next monitoring period and was up to date when this report was prepared.

Tasman Oil Tools Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent.

During the year, the Tegel Foods Ltd (feed mill) demonstrated a good level of environmental performance and compliance with their resource consents and a high level of administrative performance. A stormwater sample had a BOD result of 27 g/m³, this was in excess of the consented limit of 25 g/m³. An infringement notice was issued in response to this. Possible sources of contamination were identified in the follow up inspection (which will be reported in the 2019 2020 report) and the most recent inspection indicate that the consent holder has addressed these issues.

Overall, during the period under review, an improvement in Tegel Foods Ltd (poultry processing plant) level of environmental performance was required. There were ongoing issues in regards to site management and a non-compliant discharge and this resulted in an infringement fine being issued. Further issues since that monitoring period have arisen and been referred for investigation and follow up. Tegel Foods Ltd demonstrated a high level of administrative performance and compliance with their resource consents.

During the year TIL Freighting Ltd's level demonstrated an overall good level of environmental and administrative performance and compliance with their resource consents. Minor issues around site housekeeping were identified during inspection. The contingency plan and stormwater plan reviews were overdue. These matters have been addressed in the 2019 2020 monitoring period.

During the year under review, W Abraham Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent.

In terms of overall environmental and compliance performance by the consent holders over the last several years, this report shows that the consent holders' performance generally remained at a good level in the year under review. It is noted however that there are a few consent holders that either continued to have issues that required improvement (following on from the previous period), or required interventions and enforcement action as a result of significant events. Council officers were following up these situations at the end of the period under review.

For reference, in the 2018-2019 year, consent holders were found to achieve a high level of environmental performance and compliance for 83% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 13% 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 recommendations for the 2019-2020 year, including recommendations relating to an optional review of various consents.

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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 2018 to June 2019 by the Taranaki Regional Council (the Council) on the monitoring programme associated with 23 resource consents held by companies within the Mangati catchment. It is the 22nd combined report on the Mangati Stream Catchment Joint Monitoring Programme.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by the companies that relate to abstractions and discharges of water within the Mangati catchment, and the air discharge permits held by the companies to cover emissions to air from the sites.

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 has been integrating its environmental monitoring programmes and reporting the results of the programmes jointly. Therefore since June 2002, a combined approach has been applied to the monitoring and reporting of the non-agricultural discharges in this industrial area of Bell Block across all media. This report discusses the environmental effects of the companies' use of both water and air.

The Mangati Stream has a narrow catchment that runs from south to north in the lowland between the Waiwhakaiho and Waiongana River systems (Figure 1). The total catchment area is approximately 6.1 km². The length of the catchment, from the headwaters between Paraite and Corbett Roads to the sea at Bell Block beach, is approximately five kilometres.

The industrial area at Bell Block is situated mid-catchment predominantly on the western side of the stream. Upstream, land use is pastoral and horticultural. Downstream, the Mangati flows through the residential area of Bell Block. The Mangati Reserve, with its popular well maintained walkway, borders the stream immediately below the industrial area (Photo 1). The beach at the mouth of the stream is also a popular recreational area (Photo 2).

The Mangati Stream has been the subject of numerous pollution incidents in past years, the large majority of which have related to water discharges from the industrial area.

The Council's response to the continued pollution of the Mangati Stream has been to require licensing of discharges of wastewater or stormwater from sites where there is the potential for contamination to occur. Thus, the Mangati Stream Catchment Monitoring Programme was implemented to ensure compliance with these consents and to determine the effects of the discharges on the water quality and biota of the stream.



Photo 1 Mangati Reserve at Parklands Avenue



Photo 2 Mangati Stream at the coast

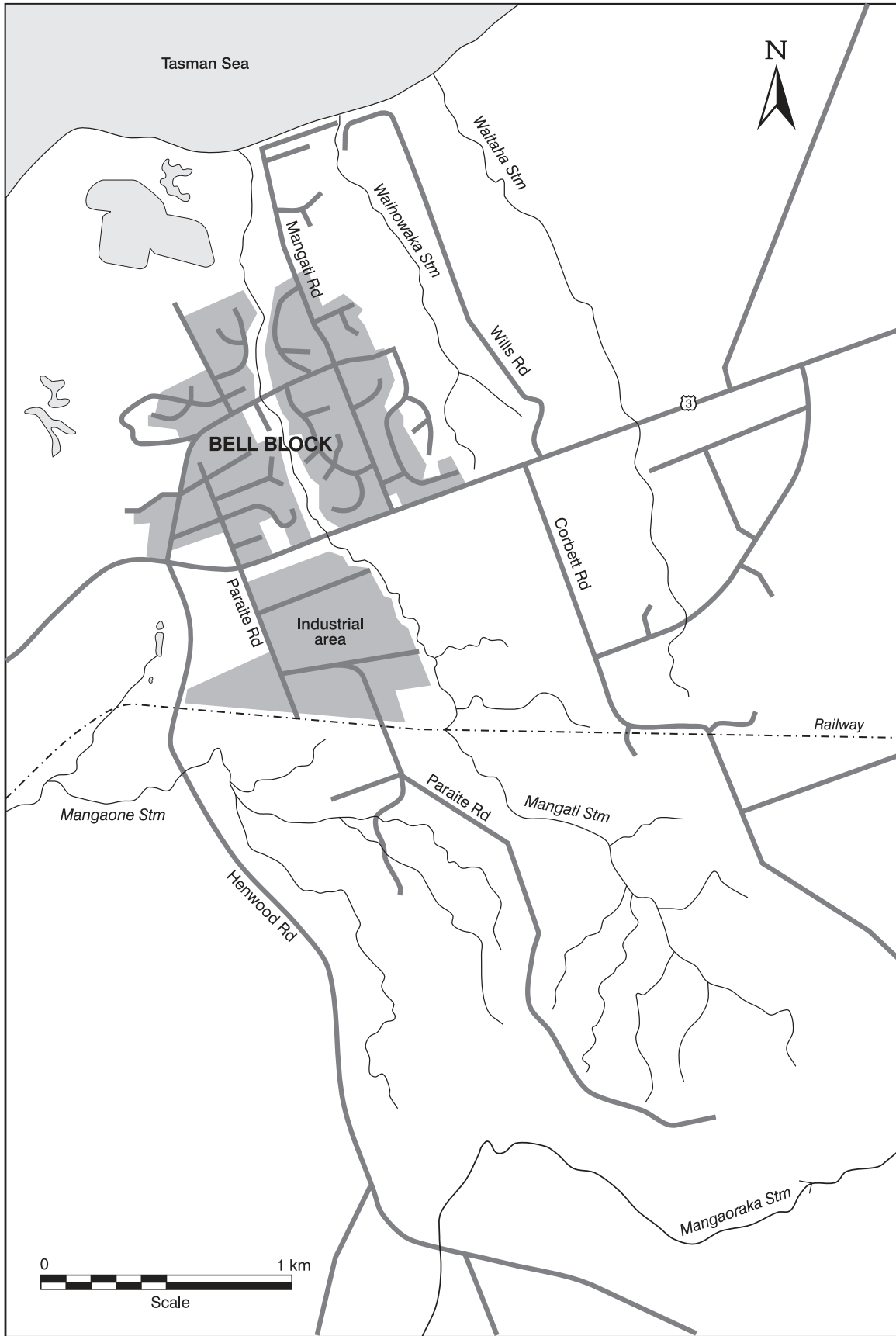


Figure 1 Mangati catchment

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

Each company's activity is then discussed in detail in a separate section (Sections 2 to 16).

In each subsection (e.g. Section 2.1) there is a general description of the industrial activity and its discharges, 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 interpretations, and their significance for the environment in the immediate vicinity of the site under discussion.

Subsection 4 presents recommendations to be implemented in the 2019-2020 monitoring year.

Section 17 presents a summary of the information on file about unauthorised incidents logged on the Council's database in the Mangati catchment, or relating to the region wide mobile abrasive blasting consent that is monitored under this programme.

Section 18 presents information relating to monitoring of the combined discharges to the New Plymouth District Council wetland, and to the Mangati Stream. There is a discussion of the results, their interpretation, and their significance for the environment.

Section 19 considers the receiving environment monitoring undertaken in the Mangati catchment.

Section 20 presents a summary of 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 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 a discharger, and may include cultural and socio-economic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (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 discharge source. 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 performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

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

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

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

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

Environmental Performance

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

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

For example:

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

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

Poor: Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant

activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

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

Good: Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

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

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

For reference, in the 2018-2019 year, consent holders were found to achieve a high level of environmental performance and compliance for 83% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 13% of the consents, a good level of environmental performance and compliance was achieved.²

1.1.5 Investigations, interventions, and incidents

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

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 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).

1.2 Resource consents

The resource consents covered by the Mangati Catchment Joint Monitoring Programme are outlined in Table 1 and their locations are shown in Figure 2. During the period under review, one water abstraction consent, seventeen non-agricultural water discharge consents, five air discharge consents and two discharge to land consents were held by industries in this catchment. There are a small number of other consented

² The Council has used these compliance grading criteria for 15 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

discharges in the catchment, such as agricultural discharges, which are not covered directly by this monitoring programme. Outlines of the companies' activities and the consent conditions in full can be found in the resource consents which are appended to this report in Appendix I.

Table 1 Resource consents in the Mangati catchment covered by this report

Consent holder	Resource consent	Purpose	Granted	Next review date	Expiry date
Water discharge permits					
First Gas Ltd	4780-2	To discharge stormwater and vehicle wash water to the Mangati Stream	17 December 2015	June 2020	1 June 2032
Barton Holdings Ltd*	7707-1	To discharge stormwater into the Mangati Stream	31 May 2011	June 2020	1 June 2026
Greymouth Petroleum Acquisitions Company Ltd	4664-3	To discharge treated stormwater from a pipe yard used for the cleaning and storage of casing and drilling equipment, and the storage of hazardous substances, onto and into land in circumstances where it may enter the Mangati Stream	1 June 2010	June 2020	1 June 2026
Halliburton New Zealand Ltd	2337-3	To discharge stormwater from an industrial site, used for an oil field service operation, into the Mangati Stream	23 June 2008	June 2020	Surrendered 26 September 2018
J Swap Contractors Ltd	10085-1	To discharge stormwater from a transport depot into an unnamed tributary of the Mangati Stream	7 October 2015	June 2020	1 June 2032
McKechnie Aluminium Solutions Ltd	3139-3	To discharge stormwater (including cooling water) from an industrial site into an unnamed tributary of the Mangati Stream	24 September 2015	June 2020	1 June 2026
New Plymouth District Council	4302-2	To discharge up to 5,200 L/s of stormwater from industrial sealed areas and roofs through piped stormwater systems into the Mangati Stream	11 September 2002	-	1 June 2020
Nexans New Zealand Ltd	4497-3	To discharge stormwater and cooling water from an electric wire and cable manufacturing site into the Mangati Stream	25 June 2008	June 2020	1 June 2026
OMV New Zealand Ltd	3913-3	To discharge stormwater from an industrial site into an unnamed tributary of the Mangati Stream	24 September 2015	June 2020	1 June 2032
Schlumberger New Zealand Ltd	5987-1	To discharge treated stormwater from a synthetic liquid mud plant and storage site into the Mangati Stream	08 June 2010	-	1 June 2020
	6032-1	To discharge treated wash water and stormwater from a storage and maintenance premises for oil field exploration equipment into the Mangati Stream	27 August 2008	-	1 June 2020

Consent holder	Resource consent	Purpose	Granted	Next review date	Expiry date
Tasman Oil Tools Ltd	4812-2	To discharge up to 112 L/s of stormwater including washdown water from a storage and maintenance yard for oil field drilling equipment into an unnamed tributary of the Mangati Stream	05 August 2014	-	1 June 2020
Tegel Foods Ltd (Feedmill)	2335-4	To discharge stormwater from a stock/poultry feed manufacturing site to the NPDC stormwater drainage network	12 February 2014	June 2020	1 June 2026
Tegel Foods Ltd (Poultry Plant)	3470-4	To discharge stormwater from a poultry processing plant site to the New Plymouth District Council drainage network	23 December 2013	June 2020	1 June 2026
	7389-1	To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream	30 March 2009	June 2020	1 June 2026
TIL Freighting Ltd	6952-1	To discharge stormwater from a truck depot into and onto land in the vicinity of the Mangaone Stream in the Waiwhakaiho catchment	20 September 2006	-	1 June 2020
	7578-1	To discharge stormwater from a truck depot into the Mangati Stream	20 April 2010	June 2020	1 June 2026
<i>Air discharge permit</i>					
Nexans New Zealand Ltd	5417-2	To discharge emissions into the air from an electric wire and cable manufacturing plant and associated activities	24 February 2015	June 2020	1 June 2032
Tegel Foods Ltd (Feedmill)	4038-6	To discharge emissions into the air from the milling and blending of grain and/or animal meals together with associated activities	23 November 2001	-	1 June 2020
Tegel Foods Ltd (Poultry Plant)	4026-3	To discharge emissions into the air from the processing of animal matter and associated processes	16 June 2014	June 2020	1 June 2032
W Abraham Ltd	7147-2	To discharge emissions into the air from the operation of a crematorium including a natural gas-fired cremator	11 May 2015	June 2020	1 June 2032
<i>Discharges of waste to land</i>					
Tegel Foods Ltd (Poultry Plant)	5494-2	To discharge poultry processing wastes by burial into land in the vicinity of the Mangati Stream in emergency circumstances only	24 October 2014	June 2020	1 June 2032

Consent holder	Resource consent	Purpose	Granted	Next review date	Expiry date
<i>Water abstraction permits</i>					
Tegel Foods Ltd (Poultry Plant)	6357-1	To take and use groundwater from a bore for food processing and washdown purposes	20 May 2005	June 2020	1 June 2038

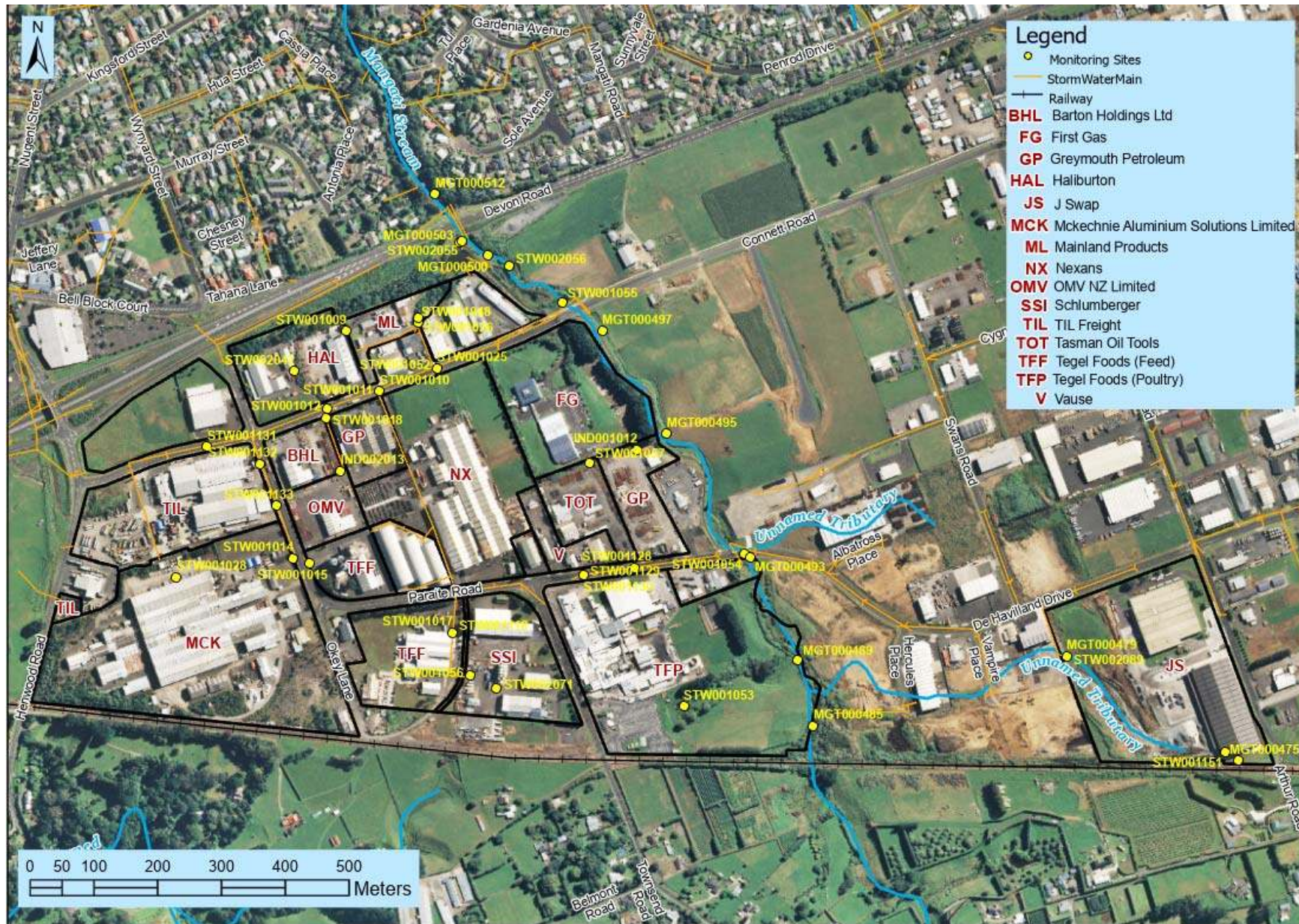


Figure 2 Location of consent holders, discharge sites, and surface water monitoring sites

1.3 Monitoring programme

1.3.1 Introduction

Section 35 of the RMA sets out obligations for 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 Mangati catchment consisted of seven 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;
- 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

Each of the consent holders' properties was inspected during the monitoring period for compliance with any relevant consent conditions, and potential for unauthorised discharge. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Areas where chemicals or products are stored or transferred are also given particular attention. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

The programmed frequency of inspection varies depending on the type of activity at the site and the outcome of previous inspections.

During the period under review, officers of the Council carried out a total of 46 inspections.

1.3.4 Chemical sampling

In relation to the monitoring of water discharges, the Council undertook sampling of the discharges from the sites, the combined discharges and the water quality upstream and downstream of the discharge points and mixing zones.

General surveys of the entire industrial stormwater drainage system and the Mangati Stream are carried out in both dry and wet weather conditions. This involves sampling at up to 46 points (Figure 2), depending upon the weather conditions and the discharges occurring. The analysis of samples from these monitoring

points includes a wide range of parameters, the particular number and type of which, is dependent on the sampling site location. Not all results for all sites are reported in this document; full results can be obtained by contacting the Council.

These synoptic surveys produce information on the combined and likely relative effects of discharges from the various industrial sites on water quality of the Mangati Stream. Where possible, these surveys also allow for the determination of compliance with consent conditions on effluent composition for particular consent holders.

The frequency of general chemical surveys has changed as the programme has developed. Two surveys are scheduled in wet weather and one in dry weather during the summer low flow period. Following analysis of the combined discharges, follow up sampling of individual discharges may be carried out if required.

During the period under review four surveys were performed, some of which were split over separate days. Wet weather runs were carried out on 21 November 2018, 11 or 23 April 2019, and 28 May or 5 June 2019, while a dry weather survey was undertaken on 6 March 2019. Discharge samples are also collected where possible during wet weather inspections.

Overall 67 discharge samples and 13 receiving water samples were taken during the 2018-2019 period.

In relation to the monitoring of air emissions, the Council undertook odour surveys in the neighbourhood of the sites inspected. Ambient and discharge dust monitoring was undertaken using hand held electronic equipment. The monitoring programme provides for deposition gauging to be conducted every three years, this was undertaken during the period under review and will next be included in the 2021-2022 monitoring programme at selected locations in the vicinity and Tegel Poultry Ltd's feed mill site.

1.3.5 Macroinvertebrate surveys

A biological (macroinvertebrate) survey was performed on two occasions at eight sites in the Mangati Stream to determine whether or not the discharges of treated and untreated stormwater, treated wash water and cooling waters from the sites have had a detrimental effect upon the communities of the stream. Monitoring was undertaken on 21 November 2018 and 20 February 2019.

The locations of the biomonitoring sites are described in Table 2 and depicted in Figure 3.

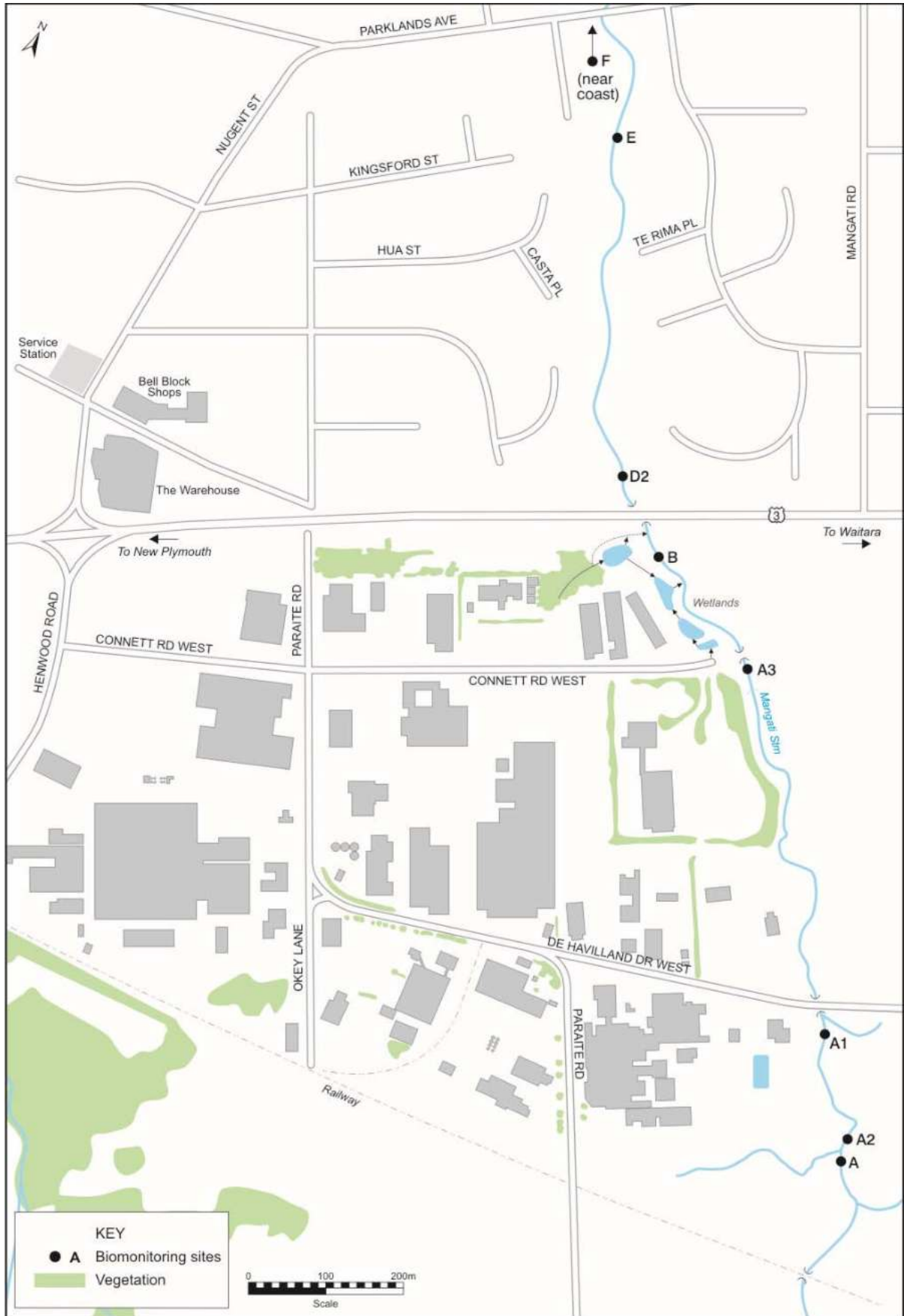


Figure 3 Location of biological monitoring sites

Table 2 Biomonitoring sites in the Mangati Stream

Site	TRC Site code	Map Reference NZTM		Location	Distance from sea, km
		Easting	Northing		
A	MGT000488	1700095	5678043	Below railway (above industrial area)	2.8
A2	MGT000490	1700062	5678084	Between wetland tributary receiving Tegel stormwater and old Tegel discharge point	2.7
A1	MGT000491	1700018	5678166	Below old Tegel Foods discharge point	2.6
A3	MGT000497	1699775	5678573	Above Connett Road	2.1
B	MGT000500	1699596	5678691	Above the industrial tributary but below the wetland	1.9
D2	MGT000512	1699513	5678787	Below the (industrial) tributary and wetland (20m below SH3)	1.9
E	MGT000520	1699385	5679103	400 metres below industrial stormwater drain	1.5
F	MGT000550	1699215	5680409	50 metres above Bell Block beach	0.0

1.3.6 Fish survey

Electric fishing and spotlighting are techniques commonly used for the assessment of fish species present in waterways. The fish communities have been monitored in the past in three areas focused around MGT000491 (site A1), MGT000505 (site D) and MGT000550 (site F).

Electric fishing surveys have been undertaken intermittently with the previous surveys carried out in December 1990, March 2001, and June 2007. In the 2010-2011 year it was determined by the Council's freshwater biologist that spotlighting was a more appropriate method for this small stream, and so three yearly spotlight fish surveys were recommended with the first of these carried out in March 2011 and again in the 2013-2014 and 2016 -2017 periods.

In the March 2011 fish survey report it was suggested that future surveys may benefit from the inclusion of fyke nets set in the stream, to try and capture larger, more secretive fish. This was due to the fact that all fish found were less than two years old, and some fish that could be expected to inhabit this stream were not recorded, e.g. giant kokopu, longfin eel. It was concluded that although this may be cause for concern, it may also be as a result of the monitoring method, rather than being indicative of environmental effects.

Fish surveys are scheduled every three years and will next be undertaken during the 2019-2020 monitoring period.

1.3.7 Data review

Special condition 4 of water abstraction consent 6357 held by Tegel Poultry Processing requires that their abstraction records are forwarded to Council by 31 July each year. Council reviews these records to ensure that the required records are being kept and that the abstraction has been managed according to the requirements of the consent.

Other data collected by consent holders and/or records that they are required to keep are requested periodically and reviewed by Council Officers for compliance with consent conditions.

1.3.8 Hydrological and environmental telemetry.

During the 2018-2019 period the Council continued to maintain a hydrological and meteorological recording station at the bottom of the industrial catchment. During the 2016-2017 period this site was enhanced with a multi parameter sonde that has sensors capable of the continuous monitoring of pH, conductivity, turbidity, dissolved oxygen and dissolved organic matter.

2 Barton Holdings Ltd

2.1 Introduction

2.1.1 Process description

Barton Holdings Ltd (BHL) supplies liquid and dry stock feed from this 0.46 ha site at 21 Paraite Road, in the industrial area of Bell Block. GrainCorp Feeds Ltd originally operated this site, however during the 2017-2018 monitoring period, the consent was transferred to BHL.

Stormwater from the site discharges via the New Plymouth District Council (NPDC) reticulated system and stormwater ponds, into the Mangati Stream.

2.2 Results

2.2.1 Inspections

The site was inspected on 10 July and 9 November 2018 and 6 May and 1 July 2019.

Inspections focussed on evidence of spills, the conditions of the drains and catchment area, treatment measures and general housekeeping.

These inspections found numerous issues at the site largely involving poor housekeeping and lack of maintenance of the stormwater treatment systems. Other issues included containers which were not bunded and tracking of product across the site. On 9 November 2018 the site was found to be in breach of consent conditions and an abatement notice was issued.

2.2.2 Results of discharge monitoring

The primary monitoring site is at a manhole in the right of way along the western side of Greymouth Petroleum's offices (site STW001138).

The discharge point was visited for sampling on four occasions during the year. During one of the visits (a dry weather survey), no discharge was occurring. Three samples of stormwater were taken from the flow exiting the BHL site during wet weather surveys.

The results of the chemical monitoring for this site are given in Table 3.

Table 3 Chemical monitoring results for BHL's stormwater discharge, site STW001138

Parameter	BOD	Conductivity	Oil and Grease	pH	Suspended solids	Temp.	Turbidity
Unit	g/m ³	mS/m@25°C	g/m ³	pH	g/m ³	Deg.C	NTU
21 Nov 2018 (w)	6.9	2.9	a	7.4	138	10.6	40
06 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd
23 Apr 2019 (w)	<2	3.3	a	7.2	18	13.1	2.4
28 May 2019 (w)	4	14.4	a	7.1	18	16.9	4
<i>Consent Limit</i>	25	-	15	6-9	100	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 (d) dry weather survey(w) wet weather survey

The sample taken on 21 November 2018 was found to be non-compliant in regard to suspended solids concentration in the discharge. All other results were found to comply with the BOD, pH, suspended solids and oil and grease limits set out in the consent conditions. The non-compliant result was dealt with by enforcement action.

2.2.3 Investigations, interventions, and incidents

During the period under review, the Council was required to undertake enforcement action, in association with BHL's conditions in resource consents or provisions in Regional Plans.

Table 4 Investigations, interventions and incidents summary table - BHL

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
9 November 2018	The stormwater system had not been maintained in accordance with the management plan for the site. Additionally, significant quantities of chemicals were stored in containers which were not bunded.	N	Abatement notice	No explanation was received and an abatement notice was issued. Site visits since the 2018 2019 monitoring year have found the site to be compliant.
21 November 2018	Discharge of suspended solids into the Mangati Stream exceeded consented limit.	N	Abatement notice	A letter of explanation was received and a meeting was held with the consent holder to ensure consent compliance. Recent sampling was compliant.

2.3 Discussion

2.3.1 Discussion of site performance

Significant and persistent issues were noted at the site especially in regards to contamination in stormwater drains, lack of maintenance of mitigation measures, and tracking of product. Two abatement notices were issued.

2.3.2 Environmental effects of exercise of consents

The stormwater discharge samples taken during the period under review were found to be compliant with the exception of one sample exceeding the suspended solids limit set by the consent. The levels of organic contaminants noted during inspections at the site are likely to have increased the nutrient load in the stormwater, but as the site discharges into the NPDC treatment ponds (via the reticulated network), this would provide further treatment and mitigation prior to final discharge into the Mangati Stream. No heterotrophic or bacterial growths were observed in the downstream receiving waters or in the treatment ponds themselves during the period under review.

2.3.3 Evaluation of performance

A tabular summary of and BHL's compliance record for the year under review is set out in Table 5.

Table 5 Summary of performance for consent 7707-1

Purpose: To discharge stormwater into the Mangati Steam		
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	No tracking of product
2. Limits stormwater catchment area	Inspection	Yes
3. Stormwater from loading/unloading area to be directed through a stormwater diversion system by 31 July 2011	Inspection	Yes
4. Above ground hazardous substance storage to be bunded	Inspection and discussion with consent holder	No, not bunded
5. Limits on chemical composition of discharge	Discharge sampling	No, suspended solids exceedance
6. Discharge cannot cause specified adverse effects in Mangati Stream	Receiving water sampling and observation	Yes
7. Limit on filtered carbonaceous BOD of stream	Receiving water sampling and observation	N/A
8. Provision (by 31 July 2011) and maintenance of a contingency plan for action to be taken to prevent spillage	Review of documents submitted and assessment of practices/controls at inspection. Consent holder has previously been advised that the plan provided with application was in need of update	Yes
9. Provision (by 31 July 2011), maintenance and adherence to stormwater management plan	Review of documents submitted and assessment of practices/controls at inspection. Consent holder has previously been advised that the plan provided with application was in need of update	Not updated for new owner
10. Written notification required regarding changes to activities at the site. Notification to include assessment of environmental effects	Inspection and discussion with consent holder	Yes
11. Lapse of consent	Consent exercised	N/A
12. Optional review provision re environmental effects and notifications of changes	Next option to review in June 2020, recommendation attached in section 3.3.6	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		Improvement required Improvement required

N/A = not applicable or not assessed

During the year, an improvement was required from Barton Holdings Ltd in both the level of environmental and administrative performance and compliance as defined in Section 1.1.4. Numerous persistent issues at the site resulted in two abatement notices being issued.

2.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for the consented activities of Barton Holdings Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, with additional work undertaken to issue enforcements as per recommendation two.

2.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 that the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the sites in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

2.3.6 Exercise of optional review of consent

Resource consent 7707-1 provides for an optional review of the consent in June 2020. Condition 12 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are grounds that require a review to be pursued. In light of the health and safety legislation introduced in 2015, it is considered that sampling from manholes in the roadway is considered unsafe. The consent conditions will therefore be reviewed to require the consent holder to ensure that a safe sampling site is provided for the sampling of stormwater discharges, either onsite or on the road verge. This will allow compliance with consent discharge conditions and adverse effects on the environment to be assessed.

2.4 Recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Barton Holdings Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.

2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 7707-1 in June 2020, as set out in condition 12 of the consent, be exercised on the grounds that current sampling points may be unsafe and therefore do not permit consent discharge conditions and any adverse environmental effects to be assessed.

3 First Gas Ltd

3.1 Introduction

3.1.1 Process description

First Gas Ltd (First Gas) operates a warehouse and gas pipe storage yard on the southern side of Connett Road West, adjacent to the Mangati Stream.

The area of the site is approximately 4 ha. The operation building and maintenance building along with sealed car parking area and access make up approximately 60 percent of the area. The remaining 40 percent is covered in grass. The maintenance shed is enclosed, and any washdown from inside the shed is directed to a holding system which is emptied by a licensed wastewater collector.

Discharges from the site are monitored as part of the combined discharge from the Connett Road stormwater (site STW001055), and periodically at the southern discharge point which enters the open stormwater drain below Tasman Oil and Greymouth Petroleum.

The site is considered to pose only a very low environmental risk and is therefore only scheduled for two inspections per year, however on occasion additional inspections are carried out when the inspecting officer is in the area.

3.2 Results

3.2.1 Inspections

The site was inspected twice during the period under review, on 10 August 2018 and 6 May 2019.

The inspections focussed on treatment measures, the condition of the stormwater drains, and general housekeeping.

On 10 August 2018, it was found that a portable toilet and shower had been set up with grey water discharging to the wash pad drain. Staff were advised that this discharge needed to be redirected to sewer. This was to be on site for three weeks while building work was undertaken. On 6 May 2019, it was noted that the vehicle wash had been decommissioned. There are future plans to reinstate a new wash that reduces sediment discharge. The site was tidy on both occasions.

3.2.2 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake additional investigations in association with First Gas's conditions in their resource consent or provisions in Regional Plans. One minor issue noted during inspection was promptly resolved by the consent holder with no further action considered necessary.

3.3 Discussion

3.3.1 Discussion of site performance

The site was found to be well managed throughout the period under review, with issues noted during inspections promptly resolved.

3.3.2 Environmental effects of exercise of consent

There were no adverse environmental effects found as a result of activities undertaken at the First Gas site.

3.3.3 Evaluation of performance

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

Table 6 Summary of performance for First Gas's consent 4780-2

Purpose: To discharge stormwater and vehicle wash water to Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Require best practice be adopted	Inspection and liaison	No – minor discharge of grey water to wash bay system
2. Specifies catchment area	Inspection	Yes
3. Require treatment of vehicle wash water	Wash bay closed	N/A
4. Limits on chemical composition of discharge	Visual inspection	Yes
5. Sampling of wash water	Wash bay closed	N//A
6. Limits effects on receiving waters	Visual inspection and sampling	Yes
7. Maintain contingency plan	Plan received with application	Yes
8. Maintain and adhere to a management plan	Plan received with application	Yes
9. Notification of changes to site processes	Inspections and liaison with staff	Yes
10. Review condition	Next option to review in June 2020, recommendation attached in section 2.3.6	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 period under review, First Gas Ltd demonstrated a good level of environmental performance and a high level of administrative performance and compliance with their resource consent as defined in Section 1.1.4

3.3.4 Recommendations from the 2017-2018 Report

In the 2017-2018 Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of First Gas Ltd's site in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

3.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme remains at a similar level as that for the 2018-2019 period. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

3.3.6 Exercise of optional review of consent

Resource consent 4780-2 provides for an optional review of the consent in June 2020. Condition 10 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

3.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of First Gas Ltd's site in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 4780-2 in June 2020, as set out in condition 10 of the consent, not be exercised, on the grounds that the current conditions are adequate.

4 Greymouth Petroleum Acquisition Company Ltd

4.1 Introduction

4.1.1 Process description

Greymouth Petroleum Acquisitions Company Ltd's (Greymouth Petroleum) yard on De Havilland Drive, formerly operated by Fletcher Challenge Energy Taranaki Ltd (FCET), was established in 1986 as a storage area for well casing, drill pipe and other drilling and testing equipment used in the oil industry. The yard is now the base for GMPE Environmental Limited, a service company that primarily provides transport and liquid waste collection and disposal services to the oil and gas industry (predominantly Greymouth Petroleum Operations). The yard is used for the cleaning and storage of drill pipe and casing, the use and storage of hazardous substances including diesel and drilling fluids, concrete construction and waste recycling and disposal services.

During development of the site, about 1 ha of the 1.48 ha area was levelled with a 2% slope eastward towards the Mangati Stream. The surface was overlain with filter cloth and metal. Perimeter drains were made along the western and northern boundaries (to divert stormwater from upslope around the site) and along the eastern boundary to collect stormwater runoff from the site itself. An oil skimmer interceptor was constructed on the eastern drain, above its junction with the northern drain, for removal of hydrocarbons. Separated hydrocarbons are skimmed off the surface of the separator as necessary and disposed of.

Originally the discharge of stormwater from the site entered a small open drain where it mixed with discharges from Tasman Oil Tool Ltd (TOT) and First Gas Ltd (FGL) prior to being discharged to the Mangati Stream. Works undertaken in the 2016-2017 monitoring period resulted in the discharges from FGL and TOT being piped along the bottom of the dry stream bed and Greymouth Petroleum now discharges via gravel filter bed laid over the top of the pipework. These works were undertaken to improve the quality of the discharges from the site.

4.2 Results

4.2.1 Inspections

Inspections of the Greymouth Petroleum site were undertaken on 10 July and 12 October 2018 and 6 May and 1 July 2019.

Inspections focussed on evidence of spills, the condition of the drains and catchment area, treatment measures, and general housekeeping.

In general the site was found to be tidy and no significant concerns were noted. It was observed that the new sediment retention system appeared to be working well. On one occasion a discharge was occurring and this was clear despite the retention pond being discoloured.

4.2.2 Results of discharge monitoring

The primary monitoring site for Greymouth Petroleum's discharge is at site (IND001012) where it discharges into a drain which discharges to the Mangati Stream.

The site was visited four times for sampling during the period under review. On all four occasions, (three wet weather surveys and the other a dry weather survey) no discharge was occurring and consequently no sample could be collected.

Copper, lead and zinc are monitored at this site as it is known that, historically, greases containing copper, lead and zinc were washed from pipes and the wash water was discharged to land. Although the grease

currently used does not contain these elements, and the washdown wastes are now directed to sewer, this historical practice resulted in an elevated concentration of copper, lead and zinc in the soil on site. Shortly after taking over the site, Greymouth Petroleum undertook remediation work in the vicinity of the wash pad, stormwater basin and open drain exiting the site to address this. It is however noted that there is the potential for these contaminants to still be present in other areas of the site surface and may become entrained in stormwater.

4.2.3 Investigations, interventions, and incidents

During the period under review, the Council was not required to record an incident in association with Greymouth Petroleum's conditions in their resource consent.

4.3 Discussion

4.3.1 Discussion of site performance

Greymouth Petroleum undertook a significant stormwater system upgrade at the site to address the ongoing suspended solids issues that have occurred in previous years. The upgrade appears to be working and results taken by Council and Greymouth Petroleum show that discharge quality has improved and that the frequency of discharges occurring from the site have decreased.

4.3.2 Environmental effects of exercise of consent

Receiving environment monitoring detected no increases in metals concentrations in the stream as a result of Greymouth Petroleum's activities. In all receiving water samples, the level of dissolved copper found in the Mangati Stream, downstream of the site was within the USEPA chronic exposure guideline of 0.005 g/m³.

In previous years increases in turbidity and suspended solids were found in the Mangati Stream when measured downstream of Greymouth's site however in this monitoring period no such effects were detected.

4.3.3 Evaluation of performance

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

Table 7 Summary of performance for Greymouth Petroleum's consent 4664-3

Purpose: To discharge treated stormwater from a pipe yard		
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. Limit on stormwater catchment area	Inspection	Yes
3. Stormwater to be discharged through treatment system	Observation at inspection	Yes
4. Limits on chemical composition of discharge	Discharge sampling - not discharging at time of inspection	N/A

Purpose: <i>To discharge treated stormwater from a pipe yard</i>		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
5. Discharge cannot cause specified adverse effects beyond mixing zone	Results of receiving water sampling and observation at the time of sampling	Yes
6. Activities to be conducted in accordance with Environmental Management Plan	Inspection and discussion with consent holder	Yes
7. Plan to be reviewed on request from Council or prior to changes at the site	Reviewed document supplied April 2017	Yes
8. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 4.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

During the year, Greymouth Petroleum demonstrated a high level of environmental and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

4.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for the consented activities of Greymouth Petroleum Acquisitions Company Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented during the 2018-2019 monitoring period. Additional investigations or interventions were not considered necessary as per recommendation two.

4.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme remains at a similar level to that carried out in 2018-2019. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

4.3.6 Exercise of optional review of consent

Resource consent 4664-3 provides for an optional review of the consent in June 2020. Condition 8 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are grounds that require a review to be pursued. In light of the health and safety legislation introduced in 2015, it is considered that sampling from manholes in the roadway is considered unsafe. The consent conditions will therefore be reviewed to require the consent holder to ensure that a safe sampling site is provided for the sampling of stormwater discharges, either onsite or on the road verge. This will allow compliance with consent discharge conditions and adverse effects on the environment to be assessed.

4.4 Recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Greymouth Petroleum Acquisitions Company Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 4664-3 in June 2020, as set out in condition 8 of the consent, be exercised, on the grounds that current sampling points may be unsafe and therefore do not permit consent discharge conditions and any adverse environmental effects to be assessed.

5 Halliburton New Zealand Ltd

5.1 Introduction

5.1.1 Process description

Halliburton New Zealand Ltd (Halliburton) has operated a facility off the northern end of Paraiti Road for services to the oil field industry since 1988. Halliburton specialises in down-hole work involving drilling fluid and pumping technology. Drilling equipment and chemicals are stored on the site. Equipment maintenance is carried out. There is also a cement bulk plant, and a small laboratory that tests cementing slurries and drilling fluids.

Spills of substances used on the site have the potential to enter the stormwater system. The areas where the hazardous substances are used and stored are flat, and are either lined, or sealed and bunded.

The resource consent held by Halliburton was surrendered on 26 September 2018.

5.2 Results

5.2.1 Inspections

This site was inspected on 8 August 2018.

Inspections focussed on evidence of spills, the condition of the drains and catchment area, treatment measures, and general housekeeping.

During the inspections it was noted that Halliburton had moved to new location and most of the equipment had been removed from site. The upper and lower yard both needed a clean to remove leaf litter and other debris. It was noted that some substances were stored without appropriate bunding, however staff resolved this promptly. The interceptors had a strong hydrocarbon odour.

5.2.2 Results of discharge monitoring

A stormwater monitoring point was identified on Halliburton's original, upper site early in 1997. Samples collected from this site are representative of stormwater exiting the upper yard via the wash pad. Historically, relatively few samples have been collected because of the rapid runoff of stormwater from this small sub-catchment. This site was not sampled during the period under review due to the surrender of the resource consent early in the monitoring period.

The primary monitoring site for the lower yard is at a manhole over a stormwater drain near the north eastern corner of the building (site STW001009). This site was not sampled during the period under review due to the surrender of the resource consent early in the monitoring period.

5.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to record incidents, in association with Halliburton's conditions in their resource consents or provisions in Regional Plans.

5.3 Discussion

5.3.1 Discussion of site performance

The Company have opted to relocate the business as they have been unable to reach an agreement with the landowner over stormwater control. The consent was surrendered on 26 September 2018.

During the monitoring period, one inspection was undertaken prior to the surrender of the consent. This found minor issues relating to bunding of stored chemicals which were promptly resolved, and the general state of the site.

5.3.2 Environmental effects of exercise of consent

No sampling was undertaken due to the surrender of this consent early in the monitoring period. No adverse effects on the environment were recorded as a result of the activities undertaken by Halliburton on this site.

5.3.3 Evaluation of performance

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

Table 8 Summary of performance for Halliburton's consent 2337-3

Purpose: To discharge stormwater from an industrial site into the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects	Inspection and discussion with consent holder	Yes
2. Stormwater catchment area limit	Inspection and discussion with consent holder	Yes
3. All stormwater to be treated in accordance with special conditions	Inspection and sampling	No
4. Above ground hazardous substance storage to be bunded	Observation at inspection	No – some substances not bunded
5. Limits on chemical composition of discharge	Sampling	Not sampled during period under review
6. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling.	Yes
7. Construction and maintenance of discharge sampling points	Observation at inspection and access sampling	Yes
8. Maintenance of a contingency plan	Review of documentation submitted	Yes
9. Maintenance of stormwater management plan	Review of documentation submitted. Update now required regarding maintenance of sediment control devices	Yes
10. Notification of changes accompanied by assessment of effects	No changes found at inspection	N/A
11. Provision for consent to lapse	Consent has been exercised	N/A
12. Optional review provision re environmental effects and notification of changes	Consent surrendered	N/A

Purpose: <i>To discharge stormwater from an industrial site into the Mangati Stream</i>		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
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

N/A = not applicable or not assessed

Halliburton New Zealand Ltd demonstrated a good level of environmental performance and a high level of administrative performance and compliance with their resource consent as defined in Section 1.1.4.

5.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Halliburton New Zealand Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

5.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed for 2019-2020 that the monitoring of the Halliburton site be discontinued as the site has been decommissioned and the consent has been surrendered. A recommendation to this effect is attached to the report.

5.4 Recommendations

1. THAT monitoring of the Halliburton site be discontinued as the site has been decommissioned and the consent has been surrendered.

6 J Swap Contractors Ltd

6.1 Introduction

6.1.1 Process description

J Swap Contractors Limit (J Swap) operate a feed store on the corner of Corbett Road and De Havilland Drive.

The site is predominantly used for the storage and dispatch palm kernel expeller cattle feed (PKE). There are two feed stores on the site in which PKE is stored, screened and then loaded on to trucks for delivery. A small section of one of the buildings is occupied by Ballance Agri-Nutrients where fertilisers are stored and transferred.

J Swap operate a truck wash onsite which sends washwater to tradewaste. After 60 minutes of rain (with no washing activity) it then diverts stormwater from the wash pad to mix with roof water for discharges to an unnamed tributary of the Mangati Stream. This is done to minimise the entrainment of contaminants in the stormwater prior to discharge to the Mangati Stream. The site also contains a truck refuelling facility.

6.2 Results

6.2.1 Inspections

The site was visited on 10 July and 8 November 2018, and 14 and 28 June 2019.

The inspections focussed on treatment measures, the condition of the stormwater drains, tracking of product, and general housekeeping.

During the inspection on 10 July 2018, a number of minor issues were noted. These included tracking of product, an orange fungal growth occurring at low points where product had accumulated, having an unlined floor in the container used for chemical bunding and stormwater from the yard being directed to the sediment pond, which has not been designed to mitigate nutrients. An update to the site's management plan was also required. Subsequent inspections found that the site was generally tidier and mitigation measures were better managed than in previous periods.

6.2.2 Results of discharge monitoring

Treated stormwater is discharged to the Mangati Stream system in two places. Roof water combined with stormwater from the truck wash area discharges directly to the piped unnamed tributary of Mangati Stream (site STW001141) whilst water from the other areas of the site are directed to the old stream gully where it is finally discharged via decanters to a riser in the piped tributary (site STW002089).

The sampling sites were visited four times during the year, three times during wet weather and once during dry weather. A discharge was occurring on only one occasion at STW002089, whilst STW001141 was discharging during the three wet weather sampling occasions. The results from chemical monitoring at site STW002089 are given in Table 9.

The sample collected from site STW002089 complied with consent limits for oil and grease, pH and suspended solids. Unionised ammonia in the discharge was well below the allowable level in the receiving waters. The BOD result of 5.3 was also considered compliant with the consent limit because the limit is specified as 5 g/m³ and not 5.0 g/m³.

Table 9 Results from monitoring of stormwater from J Swap, site STW002089

Parameter	BODC	Conductivity	Oil and Grease	pH	Suspended solids	Unionised ammonia	Temp.
Units	g/m ³	mS/m@25°C	g/m ³		g/m ³	g/m ³	Deg.C
21 Nov 2018 (w)	5.3	6.2	a	6.8	33	0.01068	14.5
06 Mar 2019 (d)	nd	nd	nd	nd	nd	Nd	nd
11 Apr 2019 (w)	nd	nd	nd	nd	nd	Nd	nd
5 June 2019 (w)	nd	nd	nd	nd	nd	Nd	nd
<i>Consent Limits</i>	5	-	15	6-9	100	0.025*	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey
BODC carbonaceous BOD
* unionised ammonia concentration at a point 20m downstream of confluence with Mangati Stream

Table 10 shows that at the time of sampling, the discharges at site STW001151 complied with consent conditions for pH range, oil and grease, and suspended solids. Unionised ammonia in the discharge was well below the allowable level in the receiving waters.

Table 10 Results from monitoring of stormwater from J Swap, site STW001151

Parameter	BODC	Conductivity	Oil and Grease	pH	Suspended solids	Unionised ammonia	Temp.
Unit	g/m ³	mS/m@25°C	g/m ³	pH	g/m ³	g/m ³	Deg.C
21 Nov 2018 (w)	5	7.4	A	6.9	4	0.00109	13.7
6 Mar 2019 (d)	nd	nd	nd	nd	nd	Nd	nd
11 Apr 2019 (w)	4	6.6	<4	6.3	10	0.000029	17.5
5 Jun 2019 (w)	-	1.2	a	6.5	5	0.000081	11.9
<i>Consent limits</i>	5	-	15	6-9	100	0.025*	-

Key: BODC carbonaceous biochemical oxygen demand
a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey
* unionised ammonia concentration at a point 20m downstream of confluence with Mangati Stream

6.2.3 Investigations, interventions, and incidents

In the period under review, the Council was required to undertake additional investigations, and record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

Minor issues identified during the first inspection were promptly addressed and resolved by the consent holder. One self-reported incident was received and investigated as set out in Table 11.

Table 11 Investigations, interventions and incidents summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
20 November 2018	Self-notification was received regarding a molasses discharge. A sucker truck was called to clean up the spill	N	None	The spill was cleaned up to a high standard. A small amount had reached a stormwater drain. Environmental effects of this discharge were considered to be insignificant.

6.3 Discussion

6.3.1 Discussion of site performance

It was noted that efforts were being made in terms of yard sweeping and the last inspection noted that filters were being cleaned more regularly than in previous periods. One spill occurred during the period under review, however this was cleaned up promptly with no adverse environmental effects noted although a small amount had reached the stormwater drain.

6.3.2 Environmental effects of exercise of consent

During the year under review, no adverse environmental effects were detected in regard to J Swap's stormwater discharges. A sample collected on 21 November 2018, the day following the molasses spill, complied with consent limits and no environmental effects were detected in the Mangati Stream.

6.3.3 Evaluation of performance

A tabular summary of J Swap's compliance record for the year under review is set out in Table 12.

Table 12 Summary of performance for J Swap's consent 10085-1

Purpose: To discharge stormwater from a transport depot into an unnamed tributary of the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practice	Inspection	No, minor issues identified during first inspection. Resolved shortly thereafter
2. Limit on catchment area	Inspection	Yes
3. Stormwater to be treated	Inspection/sampling	Yes
4. Limit on discharge constituents	Sampling	Yes
5. Maintain safe access to the sampling point	Inspection/sampling	Yes
6. Limit on effects in receiving water	Sampling	Yes
7. Submit final stage one stormwater plans	Documents received	Yes
8. Construction as per plans	Construction completed	Yes

Purpose: To discharge stormwater from a transport depot into an unnamed tributary of the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
9. Provide as built plans for stage one	Documents received	No Only original design plan submitted
10. Provide plans for future stages prior to construction	No further development as yet	Yes
11. Provide as built plans for subsequent development	No further development as yet	Yes
12. Operate site as per management plan	Inspection	Yes
13. Provide contingency plan	Documents received	Yes
14. Notification to Council prior to making changes to processes or operations	Inspections and liaison with consent holder	Yes
15. Lapse of consent	Consent exercised	N/A
16. Review of consent	Next option to review in June 2020, recommendation attached in section 6.3.6	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

N/A = not applicable or not assessed

During the year, J Swap's level of environmental performance was good and they demonstrated a high level of administrative performance and compliance with their consent as set out in Section 1.1.4.

6.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of J Swap Contractors Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

6.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the programme remains at a similar level to that of 2018-2019.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

6.3.6 Exercise of optional review of consent

Resource consent 10085-1.0 provides for an optional review of the consent in June 2020. Condition 16 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

6.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of J Swap Contractors Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 10085-1.0 in June 2020, as set out in condition 16 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

7 McKechnie Aluminium Solutions Ltd

7.1 Introduction

7.1.1 Process description

McKechnie Aluminium Solutions Ltd (McKechnie) operates a metal melting and extrusion plant that used to process copper, brass (copper/zinc) and aluminium. The copper and brass divisions have closed and the equipment has been removed from the site. The McKechnie manufacturing plant extends across the boundary between the Mangaone and Mangati catchments. Drainage from the eastern side of the site (aluminium processing areas) is into the Mangati Stream, whilst drainage from the western side of the site (historically copper and brass processing and now aluminium scrap storage and sorting) is to the eastern headwaters of the Mangaone Stream.

Stormwater from the eastern side of the plant flows into the Bell Block industrial drain through an underground system at two points along Paraita Road, one adjacent to (east of) the plant and one north of McKechnie's aluminium extrusion building. Cooling water is discharged from cooling of a press coil and heat treatment electrodes at the northern point.

About 2.7 ha of the site is under roof, comprising the old brass and copper processing buildings and the aluminium foundries, extrusion and finishing mills, and administration and utilities buildings. In the rest of catchment there are bunded areas for storage of chemicals and oils, oil/water separators, wastewater holding tanks and an open aluminium scrap yard that is now rarely used. This is because the majority of the aluminium sorting and storage is now done under cover in the Mangaone Stream catchment. Wastewater is sent to sewer, after pH neutralisation.

Since regular inspection by the Council began in 1982, MCK Metals, the former owner of the site, instituted a series of progressive upgrades of waste containment, treatment and disposal facilities, including:

- the construction of a wastewater neutralisation plant;
- cessation of soakage trenches for disposal of wastewater;
- construction of bunds around chemical storage areas;
- diversion of effluent streams to sewer;
- changes in solid waste management practice;
- the use of a mechanical sweeper for the cleaning of the scrap sorting yards; and
- the installation of baghouses in the brass and copper and aluminium foundries, thus reducing aerial deposition from the site.

A suite of contingency plans is in place in case of spillage. McKechnie operates an Environmental Management System, and specific contingency plans are included as individual Works Procedures within the McKechnie Aluminium Solutions Ltd Management System-Environmental Manual. All new work procedures that have an environmental aspect are incorporated into the documented system. The strengths of this new integrated system are that responsibilities are clearly defined, and that the whole system is reviewed regularly.

7.2 Results

7.2.1 Inspections

The site was visited on 31 July and 16 November 2018, and 7 and 28 June 2019.

Inspections focussed on evidence of spills, the condition of the drains and catchment area, treatment measures, and general housekeeping.

The inspection on 31 July 2018 discussed that the plant is being monitored closely for leaks. It was also noted that the sulphuric acid tanks were to be removed over the Christmas period for checking of the flow beneath the tanks and repairs as required. The inspection found a significant amount of waste product stored in an unbunded area. The bund area where these were normally stored was full, and some chemicals were overhanging the bund. A letter requesting explanation for these breaches of best practice was issued.

In general the remaining inspections found the site to be tidy and well managed. On 7 June 2019, self-notification of a small spill had been received. This was approximately 10 L of diesel and had been cleaned up by staff. On 7 and 28 June it was noted that drain screens required ongoing monitoring and cleaning.

7.2.2 Results of discharge monitoring

McKechnie's eastern stormwater is monitored primarily where it joins the Paraita Road stormwater drain, next to the plant entrance (site STW001014). The northern stormwater drain is monitored at a manhole within the plant (site STW001028).

The results from chemical monitoring at these primary sites are given in Table 13 and Table 14.

Site STW001014 was visited four times during the period under review, three times during wet weather surveys and once during a dry weather survey. During the dry weather run no discharge was occurring, whilst during three wet weather surveys samples were collected. The samples complied with limits on the pH range, suspended solids and oil and grease.

Copper, lead and zinc levels are not specified on consent 3139. However these parameters are monitored because of the likely presence of these contaminants on site, and the possibility of them being contained within the discharge.

Table 13 Chemical monitoring results for McKechnie's eastern stormwater discharge - site STW001014

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2018 (d)	11 Apr 2019 (w)	5 Jun 2018 (w)	Consent Limit
Acid soluble aluminium	g/m ³	0.48	nd	0.65	0.56	-
Conductivity @25°C	mS/m	3.6	nd	9.4	4.9	-
Acid soluble copper	g/m ³	0.053	nd	0.085	0.047	-
Dissolved copper	g/m ³	0.022	nd	0.039	0.015	-
Acid soluble lead	g/m ³	0.006	nd	0.009	0.005	-
Oil and Grease	g/m ³	a	nd	a	a	15
pH	pH	7.4	nd	7.2	7.2	6-9
Suspended solids	g/m ³	13	nd	16	9	100
Temperature	Deg.C	12.0	nd	17.7	12.5	-
Turbidity	NTU	11.6	nd	12.6	11.8	-
Acid soluble zinc	g/m ³	0.39	nd	0.73	0.45	-
Dissolved zinc	g/m ³	0.31	nd	0.55	0.33	-

Key: nd not discharging at time of sampling survey
a parameter not determined, no visible hydrocarbon sheen and no odour
(d) dry weather survey (w) wet weather survey

Site STW001028 was visited four times during the year under review, three times during wet weather surveys and once during a dry weather survey. Samples were collected during two of the three wet weather sampling occasions, while no discharge was occurring on the other two occasions. Compliance was achieved with consent limits for pH and suspended solids.

Table 14 Chemical monitoring results for McKechnie’s northern stormwater and cooling water - site STW001028

Parameter	Unit	21 Nov 18 (w)	6 Mar 19 (d)	23 Apr 19 (w)	5 June 19 (w)	Consent Limit
Acid Soluble Aluminium	g/m ³	0.06	nd	nd	0.06	-
Conductivity @ 25°C	mS/m	3.5	nd	nd	2.4	-
Acid Soluble Copper	g/m ³	0.027	nd	nd	0.022	-
Dissolved Copper	g/m ³	0.0173	nd	nd	<0.010	-
Oil and Grease	g/m ³	a	nd	nd	a	15
pH	pH	7.0	nd	nd	6.9	6-9
Suspended solids	g/m ³	<3	nd	nd	<3	100
Temperature	Deg.C	12.2	nd	nd	12.5	-
Turbidity	NTU	2.1	nd	nd	1.9	-
Acid Soluble Zinc	g/m ³	0.52	nd	nd	0.76	-
Dissolved Zinc	g/m ³	0.52	nd	nd	0.71	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 (d) dry weather survey (w) wet weather survey

7.2.3 Investigations, interventions, and incidents

Table 15 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to McKechnie’s activities during the 2018-2019 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 15 Incidents, investigations, and interventions summary table - McKechnie

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
31 July 2018	Chemicals and waste product used in an aluminium processing factory stored in an unbunded area and overhanging the bund, where there is potential for contaminants to enter stormwater	N	Infringement notice	Plans were already in place to remove the chemicals from the site and this was carried out

7.3 Discussion

7.3.1 Discussion of site performance

Inspections found that the site was generally well managed during the period under review. There was one spill which the consent holder notified the Council of, and on one occasion hazardous substances were found to be stored outside of a bunded area. An infringement notice was issued as a result of this consent breach.

7.3.2 Environmental effects of exercise of consent

The discharges from the McKechnie site were not found to be having any adverse effects on the Mangati Stream during the period under review. The discharges from this site would have been assimilated within the reticulated stormwater system prior to discharge into the NPDC ponds and/or to the stream from the industrial drain bypass.

7.3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 16.

Table 16 Summary of performance for McKechnie's consent 3139-3

Purpose: To discharge stormwater (including cooling water) from an industrial site		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects	Inspection and discussion with consent holder	No –issues around storage of chemicals
2. Consent to be exercised in accordance with application information	Inspection and discussion with consent holder	Yes
3. Limits on chemical composition of discharge	Discharge sampling	Yes
4. Limit on stormwater catchment	Observation and discussions at inspection	Yes
5. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
6. Maintenance of a contingency plan	Updated plan received January 2018	Yes
7. Maintenance of stormwater management plan	Updated plan received Sept 2016	Yes
8. Adherence to stormwater management plan	Observations and discussions at inspection	Yes
9. Provision for consent to lapse if not exercised	Consent exercised	N/A
10. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 7.3.6	N/A

Purpose: <i>To discharge stormwater (including cooling water) from an industrial site</i>		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
Overall assessment of consent compliance and environmental performance in respect of this consent		Improvement required High
Overall assessment of administrative performance in respect of this consent		

N/A = not applicable or not assessed

During the year, an improvement was required in McKechnie Aluminium Solutions Ltd level of environmental performance and compliance with their resource consent as defined in section 1.1.4 and a high level of administrative performance as defined in Section 1.1.4.

7.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT, in the first instance, monitoring programmed for consented activities of McKechnie Aluminium Solutions Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

7.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

7.3.6 Exercise of optional review of consent

Resource consent 3139-3 provides for an optional review of the consent in June 2020. Condition 10 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

7.4 Recommendation

1. THAT, in the first instance, monitoring programmed for consented activities of McKechnie Aluminium Solutions Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 3139-3 in June 2020, as set out in condition 10 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

8 New Plymouth District Council

8.1 Introduction

8.1.1 Process description

The roads served by the main Bell Block industrial drainage system occupy a significant stormwater catchment area of 27.5 ha. This system also serves as a conduit for the carriage of the stormwater from the industrial sites in this area. When the application for the discharge consent was lodged, NPDC stated that 'NPDC has no physical control over accidental spills or deliberate disposal of contaminants into the stormwater system'.

The NPDC stormwater drainage system had three main discharge points; into the Mangati Stream at the bottom of De Havilland Drive West, into the Mangati Stream at the bottom of Connett Road West, and the industrial drain outlet into the unnamed tributary at the rear of the Mainland site.

At the time of the consent renewal in 2002 routine physicochemical monitoring of the discharge had shown that the discharge occasionally contained high levels of suspended solids, and generally contained elevated levels of ammoniacal nitrogen, copper and zinc. Results of biomonitoring in the receiving water had shown that although the quality of discharges from the industrial area was improving, the Mangati Stream continued to be severely impacted below the industrial area.

In order to try to mitigate the effects of the quality of the stormwater carried by the NPDC pipework, during the 2002-2003 monitoring period NPDC redesigned the way in which stormwater was directed to the stream from the Connett Road and Paraita Road areas. A constructed wetland was put in place with the intention of both upgrading the quality of water discharged to the Mangati Stream, and providing a mechanism for containment of any spills or contaminants from the industrial area. The broad scope for this project was to develop an integrated water and land management system for the middle Mangati catchment in which:

- Stormwater from industrial areas is captured and passed through a constructed wetland for trapping of litter, sediment, hydrocarbons (and chemical contaminants to the extent that this is feasible) before being discharged to the stream.
- Industrial land uses are physically and hydrologically isolated from the stream by the development of a riparian reserve.
- A riparian reserve providing public access, a utilities corridor and machine access for stream maintenance purposes is provided.
- Flood detention structures and ponding areas are developed as required and integrated into the riparian reserve development.

Construction of the four-pond system was completed in the 2002-2003 monitoring year.

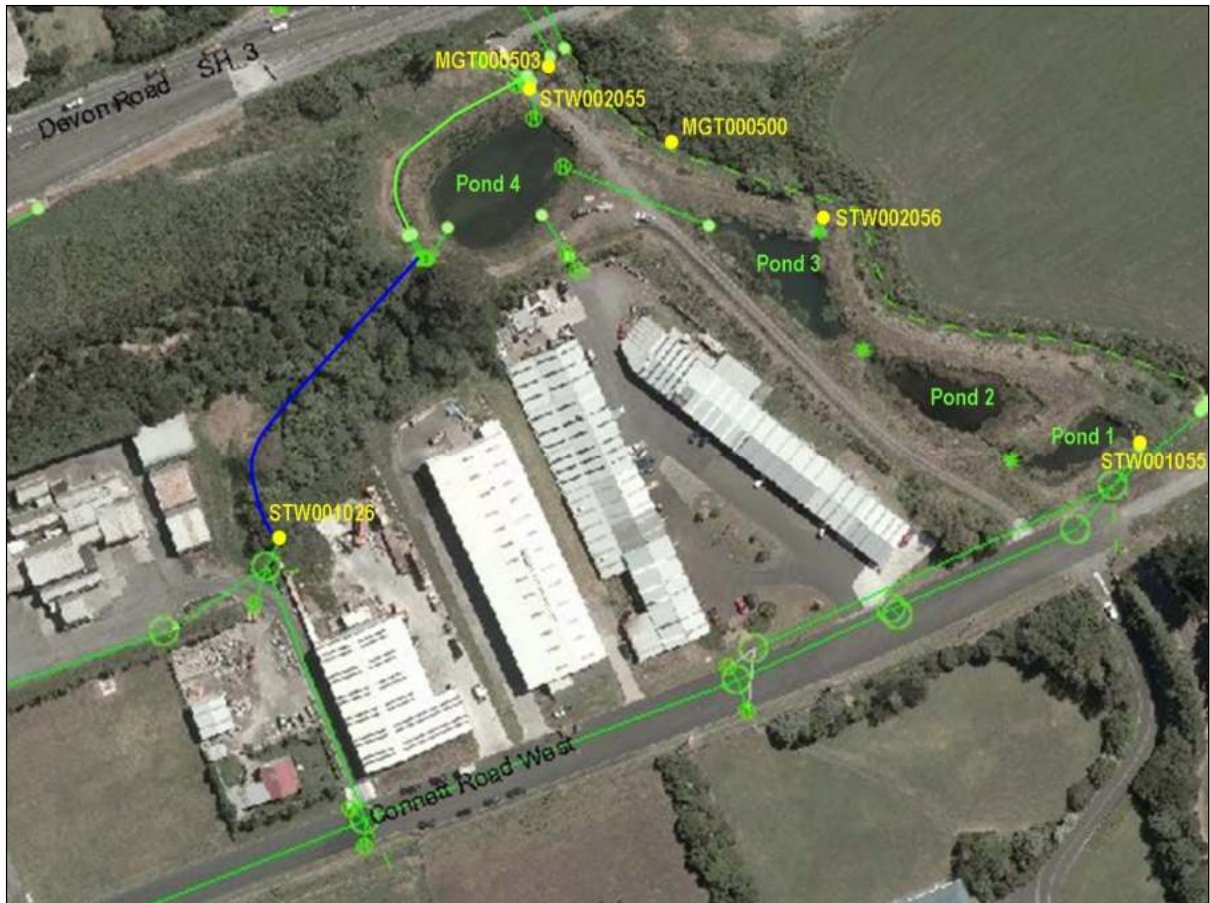


Figure 4 NPDC stormwater flow paths and sampling points

The plans submitted to the Council indicated that under light rainfall conditions, the stormwater flows under Connett Road, and passes through a downstream defender pollutant entrapment device installed in the 300 mm pipeline in Connett Road, before entering pond 1 adjacent to Connett Road and the Mangati Stream (STW001055). The water from pond 1 flows through pond 2 and into pond 3 from which it then discharges into the Mangati Stream (STW002056). When there is higher flow from moderate rainfall, stormwater will also discharge via the industrial drain outlet (STW001026) and unnamed tributary into pond 4, which then flows into pond 3. There is a provision for pond 4 to discharge into the Mangati Stream (STW002055) when the water level in the pond increases to a certain point. There is also a drainage channel from the unnamed tributary to the Mangati Stream (MGT000503) to allow the ponds to be bypassed under heavy rainfall conditions, when it was expected that the level of contaminants in the stormwater would be at their lowest due to the high rate of dilution.

More recently, the eastern side of the Mangati catchment has been developed. This is occurring along de-Havilland Drive and Connett Road. The De Havilland drive sites generally discharge to the Mangati via the stormwater network and currently there is no treatment infrastructure in this section of the network. The eastern Connett Road area discharges to land via rain cells buried under the grass verges with a 150 mm overflow pipe discharging to the stream. In heavy rain events further overflow is provided by grass swales on the road verge.

8.2 Results

8.2.1 Inspections

During the monitoring period inspections were undertaken in the area of the constructed ponds, and of the discharges to the Mangati Stream on 10 July and 12 October 2018, and 6 May and 1 July 2019.

The inspections focussed on the condition of the ponds, discharge structures, and receiving waters.

During the inspections no significant issues were noted. In general, the ponds were found to be in a tidy condition, with good vegetation growth on the banks. Some discolouration was noted in one or more of the ponds during inspections, and on 12 October 2018 this discolouration caused a visible increase in the turbidity of the Mangati Stream below the discharge point.

8.2.2 Results of discharge monitoring

Stormwater is discharged to the Mangati Stream from the wetlands, and from roads running through the industrial area. As combined discharges, the monitoring of the flow to and from the wetlands to the Mangati Stream is reported in Section 18.

Stormwater discharged to the Mangati Stream from roads running through the industrial area is monitored at two points, off De Havilland Drive West and Connett Road West (STW001054 and STW001055). Other discharges contribute to the flow at both monitoring points. The De Havilland Drive stormwater discharges directly into the Mangati Stream. The Connett Road stormwater now discharge into pond 1 of the wetland and includes a portion of the stormwater from the industrial sites, this discharge is therefore discussed in Section 18 where the combined discharges are considered.

De Havilland Drive stormwater has components from several small industrial sites, including part of Tegel Foods Ltd's (Tegel's) poultry processing plant on the southern side of the road, Ireland Roading and Construction Ltd's depot and Vause Oil Production Services workshop on the northern side of the road.

The results from chemical monitoring of stormwater from De Havilland Drive are given in Table 17.

An elevated level of BOD was found during all three wet weather sampling surveys, while the BOD was within acceptable levels during the dry weather survey. It should be noted that due to a laboratory error, the BOD result presented on 28 May 2019 was carbonaceous BOD. A higher result would be expected for total BOD. Suspended solids was also elevated above guideline levels on 21 November 2018. No environmental effects were observed in the Mangati Stream as a result of these elevations.

Table 17 Chemical monitoring results for stormwater discharged to the Mangati Stream from De Havilland Drive West-site STW001054

Parameter	BOD	Conductivity	Dissolved reactive phosphorus	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³
21 Nov 2018 (w)	5.5	4.3	0.089	a	7.1	107	14.3	0.00187
6 Mar 2019 (d)	1.1	21.3	0.30	a	6.6	9	18.2	0.00084
11 Apr 2019 (w)	12	15.5	1.46	a	7.0	61	18.0	0.00680
28 May 2019 (w)	14*	21.2	0.55	a	7.0	24	17.0	0.00350
<i>RWFP limits</i>	5	-	-	15	6-9	100	-	0.025

Key: Results shown in bold within a table indicates that **a guideline** for a particular parameter has been exceeded

* BOD measured as carbonaceous due to lab error – a higher BOD would be expected for total BOD

a parameter not determined, no visible hydrocarbon sheen and no odour

(d) dry weather survey (w) wet weather survey

8.2.3 Investigations, interventions, and incidents

In the period under review, the Council was required to undertake significant additional investigations and interventions in association with NPDC's conditions in resource consents or provisions in Regional Plans. There were several incidents that occurred in the Mangati catchment, however these were not related to consent 4302-2 and were downstream of the industrial area. These incidents are briefly summarised in Table 18 below.

Table 18 Incidents, investigations, and interventions summary table - NPDC

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
7 July 2018	A complaint was received concerning odour from fertiliser spreading on paddocks at Parkview drive. Investigation found that the odour was objectionable at times, and that there was a substantial amount of fertiliser present on the Mangati walkway	N	Infringement notice	No further action
15 November 2018	A complaint was received regarding a sewage discharge from a sewage pump station into the Mangati Stream. Investigation found that a power outage had caused a pump failure resulting in a discharge of untreated sewage into the Mangati Stream. Notification of the discharge did not occur until the following day.	N	No	No discharge was occurring at the time of inspection and the contingency plan had been complied with.
1 December 2018	Self-notification was received concerning a sewage overflow from a sewer pump station. The notification was delayed, and the subsequent inspection found no signs of discharge.	N	No	The contingency plan had been complied with. No further action was taken.

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
21 January 2019	Approximately 1,500m ³ of sewage discharged to the Mangati Stream over a nine hour period due to an electrical fault and associated human error. A clean-up operation was undertaken, however significant contamination was evident in the stream for approximately 1km, with discolouration extending into the sea. Dead fish and eels were found and further investigation noted impacts on the stream for approximately three weeks.	N	Abatement notice	NPDC and City Care are currently being prosecuted by Council over the incident.
16 March 2019	Self-notification was received concerning a sewage overflow from a sewer pump station. The subsequent inspection found no signs of discharge.	N	No	The contingency plan had been complied with. No further action was taken.

8.3 Discussion

8.3.1 Discussion of site performance

The wetlands were found to be well maintained during the year under review and no significant issues were noted.

While unrelated to the stormwater consent, it is noted that there were three sewage overflows to the Mangati Stream during the year, two were minor and dealt with in a timely manner. The third was a large overflow resulting in significant effects in the stream and NPDC and their contractor, City Care, are currently being prosecuted over this.

8.3.2 Environmental effects of exercise of consent

No significant adverse effects were noted as direct result of the exercise of NPDC's stormwater discharge consent. Discharges from NPDC outfalls are likely to have contributed to the transitory elevation in concentrations of BOD found in the stream during wet weather surveys. However, as stated earlier in this report, NPDC has little, if any, control over the quality of the industrial discharges entering its system. For this reason the consent does not place limits on the quality of the NPDC's discharges. The effects observed are discussed in more detail in Section 18 covering the combined discharges and Section 19 covering the Mangati Stream chemical monitoring.

8.3.3 Evaluation of performance

A tabular summary of NPDC's compliance record for the year under review is set out in Table 19.

Table 19 Summary of performance for NPDC's consent 4302-2

Purpose: To discharge up to 5,200 litres/second of stormwater from industrial sealed areas and roofs		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent to be exercised in accordance with application information	Inspection and discussion with consent holder	Yes
2. Adoption of best practicable option to minimise effects	Inspection and discussion with consent holder	Yes
3. Provision of designs, specifications and operating procedures	Review of Council records	Yes
4. Prevention and mitigation of erosion	Inspection	Yes
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable or not assessed

With consideration to the incidents outlined in the section above and their performance as per the conditions of this consent, an overall performance rating has been determined. During the year, NPDC demonstrated a poor level of environmental performance and a high level of administrative performance and compliance with their resource consent conditions as defined in section 1.1.4.

8.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of New Plymouth District Council in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

These recommendations were implemented.

8.3.5 Alterations to monitoring programmes for 2019-2020

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

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;

- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

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

It is proposed that for 2019-2020 the programme remains unchanged from that of 2018-2019.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

8.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of New Plymouth District Council in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

9 Nexans New Zealand Ltd

9.1 Introduction

9.1.1 Process description

The electric wire and cable manufacturing plant of Nexans New Zealand Ltd (Nexans) was established on Paraitē Road beside the railway line in 1967. The plant produces for both domestic and export markets. This company was previously known as Olex New Zealand Ltd.

The site occupies an area of 6.7 ha, of which about 85% is developed. A large variety and volume of chemicals, some potentially toxic, are stored on the site. The majority are stored within buildings in areas where they can be contained if spilled.

Chemicals are stored outside the buildings in two bunded areas. In one area, phthalate esters (also liquid plasticisers) are stored in three 50,000 L tanks. In another area, copper wire drawing liquor is stored in a 12,000 L above ground tank which is bunded. A security fence surrounds areas vulnerable to vandalism. All bunded areas are fitted with liquid level alarms and stormwater from within one of these bunds is discharged to the stormwater drains after appropriate quality checks. The other bund is used to harvest rainwater for cooling water.

The air discharge consent held by Nexans is to cover the minor discharges associated with the Curing Continuous Velocity (CCV) process. This process involves the moulding of an insulating layer around a conductor at elevated temperatures in an inert nitrogen atmosphere. The discharge stream from this process has the condensates separated before the gas is released to atmosphere via a sparge nozzle above the factory roof. The gas discharged is predominantly nitrogen, but contains alkanes at less than 0.5%, and acetophenone (10 ppm). Acetophenone has a sweet orange blossom odour and is not expected to give rise to any adverse environmental effects.

There is a contingency plan in place in case of spillages, with a revised plan dated July 2016 being received and accepted by the Council.

A comprehensive Environmental Management System has been put in place at the Nexans site, and a revised stormwater management plan was received in May 2015.

9.2 Results

9.2.1 Inspections

The site was inspected on 10 July 2018 and 7 May 2019.

The inspections focussed on stormwater treatment measures, the condition of containment bunds, and general housekeeping.

The site was found to be tidy and well managed during the period under review and no issues were noted. The stormwater treatment systems were found to be well maintained and in good working order. On 7 May 2019, some potential contaminants were present in the finished goods yard, however the consent holder had covered the stormwater grate to prevent contamination of stormwater while the clean-up occurred. No visible air emissions or odours were detected.

9.2.2 Results of discharge monitoring

Stormwater from the Nexans site discharges to the industrial stormwater drain underneath Connett Road at two points; the one from the main loading area on the western side of the plant is opposite the entrance to

Mainland Products; the other, from the remainder of the site, is about 100 metres further down Connett Road. The uppermost monitoring point for the eastern catchment (STW001025) is unaffected by other discharges. Other discharges contribute to the flow at all of the monitoring points for the western discharge, including the uppermost site (STW001011), which is influenced by discharges from ABB, Schlumberger (tool and mud sites), Tegel's feed mill storage sheds. The results of monitoring for these two primary sites are given in Table 20 and Table 21.

The uppermost monitoring point was visited three times and two samples were collected during wet weather surveys at this site during the period under review. The second occasion was during a dry weather survey and no discharge was occurring. The pH range and oil grease concentrations of the samples complied with consent conditions.

The consent also places limits on the concentration of suspended solids in the discharge. However, these parameters are not routinely determined in the discharge by analysis, as historical data (in excess of 25 samples) has shown that the maximum recorded values have generally been very low (oil and grease 2 g/m³, suspended solids 7 g/m³). The samples are therefore inspected visually and analysed for turbidity, with full suspended solids analysis to be undertaken if required. All results complied with consent conditions.

Table 20 Chemical monitoring results for Nexans' cooling water and eastern stormwater discharge, site STW001025

Parameter	Conductivity	Acid soluble copper	Dissolved copper	Oil and grease	pH	Temp	Turbidity	Acid soluble zinc	Dissolved zinc
Unit	mS/m@25°C	g/m ³	g/m ³	g/m ³		Deg.C	NTU	g/m ³	g/m ³
21 Nov 2018 (w)	3.2	0.014	0.0109	a	6.7	13.7	14.6	0.05	0.045
6 Mar 2019 (d)	nd	Nd	nd	nd	nd	nd	nd	nd	nd
28 May 2019 (w)	12.6	0.033	0.0260	a	6.8	16.4	2.5	0.11	0.08
<i>Consent limits</i>	-	-	-	15	6-9	-	-	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 (d) dry weather survey (w) wet weather survey

Copper is included in the analysis suite for site STW001025 because the cooling water used as part of the copper wire drawing process was previously discharged via stormwater. Whilst the cooling water is now being directed to the sewer, the Council will continue to analyse for copper given that the site is still a potential source of copper contamination with the large amount of copper stored and processed at the site. Zinc is included in the analysis suite to better assist Council in the assessment of zinc contamination of the entire industrial area, and because a calcium/zinc stabiliser is used at the site.

Overall the concentrations of these metals were found to be at acceptable levels.

Two samples were collected during wet weather surveys from the central drain and Nexans' western stormwater discharge during the period under review (STW001011). The site was visited on one further occasion during a dry weather survey and was not discharging at this time. All results complied with consent conditions. The consent also places limits on the suspended solids concentrations in the discharge. The samples were inspected visually and analysis was not considered necessary as high turbidity was not noted in the sample.

It is noted that other industries drain via this part of the reticulated stormwater network, including the storage sheds utilised by Tegel's feed mill. Monitoring of this parameter will continue at this location, with additional monitoring of the Tegel feed mill drain being undertaken if warranted.

No visible emissions or objectionable odours were noted during any of the inspections.

Table 21 Chemical monitoring results for NPDC's central drain and Nexans' western stormwater discharge, site STW001011

Parameter	Ammoniacal nitrogen	Conductivity	Oil and Grease	pH	Temp.	Turbidity
Unit	g/m ³ N	mS/m@25°C	g/m ³	pH	Deg.C	NTU
21 Nov 2018 (w)	0.25	5.6	A	6.9	14.4	15.2
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd
5 Jun 2019 (w)	0.091	3.1	A	6.8	13.2	126
<i>Consent limits</i>	-	-	15	6-9	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 (d) dry weather survey (w) wet weather survey

9.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with Nexans' conditions in resource consents or provisions in Regional Plans.

9.3 Discussion

9.3.1 Discussion of site performance

The site was found to be well managed throughout the period under review and no issues were noted in regard to mitigation measures, bunding or general housekeeping.

9.3.2 Environmental effects of exercise of consents

No adverse environmental effects were observed as a result of stormwater discharges or air emissions originating from the Nexans' site during the monitoring period under review.

9.3.3 Evaluation of performance

A tabular summary of Nexans' compliance record for the year under review is set out in Table 22, and Table 23.

Table 22 Summary of performance for Nexans' consent 4497-3

Purpose: To discharge stormwater and cooling water		
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. Limits stormwater catchment area	Inspection	Yes

Purpose: To discharge stormwater and cooling water		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. Above ground hazardous substance storage to be bunded and not to drain directly to stormwater catchment	Inspection and discussion with consent holder	Yes
4. Limits on chemical composition of discharge	Sampling	Yes
5. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water and sediment sampling. Biomonitoring	Yes
6. Maintenance of a contingency plan for action to be taken to prevent spillage	Review of documents provided. Plan on file dated July 2018	Yes
7. Maintenance of stormwater management plan	Plan on file	Yes
8. Written notification required regarding changes to activities at the site	Inspection and discussion with consent holder	Yes
9. Provision for consent to lapse if not exercised	Consent has been exercised	N/A
10. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 9.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable or not assessed

Table 23 Summary of performance for Nexans consent 5417-2

Purpose: To discharge emissions to air		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects	Inspections and liaison with consent holder	Yes
2. Discharge not to give rise to offensive, objectionable or toxic dust or odour	Inspections	Yes
3. Control of emissions of CO, NO ₂ , PM ₁₀ and SO ₂	Not assessed during review period	N/A
4. Control on other emissions	Not assessed during review period	N/A
5. Consent holder to consult Council prior to making alterations to plant, processes or operations	Inspections and liaison with consent holder	Yes

Purpose: <i>To discharge emissions to air</i>		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
6. Consent holder to maintain record of complaints	Not requested during review period	N/A
7. Report reviewing technological advances in the reduction and mitigation of emissions due in November each year	Plan received	Yes
8. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 9.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable or not assessed

During the year, Nexans New Zealand Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consents as defined in Section 1.1.4.

9.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Nexans New Zealand Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

9.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site(s) in question. The Council reserves the right to subsequently adjust the programme

from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

9.3.6 Exercise of optional review of consent

Resource consents 4497-3 and 5417-2.0 provide for an optional review of the consents in June 2020. Condition 10 of consent 4497-3 and condition 8 of consent 5417-2.0 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

9.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Nexans New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consents 4497-3 and 5417-2.0 in June 2020, as set out in conditions 10 and 8 of the consents, not be exercised, on the grounds that current consent conditions are adequate to deal with adverse effects on the environment.

10 OMV New Zealand Ltd

10.1 Introduction

10.1.1 Process description

OMV New Zealand Ltd (OMV) manages this 1.08 ha site as a storage facility to support the offshore Maari Field.

The site is used for the storage and dispatch of off-shore equipment between drilling campaigns. This equipment includes chemicals and drill pipes. The drill pipes are either new, prior to them being prepared for use, or unused pipes returned from the off-site drilling activities. There is no pipe washing, preparation, or reconditioning of used pipes carried out at the site.

Chemicals, of limited quantities and classes, are stored either under cover in the warehouse buildings, or in bunded shipping containers in the yard, prior to dispatch.

Any equipment returned from off-shore is washed off-shore, if required, and is clean when it is returned to the site.

Stormwater drains via a three-stage oil separator to the Bell Block industrial drainage system.

Prior to OMV leasing the site, the entire property had been developed, with the site being roofed, tar-sealed or metalled.

A wash facility is situated on the southern side of the site, and an automatic diverter valve diverts the discharge of washings to sewer via an oil separator when the wash pad is in use. Stormwater from the washing area, when the wash pad is not in use, continues to be directed to the Mangati Stream via an older oil separator. The wash pad is now permanently diverted to sewer.

10.2 Results

10.2.1 Inspections

The site was visited on 7 May 2019.

The inspections focussed on treatment measures, the condition of the stormwater drains and general house-keeping.

The site was found to be clean and tidy when inspected. No sheens or spills were noted and the stormwater drains appeared tidy.

10.2.2 Results of discharge monitoring

OMV's primary monitoring site is immediately below the oil separator for treating the site stormwater discharged (IND002013). This site was visited on four occasions during the year and three samples were collected during wet weather surveys. The fourth occasion was during a dry weather survey and no discharge was occurring. The results from chemical monitoring at this site are given in Table 24.

Table 24 Results from monitoring of stormwater from OMV, site IND002013

Parameter	BOD	Conductivity	Oil and Grease	pH	Suspended solids	Temp	Ammoniacal Nitrogen
Units	g/m ³	mS/m@ 25°C	g/m ³	pH	g/m ³	Deg.C	g/m ³ N
21 Nov 2018 (w)	4.9	5.3	a	6.7	32	14.6	0.59
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd
23 Apr 2019 (w)	2	1.9	a	6.5	9	13.0	-
28 May 2019 (w)	5	18	a	6.6	29	16.1	-
<i>Consent Limits</i>	<i>16</i>	<i>-</i>	<i>15</i>	<i>6-9</i>	<i>100</i>	<i>-</i>	<i>10</i>

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The discharge complied with consent conditions for BOD, pH range, oil and grease and suspended solids during the period under review. Ammoniacal nitrogen was assessed on only one occasion and was compliant with consent conditions.

10.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with OMV's conditions in resource consents or provisions in Regional Plans.

10.3 Discussion

10.3.1 Discussion of site performance

The site was well managed during the period under review, with no issues noted during inspections.

10.3.2 Environmental effects of exercise of consent

During the year under review, there were no significant adverse effects noted as a result of the exercise of OMV's water discharge consent.

10.3.3 Evaluation of performance

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

Table 25 Summary of performance for OMV's consent 3913-2

Purpose: To discharge stormwater from an industrial site into an unnamed tributary of the Mangati Stream		
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. Limits stormwater catchment area	Inspection	Yes
3. Limits on chemical composition of discharge	Sampling	Yes

Purpose: To discharge stormwater from an industrial site into an unnamed tributary of the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Discharge cannot cause specified adverse effects beyond mixing zone	Inspection/sampling	Yes
5. Maintenance of a contingency plan for action to be taken to prevent spillage	Inspection	Yes
6. Maintenance of stormwater management plan	Inspection	Yes
7. Written notification required regarding changes to activities at the site	Inspection and discussion with consent holder	N/A
8. Optional review provision re environmental effects and notifications of changes (S.C.9)	Next option to review in June 2020, recommendation attached in section 10.3.6	Yes
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

During the year, OMV New Zealand Ltd demonstrated a high of environmental performance and a high level of administrative performance and compliance with the resource consents as defined in Section 1.1.4.

10.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of OMV New Zealand Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented during the monitoring period, while additional monitoring, investigation or intervention was not considered necessary as per recommendation two.

10.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

10.3.6 Exercise of optional review of consent

Resource consent 3913-3 provides for an optional review of the consent in June 2020. Condition 8 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

10.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of OMV New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 3913-3 in June 2020, as set out in condition 8 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

11 Schlumberger New Zealand Ltd

11.1 Introduction

11.1.1 Process description

Schlumberger New Zealand Ltd (Schlumberger) provides services to the oil production industry, and stores a range of hazardous substances in enclosed areas of the site. Washdown of drilling mud and occasionally oil residue from down-hole tools occurs, with this water discharged to the stormwater system via an interceptor.

The wash area is housed within a building that also contains the paint, waste, oil, and chemical storage areas. The floors within this building all drain to a common 1.5 m³ capacity sealed sump. The liquid collected in this sump can either be removed by a contractor for appropriate off-site disposal, or be pumped to the stormwater drainage system via an oil separator, which removes the oily waste and suspended solids from the effluent stream.

Late in the 2013-2014 year Schlumberger acquired the MI New Zealand site, with consents being transferred to Schlumberger on 13 May 2014. This includes the operation of a Liquid Mud Plant (LMP) and a warehouse/storage facility.

Activities at the site involve the mixing of synthetic based muds to be used in hydrocarbon exploration, and storage of chemicals to be used in the mixing operations. The LMP comprises a series of tanks of up to 10.9 m in height that are used to mix up the drilling mud. Once mixed the mud is tankered from the site. The LMP area is outdoors and is not covered with a roof to prevent stormwater from entraining contaminants. All stormwater discharged from the bunded LMP area is treated via an interceptor.

The adjacent site contains a large outdoor laydown area and large warehouse/ workshop building. Sea transport containers containing flexitank bladders of synthetic fluid are stored in this laydown area pending the availability of storage space in the LMP area. The sea containers are transferred by swing-lift transporter to the bunded loading/unloading bay alongside LMP when the synthetic fluids are required for use.

The site is manned at all times when the mixing of chemicals occurs in the LMP, therefore minimising the potential of a spill occurring unnoticed. Sandbags are also located on the site for use in the event of a spill to contain liquid chemicals and to place over stormwater drains to prevent discharge from the site.

11.2 Results

11.2.1 Inspections

This site was inspected on 10 August 2018 and 9 May 2019.

The inspections focussed on evidence of spills, the maintenance and operation of treatment systems, and general housekeeping.

The inspection on 10 August 2018 found multiple issues at the site. These included equipment that had been returned to the yard with considerable quantities of drilling mud still present. This had leached onto the ground and toward the stormwater drain. A hydraulic leak and a spill were also noted on site. The sump and interceptors were clear and chemicals were bunded.

On the 9th of May 2019 the site was found to be in a more typically tidy condition that was found in the previous inspection.

Parameter	Conductivity	Dissolved copper	Acid soluble lead	Oil and grease	pH	Suspended solids	Temp	Dissolved zinc
23 Apr 2019 (w)	2.7	0.0022	<0.002	a	7.0	4	14.4	0.077
28 May 2019 (w)	4.8	<0.010	<0.002	a	7.0	7	16.7	0.060
<i>Consent limits</i>	-	<i>0.05</i>	<i>0.02*</i>	<i>15</i>	<i>6-9</i>	<i>100</i>	-	-

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

- a parameter not determined, no visible hydrocarbon sheen and no odour
- nd not discharging at time of sampling survey
- (d) dry weather survey (w) wet weather survey
- * limit is for dissolved lead

The samples were within consented limits for dissolved copper, oil and grease, lead, pH, and suspended solids.

11.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with Schlumberger's conditions in resource consents or provisions in Regional Plans.

Issues noted during the first inspection around site housekeeping with the potential discharge of contaminants from site, were addressed by the consent holder and the next inspection found the site to be compliant.

11.3 Discussion

11.3.1 Discussion of site performance

There were a couple of minor issues noted during inspections however, the site was found to be generally neat and tidy and well managed.

The management and contingency plans for the site were last updated in September 2010 and were well overdue for the biennial update. An update was received on 20 August 2019, in the following monitoring year.

11.3.2 Environmental effects of exercise of consent

There were no significant adverse environmental effects identified by the Council as a result of the discharges from the Schlumberger site during the year under review.

11.3.3 Evaluation of performance

A tabular summary of Schlumberger's compliance record for the year under review is set out in Table 28 and Table 29.

Table 28 Summary of performance for Schlumberger's consent 5987-1

Purpose: To discharge treated stormwater from a synthetic liquid mud plant and storage site into the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects	Inspection and discussion with consent holder	No – minor site housekeeping issues noted during 1 st inspection
2. Limit on stormwater catchment	Observation and discussions at inspection	Yes
3. LMP discharge to be treated and managed as per stormwater management plan	Inspection and discussion with consent holder	Yes
4. Limits on chemical composition of discharge	Discharge sampling	Yes
5. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
6. Preparation and maintenance of contingency plan re measures to prevent spillage or accidental discharge and avoid, remedy or mitigate effects	Review of plan overdue (due at two-yearly intervals)	No
7. Preparation and maintenance of stormwater management plan re measures to minimise contaminants in the stormwater	Review of plan overdue (due at two-yearly intervals)	No
8. Written notification required regarding changes to activities at the site. Notification to include assessment of environmental effects	Inspection and discussion with consent holder	Yes
9. Optional review provision re environmental effects or changes	No further provision for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good Improvement required
Overall assessment of administrative performance in respect of this consent		

N/A = not applicable or not assessed

Table 29 Summary of performance for Schlumberger's consent 6032-1

Purpose: To discharge treated wash water and stormwater from a storage and maintenance premises for oil field exploration equipment into the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent to be exercised in accordance with information submitted at application, and in plans (S.C. 3,4,and 7)	Inspection and discussion with consent holder. Some changes, plans to be reviewed	Yes
2. Council to be advised in writing with assessment of effects prior to changes	Inspection and discussion with consent holder. No further changes	Yes
3. Maintenance of plan for wash water treatment system	Plan reviewed	No-update required
4. Maintenance of stormwater management plan	Plan reviewed	No-update required
5. Limits on chemical composition of discharge	Sampling, and review of self-monitoring data	No-results not received
6. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
7. Maintenance of a contingency plan for action to be taken to prevent spillage	Plan on file received September 2010 – review overdue	No
8. Optional review provision re environmental effects and notifications of changes	No further provision for review prior to expiry	N/A
9. Prohibition of wastes containing degreasers, solvents or surfactants	Inspection and discussion with consent holder. Observations at sampling	Yes
Overall assessment of consent compliance and environmental performance in respect of this consent		High Improvement required
Overall assessment of administrative performance in respect of this consent		

N/A = not applicable or not assessed

During the year, Schlumberger demonstrated and an overall high level of environmental performance and compliance with their resource consents as defined in Section 1.1.4. However, an improvement is required in their administrative performance. An updated contingency plan and stormwater/wastewater plan is required for the site and was not provided during the period under review despite numerous requests. This was provided early in the next monitoring period and was up to date when this report was prepared.

11.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Schlumberger New Zealand Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.

2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

11.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020, the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

11.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Schlumberger New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

12 Tasman Oil Tools Ltd

12.1 Introduction

12.1.1 Process description

Tasman Oil Tools Ltd (Tasman Oil) has a 1.4 ha yard on De Havilland Drive 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 recently contained some copper and zinc, and a high proportion of lead. Historically the wash water discharged to land and then flowed overland to an interceptor pit. Tasman Oil's yard is immediately upslope of the pipe yard of Greymouth Petroleum, where a similar activity is undertaken.

Washing is now undertaken in a roofed wash pad and directed to a three-stage oil separator and then to tradewaste. Occasionally larger items are washed outdoors, however this requires notification to the Council prior to commencement.

Stormwater from the site is collected in open perimeter drains, treated in a three stage interceptor and settling pond, and then directed to the Mangati Stream.

The discharge from the settling pond enters a common open stormwater drain that also receives stormwater from the adjacent properties of NGC and Greymouth Petroleum. The drain reaches the Mangati Stream about 250 m below De Havilland Drive.

Improvements made at the site include the construction of a roofed wash pad, the installation of a three-stage oil separator to collect and treat equipment washings, the connection of the wash pad to tradewaste sewer, the installation of a large shipping container to house oils and chemicals, and the installation of a paint locker.

Larger items are washed outside on a purpose built pad where the washwater is intercepted to tradewaste.

Due to elevated levels of copper being found in the stormwater discharged from the site, in April 2002 the Council investigated contaminant levels in soils on the site with samples taken from current and historical pipe storage areas and the gravelled pipe washing area. Although elevated levels of various metals were found in the samples, the concentrations met the relevant industrial guideline levels. Stormwater sampling continued to indicate that there was a significant source of heavy metals on site due to historical activities and two possible conclusions were identified:

- A 'hot spot' containing a higher concentration of heavy metals was missed during the soil sampling exercise.
- Because the original source of heavy metals was from an historical activity that occurred in excess of five years ago, the loose surface soils containing the major portion of the heavy metals have been washed from the active areas of the site and had been retained in the settlement pond.

It was considered at that time, that the second conclusion was the more probable scenario and the accumulated sediment and sludge was removed from the settlement pond. Council has continued to monitor for the presence of copper, lead and zinc in the site stormwater discharge.

A contingency plan for spillage response is in place for the site, with the most recent document received in February 2018.

12.2 Results

12.2.1 Inspections

Inspections were undertaken on 10 August and 15 October 2018 and 7 May and 1 July 2019.

The inspections focussed on treatment measures, the condition of the stormwater drains and general housekeeping.

The site was found to be clean and tidy and well managed during all visits. Silt and sediment controls were in place however on 7 May 2019 it was noted that the silt controls required maintenance.

On two occasions oil and hydraulic fluid were observed to be dripping onto the ground from tools stored on racks near the washbay. Bunding of these tool racks was discussed with the consent holder during the inspection on 10 August 2019, while on 1 July 2019 the consent holder was advised that bunding should be installed for the storage of the portable diesel trailer.

12.2.2 Results of discharge monitoring

The primary monitoring site is at the discharge point from Tasman Oil skimmer pit (site STW001057). Routine samples of the discharge were collected on three occasions during the period under review, while on one other occasion the site was visited and no discharge was occurring. The results for the period under review are given in Table 30.

Table 30 Chemical monitoring results for Tasman Oil's stormwater discharge, site STW001057

Parameter	Conductivity @25°C	Acid soluble copper	Dissolved copper	Acid soluble lead	Oil and grease	pH	Suspended solids	Temp.	Acid soluble zinc	Dissolved zinc
Unit	mS/m	g/m ³	g/m ³	g/m ³	g/m ³		g/m ³	Deg.C	g/m ³	g/m ³
21 Nov 2018 (w)	6.6	0.019	0.01	0.006	a	8.2	13	15.9	0.03	0.0043
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
23 Apr 2019 (w)	5.7	0.011	0.0069	0.007	a	7.7	7	14.2	<0.02	0.0084
28 May 2019 (w)	17.3	<0.010	0.0068	0.002	a	8.0	<3	14.4	<0.02	0.0055
<i>Consent limits</i>	-	-	<i>0.05</i>	<i>0.5</i>	<i>15</i>	6-9	<i>100</i>	-	-	<i>0.65</i>

Key: Results shown in bold within a table indicates that a consent limit for a particular parameter has been exceeded
a parameter not determined, no visible hydrocarbon sheen and no odour
nd no discharge occurring
(d) dry weather survey (w) wet weather survey

Copper, lead and zinc are monitored at this site because it was known that, historically, these heavy metals were present in the grease washed from the pipes. The wash water from this activity was discharged onto land and into the Mangati Stream via the interceptor pit. Although the grease currently used does not contain these elements, and the majority of the washdown wastes are directed to sewer, it has been identified that this practice has resulted in an elevated concentration of copper, lead and zinc in the soil on site.

The results for pH, oil and grease, dissolved copper, lead and zinc were within the consent limits.

12.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake additional investigations and record incidents, in association with Tasman Oil's conditions in their resource consent.

12.3 Discussion

12.3.1 Discussion of site performance

Tasman Oil generally maintained a high level of housekeeping during the year under review and activities at the site in relation to chemical storage and use of the main wash pad (which is diverted to tradewaste) were generally well managed.

Additional improvements and modifications to reduce silt and sediment implemented at the site during the previous monitoring period were working well, with sample results compliant for all parameters.

12.3.2 Environmental effects of exercise of consent

Sample results indicated that it was unlikely that the discharge would be having a significant adverse effect on the receiving waters.

As the dissolved (immediately bioavailable) copper concentration of the Tasman Oil's discharge was at the permitted level on all sampling occasions during the period under review, and the concentration of this parameter remained low in the Mangati Stream, it is considered that there was no significant adverse effect occurring at the time of sampling.

12.3.3 Evaluation of performance

A tabular summary of Tasman Oil's compliance record for the year under review is set out in Table 31.

Table 31 Summary of performance for Tasman Oil's consent 4812-2

Purpose: To discharge wash water and stormwater		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent to be exercised in accordance with information submitted in application, and conditions of consent	Inspection and discussion with consent holder	Yes – although some improvements suggested to site housekeeping during inspection
2. Yard washing records to be kept and provided to Council on request	Review of logs	Yes
3. Council to be notified if yard washing more than 8 hours in any 7 days	No washing in the yard undertaken during monitoring period	Yes
4. Council to be advised in writing with assessment of effects prior to changes	Inspection and discussion with consent holder. No changes	Yes
5. Stormwater treatment system to be maintained satisfactorily	Inspection and discussion with consent holder	Yes

Purpose: <i>To discharge wash water and stormwater</i>		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
6. Limits on chemical composition of discharge	Sampling	Yes
7. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
8. Maintenance of a contingency plan for action to be taken to prevent spillage	Plan last updated in February 2018	Yes
9. Optional review provision re environmental effects and notifications of changes	No further provision for review prior to expiry	N/A
10. Prohibition of wastes containing degreasers, solvents or surfactants	Inspection and discussion with consent holder. Observations at sampling	Yes
11. Maintenance of stormwater management plan	Inspection and discussion with consent holder, and review of documentation on file	Yes
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 or not assessed

Tasman Oil Tools Ltd demonstrated a high level of environmental performance and compliance with their resource consents and a high level of administrative performance as defined in Section 1.1.4.

12.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Tasman Oil Tools Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to carry out additional monitoring as per recommendation two.

12.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme is unchanged from that of 2018-2019.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

12.4 Recommendation

1. THAT in the first instance, monitoring programmed for consented activities of Tasman Oil Tools Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

13 Tegel Foods Ltd – feed mill

13.1 Introduction

13.1.1 Process description

The New Plymouth feed mill of Tegel Foods Ltd (Tegel) has been in operation on their 1.6 ha site on Paraita Road since 1968. Raw grain and supplements are processed into feed for central North Island divisions of the company.

Raw materials are transported to the site by truck in bagged and bulk form, the largest component being various types of grain. Other raw materials are soft goods or feed supplements such as lime, meat and bone meals, broll, vitamins, and minerals. Liquids such as tallow, canola oil, or molasses are also used. The grain is ground and the meal is mixed and blended with various supplements and liquids according to requirements. The feed is then pelletised and bagged or stored in bulk, before being loaded onto trucks for dispatch.

Storage tanks for tallow (40 tonne), molasses (30 tonne), and canola oil (40 tonne) feed supplements are situated outside the mill. The "alimet" tank, in which the canola oil is stored, is situated within a bund. There is no bund around the tallow and molasses tanks owing to the high viscosity of the liquids. A dangerous goods store holds miscellaneous liquids such as weed sprays, paint and oils.

A grain storage facility is now operated by Tegel at a second site on Paraita Road opposite the original feedmill site. The grain is transported across the road to the feedmill as required. This site currently operates under permitted activity rules.

13.2 Results

13.2.1 Inspections

The feed mill site was inspected on 20 September, 1 November and 14 December 2018, and 21 June 2019.

Inspections focussed on treatment measures, product tracking, potential sources of contamination, conditions of drains and general housekeeping.

In general the site was observed to be neat and tidy. On 20 September 2018, it was observed that some product had been stored too high in shed 3, resulting in some spillage onto the ground and roof gutter. Mitigation measures were in place. Organic material was noted near the end of two down pipes. There was also some minor product spillage in and around the silo area. On 1 November 2018, it was noted that the stormwater filter bags required cleaning. It was also observed that a new bund had been installed around the rubbish storage area to prevent leachate from reaching stormwater. All other inspections found the site to be tidy and no tracking of product was noted.

The inspecting officer noted that there were some good initiatives in place and that Tegel had a proactive approach to reducing their environmental footprint.

13.2.2 Results of discharge monitoring

Stormwater from the Tegel Feed site discharges to the NPDC network and then the NPDC wetlands. The stormwater enters the networks at two points one is on Paraita Road and the other is via the central drain. The primary monitoring site is at a manhole over the stormwater drain at the northern entrance to the mill from Paraita Road (site STW001015). The site is not influenced by discharges from other sources. The results from chemical monitoring at that site are given in Table 32.

Samples were collected in three wet weather surveys during the monitoring period. There was no discharge during the dry weather survey.

Table 32 Chemical monitoring results for Tegel's feed mill stormwater discharge, site STW001015

Parameter	Ammoniacal nitrogen	Chemical Oxygen Demand	BOD	Conductivity @ 25°C	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	g/m ³	mS/m	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.82	62	16	6.6	a	6.9	27	13.4	0.00165
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
11 Apr 2019 (w)	0.158	109	27	13.1	a	7.0	39	17.6	0.00051
5 Jun 2019 (w)	0.24	111	21	8.5	a	6.8	51	13.8	0.00038
<i>Consent limits</i>	-	-	25	-	15	6-9	100	-	-

Key: Results shown in bold within a table indicates that a consent limit for a particular parameter has been exceeded
a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at the time of sampling
(d) dry weather survey (w) wet weather survey

The consent conditions for oil and grease, pH, and suspended solids were complied with on all monitoring occasions. The BOD in the sample collected on 11 April 2019 exceeded the consented limit. There were no numerical limits specified in the consent for any of the other parameters tested. However, these additional analyses were performed in order to monitor the overall quality of the discharge.

13.2.3 Air Inspections

The inspections focus on assessing the relevant emission sources to air particularly:

- the cyclonic dust extraction systems;
- the boiler and exhaust gas stack;
- general processing areas within the plant;
- raw and finished material storage areas (including the main silos);
- and conveyance system within the factory.

In addition to this any changes to the mill which could have an effect upon local air quality were also checked.

The feed mill site was inspected on 20 September, 1 November and 14 December 2018 and 21 June 2019.

The site was inspected in a variety of wind and weather conditions. During the period under review, no visible emissions were found from the emission abatement equipment, the processing buildings or the dry goods/grain storage sheds at any of the inspections. The use of the blower to prevent dust falling from trucks was observed.

13.2.4 Deposition gauging

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 m. The buckets have a solution in them to ensure that any dust that settles out of the air is not re-suspended by wind.

Guideline values used by the Council for dust deposition are 4 g/m²/30 days or 0.13 g/m²/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.

Deposition gauging is carried out triennially at the sites, this was undertaken during the 2018-2019 period, and the results are presented in Table 33 with the deposition gauges locations shown in Figure 5 and a wind rose for the gauging period given in Figure 6.

Table 33 Air deposition results for Tegel feed mill

Site	Date collected	Air deposition weight	Number of days	Particulate deposited	Volume air deposition samples
		g	days	g/m ² /d	L
AIR009101	6 Mar 2019	0.0619	21	0.09	1.2
AIR009102	6 Mar 2019	0.0834	21	0.13	1.2
<i>Consent limits</i>	-	-	-	0.13	-



Figure 5 Location of Tegel feed mill's deposition gauges

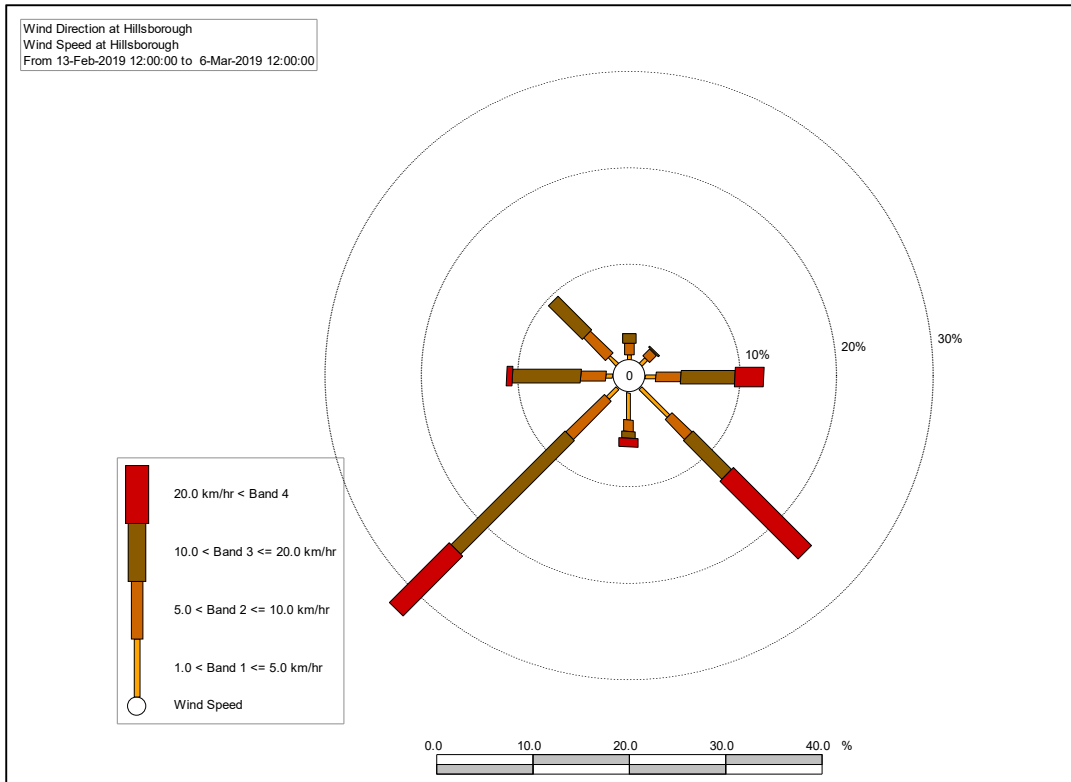


Figure 6 Wind rose for the duration of Tegel feed mill's deposition gauge deployment

The deposition gauging results did not exceed the consent limit of 0.13 g/m²/day at either site. No dust complaints were received during the gauge deployment.

13.2.5 Investigations, interventions, and incidents

Table 34 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to Tegel feed mill's activities during the 2018-2019 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 34 Incidents, investigations, and interventions summary table – Tegel feed mill

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
23 November 2018	An odour complaint was received. A subsequent odour survey was undertaken, and a faint odour was found to be intermittently occurring downwind of the feedmill. This odour was not objectionable	Y	None	The complaint was not substantiated

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
11 December 2018	An odour complaint was received. An odour survey found a strong unpleasant odour that was intermittent. The odour was not considered to be objectionable because it was intermittent. Tegel advised that works to clean out a part of the system were ongoing, and this was the likely cause. In future wind direction will be considered when such work is undertaken.	Y	None	Tegel were asked to ensure no objectionable odour was present beyond the site boundary
12 December 2018	An odour complaint was received. An odour survey was undertaken. A noticeable odour was found beyond the boundary, however this odour was not considered objectionable.	Y	None	Odour was not found to be objectionable
11 April 2019	A stormwater sample had a BOD result of 27 g/m ³ , this was in excess of the consented limit of 25 g/m ³ .	N	Infringement notice	An infringement notice was issued

13.3 Discussion

13.3.1 Discussion of site performance

During the year under review the site was found to be generally well managed. The upgrades made during the previous year appeared to work well. However one stormwater sample exceeded the consent limit for BOD and an infringement notice was issued as a result.

13.3.2 Environmental effects of exercise of consents

During the year under review there were no significant adverse environmental effects attributable to the exercise of the Tegel's stormwater or air discharge consents for activities at their feed mill site.

The stormwater samples exceeded the consented limit for BOD on one occasion, while all other parameters were within the consented limits. On this occasion no downstream samples were collected because this was a discharge only sampling run. Therefore no effects on the Mangati Stream could be proven.

13.3.3 Evaluation of performance

A tabular summary of Tegel's compliance record for the year under review is set out in Table 35 and Table 36.

Table 35 Summary of performance for Tegel's consent 2335-4

Purpose: To discharge stormwater from a stock/poultry feed manufacturing site to NPDC's stormwater drainage network		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects on the environment, particularly with respect to BOD	Inspection and discussion with consent holder	Yes
2. Limits stormwater catchment area	Inspections	Yes
3. Limits on chemical composition of discharge	Sampling of discharges	No – BOD exceeded consented limit on one occasion
4. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
5. Wastewater tank to be replaced with tradewaste connection by 30 November 2014	Installation complete	Yes
6. Provision of performance based improvement programme by 1 April 2014	Received July 2014	Yes
7. Performance report to be provided by 1 July each year	Received	Yes
8. Maintenance of a contingency plan for action to be taken to prevent spillage	Received July 2014 (incorporated into Stormwater Management Plan)	Yes
9. Prepare and maintain stormwater management plan	Received July 2014	Yes
10. Written notification required regarding changes to activities at the site	No changes during monitoring period	Yes
11. Optional review provision re environmental effects and notifications of changes (S.C.9)	Next option to review in June 2020, recommendation attached in section 13.3.6	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

N/A = not applicable or not assessed

Table 36 Summary of performance for Tegel's consent 4038-6

Purpose: To discharge emissions into the air from the milling and blending of grain and/or animal meals together with associated activities		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to prevent or minimise effects on the environment	Inspection and discussion with consent holder	Yes
2. No alterations that might change the nature/quantity of discharge without prior consultation with Council	No changes during monitoring period	Yes
3. Maintenance of plan to prevent accumulation of dust in stormwater catchment	Inspection and discussion with consent holder	Yes
4. Limit on point source particulate emissions (125 mg/m ³)	Not assessed during monitoring period	N/A
5. Limit on dust deposition beyond boundary (4.0 mg/m ² /day)	Deposition gauging indicated compliance	Yes
6. Limit on boundary suspended particulates (3 mg/m ³)	Not assessed during monitoring period	N/A
7. Keep, and make available, records of all dust and smoke incidents	Inspection of records and discussion with consent holder	Yes
8. Clearance of accumulated dust	Inspection	Yes
9. Optional review provision re environmental effects	No further provision for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable or not assessed

During the year, the Tegel Foods Ltd (feed mill) demonstrated a good level of environmental performance and compliance with their resource consents and a high level of administrative performance as defined in Section 1.1.4.

13.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (feed mill) in the 2018-2019 year continues at a similar level to that programmed for 2017-2018, with the addition of triennial deposition gauging.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented during the period under review, while it was not considered necessary to carry out additional investigations or monitoring as per recommendation two.

13.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the programme remains similar to that undertaken in the 2018-2019 year with the exception of deposition gauging which is undertaken triennially. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

13.3.6 Exercise of optional review of consent

Resource consent 2335-4 provides for an optional review of the consent in June 2020. Condition 11 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

13.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (feed mill) in the 2019-2020 year continues at a similar level to that programmed for 2018-2019, with the triennial deposition gauging next due in 2021-2022.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 2335-4 in June 2020, as set out in condition 11 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

14 Tegel Foods Ltd – poultry processing plant

14.1 Introduction

14.1.1 Process description

Tegel Foods Ltd (Tegel) operates a poultry processing plant on Paraitē Road in the south-east corner of the Bell Block industrial area. The plant processes, on average, 65,000 birds per day, but has the capacity to process 105,000 per day.

Poultry are delivered in plastic crates to the hanging area where they are hung on a chain line, in a semi-enclosed area under a roof with two exhaust fans discharging to the atmosphere. Slaughter is accomplished via stunning and bleeding, and then the carcasses are scalded and plucked. The chickens then enter a primary processing stage where they are prepared to a 'dressed' stage prior to secondary processing or alternatively chilling and dispatch as whole chickens. The refrigeration system in place utilises ammonia as a coolant replacing a carbon dioxide based system. Primary and secondary processed chickens are chilled and frozen on site before being moved off site for storage.

All materials to be rendered, including feathers, are transferred by screw conveyer into trucks and removed off site to Taranaki By-Products Ltd for further processing. Blood is pumped to a holding tank prior to discharge.

Wastewaters such as cooling water, blowdown, and process water, along with truck wash water are directed to tradewaste sewer. Modifications have been made to divert runoff from the live bird reception area and yard to the tradewaste system also. Areas with potential for spillage of chemicals have been bunded. Spill containment equipment is on site.

Stormwater from a developed area of 1.7 ha discharges to the Mangati catchment at two points. Drainage from most of the site flows to a small wetland on the southern side of the plant that feeds into the Mangati Stream. Drainage from the relatively small remainder, including the car park and part of the load-out area in the north western area of the site, flows into the NPDC De Havilland Drive stormwater drain.

Major construction activities occurred at the site during the 2002-2003 monitoring period. In large, upgrades have been driven by the relocation of processing activities from the Te Horo region to the New Plymouth site. These structures included a crate wash, concreting in the area around the ammonia plant, and 5,000 m² of roofing, which covers the bird reception area, renderable waste storage area, and areas that flowed to both the stormwater and tradewaste catchments. A chlorinated water tank has been installed within a bunded area that drains to tradewaste.

Additional expansions at the site have also included a new cool store and load out area, and a sausage plant.

Contingency plans in place for the site include a contingency plan in case of spillage, a contingency plan for burial to land, and a contingency plan for discharge to air.

14.2 Results

14.2.1 Inspections

Inspections of the site concentrated on the loading areas, particularly the live bird reception area, the truck wash area, the wastewater treatment plant, chemical storage, the dispatch area, and the drainage systems for tradewaste and stormwater.

Inspections occurred on 21 September and 1 November 2018, and 21 June 2019. Some areas of the site were found to be generally clean and tidy and well managed, however there were a some persistent issues noted.

On 21 September 2018, it was found that fungal growth and odour were present on the ground outside the work in progress chiller. A film was present on water tracking toward the stormwater sump. Debris was caught in the grating outside the chiller, which indicates that the chiller was being hosed down while the door was open. A second issue which had also been ongoing throughout the previous year was the management and location of rubbish bins. This was discussed with staff during the first two inspections of the year. The location of these was such that they had potential to discharge to stormwater sumps. The inspecting officer advised staff that they should be moved or bunded in order to direct run-off to the sewer (as opposed to leachate entering the wetland). A non-compliance had been recorded for this issue in the preceding monitoring period, and a further non-compliance was recorded at this time. This is discussed further in section 15.2.5 below.

On 1 November 2018, the area outside the work in progress chiller was tidy. Process changes had been made to ensure that hosing down only occurred with the door shut. A concrete bund had been installed around the rubbish storage area to prevent leachate reaching stormwater. A bund had also been installed to contain the chemicals outside the engine room, and other chemicals had been repositioned to ensure that any spills or leaks flowed to tradewaste.

On 21 June 2019, the site was generally found to be clean and tidy and the bunds had sufficient capacity. However some sediment and debris was observed entering stormwater drains from the southern carpark. A discussion was held with Tegel staff regarding maintenance of the stormwater system, and adding procedures to the management plan regarding the emergency showers that drain directly to the stormwater system.

14.2.2 Results of discharge monitoring

Consent 7389 – treated stormwater discharge via wetland

Site STW001053 is the point at which Tegel discharges to the wetland. The site was visited three times during the monitoring period under review, twice during wet weather surveys and once during a dry weather survey. Samples were collected during the wet weather surveys, while no discharge was occurring during the dry weather survey. These results are given in Table 37.

The discharge from the plant to the wetland was observed to already be within the consent limits given by consent 7389 for BOD, unionised ammonia, oil and grease, pH and suspended solids in both samples.

Table 37 Chemical monitoring results for Tegel's poultry processing plant stormwater discharge to Mangati Stream tributary, site STW001053 (pre-treatment)

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.25	5.7	21.8	0.25	a	7.7	3	14.1	0.0038
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
28 May 2019 (w)	1.84	9	11.0	0.43	a	7.1	19	14.7	0.0059

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 (d) dry weather survey (w) wet weather survey

Four samples were taken of the discharge from the wetland to the stream, three during wet weather surveys and one during a dry weather survey. This monitoring location is considered to be the discharge point when assessing compliance with the component concentrations given on the consent. These results are given in Table 38.

Table 38 Chemical monitoring results for stormwater discharge to Mangati Stream from wetland, site MGT000489

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.43	31	25.1	0.008	a	7.1	5	12.6	0.00118
6 Mar 2019 (d)	0.07	0.9	19.7	0.006	a	7.0	<8	16.3	0.00022
11 Apr 2019 (w)	0.057	<2	17.5	0.016	a	6.6	4	15.6	0.00007
28 May 2019 (w)	0.128	<2	18.5	0.016	a	7.1	4	14.0	0.00046
<i>Consent limit</i>	-	15	-	-	15	6-9	100	-	0.025

Key: Results shown in bold within a table indicates that a consent limit for a particular parameter has been exceeded
a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

All pH, suspended solids and unionised ammonia results for the period under review were compliant with consent conditions. Oil and grease were not analysed for as each sample was visually inspected and found to be free of any obvious sheens or scums. BOD results exceed the consent limits on 21 November 2018, while all subsequent samples were below the limit. An infringement notice was issued and this is discussed in section 14.2.5 below.

Consent 3470 – untreated stormwater discharges via De Havilland Drive

Stormwater predominantly from the northern and eastern areas of the site is discharged via three lateral connections to NPDC's network on De Havilland Drive. These sites (STW001130, STW001129 and STW001128) were visited on four occasions for sampling (once during dry weather and three times in wet weather). The results are given in Table 39, Table 40, and Table 41.

Table 39 Chemical monitoring results for Tegel's poultry processing plant stormwater discharge site, STW001130

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.22	2.9	3.5	0.084	A	6.9	71	12.7	0.00042
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
11 Apr 2019 (w)	3.1	65	24.9	1.67	A	6.9	53	18.0	0.0077
28 May 2019 (w)	nd	nd	Nd	nd	nd	nd	nd	nd	nd
<i>Consent Limit</i>	-	15	-	-	15	6-9	100	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The samples collected from this monitoring location complied with the oil and grease, suspended solids and pH limits of the consent. The BOD was compliant with the consent limit on 21 November 2018 but exceeded the consented limit in the sample collected on 11 April 2019. An infringement notice was issued and this is discussed in section 14.2.5 below.

Table 40 Chemical monitoring results for Tegel's poultry processing plant stormwater discharge, site STW001129

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.21	2.3	2.0	0.037	a	6.8	28	11.4	0.00025
6 Mar 2019 (d)	0.131	<0.4	1.6	0.064	a	6.2	4	21.4	0.000096
11 Apr 2019 (w)	3.0	3	14.5	0.35	a	7.0	7	17.5	0.0099
28 May 2019 (w)	0.81	<2	6.6	0.16	a	6.9	14	17.1	0.0020
<i>Consent Limit</i>	-	15	-	-	15	6-9	100	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 (d) dry weather survey (w) wet weather survey

The samples collected from this monitoring location complied with the BOD, oil and grease, suspended solids and pH limits of the consent.

Table 41 Chemical monitoring results for Tegel's poultry processing plant stormwater discharge, site STW001128

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m ³ N	g/m ³	mS/m@25°C	g/m ³ P	g/m ³	pH	g/m ³	Deg.C	g/m ³ -N
21 Nov 2018 (w)	0.29	3	4.2	0.075	a	7.1	7	12.8	0.00088
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
11 Apr 2019 (w)	4.6	5	17.4	0.55	a	7.6	11	17.5	0.067
28 May 2019 (w)	0.76	2	10.2	0.27	a	7.3	6	16.7	0.0049
<i>Consent Limit</i>	-	15	-	-	15	6-9	100	-	-

Key: Results shown in bold within a table indicates that a consent limit for a particular parameter has been exceeded
 a parameter not determined, no visible hydrocarbon sheen and no odour
 (d) dry weather survey (w) wet weather survey

It is noted that (as in the previous three monitoring periods) there were discharges occurring during a dry weather survey (6 March 2019). As on the previous occasion, STW001129 had a trickle of flow while STW001128 had a slow drip but no flow (and was not sampled). As the consent permits only stormwater discharges, these were not covered by Tegel's resource consent. As the contaminant levels were low, no action was taken at this time, however the consent holder was informed as previous dry discharges from the site were found to have elevated level of BOD and ammonia. It was noted at the time of sampling that the emergency showers had been tested and that these appeared to drain to the stormwater system.

14.2.3 Air

14.2.3.1 Inspections

Inspections focused on the areas associated with the following potential emissions:

- Combustion products from the two units within the boiler house.
- Ammonia, which is used as a refrigerant, is circulated through pipes under vacuum. Contamination with small amounts of air requires purging of the system releasing small quantities of ammonia. The odour is not noticeable more than ten metres from the purge outlet.
- Heat and water vapour discharged to the atmosphere from the cooling units on-site, including evaporative towers and oil coolers.
- Dust (during summer) and odours may be discharged from the area of the plant where the birds are received and slaughtered. These effects are not usually discernible off-site.
- Odours from the offal and blood storage areas.
- Odours from the effluent system. The effluent passes through a milliscreen to separate out solids, then a Dissolved Air Flotation (DAF) treatment unit to aerate the wastewater and remove fats. The rate of discharge of wastewater to the sewage system is maintained at a constant 10 L/s during the day, with the remainder of the wastewater being stored in a holding pond, to enable the entire flow of wastewater to be directed to the sewage system if any contingency event should make this necessary.

Routine compliance monitoring inspections were undertaken on 21 September and 1 November 2018 and 21 June 2019.

During routine compliance monitoring inspections no issues were noted regarding the management of the blood, offal or feathers at the site. No offensive or objectionable odours were noted on site during the inspections.

14.2.4 Exercise of discharge to land consent

It was confirmed that no discharges to land occurred during the 2018-2019 monitoring period.

14.2.5 Investigations, interventions, and incidents

Table 42 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to Tegel poultry processing plant activities during the 2018-2019 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 42 Incidents, investigations, and interventions summary table - Tegel poultry processing plant

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
21 September 2018	Inspections found that the waste product storage area was not bunded. This had been an ongoing issue during the previous year and the site had previously been non-complaint as a result of this issue.	N	No	Subsequent inspections found that concrete bunding was installed in this area.

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
21 November 2018	Analysis of samples collected during routine monitoring found a BOD of 31 g/m ³ , well in excess of the consent limit of 15 g/m ³ in the discharge from the wetland to the Mangati Stream. Sampling of the Mangati Stream found that this caused an instream increase of more than 2 g/m ³ BOD.	N	Abatement notice	A meeting was held onsite with the consent holder to discuss works required to comply with consent conditions
4 February 2019	A complaint was received regarding odour from the Tegel processing plant. An odour survey was undertaken and no odour was recorded offsite at the time.	Y	None	No further action
11 April 2019	During analysis of samples collected during routine monitoring it was found that the BOD (65 g/m ³) exceeded the consent limit (15 g/m ³) at stormwater discharge site STW001130.	N	Infringement notice	

14.3 Discussion

14.3.1 Discussion of site performance

The several issues at the site most notably the management and location of the rubbish bins which were seen to be contaminating stormwater catchments on the site. This had been an ongoing issue during the preceding period, and was addressed during the current monitoring period with the installation of bunding around the bins to contain leachate. One abatement notice and one infringement notices were issued in regards to non-compliant discharges to both the Mangati Stream and the De Havilland Drive stormwater network.

No objectionable or offensive odours were found beyond the boundary due any of the inspections. One odour complaint was received but this was not substantiated.

14.3.2 Environmental effects of exercise of consents

Monitoring of the NPDC network discharges, Tegel's wetland discharges and receiving waters indicated that on one occasion the non-compliant discharge caused an increase of greater than 2 g/m³ BOD in the Mangati Stream. On another occasion, sampling of the stream did not coincide and it is unknown if an instream increase in BOD occurred as a result of the discharge.

14.3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 43, Table 44, Table 45, Table 46, and Table 47.

Table 43 Summary of performance for Tegel's consent 6357-1

Purpose: To take and use groundwater from a bore for food processing and washdown purposes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Consent to be exercised in accordance with application information	Consent not exercised during period under review	N/A
2. Limit on abstraction rate: 3000 m ³ /day and 35 L/s	Consent not exercised during period under review	N/A
3. Water level to be maintained above 35 m below ground level at all times	Consent not exercised during period under review	N/A
4. Record of date pumping hours and daily volume abstracted to be kept and provided to council upon request	Consent not exercised during period under review	N/A
5. Water meter to be installed and maintained	Not monitored. Tegel advised that they had no immediate plans to utilise the bore	N/A
6. Consent holder to meet reasonable costs associated with monitoring	Combined monitoring programme in place	Yes
7. Provision for consent to lapse if not exercised	Lapse date extended to 20 May 2020, if not exercised prior	N/A
8. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 14.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		N/A
Overall assessment of administrative performance in respect of this consent		N/A

N/A = not applicable or not assessed

Table 44 Summary of performance for Tegel's consent 3470-4

Purpose: To discharge stormwater from a poultry processing plant site to NPDC's drainage network		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects on the environment, particularly with respect to BOD	Inspection and discussion with consent holder	No – elevated BOD in discharge
2. Limits stormwater catchment area	Inspection	Yes
3. Limits on chemical composition of discharge	Sampling and analysis of discharges	No – BOD exceedance

Purpose: To discharge stormwater from a poultry processing plant site to NPDC's drainage network		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
5. Provision of stormwater network analysis by 28 February 2014	Review of documents provided July 2014	Yes
6. Maintenance of contingency plan	Review of documents provided. Reviewed plan provided May 2016	Yes
7. Maintenance of and adherence to a stormwater management plan	Inspections and liaison with consent holder	No
8. Written notification required regarding changes to activities at the site	Inspection and discussion with consent holder. No changes occurred which may alter the nature of the discharge	N/A
9. Optional review provision re environmental effects and notifications of changes	Next option to review in June 2020, recommendation attached in section 14.3.6	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		High

N/A = not applicable or not assessed

Table 45 Summary of performance for Tegel's consent 7389-1

Purpose: To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream		
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	No – issues with stormwater discharge
2. Limits stormwater catchment area	Inspection	Yes
3. All stormwater directed through treatment system (wetland), and wetland to be maintained to ensure effective treatment	Inspection and discussion with consent holder	Yes
4. Above ground hazardous substance storage to be bunded and not to drain directly to stormwater catchment	Inspection and discussion with consent holder	Yes
5. Limits on chemical composition of discharge	Sampling and analysis of discharges	No – BOD exceedance

Purpose: To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
6. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
7. Limit on filtered carbonaceous BOD change in stream (2 g/m ³)	Receiving water sampling	Yes
8. Wetland to be maintained to ensure maximum effluent treatment at all times	Inspection and discussion with consent holder and sampling	Yes
9. Riparian fencing to be completed as per plan by 31 December 2010	Inspection by Council Land Management Officers	Yes
10. Maintenance of a contingency plan for action to be taken to prevent spillage	Review of documents provided. Reviewed plan received November 2016	Yes
11. Maintenance of and adherence to a stormwater management plan	Inspection and liaison with consent holder	No
12. Written notification required regarding changes to activities at the site	Inspection and discussion with consent holder. No changes occurred which may alter nature of discharge	N/A
13. Optional review provision re environmental effects and notifications of changes (S.C.9)	Next option to review in June 2020, recommendation attached in section 14.3.6	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		High

N/A = not applicable or not assessed

Table 46 Summary of performance for Tegel's consent 4026-3

Purpose: To discharge emissions into the air from the processing of animal matter and associated processes		
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. No alterations that might change the nature/quantity of discharge without prior consultation with the Council	Inspection and discussion with consent holder. Review of documents provided to the Council	N/A
3. Offensive and objectionable odours beyond boundary not permitted	Inspection and discussion with consent holder. Complaint response	Yes
4. No offal or blood to go to wastewater pond	Inspection and discussion with consent holder	Yes

Purpose: To discharge emissions into the air from the processing of animal matter and associated processes		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
5. Contingency plan to be maintained and regularly updated	Review of documents provided. Updated plan provided September 2014	Yes
6. Operation and maintenance plan re special conditions of consent and particular aspects of Tegel's activities	Review of documents provided. Updated plan provided September 2014	Yes
7. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 14.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 47 Summary of performance for Tegel's consent 5494-2

Purpose: To discharge poultry processing wastes by burial into land in the vicinity of the Mangati Stream in emergency circumstances only		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. To be exercised in emergency only, as confirmed by Council	Not exercised during period under review	N/A
2. Details to be provided to Council prior to exercise of consent	Not exercised during period under review	N/A
3. Adopt BPO to prevent or minimise adverse effects	Not exercised during period under review	N/A
4. Burial trenches to be more than 25 m from any surface water body	Not exercised during period under review	N/A
5. Base of burial trenches to be located above groundwater level	Not exercised during period under review	N/A
6. Consent holder to maintain records of disposal	Not exercised during period under review	N/A
7. Maintain and update a Burial Management Plan	Updated plan received August 2014	Yes
8. Lapse of consent June 2032		N/A
9. Optional review provision re environmental effects	Next option to review in June 2020, recommendation attached in section 14.3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

N/A = not applicable or not assessed

Overall, during the period under review, an improvement in Tegel Foods Ltd (poultry processing plant) level of environmental performance was required as defined in Section 1.1.4. There were ongoing issues in

regards to site management and a non-compliant discharge and this resulted in an infringement fine being issued. Tegel Foods Ltd demonstrated a high level of administrative performance and compliance with their resource consents as defined in Section 1.1.4.

14.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (poultry processing plant) in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented during the period under review, while it was not considered necessary to carry out additional investigations or monitoring as per recommendation two.

14.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the programme remains unchanged from that of 2018-2019.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

14.3.6 Exercise of optional review of consents

Resource consents 3740-4, 4026-3, 5494-2, 6357-1 and 7389-1 provide for an optional review of the consent in June 2020. Condition 9 of consent 3740-4, condition 7 of consent 4026-3.0, condition 9 of consent 5494-2.0, condition 8 of 6537-1.2 and condition 13 of consent 7389-1 allow the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

14.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (poultry processing plant) in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consents 3740-4, 4026-3, 5494-2, 6357-1 and 7389-1 in June 2020, as set out in consent conditions, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

15 TIL Freighting Ltd

15.1 Introduction

15.1.1 Process description

TIL Freighting Ltd (TIL) (previously Hookers Bros Investments Ltd), operates a truck depot from a 5.7 ha site from which goods for various industries are transported throughout the country. The site was established in 2005. The three primary industries using TIL's transport services are food and beverage, agriculture, and petroleum/gas exploration. Some of the materials handled or transported through the site are classified as hazardous substances and others, although not classified as hazardous substances, would result in adverse environmental effects if discharged to water.

The site straddles the Mangati Stream/Mangaone Stream catchment boundary, and therefore TIL holds consents to discharge stormwater in each of these catchments.

Activities in the Mangaone catchment include a container storage area, a truck parking area, a truck wash facility and Ross Graham Motors workshop.

The truck wash facility has a wash water separator, which directs stormwater into the stormwater system and any truck wash into the sewage system. The separator is a "Smart Valve", which works by directing all water from the truck wash pad to tradewaste whenever it is in use (i.e. if any tap is turned on). While the truck wash is not in use, water is directed to stormwater after a certain amount of rainfall.

The truck park and container storage areas have sumps that collect stormwater, and direct it through a 300 mm pipe to the stormwater settlement pond. The pond, which is approximately 350 m² in area and 3 m deep, has an overflow outlet pipe. However, it was anticipated that the pond would be large enough for the stormwater to soak away, without overflows occurring.

The consent for this area was granted prior to the development of the site. At the time the consent was processed it was considered that, as the truck wash water is discharged to tradewaste, and stormwater is directed to the stormwater settlement pond to soak away, there should be no direct discharge to surface water and therefore no adverse environmental effects were anticipated.

The eastern area of the site (approximately 2.60 ha) is piped to NPDC's reticulated stormwater system at three points, and discharges to the Mangati Stream via the NPDC's constructed wetland.

A large proportion of this area of the site is roofed (approximately 1.26 ha) and the remainder is predominantly hard paved or metalled. Activities within the stormwater catchment include parking, loading, storage and heavy vehicle movements.

The stormwater discharges from three points, all of which contain a mixture of roof stormwater and yard stormwater. The northern catchment is predominantly leased, and contains KMC Engineering, the Coca-Cola distribution loading area and parking, and has a low traffic volume. It discharges to the NPDC system at Connett Road.

The central catchment is used for loading and storage, and has high heavy traffic volume. This area discharges to the NPDC system on Paraita Road in front of the loading tunnel. The southern catchment contains molasses storage and loading facilities, container storage, privately leased storage sheds and a wash bay used for cleaning imported containers to the standards required by the Ministry of Primary Industries (MPI). It is subject to a lower volume of heavy traffic movement and discharges to the NPDC system in front of the building leased by Turners and Growers.

15.2 Results

15.2.1 Inspections

The TIL site was visited on 31 July and 11 December 2018 and 7 and 28 June 2019.

Inspections focussed on evidence of spills, the condition of the drains and catchment area, treatment measures, and general housekeeping.

In general the housekeeping of the site had improved from previous years. It was noted on the first two inspections that the drain wardens were in need of maintenance and on 7 June 2019 a sump was observed to need cleaning to remove silt. On 31 July 2018 it was also noted that a drum on the TIL site was leaking. On the Ross Graham site it was observed that the waste oil container had been upgraded to a 200-L double skinned container.

15.2.2 Results of discharge monitoring

There are no limits on the constituents of the discharge directed to the on-site stormwater pond that discharges onto and into land in the Waiwhakaiho/Mangaone Stream catchment, and so this is not currently programmed for sampling.

Two stormwater monitoring points were identified on the TIL site for the areas of the site discharging to the Mangati Stream via the NPDC reticulated stormwater network and stormwater ponds.

Stormwater from the south eastern area of the site, which contains the rented storage sheds, the molasses storage and transfer area, the MPI wash pad, and Turners & Growers is sampled from a stormwater drain on Paraita Road in front of Turners & Growers southern entrance (site, STW001133). The results from chemical monitoring at this location are given in Table 48. The site was visited four times during the year, three times during wet weather surveys, and once during a dry weather survey.

The consent limits on biochemical oxygen demand, oil and grease, pH range and suspended solids were observed as being complied with for the samples collected from the southern areas of the site during the period under review.

Table 48 Chemical monitoring results for TIL's stormwater discharge (outside Turners and Growers) (site STW001133)

Parameter	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp	Turbidity
Unit	g/m ³	mS/m@25°C	g/m ³ P	g/m ³		g/m ³	Deg.C	NTU
21 Nov 2018 (w)	2.9	5.3	0.025	a	7.7	3	13.5	4.4
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd
11 Apr 2019 (w)	<2	10.4	0.044	a	7.5	9	15.8	5.2
5 Jun 2019 (w)	-	4.4	0.011	a	7.2	<3	12.4	2.8
<i>Consent limits</i>	7	-	-	15	6-9	100	-	-

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

a parameter not determined, no visible hydrocarbon sheen and no odour

nd not discharging at time of sampling survey

(d) dry weather survey (w) wet weather survey

Stormwater from the central eastern area of the site, which includes the main loading canopy and storage sheds, is sampled from a manhole on Paraita Road in front of the loading canopy (site STW001132). This site was visited four times during the year, three during wet weather surveys, once during a dry weather survey. On one occasion the manhole was unable to be opened, while during the dry weather run no discharge was occurring. The results from chemical monitoring at this location are given in Table 49.

Table 49 Chemical monitoring results for TIL's loading canopy stormwater discharge (site STW001132)

Parameter	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp	Turbidity
Unit	g/m ³	mS/m@25°C	g/m ³ P	g/m ³		g/m ³	Deg.C	NTU
21 Nov 2018 (w)	ns	ns	ns	ns	ns	ns	ns	ns
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd
11 Apr 2019 (w)	2	12.4	0.28	a	7.3	6	16.9	5.6
5 Jun 2018 (w)	-	2.4	0.07	a	7.3	98	13.0	34
<i>Consent limits</i>	7	-	-	15	6-9	100	-	-

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

- a parameter not determined, no visible hydrocarbon sheen and no odour
- ns no samples collected, unable to determine whether a discharge was occurring
- nd not discharging at time of sampling survey
- (d) dry weather survey (w) wet weather survey

Compliance was achieved with the consent limits for biochemical oxygen demand, pH, suspended solids and oil and grease in all samples collected during the period under review.

15.2.3 Investigations, interventions, and incidents

In the period under review, the Council was not required to record an incident in association with TIL's conditions in resource consents or provisions in Regional Plans.

Minor site housekeeping matters including potential sources of contamination were identified and communicated to the consent holder at inspection.

15.3 Discussion

15.3.1 Discussion of site performance

The housekeeping issues at the site noted in the previous year had largely been improved upon. However, it was noted that the stormwater system had minor maintenance issues which were ongoing throughout the year. It was also noted that the stormwater management plan needs to be reviewed and updated.

15.3.2 Environmental effects of exercise of consents

No significant adverse environmental effects were found during the year under review as a result of the exercise of TIL's consents.

15.3.3 Evaluation of performance

A tabular summary of TIL's compliance record for the year under review is set out in Table 50 and Table 51.

Table 50 Summary of performance for TIL's consent 6952-1

Purpose: To discharge stormwater from a truck depot into and onto land in the vicinity of the Mangaone Stream in the Waiwhakaiho catchment		
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. Limits stormwater catchment area	Inspection and discussion with consent holder	Yes
3. Provision of stormwater management plan prior to exercise of consent	Review of Council records and of any correspondence or documents submitted	Yes
4. Provision of contingency plan prior to exercise of consent	Review of Council records and of any correspondence or documents submitted	Yes
5. All stormwater to be treated in accordance with special conditions	Inspection	Yes
6. Design, management and maintenance of stormwater system to be as per application	Inspection and discussion with consent holder	Yes
7. Above ground hazardous substance storage to be bunded	Inspection and discussion with consent holder	Yes
8. Direct discharge to surface water prohibited. Thirty metre buffer zone between discharge to land and any surface water	Observation at inspection	Yes
9. Provision for lapse of consent	Consent exercised	N/A
10. Optional review provision re environmental effects	No further provision for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 51 Summary of performance for TIL's consent 7578-1

Purpose: To discharge stormwater to the Mangati Stream		
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	No – minor issues noted at inspection
2. Limits stormwater catchment area	Inspection and discussion with consent holder	Yes

Purpose: To discharge stormwater to the Mangati Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. Above ground hazardous substance storage to be bunded	Inspection and discussion with consent holder	No
4. Limits on chemical composition of discharge	Sampling	Yes
5. Discharge cannot cause specified adverse effects surface water	Observation at inspection	Yes
6. Maintenance of and adherence to contingency plan, reviews to be within two years	Review of Council records and of any documents submitted. Plan dated September 2009 on file	Plan overdue for review
7. Maintenance of and adherence to stormwater management plan, reviews to be within two years	Review of Council records and of any documents submitted. Plan dated September 2009 on file	Plan overdue for review
8. Written notification required regarding changes to activities at the site that alters nature of discharge	Inspection and discussion with consent holder. No changes	N/A
9. Provision for lapse of consent	Consent exercised	N/A
10. Optional review provision re environmental effects or notification of changes per condition 8	Next option to review in June 2020, recommendation attached in section 15.3.6	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		Good

N/A = not applicable or not assessed

During the year TIL Freighting Ltd's level demonstrated a good level of both environmental and administrative performance and compliance with their resource consents as defined in Section 1.1.4.

15.3.4 Recommendations from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of TIL Freighting Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented during the period under review, while it was not considered necessary to carry out additional investigations or monitoring as per recommendation two.

15.3.5 Alterations to monitoring programmes for 2019-2020

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

- the extent of information already made available through monitoring or other means to date;

- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

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

It is proposed that for 2019-2020 the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

15.3.6 Exercise of optional review of consent

Resource consent 7578-1 provides for an optional review of the consent in June 2020. Condition 9 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

15.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of TIL Freighting Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 7578-1 in June 2020, as set out in condition 9 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

16 W Abraham Ltd

16.1 Introduction

16.1.1 Process description

W Abraham Ltd (Abraham) operates a crematorium on Swans Road, Bell Block. Approximately 250 cremations occur per year in the gas-fired cremator.

The potential impact on the environment from the operation of cremators is discharges to air that contain some low level contaminants. The complete combustion of human remains, casket materials and any special belongings put with the deceased results in the emission of carbon dioxide, carbon monoxide, water vapour, nitrogen oxides, particulate, hydrogen chloride (if plastics are present), and other volatile compounds in low concentrations. The height that the stack, from the cremator, discharges to air is also important.

Effects from the discharge may arise from;

- Visible emissions
- Odour
- Toxic by-products (from wood treatments and plastic parts)
- Particulate deposition
- Nitrogen and sulphur oxides

At the time of application it was noted that the adverse effects from the crematorium have the potential to be marked, given the sensitive nature of crematorium activities, and social attitudes. However, the location of the facility in an industrial area, the use of modern equipment, and proper operation should minimise environmental effects to an acceptable level. The low emission levels from a stack that was to be at least 20 metres above ground level (under the NPDC land use provisions), should not result in contaminants entering the food chain, or offending neighbours.

The requirement for an efficient combustion system is emphasised with regard to minimising these effects. From the data provided on the cremator, it is anticipated that the system would be a modern and well set-up facility. However, maintenance and effective operator training to ensure an efficient combustion process is a paramount consideration of crematorium management. The conditions of the consent provide reassurance over the unit's environmental performance.

16.2 Results

16.2.1 Air

16.2.1.1 Inspections

The crematorium was visited on 16 October 2018 and 21 March and 29 May 2019.

The inspections focussed on visual emissions, odour, smoke opacity reading, furnace temperature records, condition of the plant and environmental effects.

Visible emissions or odours were not detected upwind or downwind of the site during the routine inspections undertaken. Temperature and smoke opacity indicated that the plant was being operated in a satisfactory manner. Compliance with all consent conditions was achieved during inspections.

16.2.2 Investigations, interventions, and incidents

In the period under review, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with Abraham's conditions in resource consents or provisions in Regional Plans.

16.3 Discussion

16.3.1 Discussion of site performance

During the period under review it was found that the cremator was operated in a satisfactory manner.

Compliance with all consent conditions was achieved during inspections. No visible smoke or emissions were detected during any inspection.

16.3.2 Environmental effects of exercise of consent

There was no evidence of offsite effects found at inspections, and no complaints were received by the Council. There was generally only a slight heat haze visible and no odours were noted during the inspections undertaken during the period under review.

16.3.3 Evaluation of performance

A tabular summary of Abraham's compliance record for the year under review is set out in Table 52.

Table 52 Summary of performance for Abraham's consent 7147-2

Purpose: To discharge emissions to air from a crematorium		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option to minimise effects	Inspection and discussion with consent holder	Yes
2. Consent to be exercised in accordance with application documentation	Inspection and discussion with consent holder	Yes
3. Consultation required prior to making alterations to plant, process or operations	Inspections and liaison with consent holder	Yes
4. Notification prior to maintenance	Inspections and liaison with consent holder	Yes
5. Emissions maintained to a practicable minimum	Inspections	Yes
6. Cremator and ducting to be gas tight such that discharge of gases, other than through the stack, are prevented	Inspections	Yes
7. Flue and ducting to be adequately insulated to prevent specified effects	Inspections	Yes
8. Reasonable steps to reduce the quantity of materials combusted	Inspections	Yes
9. Consent holder to remove external casket fittings containing metals or PVC prior to combustion	Inspections and liaison with consent holder	Yes

Purpose: To discharge emissions to air from a crematorium		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
10. Interlock required to prevent introduction of a coffin to the primary chamber unless secondary chamber temperature is above 750°C	Confirmed at inspection	Yes
11. Minimum stack height of 8 m	Inspection	Yes
12. Secondary chamber and it's outlet to be above 750°C, with steps to be taken to increase temperature if it falls below 750°C	Inspection and discussion with consent holder	Yes
13. Cremator shall have two combustion zones with specified minimum residence time and temperature in second chamber. As built diagrams and drawings demonstrating compliance to be provided prior to exercising consent	Built as proposed	Yes
14. Not more than two one-minute averages of the opacity readings shall exceed 20% obscuration per cremation	Inspection and discussion with consent holder	Yes
15. Limits maximum carbon monoxide concentration at outlet of secondary chamber (100 mg/m ³)	Not monitored. Meter to be installed if adverse effects noted	Yes
16. Opacity of exhaust gasses to be continuously monitored and recorded	Records checked at inspection	Yes
17. Temperature of gasses to be continuously monitored and recorded	Records checked at inspection	Yes
18. Maintenance of a schedule of maintenance and calibration	Inspection and discussion with consent holder	N/A
19. Control of emissions of CO, NO ₂ , PM ₁₀ and SO ₂ to not exceed relevant air quality standards	Not monitored. Meter to be installed if adverse effects noted	N/A
20. Control of other emissions so not hazardous, noxious or dangerous	Inspections	Yes
21. Control of odours so not offensive or objectionable	Inspections, no complaints received	Yes
22. Definition of offensive or objectionable		N/A
23. Consent holder to undertake emission testing if requested	Not requested during period under review	N/A
24. Consent holder to provide monitoring results on request	Not requested during period under review	N/A
25. Review of consent conditions	Next option to review in June 2020, recommendation attached in section 16.3.6	N/A

Purpose: <i>To discharge emissions to air from a crematorium</i>		
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

During the period under review, W Abraham Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

16.3.4 Recommendation from the 2017-2018 Annual Report

In the 2017-2018 Annual Report, it was recommended:

1. THAT in the first instance, monitoring programmed for consented activities of W Abraham Ltd in the 2018-2019 year continues at a similar level to that programmed for 2017-2018.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation one was implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

16.3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme remains similar to that undertaken in the 2018-2019 year. A recommendation to this effect is attached to this report.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2019-2020.

16.3.6 Exercise of optional review of consent

Resource consent 7147-2.0 provides for an optional review of the consent in June 2020. Condition 25 allows the Council to review the consent, for the purpose of ensuring that consent conditions are adequate to deal with any adverse effects on the environment.

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

16.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of W Abraham Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 7147-2.0 in June 2020, as set out in condition 25 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.

17 Investigations, interventions, and incidents

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

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 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).

There were a total of 12 unauthorised incidents, not already covered by this report, recorded on the Council's database in the Mangati catchment during the 2018-2019 period.

A summary of the responsible parties, and whether or not the incident could be substantiated, is provided in Table 53.

Table 53 Summary of the number of unauthorised incidents discovered and complaints received relating to activities in the Mangati catchment

Company	Number of substantiated incidents/complaints	Number of unsubstantiated incidents/complaints
ADM Palm Kernel Storage Sheds	1 (product tracking)	0
Chislehurst Farms Limited	1 (discharge of dairy effluent to water)	0
Darcy Keen Earthmoving	1 (dust)	1 (dust)
Endurance Holidays Limited	1 (sediment discharge)	0
McCurdy Construction	1 (dust)	1 (dust)
Offshore Plumbing & Pipeline	1 (dust)	0
Un sourced	0	4 (2 odour, 2 discolouration of stream)
Total	6	6

The substantiated incidents were referred for follow up investigation and enforcement as appropriate.

18 Chemical monitoring of combined discharges

18.1 Drain between De Havilland Drive West and Connett Road West

Discharges from Tasman Oil and Greymouth Petroleum sites, along with part of the First Gas site, reach the Mangati Stream via an open drain that flows into the Mangati Stream approximately half way between De Havilland Drive West and Connett Road West.

Copper, lead and zinc are monitored at this site because it was known that these heavy metals were present in the preservation grease used in the 1980's. At that time the grease was washed from the pipes, with the wash water from this activity discharged onto land and then into the Mangati Stream via the sites' stormwater basins. Although the grease currently used does not contain these elements, it has been identified that historical practices at the sites have resulted in elevated concentrations of copper, lead and zinc at particular on-site locations and in the sediments of the open stormwater drain to the Mangati.

Table 54 Chemical monitoring results for the combined stormwater discharge downstream of De Havilland Drive - site MGT000495

Parameter	Condy	Acid soluble copper	Dissolved copper	Acid soluble lead	Oil and grease	pH	Suspended solids	Temp.	Acid soluble zinc	Dissolved zinc
Unit	mS/m @25°C	g/m ³	g/m ³	g/m ³	g/m ³	pH	g/m ³	Deg. C	g/m ³	g/m ³
21 Nov 2018 (w)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
6 Mar 2019 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
28 May 2019 (w)	15.5	<0.010	<0.0005	<0.002	a	6.6	7	16.0	0.03	0.034
<i>Greymouth Consent Limit</i>	-	-	-	-	15	6-9	100	-	-	-
<i>Tasman Tools Consent Limit</i>	-	-	0.05	-	15	6-9	100	-	-	-

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

a parameter not determined, no visible hydrocarbon sheen and no odour

nd not discharging

This site was visited three times during the year under review, twice during wet weather surveys and once during a dry weather survey. A sample was taken on one occasion (during a wet weather survey), while no discharge was occurring on the other occasions.

Acid soluble and dissolved metal levels were found to be generally low in the sample collected, neither exceeding relevant USEPA water quality criteria (refer to section 19.1.2).

18.2 Industrial stormwater and the wetland discharges

Twelve of the 17 licensed discharges to the Mangati Stream occur via the NPDC drainage and wetland system. The wetlands routinely discharge to the stream at up to two points immediately above the main highway (SH3).

The stormwater drainage system is designed to divert low flows, and therefore, the potentially more concentrated 'first flush' of stormwater down to the bottom of Connett Road and into pond 1. Pond 1 flows through a further two ponds (ponds 2 and 3) prior to discharge to the stream. This allows more time for settling and for natural processes to reduce the concentration of some of the contaminants that may be

present. The level of pond 3 is controlled by a weir at the outlet above the stream. The discharge is monitored immediately downstream of this weir (site STW002056).

Under normal conditions the remainder of the stormwater flow continues to be directed through the 'industrial drain outlet' (site STW001026), into the existing man-made watercourse, which now flows into Pond 4. Pond 4 discharges preferentially to Pond 3, but will discharge directly to the stream if the water level gets sufficiently high at site STW002055.

There is an extension to the existing open drain that allows stormwater to bypass the ponds altogether during very high rainfall events at site MGT000503.

The drainage system is generally monitored at up to six points in order to help differentiate the effects of inflows from a large number of sources. The monitoring points are at the Mangati confluence, at the exit of the underground system to both Ponds 1 and 4 and at three points where the main underground stormwater pipe runs under Connett Road. Other points may be monitored when tracing unauthorised discharges.

18.2.1 Connett Road pond one inlet (STW001055)

The Connett Road inlet to Pond 1 is the combined discharges from industrial sites and roading serviced by the Paraita Road and Connett Road stormwater network.

The site was visited four times during the year, three times during wet weather surveys and once during a dry weather survey. Samples were collected during the wet weather surveys, while no discharge was occurring during dry weather. The results for the Connett Road inlet to Pond 1 of the treatment system are given in Table 55.

Table 55 Chemical monitoring results for stormwater discharged to pond 1 from Connett Road (site 33), site STW001055

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2019 (d)	23 Apr 2019 (w)	28 May 2019 (w)	RFWP guideline
Ammoniacal nitrogen	g/m ³ N	0.26	nd	0.029	0.89	-
BOD	g/m ³	4.9	nd	<2	2	5
Conductivity @ 25°C	mS/m	4.0	nd	12.5	138.4	-
Acid soluble copper	g/m ³	0.027	nd	<0.010	0.015	-
Dissolved copper	g/m ³	0.0123	nd	0.0036	0.013	-
DRP	g/m ³ P	0.041	nd	<0.004	0.029	-
Oil and Grease	g/m ³	a	nd	a	a	15
pH	pH	6.9	nd	6.5	7.1	6-9
Temperature	Deg.C	13.9	nd	17.4	16.7	-
Turbidity	NTU	16.5	nd	1.6	7.1	-
Un-ionised ammonia	g/m ³	0.00049	nd	0.00003	0.0032	0.025
Acid soluble zinc	g/m ³	0.23	nd	0.09	0.38	-
Dissolved zinc	g/m ³	0.169	nd	0.081	0.37	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd no discharge
 (d) dry weather survey (w) wet weather survey

There are no specific consent limits on any given contaminant in the discharge to Pond 1, however RFWP permitted activity limits are used as a guide and these are included in the table above.

The results obtained for these parameters of the combined stormwater discharges to Pond 1 were within RFWP BOD, oil and grease, pH and un-ionised ammonia limits on all occasions.

18.2.2 Industrial drain outlet (STW001026) and discharge (MGT000503)

The industrial drain outlet was visited on four occasions. Samples were collected twice in wet weather. On one occasion during dry weather no discharge was occurring and one further occasion during wet weather no sample was taken although a discharge was occurring, because access to the sampling site was deemed unsafe in the weather and ground conditions at the time. The results are given in Table 56.

Table 56 Chemical monitoring results for industrial drain outlet, site STW001026

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2019 (d)	23 Apr 2019 (w)	28 May 2019 (w)	RFWP guideline
Ammoniacal nitrogen	g/m ³ N	0.131	nd	ns	2.0	-
BOD	g/m ³	2	nd	ns	8	5
Conductivity @ 25°C	mS/m	3.9	nd	ns	444	-
Acid soluble copper	g/m ³	0.042	nd	ns	0.025	-
Dissolved copper	g/m ³	0.0132	nd	ns	0.015	-
DRP	g/m ³ P	0.025	nd	ns	0.033	-
Oil and Grease	g/m ³	a	nd	ns	a	15
pH	pH	7.2	nd	ns	7.1	6-9
Temperature	Deg.C	12.3	nd	ns	15.9	-
Turbidity	NTU	24	nd	ns	23	-
Un-ionised ammonia	g/m ³	0.00052	nd	ns	0.0067	0.025
Acid soluble zinc	g/m ³	0.24	nd	ns	0.62	-
Dissolved zinc	g/m ³	0.163	nd	ns	0.54	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
 nd not discharging at time of sampling survey
 ns no sample collected, unable to determine whether discharge occurring
 (d) dry weather survey (w) wet weather survey

BOD, pH and un-ionised ammonia were all below the RFWP permitted activity limits on 21 November 2018. On 28 May 2019, pH and un-ionised ammonia were within the RFWP permitted activity limits, however the BOD exceeded this limit. Concurrently, high conductivity and total ammoniacal nitrogen were recorded.

The monitoring results for discharge from the industrial drain into the Mangati Stream are recorded in Table 57. This site was visited three times during the year, twice during wet weather surveys and once during a dry weather survey. Samples were taken during the wet weather surveys, while no discharge was occurring during the dry weather visit.

As the stormwater flows have been designed such that the industrial drain should now only flow during heavier rainfall events it would be expected that the discharge quality at this sampling point would improve due to the increased dilution potential during these events.

Table 57 Chemical monitoring results for the industrial drain discharge to Mangati Stream, site MGT000503

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2019 (d)	31 May 2019 (w)	RFWP guideline
Aluminium acid soluble	g/m ³	0.15	nd	<0.06	
Ammoniacal nitrogen	g/m ³ N	<0.010	nd	0.039	-
BOD	g/m ³	1.7	nd	<2	5
Conductivity @ 25°C	mS/m	12.7	nd	15.3	-
Acid soluble copper	g/m ³	<0.010	nd	-	-
Dissolved copper	g/m ³	0.0017	nd	-	-
Dissolved oxygen	g/m ³	12.99	nd	-	
Oxygen saturation	%	124.6	nd	-	
DRP	g/m ³ P	<0.04	nd	<0.004	-
Acid soluble lead	g/m ³	<0.002	nd	<0.002	
Oil and Grease	g/m ³	a	nd	a	15
pH	pH	6.9	nd	6.5	6-9
Suspended solids	g/m ³	3	nd	<3	
Temperature	Deg.C	12.9	nd	14.3	-
Turbidity	NTU	1.86	nd	0.57	-
Un-ionised ammonia	g/m ³	<0.00002	nd	0.000029	0.025
Acid soluble zinc	g/m ³	0.03	nd	-	-
Dissolved zinc	g/m ³	0.031*	nd	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour

(d) dry weather survey (w) wet weather survey

nd not discharging

* It has been noted that the result for the dissolved fraction was greater than that for the acid soluble fraction, but within analytical variation of the methods.

Historical monitoring had previously shown that the component concentrations in the bypass drain had been similar to, or lower than, the pond discharges, indicating that the increased dilution present during heavy rainfall could allow the ponds to be bypassed without any detrimental effects on the water quality of the Mangati Stream.

Where given, all parameters were found to be within RFWP permitted activity limits.

18.2.3 Pond 3 and 4 discharges

The results for the treated discharge from pond 3 to the stream are given in Tables 58 and 59.

Table 58 Chemical monitoring results for pond 3 discharge to the Mangati Stream, site STW002056

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2019 (d)	23 Apr 2019 (w)	28 May 2019 (w)	RFWP guideline
Aluminium acid soluble	g/m ³	<0.06	<0.06	<0.06	<0.06	-
Ammoniacal nitrogen	g/m ³ N	0.055	0.078	0.061	1.26	-
BOD	g/m ³	4.3	2.9	<2	<2	5
COD	g/m ³	12	18	<6	14	-
Conductivity @ 25°C	mS/m	14.4	16.7	4.7	28.1	-
Acid soluble copper	g/m ³	<0.010	<0.010	<0.010	-	-
Dissolved copper	g/m ³	0.0031	0.0015	0.0044	-	-
DRP	g/m ³ P	<0.004	<0.004	<0.004	<0.004	-
Acid soluble lead	g/m ³	<0.002	<0.002	<0.002	-	-
Oil and Grease	g/m ³	a	a	a	a	15
pH	pH	6.9	7.3	6.8	7.1	6-9
Suspended solids	g/m ³	14	18	<3	5	-
Temperature	Deg.C	14.6	19.4	15.3	14.6	-
Turbidity	NTU	8.9	6.4	2.0	7.8	-
Un-ionised ammonia	g/m ³	0.00012	0.00063	0.00010	0.0045	0.025
Acid soluble zinc	g/m ³	0.08	0.03	0.19	-	-
Dissolved zinc	g/m ³	0.08	0.023	0.188	-	-

Key: Results shown in bold are outside the desirable range of Regional Freshwater Plan Rule 23

a parameter not determined, no visible hydrocarbon sheen and no odour

(d) dry weather survey (w) wet weather survey

On one occasion the BOD concentration was elevated, however this did not exceed the desired 5.0 g/m³ limit. Copper, zinc and lead concentrations were found to be within acceptable limits and below historical medians in all samples. Unionised ammonia was well below the desired 0.025 g/m³ value.

The result of discharge monitoring from pond 4 is present in Table 59. The site was visited three times during the year, twice during wet weather and once during dry weather. A discharge was occurring on only one occasion during wet weather.

Table 59 Chemical monitoring results for pond 4 discharge to the Mangati Stream, site STW002055

Parameter	Unit	21 Nov 2018 (w)	6 Mar 2019 (d)	31 May 2019 (w)	RFWP guideline
Aluminium acid soluble	g/m ³	nd	nd	0.32	
Ammoniacal nitrogen	g/m ³ N	nd	nd	0.41	-
BOD	g/m ³	nd	nd	<2	5
COD	g/m ³	nd	nd	<6	
Conductivity @ 25°C	mS/m	nd	nd	14.6	-
Acid soluble copper	g/m ³	nd	nd	-	-
Dissolved copper	g/m ³	nd	nd	-	-
DRP	g/m ³ P	nd	nd	0.008	-
Acid soluble lead	g/m ³	nd	nd	<0.002	
Oil and Grease	g/m ³	nd	nd	a	15
pH	pH	nd	nd	7.1	6-9
Suspended solids	g/m ³	nd	nd	13	
Temperature	Deg.C	nd	nd	14.8	-
Turbidity	NTU	nd	nd	10.4	-
Un-ionised ammonia	g/m ³	nd	nd	0.00135	0.025
Acid soluble zinc	g/m ³	nd	nd	-	-
Dissolved zinc	g/m ³	nd	nd	-	-

Key: a parameter not determined, no visible hydrocarbon sheen and no odour
(d) dry weather survey (w) wet weather survey nd not discharging

The ammoniacal nitrogen concentration was above the median on one occasion, however the concentration of unionised ammonia at the time was well below the 0.025 g/m³ RFWP permitted activity limit.

All other parameters were compliant with RFWP limits where applicable.

19 Receiving environment monitoring in the Mangati Stream

19.1 Mangati Stream water quality surveys

Sampling of the Mangati Stream itself was carried out on three occasions during the reporting period, concurrently with chemical surveys of the industrial stormwater drainage system. An attempt is made to sample the stream three times per year; twice under wet conditions and once during summer low flows. However, uncertain weather conditions and competing demands of other monitoring programmes often makes sampling at regular intervals difficult.

During the period under review three surveys were performed. The wet weather surveys were conducted on 21 November 2018, and 28 May 2019. One dry weather survey was also undertaken on 6 March 2018.

Six sites on the Mangati Stream were monitored. These sites traverse the industrial area and include a point at the coast. The locations of the monitoring sites are shown in Figure 2, and are described in Table 60.

Runs are always undertaken from the top towards the bottom of the catchment. There are occasionally anomalies in results between sites within sampling runs, owing to differences between velocity of the stream and movement downstream of samplers, and to changing flow conditions during and after rainfall events. The results are given in Table 61.

Overall, the results are considered to provide a good indication of the range of water quality conditions in the stream at the various sites. Historical results have been biased towards wet weather conditions due to the fact that the Council has historically programmed three wet weather surveys and one dry weather survey per year.

Table 60 Chemical sampling sites on the Mangati Stream

Site	Location	GPS (NZTM)	Site code
Mangati above Tegel (poultry processing plant)	Below railway bridge approx 100 m above inflow from the wetland that receives Tegel discharge	E 1700106 N 5677953	MGT000485
Mangati below Tegel (poultry processing plant)	Approx 200 m below the wetland that receives Tegel's discharge and 40 m above De Havilland Drive	E 1700007 N 5678217	MGT000493
Mangati above Connett Road	Immediately above the end of Connett Road about 200 m below Greymouth Petroleum and Tasman Oil discharge	E 1699775 N 5678573	MGT000497
Mangati above industrial drain	Below pond 3 discharge and immediately above pond 4 and industrial drain direct discharges	E 1699596 N 5678691	MGT000500
Mangati below industrial drain	Approx 50 m below State Highway 3	E 1699513 N 5678787	MGT000512
Mangati at coast	Opposite NPDC sewage pumping station approx 30 m from high water mark	E 1699215 N 5680409	MGT000550

The top site is above the direct influence of the industrial area, though it is possible that deposits from aerial emissions could cause effects there. The second site is below the influence of treated discharge from Tegel's poultry plant. There is a tributary that joins the Mangati Stream from the north approximately 100m upstream of the Tegel swamp tributary. This tributary receives stormwater discharges from J Swap and is monitored above and below the J Swap discharges. The third site, above Connett Road is below the influence of the industries on De Havilland Drive and above the main stormwater drain (pond) discharge

points. This site would show the influence of the untreated discharge from the northern side of the poultry processing plant, Tasman Oil, Greymouth Petroleum, along with the road stormwater and permitted activities that discharge via the NPDC's reticulated stormwater outlets from De Havilland Drive on either side of the Mangati Stream. The fourth site is below the discharge from pond 3, which has been found to still be discharging even during prolonged periods of dry weather. The fifth site is below the discharges from the main stormwater drain when it either bypasses the wetlands, or discharges from pond 4. These five sites lie along a reach of about 1 km that is relatively flat, apart from the fall at the highway. The sixth site is below a steeper reach and is about 2 km further downstream, beyond the residential area, close to the mouth of the stream.

The chemical and microbiological characteristics of the stream above the industrial area are typical of a lowland stream in a pastoral catchment. In general, they have not changed significantly since monitoring began in 1992, although the BOD and dissolved reactive phosphorous do appear to be increasing in the stream at the railway site, above the industrial area, as well as through, and below, the industrial area. It also appears that there may be an emerging trend of reducing metals concentrations, particularly in dissolved copper and zinc at the site below pond 4 and the bypass drain, and at the coast.

Table 61 Results from chemical surveys of the Mangati Stream

Parameter		Mangati Stream					
		MGT000485 Railway	MGT000493 Above DeHav. Drive	MGT000497 Above Connett Road	MGT000500 Below pond 3	MGT000512 Below pond 4	MGT000550 At Coast
21 November 2018 - Wet Run							
BOD	g/m ³	1.0	3.2	6.0	5.5	5.2	3.4
BODCF	g/m ³	<1.0	2.7	1.5	2.5	2.9	<1.0
Conductivity @ 25°C	mS/m	21.8	22.4	16.4	12.6	12.5	8.6
Acid soluble copper	g/m ³	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved copper	g/m ³	0.0006	0.006	0.0031	0.0038	0.0037	0.0025
Dissolved oxygen	g/m ³	8.0	7.8	8.4	8.2	8.6	10.0
DRP	g/m ³ P	<0.004	<0.004	0.012	0.015	0.013	<0.004
Un-ionised ammonia	g/m ³ N	0.00081	0.0011	0.00096	0.00073	0.00070	0.00022
Ammoniacal nitrogen	g/m ³ N	0.20	0.29	0.32	0.27	0.22	0.077
Nitrate/nitrite	g/m ³	0.55	-	-	-	-	0.32
pH	pH	7.2	7.2	7.0	7.0	7.1	7.1
Temperature	Deg.C	12.2	12.1	14.4	13.9	13.9	12.8
Suspended solids	g/m ³	5	9	116	57	44	80
Turbidity	NTU	5.3	7.1	60	36	30	35
Acid soluble zinc	g/m ³	<0.02	<0.02	0.07	0.04	0.04	0.05
Dissolved zinc	g/m ³	0.0022	0.0127	0.0196	0.022	0.020	0.0126
6 Mar 2019 – dry run							

Parameter		Mangati Stream					
		MGT000485 Railway	MGT000493 Above DeHav. Drive	MGT000497 Above Connett Road	MGT000500 Below pond 3	MGT000512 Below pond 4	MGT000550 At Coast
BOD	g/m ³	2.1	3.0	1.5	2.0	1.1	1.2
BODCF	g/m ³	<1.0	<1.0	<1.0	<1.0	<1.0	-
Conductivity @ 25°C	mS/m	28.2	27.1	31.2	29.7	29.2	23.3
Acid soluble copper	g/m ³	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved copper	g/m ³	<0.0005	0.0005	0.0007	0.0009	0.0008	0.0011
Dissolved oxygen	g/m ³	4.8	3.6	3.2	5.9	6.9	9.7
DRP	g/m ³ P	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Ammoniacal nitrogen	g/m ³ N	0.60	0.76	0.27	0.27	0.25	0.06
Un-ionised ammonia	g/m ³ N	0.0043	0.0033	0.0015	0.0019	0.0023	0.00095
Nitrate/nitrite	g/m ³ N	-	-	-	-	0.58	0.82
Oil and Grease	g/m ³	a	a	a	a	a	a
pH	pH	7.4	7.2	7.2	7.3	7.4	7.7
Suspended solids	g/m ³	11	43	<3	22	<3	<3
Temperature	Deg.C	16.2	16.5	17.0	17.4	17.3	17.8
Turbidity	NTU	11.4	30	8.2	8.5	8.2	6.3
Acid soluble zinc	g/m ³	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Dissolved zinc	g/m ³	<0.0010	0.0047	0.0036	0.0076	0.0051	0.0057
28 May 2019 - wet run							
BOD	g/m ³	<2	<2	<2	<2	<2	<2
BODCF	g/m ³	<2	<2	<2	<2	<2	<2
Conductivity @ 25°C	g/m ³	20.0	19.9	21.1	21.8	21.8	19.8
Acid soluble copper	g/m ³	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved copper	mS/m	<0.0005	0.0006	0.0008	0.0010	0.0009	0.0019
DRP	g/m ³ P	0.026	0.017	0.011	0.008	0.011	0.008
Ammoniacal nitrogen	g/m ³ N	0.069	0.11	0.151	0.29	0.29	0.131
Un-ionised ammonia	g/m ³ N	0.00046	0.00072	0.00069	0.00187	0.00162	0.00071
Nitrate/nitrite	g/m ³	0.61	-	-	-	-	0.84
Oil and Grease	g/m ³	a	a	a	a	a	a
pH	pH	7.4	7.4	7.2	7.4	7.3	7.3

Parameter		Mangati Stream					
		MGT000485 Railway	MGT000493 Above DeHav. Drive	MGT000497 Above Connett Road	MGT000500 Below pond 3	MGT000512 Below pond 4	MGT000550 At Coast
Suspended solids	g/m ³	<3	6	5	6	5	4
Temperature	Deg.C	14.1	14.2	14.8	14.8	15.0	15.5
Turbidity	NTU	1.6	2.9	3.8	4.9	4.9	7.9
Acid soluble zinc	g/m ³	<0.02	<0.02	<0.02	0.03	0.02	<0.02
Dissolved zinc	g/m ³	0.0019	0.00087	0.00082	0.021	0.0189	0.0107

Results shown in bold are outside the desirable range of Regional Freshwater Plan Rule 23

a parameter not determined, no visible hydrocarbon sheen and no odour

b no flow

(d) dry weather survey (w) wet weather survey

19.1.1 Nutrients

The BOD concentrations typically increase slightly when comparing the concentrations between the upper site (MGT000485) and the site immediately below the industrial area (MGT000512). However improvements are noted further downstream at site MGT000550. It has been noted that nutrients at the upstream site have been increasing over the past few years and this may be linked to agricultural activities in semi-rural upper reaches of the Mangati catchment.

Ammonia levels were not found to be especially elevated in any of the surveys and none of the 18 instream samples taken during period under review exceeded the 0.025 g/m³ RFWP unionised ammonia guideline limit for the protection of aquatic ecosystems. All ammoniacal nitrogen results were below the 0.9 g/m³ national guideline.

As with previous monitoring, phosphorus concentrations were found to generally decrease in a downstream direction indicating that rural activity is likely the biggest source.

19.1.2 Zinc and copper

The results for the period under review for acid soluble and dissolved zinc (Zn) and copper (Cu) concentrations in the water column of the Mangati Stream, are given in Table 62 and Table 63.

Table 62 Summary of zinc monitoring data for Mangati Stream water

Date	Above industrial area (MGT000485)		Above DeHavilland Drive (MGT000493)		Above Connett Road (MGT000497)		Below pond 3 Discharge (MGT000500)		Below pond 4 and wetland bypass drain (MGT000512)		Mangati at Coast (MGT000550)	
	ZnAs g/m ³	ZnD g/m ³	ZnAs g/m ³	ZnD g/m ³	ZnAs g/m ³	ZnD g/m ³	ZnAs g/m ³	ZnD g/m ³	ZnAs g/m ³	ZnD g/m ³	ZnAs g/m ³	ZnD g/m ³
Minimum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.004	<0.005	<0.005	0.006	0.005
Maximum	0.043	0.034	0.229	0.17	0.147	0.052	0.28	0.141	0.637	0.377	0.358	0.179
21 Nov 18 (w)	< 0.02	0.0022	< 0.02	0.0127	0.07	0.0196	0.04	0.022	0.04	0.02	0.05	0.0126
6 Mar 19 (d)	< 0.02	<0.001	0.02	0.0047	<0.02	0.0036	<0.02	0.0076	<0.02	0.0051	<0.02	0.0057
28 May 19 (w)	< 0.02	0.0019	< 0.02	0.0087	<0.02	0.0082	0.03	0.021	0.02	0.0189	<0.02	0.0107

Key: (d) dry weather survey (w) wet weather survey ZnAs = Acid soluble zinc ZnD = Dissolved zinc

Table 63 Summary of copper monitoring data for Mangati Stream water

Date	Above industrial area (MGT000485)		Above DeHavilland Drive (MGT000493)		Above Connett Road (MGT000497)		Below pond 3 Discharge (MGT000500)		Below pond 4 and wetland bypass drain (MGT000512)		Mangati at Coast (MGT000550)	
	CuAs, g/m ³	CuD, g/m ³	CuAs, g/m ³	CuD, g/m ³	CuAs, g/m ³	CuD, g/m ³	CuAs, g/m ³	CuD, g/m ³	CuAs, g/m ³	CuD, g/m ³	CuAs, g/m ³	CuD, g/m ³
Minimum	0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001	0.001	0.001	<0.001	0.001	0.001
Maximum	0.017	<0.01	0.044	<0.01	0.09	0.016	0.06	0.016	0.28	0.06	0.21	0.025
21 Nov 18 (w)	<0.010	0.0006	< 0.01	0.0006	<0.010	0.0031	<0.010	0.0038	<0.010	0.0037	<0.010	0.0025
6 Mar 19 (d)	<0.010	<0.0005	< 0.01	0.0005	<0.010	0.0007	<0.010	0.0009	<0.010	0.0008	<0.010	0.0011
28 May 19 (w)	<0.010	<0.0005	< 0.01	0.0006	<0.010	0.0008	<0.010	0.001	<0.010	0.0009	<0.010	0.0019

Key: (d) dry weather survey (w) wet weather survey CuAs = Acid soluble copper ZnD = Dissolved copper

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.

The water quality criteria for dissolved copper and zinc, for water of hardness 50 g/m³ CaCO₃, are 0.005 g/m³ for Cu and 0.058 g/m³ for Zn respectively as a four day average, for chronic (long term) exposure. The corresponding criteria for acute (4-hour) exposure are 0.007 g/m³ for Cu and 0.064 g/m³ for Zn. Acute criteria only are applicable to wet weather sampling results, whereas both chronic and acute exposure criteria are applicable to dry weather sampling results.

All 18 samples collected during both wet weather and dry surveys were below the USEPA chronic exposure limit for both dissolved zinc and dissolved copper.

19.2 Mangati Stream biological surveys

Biological surveys produce a measure of time-integrated effects of discharges on water quality of a waterway, as opposed to the "snapshot" measure of a chemical survey.

19.2.1 Macroinvertebrate surveys

The routine surveys for the period under review were carried out on 21 November 2018 and 20 February 2019. These were the 47th and 48th surveys for this programme. The reports for these surveys are available upon request. The "tributary" referred to in the reports is the main industrial storm drain.

The surveys measure the "health" of the stream in terms of the presence and abundance of benthic macroinvertebrates (bottom dwelling life) and microflora. There are eight fixed sites, as described in Table 64 and Figure 7. The uppermost site is above the influence of any known industrial discharge. There are five sites above and four below the pond 3 discharge from the wetland.

The reports assess the quality of the water in terms of macroinvertebrate diversities (number of taxa), Macroinvertebrate Community Index (MCI) values, and Semi-Quantitative Macroinvertebrate Community Index (SQMCI) values.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of organic pollution in stony streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to environmental conditions. The SQMCI takes into account taxa abundance as well as sensitivity to pollution,

and may reveal more subtle changes in communities, particularly if non-organic impacts are occurring. Significant differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored.

Past biological surveys of the Mangati Stream have recorded poor macroinvertebrate communities with limited numbers of taxa and low MCI values, particularly downstream of the industrial tributary. Small, slow flowing coastal streams draining farmland and industrial areas are not expected to support a large number of macroinvertebrate taxa. High MCI values are not expected in the lowland reaches of soft-bedded streams with farmland or urban catchments because not many high scoring, 'sensitive' taxa are suited to these conditions. However, the abundance and MCI values recorded at some sites downstream of the tributary have been unusually low even for these conditions. A summary of previous results is presented with current results in Table 64 and the summary and conclusions of the macroinvertebrate survey reports are given below.

Table 64 Biomonitoring sites in the Mangati Stream catchment

Site No	Site code	Grid reference	Location
A	MGT000488	E1700095 N5678043	Mangati Stream, 20 m upstream of swampy tributary
A2	MGT000490	E1700062 N5678084	Mangati Stream, 100 m downstream of swampy tributary
A1	MGT000491	E1700018 N5678166	Mangati Stream, 50 m upstream of De Havilland Drive
A3	MGT000497	E1699775 N5678573	Mangati Stream, 10 m above Connett Road
B	MGT000500	E1699596 N5678691	Mangati Stream above the industrial tributary, below wetland
D2	MGT000512	E1699513 N5678787	Mangati Stream, 20 m downstream SH3
E	MGT000520	E1699385 N5679103	Mangati Stream, 400 m below Devon Road
F	MGT000550	E1699215 N5680409	Mangati Stream, 50 m above Bell Block beach

21 November 2018

On 21 November 2018 eight established sampling sites in the Mangati Stream catchment were sampled using kick samples (sites B, D2, E and F), a combination of the 'kick sampling' and 'sweep-sample' techniques (sites A, A2, A1, and A3), to determine whether stormwater and wastewater discharges from the Mangati industrial area have had any adverse effects on the macroinvertebrate communities of this stream. Samples were sorted and identified to provide the number of taxa (richness), MCI score and SQMCI score for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of organic pollution in stony streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to environmental conditions. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in communities, particularly if non-organic impacts are occurring. Significant differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored.

Macroinvertebrate richnesses among the surveyed sites differed by up to 14 taxa though this was largely due to the low richness found at site B. Excluding site B there was a more typical nine taxa richness difference between sites. The three upper sites (15-20 taxa) and the mid-reach site A3 (16 taxa) had moderate richnesses which were either the same or higher than historic medians. Site B had a low taxa richness of only six taxa which was eight taxa lower than its historic median. In contrast site D2, which was situated a short distance downstream of site B, had a moderately low taxa richness which was typical for the site. Sites E and F also had moderately low taxa richnesses which were typical for the two most downstream sites. Taxa richness indicate that site B was probably affected by some type of toxic discharge, presumably from the discharge from the wetland ponds, which caused a decrease in taxa richness, but which did not have a large affect downstream.

The composition of the macroinvertebrate communities in the Mangati Stream at the upper sites were typical for a lowland, soft-bottom stream running through farmland, an industrial area and a residential area. The community at site B was depauperate and indicative of a community recovering from toxic discharges with only pollution tolerant taxa present at the site. The communities are usually dominated by taxa that are relatively 'tolerant' to organic pollution and prefer muddy substrates e.g. oligochaete worms and snails (*Potamopyrgus*), and those 'moderately sensitive' taxa commonly associated with macrophytes e.g. amphipods (*Paracalliope*). The results of this survey in respect to community composition are largely congruent with past results.

MCI scores among sites varied by a significant 30 units (53-83), a range that was comparable with the preceding survey (25 units), but still larger than usual. MCI scores indicated that the surveyed reach was generally in 'poor' health except for site A1 which was in 'fair' health and site B which was in 'very poor' health. There was a significant decline from site A1 to site A3 by 14 units and a further decline of 16 units between site A3 and B. All sites apart from site B had scores not significantly different to historic medians with site B recording a score a significant 15 units below its historic median.

The SQMCI can be more sensitive to pollution compared with the MCI. SQMCI scores indicated 'fair' to 'very poor' macroinvertebrate health. The SQMCI scores were generally congruent with MCI scores with site B being the only site in 'very poor' health and showing a significant decline from site A3 to site B.

With regard to all three biotic indices, taxa richness, MCI and SQMCI_s scores, the decline in condition at site B compared with upstream sites and the generally poor state of the macroinvertebrate taxa present there indicates that there were likely discharges below site A3. No sewage fungus was present so any discharge was unlikely to be from a chronic organic discharge that would elevate BOD. However, any potential discharges entering the Mangati Stream between sites A3 and B did not appear to have a significant effect at the lower reach sites.

Previous surveys have observed evidence of urbanisation of the Mangati Stream, such as bed erosion and significantly high preceding flows. Although no such erosion was noted during the current survey, the December 2014 survey did note that site B was experiencing bank undercutting and collapse, and that this was likely to be a reflection of this urbanisation. Urbanisation of the catchment must be given regard to, due to increased subdivision in the headwaters, as there is potential for an increase in the 'flashiness' of the floods experienced by the Mangati Stream. This may become apparent with the installation of a continuous flow and rainfall data recording station (October 2012). This impact is likely to worsen as the new industrial subdivision around the De Havilland Drive area is developed further.

Overall, the results of the spring survey indicated that macroinvertebrate health was generally 'poor' for the surveyed sites in the Mangati Stream and that there was likely to have been discharges below site A3, which had a significant negative impact on the macroinvertebrate communities present at site B.

Table 65 Numbers of taxa and MCI values recorded in previous surveys in the Mangati Stream, together with the November 2018 survey

Site No.	N	No of taxa				MCI value				SQMCI value			
		Median	Range	Previous survey	Current survey	Median	Range	Previous survey	Current survey	Median	Range	Previous survey	Current survey
A	49	16	9-29	11	20	78	56-91	71	79	3.7	2.2-4.7	4.2	4.2
A2	47	16	9-29	9	16	74	57-92	58	74	3.5	1.3-4.7	1.3	4.8
A1	49	15	7-23	7	15	73	47-89	51	83	3.5	1.5-4.7	1.9	4.3
A3	46	16	8-23	17	16	69	52-83	68	69	2.6	1.6-4.6	1.7	3.5
B	55	14	3-29	14	6	68	50-86	65	53	2.5	1.1-4.5	2.5	2.5
D2	31	11	4-18	10	13	67	40-78	62	77	2.5	1.1-3.5	2.5	2.5
E	53	10	3-22	10	13	65	44-79	76	74	2.5	1.1-3.9	3.5	3.5
F	46	11	2-22	11	11	67	30-79	62	75	2.5	1.2-4.1	2.5	3.9



Figure 7 Biomonitoring sites in the Mangati Stream in relation to the Bell Block industrial area with taxa number, MCI scores and SQMCI scores for each site in the November 2018 survey

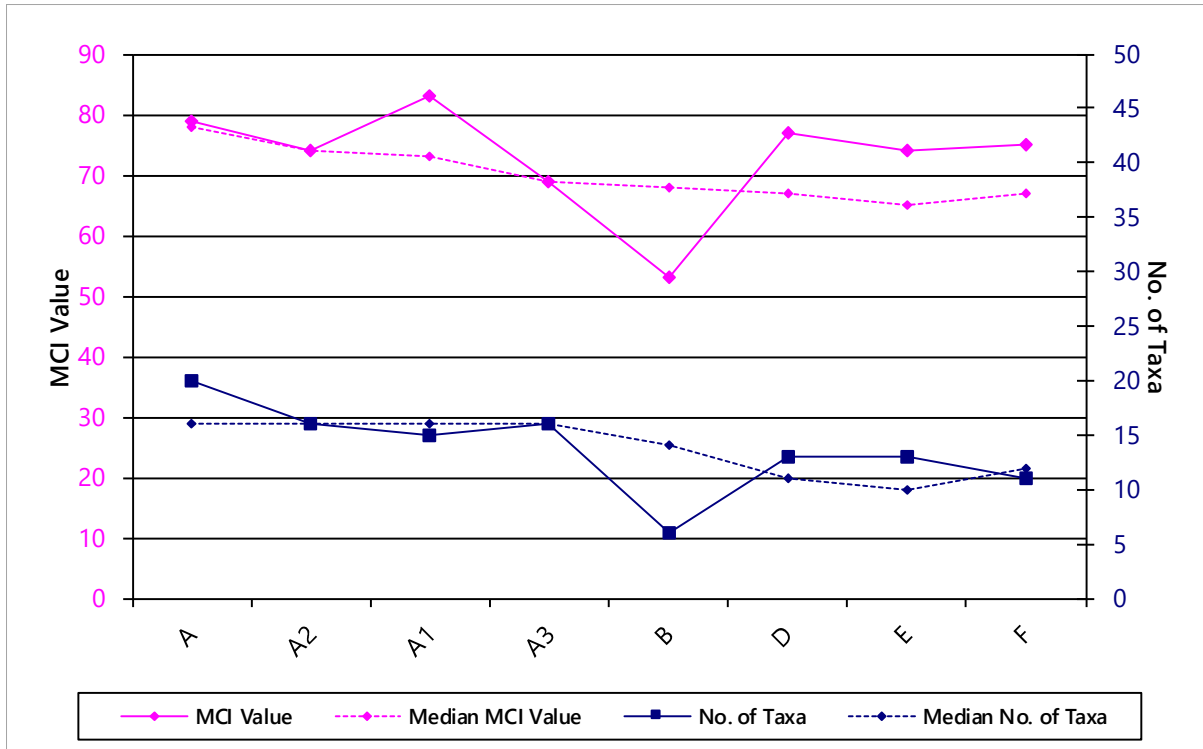


Figure 8 Numbers of taxa and MCI values recorded at sites in the Mangati Stream in the November 2018 survey

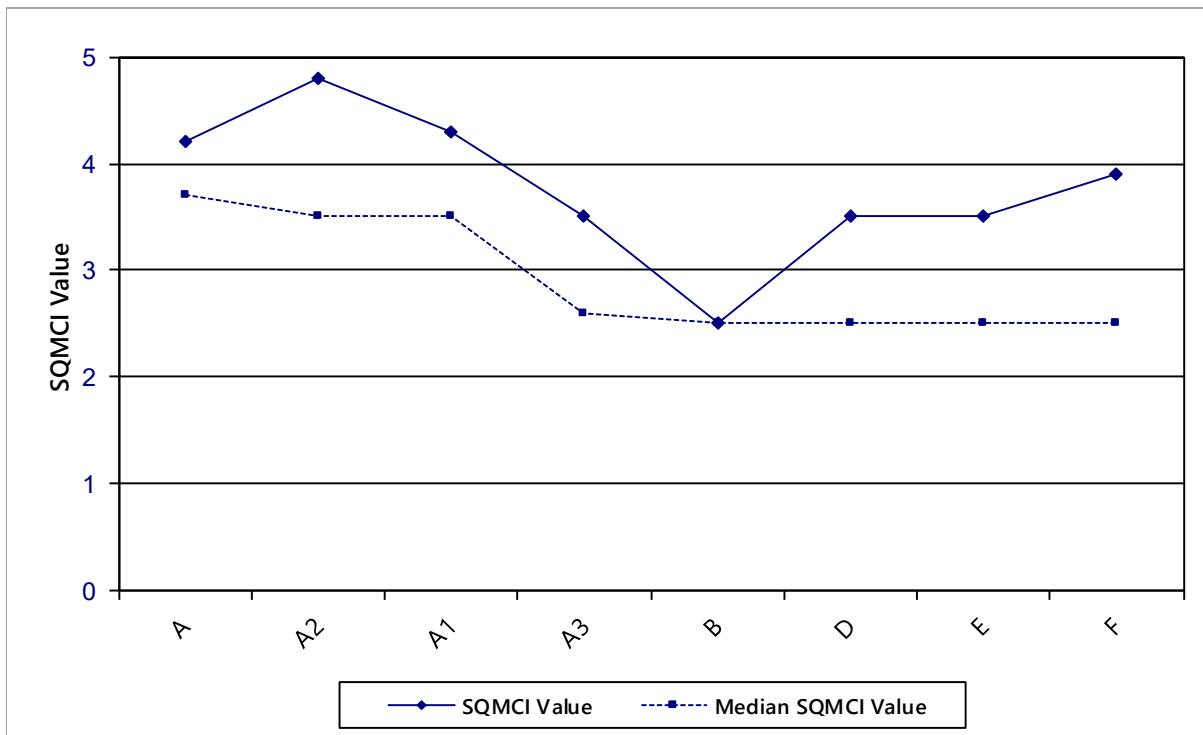


Figure 9 SQMCI values recorded at sites in the Mangati Stream in the November 2018 survey
20 February 2019

On 20 February 2019 eight established sampling sites in the Mangati Stream catchment were sampled using 'kick samples' (sites B, D2, E and F), a combination of the 'kick sampling' and 'sweep-sample' techniques (sites A, A2, A1 and A3) to determine whether stormwater and wastewater discharges from the Mangati industrial area have had any adverse effects on the macroinvertebrate communities of this stream.

Samples were sorted and identified to provide the number of taxa (richness), MCI score and SQMCI score for each site.

Macroinvertebrate richness among the surveyed sites differed by up to eight taxa, a fairly typical taxa richness difference between sites. The three upper sites (10-16 taxa) and the mid-reach site A3 (13 taxa) had moderate richness which were either the same or lower than historic medians. Site B had a moderately low taxa richness of eleven taxa which was three taxa lower than its historic median, and a substantial five taxa increase since the preceding survey. In contrast site D2, which was situated a short distance downstream of site B, had a low taxa richness which was only slightly lower than its historic median. Sites E and F also had moderately low taxa richness which were typical for the two most downstream sites.

The composition of the macroinvertebrate communities in the Mangati Stream at the upper sites were typical for a lowland, soft-bottom stream running through farmland, an industrial area and a residential area. The communities are usually dominated by taxa that are relatively 'tolerant' to organic pollution and prefer muddy substrates e.g. oligochaete worms and snails (*Potamopyrgus*), and those 'moderately sensitive' taxa commonly associated with macrophytes e.g. amphipods (*Paracalliope*). The results of this survey in respect to community composition are largely congruent with past results.

MCI scores among sites varied by a significant 24 units (50-74), a range that was comparable with the preceding survey (30 units), but still larger than usual. MCI scores indicated that the surveyed reach was generally in 'poor' health except for site D2 which was in 'very poor' health. There was a significant decline of 11 units between site A3 and B, with a significant improvement of 23 units further downstream between site D2 and E. All sites apart from site D2 had scores not significantly different to historic medians with site D2 recording a score a significant 18 units below its historic median.

The SQMCI can be more sensitive to pollution compared with the MCI. SQMCI scores indicated 'fair' to 'very poor' macroinvertebrate health. The SQMCI scores were generally congruent with MCI scores with sites B and D2 being the only sites in 'very poor' health and showing a significant decline from site A3 to site B, with a significant improvement further downstream between sites D2 and E.

With regard to all three biotic indices, taxa richness, MCI and SQMCI scores, the decline in condition at site B compared with upstream sites and the generally poor state of the macroinvertebrate taxa present there indicates that there were likely discharges below site A3. No sewage fungus was present so any discharge was unlikely to be from a chronic organic discharge that would elevate BOD. However, any potential discharges entering the Mangati Stream between sites A3 and B appeared to cause relatively localised effects that were evident only at sites B and D2, with the lower reach sites E and F showing some improvement.

On 22 January 2019, a large sewer overflow occurred in the lower Mangati Stream, below site E and upstream of site F. Despite this, the current survey found largely similar macroinvertebrate communities at these two sites. All three macroinvertebrate indices in the current survey recorded results similar to or better than historic medians for these sites. This provides no indication that this event had caused a significant effect on the macroinvertebrate communities that had persisted until the current survey.

Previous surveys have observed evidence of urbanisation of the Mangati Stream, such as bed erosion and significantly high preceding flows. Although no such erosion was noted during the current survey, the December 2014 survey did note that site B was experiencing bank undercutting and collapse, and that this was likely to be a reflection of this urbanisation. Urbanisation of the catchment must be given regard to, due to increased subdivision in the headwaters, as there is potential for an increase in the 'flashiness' of the floods experienced by the Mangati Stream. This may become apparent with the installation of a continuous flow and rainfall data recording station (October 2012). This impact has the potential to worsen as the new industrial subdivision around the De Havilland Drive area is developed further.

Overall, the results of the summer survey indicate that macroinvertebrate health was generally 'poor' for the surveyed sites in the Mangati Stream and that there was likely to have been discharges below site A3, which had a significant negative impact on the macroinvertebrate communities present at sites B and D2.



Figure 10 Biomonitoring sites in the Mangati Stream in relation to the Bell Block industrial area with taxa number, MCI scores and SQMCI scores for each site in the February 2019 survey

Table 66 Numbers of taxa and MCI values recorded in previous surveys in the Mangati Stream, together with results of the February survey

Site No.	N	No of taxa				MCI value				SQMCI value			
		Median	Range	Previous survey	Current survey	Median	Range	Previous survey	Current survey	Median	Range	Previous survey	Current survey
A	50	16	9-29	20	16	78	56-91	79	74	3.7	2.2-4.7	4.2	3.9
A2	48	16	9-29	16	10	74	57-92	74	66	3.5	1.3-4.8	4.8	4.2
A1	50	15	7-23	15	14	73	47-89	83	73	3.5	1.5-4.7	4.3	3.9
A3	48	16	8-23	16	13	69	52-83	69	71	2.6	1.6-4.6	3.5	4.1
B	56	14	3-29	6	11	68	50-86	53	60	2.5	1.1-4.5	2.5	2.4
D2	32	11	4-18	13	8	68	40-78	77	50	2.5	1.1-3.5	2.5	2.2
E	55	10	3-22	13	12	65	44-79	74	73	2.5	1.1-3.9	3.5	4.0
F	49	11	2-22	11	13	68	30-79	75	66	2.5	1.2-4.1	3.9	4.0

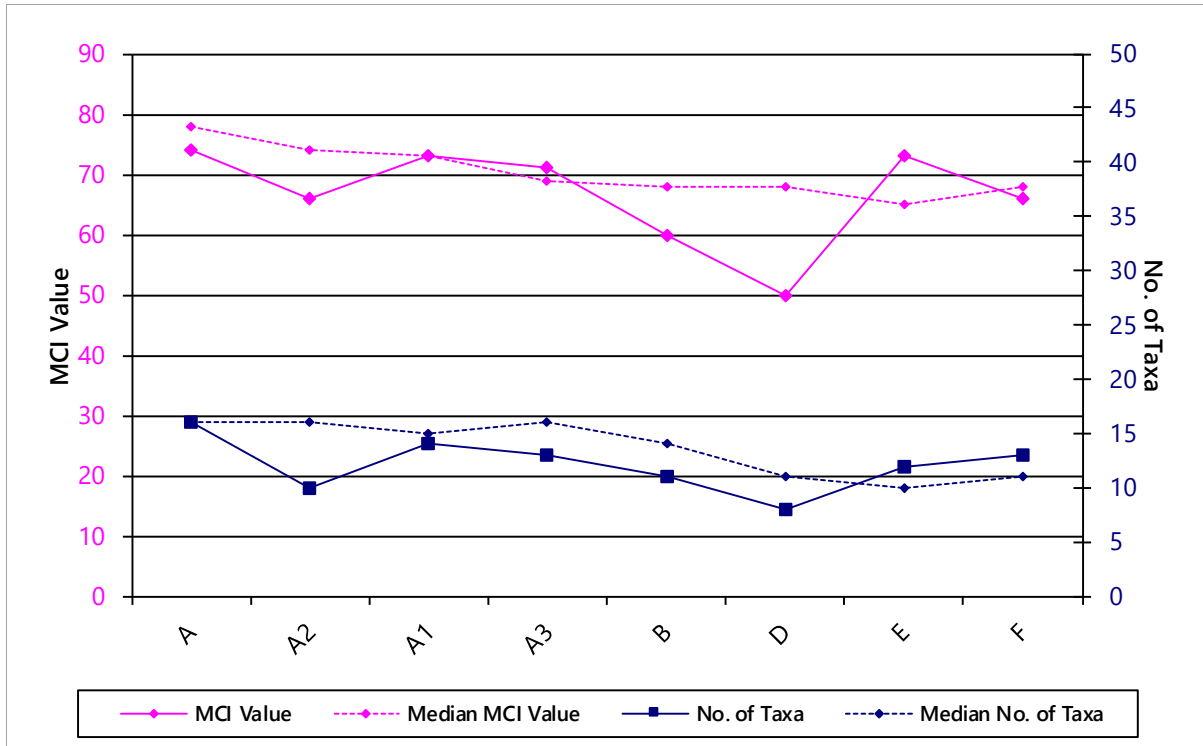


Figure 11 Numbers of taxa and MCI values recorded at sites in the Mangati Stream in the February 2019 survey

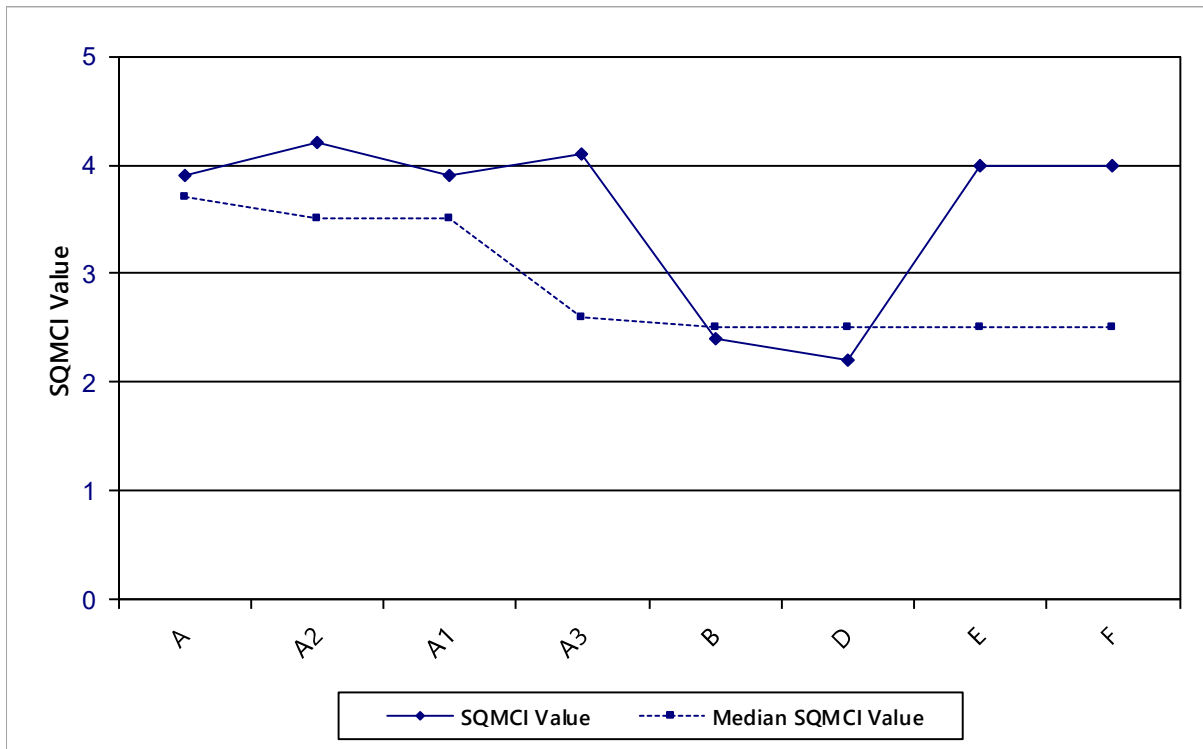


Figure 12 SQMCI values recorded at sites in the Mangati Stream in the February 2019 survey

19.2.2 Statistical analysis of macroinvertebrate results

A trending analysis of MCI results, at two sites used in monitoring the activities in the Mangati industrial catchment, was presented in the *Freshwater Macroinvertebrate Fauna Biological Monitoring Programme Annual State of the Environment Monitoring Report 2018-2019*.

The sites that were trended were site A (MGT000488, above industrial catchment) and site E (MGT0000520, below industrial catchment). A non-parametric statistical trend analysis of the MCI data using the Mann-Kendall test was then performed on 24 years of SEM results (1995-2019) and the most recent ten-years of results (2009-2019).

At site A, above the industrial area, a non-significant positive overall trend was identified in the MCI scores over the full time range. Overall, the trendline was indicative of 'poor' generic stream health throughout most of the period. There was a non-significant negative trend in MCI scores over the most recent ten-year period, in contrast with the full dataset, with a decline in the trendline from 2012 onwards, probably as a result of increased earthworks upstream of the site. The trendline for the most recent ten-year period was indicative of 'poor' health.

At site E, below the industrial area, a positive significant trend in MCI scores has indicated continued improvement coincident with better control and treatment of industrial point source discharges in the catchment and wetland installation (stormwater interception) in the mid catchment with this improvement continuing in recent years. The trendline had a range of scores (23 units) that has been ecologically important with MCI scores indicative of a shift from 'very poor' over the first four years to 'poor' generic stream health during the remaining period. There was a non-significant positive trend in MCI scores over the most recent ten-year period with the trendline slope starting to flatten out after 2014. The trendline for the most recent ten-year period was indicative of 'poor' health.

Updated trend graphs are given below in Figure 13 and Figure 14 for the two sites used in the statistical analysis.

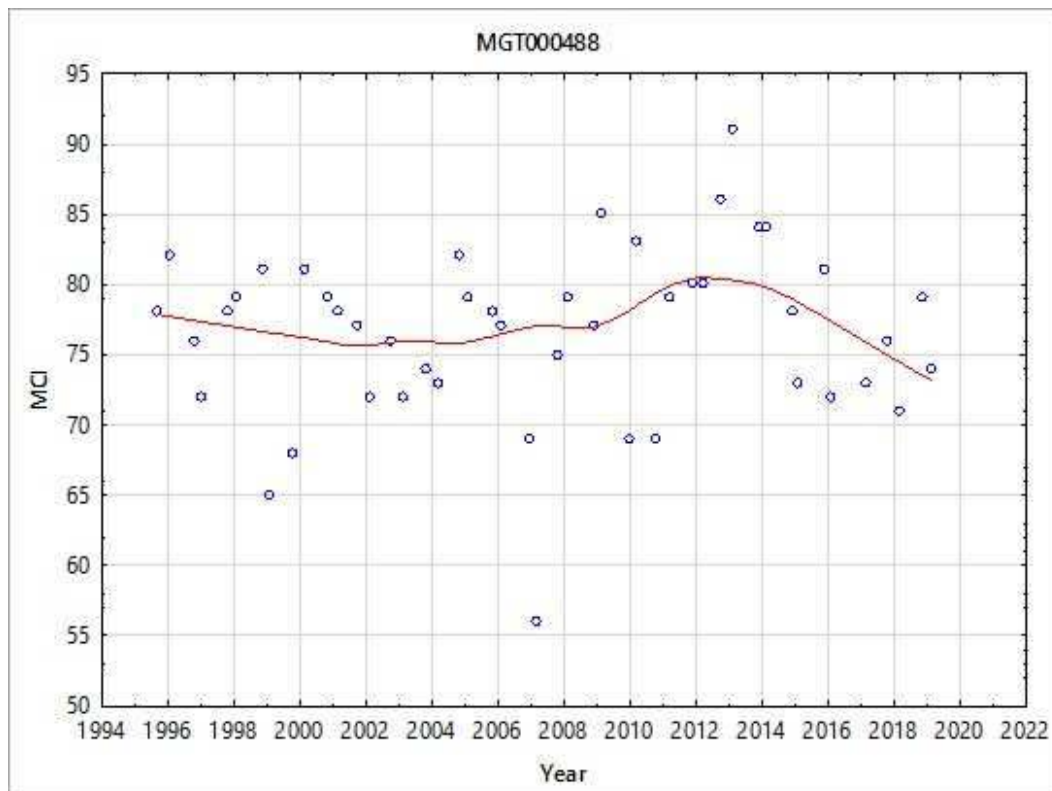


Figure 13 LOWESS trend plot of MCI data at site A (upstream of industrial area)

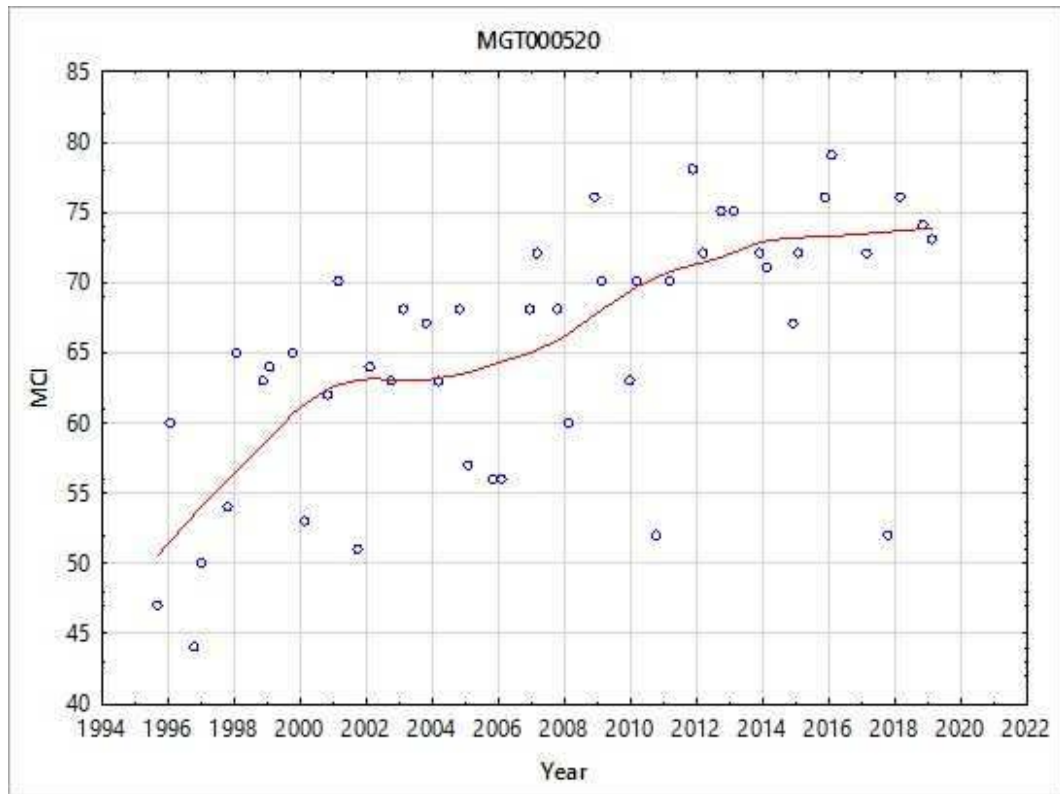


Figure 14 LOWESS trend plot at the Te Rima Place, Bell Block Site E (downstream of the industrial area)

20 Summary of recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Barton Holdings Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
2. THAT in the first instance, monitoring programmed for consented activities of First Gas Ltd's site in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
3. THAT the option for a review of resource consent 4780-2 in June 2020, as set out in condition 10 of the consent, not be exercised, on the grounds that the current conditions are adequate.
4. THAT in the first instance, monitoring programmed for the consented activities of Greymouth Petroleum Acquisitions Company Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
5. THAT the option for a review of resource consent 4664-3 in June 2020, as set out in condition 8 of the consent, be exercised, on the grounds that current sampling points may be unsafe and therefore do not permit consent discharge conditions and any adverse environmental effects to be assessed.
6. THAT monitoring of the Halliburton site be discontinued as the site has been decommissioned and the consent has been surrendered.
7. THAT in the first instance, monitoring programmed for consented activities of J Swap Contractors Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
8. THAT the option for a review of resource consent 10085-1.0 in June 2020, as set out in condition 16 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
9. THAT, in the first instance, monitoring programmed for consented activities of McKechnie Aluminium Solutions Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
10. THAT the option for a review of resource consent 3139-3 in June 2020, as set out in condition 10 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
11. THAT in the first instance, monitoring programmed for consented activities of New Plymouth District Council in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
12. THAT in the first instance, monitoring programmed for consented activities of Nexans New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
13. THAT the option for a review of resource consents 4497-3 and 5417-2.0 in June 2020, as set out in conditions 10 and 8 of the consents, not be exercised, on the grounds that current consent conditions are adequate to deal with adverse effects on the environment.
14. THAT in the first instance, monitoring programmed for consented activities of OMV New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
15. THAT the option for a review of resource consent 3913-3 in June 2020, as set out in condition 8 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
16. THAT in the first instance, monitoring programmed for consented activities of Schlumberger New Zealand Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
17. THAT in the first instance, monitoring programmed for consented activities of Tasman Oil Tools Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.

18. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (feed mill) in the 2019-2020 year continues at a similar level to that programmed for 2018-2019, with the triennial deposition gauging next due in 2021-2022.
19. THAT the option for a review of resource consent 2335-4 in June 2020, as set out in condition 11 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
20. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (poultry processing plant) in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
21. THAT the option for a review of resource consents 3740-4, 4026-3, 5494-2, 6357-1 and 7389-1 in June 2020, as set out in consent conditions, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
22. THAT in the first instance, monitoring programmed for consented activities of TIL Freighting Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
23. THAT the option for a review of resource consent 7578-1 in June 2020, as set out in condition 9 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
24. THAT in the first instance, monitoring programmed for consented activities of W Abraham Ltd in the 2019-2020 year continues at a similar level to that programmed for 2018-2019.
25. THAT the option for a review of resource consent 7147-2.0 in June 2020, as set out in condition 25 of the consent, not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment.
26. THAT should there be issues with environmental or administrative performance at any of the sites in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

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

Al*	aluminium
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
BODCF	filtered carbonaceous biochemical oxygen demand. A measure of the presence of dissolved degradable organic matter, excluding the biological conversion of ammonia to nitrate
Bund	a wall around a tank to contain its contents in the case of a leak
CDS	condensed distiller's syrup. A dark brown syrupy liquid with similar consistency to runny honey, which is the liquid fraction that remains after grains (principally wheat) have been fermented in the process of producing bio-ethanol in combination with yeasts and enzymes
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 25°C and expressed in mS/m
Cu*	copper
DO	dissolved oxygen
DRP	dissolved reactive phosphorus
<i>E.coli</i>	<i>escherichia coli</i> , an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
Ent	enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre of sample
FC	faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
Fresh	elevated flow in a stream, such as after heavy rainfall
g/m ³	grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures
IBC	1,000 L intermediate bulk container
Incident	an event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred

Intervention	action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring
Investigation	action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident
Incident register	Incident register entry- an event recorded by the Council on the basis that it had potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan
LMP	liquid mud plant
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)
NNN	total nitrate and nitrite nitrogen, expressed in terms of the mass of nitrogen (N)
NO ₃	nitrate, normally expressed in terms of the mass of nitrogen (N)
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water
O&G	oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons)
Pb*	lead
pH	a numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5
Physicochemical	measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment
RFWP	Regional Freshwater Plan for Taranaki
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 subsequent amendments
SS	suspended solids
SQMCI	semi quantitative macroinvertebrate community index. MCI with taxa abundance factored in

Temp	temperature, measured in °C (degrees Celsius)
Turb	turbidity, expressed in NTU
USEPA	The United States Environmental Protection Agency
XLPE	cross linked polyethylene, which is hydronic tubing that is manufactured from polyethylene plastic with a three dimensional molecular bond that is created within the structure of the plastic
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 a Science Services Manager.

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Appendix I

Resource consents held by industries
in the Mangati catchment (alphabetical order)

Water abstraction permits

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

Water discharge permits

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

Air discharge permits

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

Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

Land use permits

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

Coastal permits

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

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

Name of
Consent Holder: Tegel Foods Limited
Private Bag 2015
NEW PLYMOUTH 4340

Decision Date: 12 February 2014

Commencement Date: 12 February 2014

Conditions of Consent

Consent Granted: To discharge stormwater from a stock/poultry feed manufacturing site to the New Plymouth District Council stormwater drainage network

Expiry Date: 01 June 2026

Review Date(s): June 2017, June 2020, June 2023 and/or within 3 months of receiving a notification under special condition 10

Site Location: 39 & 57 Paraitē Road, Bell Block

Legal Description: Lots 1 & 2 DP 346597 (Discharge source & site)

Grid Reference (NZTM) 1699389E-5678203N

Catchment: Mangati

*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. Specifically this includes ensuring that 5 day total Biochemical Oxygen Demand (BOD) of the discharge is as low as practically achievable.
2. The stormwater discharged shall be from a catchment area not exceeding 2 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
total recoverable hydrocarbons	Concentration not greater than 15 gm ⁻³
5 day total Biochemical Oxygen Demand (BOD) until 30 November 2014	Concentration not greater than 50 gm ⁻³
5 day total Biochemical Oxygen Demand (BOD) after 30 November 2014	Concentration not greater than 25 gm ⁻³

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

4. After allowing for reasonable mixing, within a mixing zone extending 20 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. Before 30 November 2014, the consent holder shall empty the tank and pipe the waste water to the New Plymouth District Council's municipal trade waste system.
6. Before 1 April 2014 the consent holder shall provide, for certification by the Chief Executive of the Taranaki Regional Council, details of a performance based improvement programme outlining monitoring, trigger values, inspections, corrective actions, roles and responsibilities and performance reporting to be undertaken by the consent holder to demonstrate compliance with special condition 1.

Consent 2335-4.0

7. A copy of the performance report required by condition 6 shall be provided to the Taranaki Regional Council by 1 July each year.
8. 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.
9. 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 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.

10. 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 materials 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.
11. 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 2017 and/or June 2020 and/or June 2023; and
 - b) within 3 months of receiving a notification under special condition 10 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 12 February 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: Halliburton New Zealand
 P O Box 7160
 NEW PLYMOUTH 4341

Decision Date: 23 June 2008

Commencement
Date: 23 June 2008

Conditions of Consent

Consent Granted: To discharge stormwater from an industrial site, used for
 an oil field service operation, into the Mangati Stream at or
 about (NZTM) 1699312E-5678527N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020 and/or within 3 months of receiving a
 notification under special condition 10

Site Location: Paraita Road/Connett Road, Bell Block

Legal Description: Lot 1 DP 9985 Lot 1 DP 10362

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 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. Notwithstanding any other condition of this consent, 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 2.02 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. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or another appropriate recovery system, and not directly to the stormwater catchment.
5. Constituents in the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
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 5gm ⁻³
Unionised ammonia	Concentration not greater than 0.025gm ⁻³

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

Consent 2337-3

6. After allowing for a mixing zone of 20 metres extending downstream of the discharge, the discharge shall not give rise to any of the following effects in the receiving waters of the Mangati Stream:
 - 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 construct and maintain an adequate discharge sampling point, within three months of the granting of this consent, to the satisfaction of the Chief Executive, Taranaki Regional Council.
8. The consent holder shall maintain a contingency plan. The contingency plan shall be adhered to at all times 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.
9. The consent holders shall maintain an operational and management plan. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
10. The consent holder shall notify the Chief executive, Taranaki Regional Council, prior to making any changes in the processes undertaken at the site, or the chemicals used or stored on site, which could alter the nature of the discharge. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environment effects of any changes, and to be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
11. 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.

Consent 2337-3

12. In accordance with section 128 and 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 10 above;

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

Transferred at Stratford on 1 October 2012

For and on behalf of
Taranaki Regional Council

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: McKechnie Aluminium Solutions Limited
Private Bag 2007
NEW PLYMOUTH 4342

Consent Granted
Date: 2 November 2007

Conditions of Consent

Consent Granted: To discharge stormwater [including cooling water] from an industrial site into an unnamed tributary of the Mangati Stream at or about (NZTM) 1699261E-5678255N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Paraite Road, Bell Block, New Plymouth

Legal Description: Lot 1 DP 9212, Lot 1 DP 10008 & Lot 2 DP 330342

Catchment: Mangati

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 exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 5010. In the case of any contradiction between the documentation submitted in support of application 5010 and the conditions of this consent, the conditions of this consent shall prevail.
3. The stormwater discharge shall be from a catchment not exceeding 5 hectares.
4. After allowing for a mixing zone of 10 metres, the discharge shall not give rise to any of the following effects in the receiving waters of the Mangati Stream:
 - (a) the production of any conspicuous oil or grease films, scums or foams or floatable or suspended matter;
 - (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 effect on aquatic life;
 - (f) the temperature of water shall not exceed 25°C.
5. Components of the discharge shall not exceed the following concentrations:

pH (range)	6.0-9.0
oil and grease	15 g/m ³
suspended solids	100 g/m ³
6. The consent holder shall maintain a contingency plan that details action to be taken in the event of accidental discharge or spillage of contaminants to ensure that the effects are minimised.

Consent 3139-3

7. The consent holder shall maintain a stormwater management plan detailing the management and discharge of stormwater and cooling water to ensure that any effects on the Mangati Stream are minimised. This shall include any capital works planned to be undertaken.
8. The consent holder shall comply with the procedures, requirements, obligations and all other matters specified in the management plan except with the specific agreement of the Chief Executive, Taranaki Regional Council. In the case of any contradiction between the management plan and the conditions of this consent, the conditions of this resource consent shall prevail.
9. 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.
10. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review 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.

Transferred at Stratford on 4 March 2010

For and on behalf of
Taranaki Regional Council

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: Tegel Foods Limited
Private Bag 2015
NEW PLYMOUTH 4340

Decision Date: 23 December 2013

Commencement Date: 23 December 2013

Conditions of Consent

Consent Granted: To discharge stormwater from a poultry processing plant site to the New Plymouth District Council drainage network

Expiry Date: 1 June 2026

Review Date(s): June 2017, June 2020, June 2023 and in accordance with special condition 9

Site Location: 91-95 Paraita Road, Bell Block

Legal Description: Lot 1 DP 10331 Pt Sec 14 Blk II Paritutu SD
(Discharge source & site)

Grid Reference (NZTM) 1700090E-85678021N

Catchment: Mangati

*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 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. Specifically this includes ensuring that 5 day total Biochemical Oxygen Demand (BOD) of the discharge is as low as practically achievable.
2. The total catchment area discharged from this consent and consent 7389-1 shall not exceed 4.3 hectares.
3. Constituents of the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
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
Free chlorine	Concentration not greater than 0.2 gm ⁻³
5 day total Biochemical Oxygen Demand (BOD)	Concentration not greater than 15 gm ⁻³

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

4. After allowing for reasonable mixing, within a mixing zone extending 20 metres downstream of the point of discharge to the Mangati 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.

Consent 3470-4.0

5. Before 28 February 2014, the consent holder shall prepare and submit to the Council an accurate stormwater network analysis for the site. The analysis shall be prepared by a suitably qualified person. The stormwater network analysis shall include but not necessarily be limited to:
 - a) confirmation of the flow paths for the stormwater from the various stormwater ingress points, to the outlet points, under the different potential rainfall intensities;
 - b) the potential for deposition of solids within the stormwater system given the competing flow paths; and
 - c) the effect this may have on the preferential stormwater flow paths and stormwater quality.
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 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 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.

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 materials 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.

Consent 3470-4.0

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 2017 and/or June 2020 and/or June 2023;
 - b) within 3 months of providing the information required by special condition 5 above; and
 - c) 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 23 December 2013

For and on behalf of
Taranaki Regional Council

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: OMV New Zealand Limited
PO Box 2621
Wellington 6140

Decision Date: 24 September 2015

Commencement Date: 24 September 2015

Conditions of Consent

Consent Granted: To discharge stormwater from an industrial site into an unnamed tributary of the Mangati Stream

Expiry Date: 01 June 2032

Review Date(s): June 2020 and/or June 2026

Site Location: 29 Paraitē Road, Bell Block

Legal Description: Lot 3 DP 15627 (Discharge source)
Lot 1 DP 13379 (Discharge site)

Grid Reference (NZTM) 1699369E-5678348N

Catchment: Mangati

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

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from an area not exceeding 1.08 hectares.
3. 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	Concentration not greater than 15 gm ⁻³
Ammoniacal nitrogen	Concentration not greater than 10 gm ⁻³
BOD	Concentration not greater than 16 gm ⁻³

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

4. At the point 1699596E- 5678691N the discharge shall not give rise to any of the following effects in the receiving waters of the unnamed tributary of the Mangati Stream:
 - (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 objectionable odour;
 - (iv) the rendering of fresh water unsuitable for consumption by farm animals;
 - (v) any significant adverse effects on aquatic life, habitats, or ecology;
 - (vi) any undesirable biological growths.
5. 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.

Consent 3913-3.0

6. 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 loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
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 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. 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 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 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: Tegel Foods Limited
Private Bag 2015
NEW PLYMOUTH 4340

Decision Date: 16 June 2014

Commencement Date: 16 June 2014

Conditions of Consent

Consent Granted: To discharge emissions into the air from the processing of animal matter and associated processes

Expiry Date: 01 June 2032

Review Date(s): June 2020, June 2026

Site Location: 91 Paraitē Road, Bell Block

Legal Description: Lot 1 DP 10331 Pt Sec 14 Blk II Paritutu SD
(Discharge source & site)

Grid Reference (NZTM) 1699798E-5678097N

*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. That at all times the consent holder shall 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 into the air from the site.
2. That prior to undertaking any alterations to the plants processes, operations, equipment or layout, as specified in the original application for this consent or any subsequent application to change consent conditions, 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 its amendments.
3. The discharges authorised by this consent shall not give rise to an odour at or beyond the boundary of the site that is offensive or objectionable.
4. No offal or blood collected from carcasses shall be discharged to the wastewater holding pond.
5. The consent holder shall maintain and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken in the event of plant equipment failure or any other loss of processing or transportation capacity. 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.
6. The site shall be operated in accordance with an 'Operations and Maintenance 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 will be managed to achieve compliance with the conditions of this consent and shall include but not be limited to:
 - a. The identification of key personnel responsible for managing air discharges and implementing the Operations and Maintenance;
 - b. A description of the activities on the site and the main potential sources of odour emissions;
 - c. A description of storage and treatment procedures (including specification of storage times and preservative dosing concentrations) for ensuring that only high quality raw material is processed;
 - d. The identification and description of the odour and dust mitigation measures in place;
 - e. A description of the use and maintenance of the Wastewater treatment pond;
 - f. The identification and description of relevant operating procedures and parameters that need to be controlled to minimise emissions;

Consent 4026-3.0

- g. A description of monitoring and maintenance procedures for managing the odour mitigation measures including record keeping of control parameters and maintenance checks; and
 - h. Details of staff training proposed to enable staff to appropriately manage the odour mitigation measures.
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 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 16 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: Tegel Foods Limited
Private Bag 2015
NEW PLYMOUTH

Consent Granted 23 November 2001
Date:

Conditions of Consent

Consent Granted: To discharge emissions into the air from the milling and
blending of grain and/or animal meals together with
associated activities at or about GR: P19:094-399

Expiry Date: 1 June 2020

Review Date(s): June 2008, June 2014

Site Location: 39/57 Paraitē Road, Bell Block, New Plymouth

Legal Description: Lots 3 & 4 DP 11072 Blk II Paritutu SD

Consent 4038-6

General conditions

- a) That 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) That 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) That 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.
2. No alteration shall be made to plant equipment or processes which may substantially alter the nature, quantity or likelihood of discharges to atmosphere without prior consultation with the Chief Executive, Taranaki Regional Council.
3. Within three months of the granting of this consent the consent holder shall prepare and maintain to the satisfaction of the Chief Executive, Taranaki Regional Council a management plan addressing the measures adopted to prevent an accumulation of dust within the stormwater catchment as a result of normal operations and emission incidents.
4. The discharge concentration of dust from any point source shall be less than 125 mg/m³ normal temperature and pressure (NTP).
5. The dust deposition rate beyond the property boundary arising from the discharge shall be less than 4.0 g/m²/30 days.
6. Any discharge to air from the premises shall not give rise to any offensive, objectionable, noxious or toxic levels of dust or odour at or beyond the boundary of the property, and in any case, suspended particulate matter shall not exceed 3 mg/m³ (measured under ambient conditions) beyond the boundary of the site.
7. The consent holder shall keep, and make available to the Chief Executive, Taranaki Regional Council, upon request, a record of the time, duration and cause of all dust or smoke emissions incidents having actual or potential off-site impacts.
8. As far as is practicable yard areas of the site shall be cleared of accumulations of dust.

Consent 4038-6

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 2008 and/or June 2014, 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 23 November 2001

For and on behalf of
Taranaki Regional Council

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

Consent Granted
Date: 11 September 2002

Conditions of Consent

Consent Granted: To discharge up to 5200 litres/second of stormwater from industrial sealed areas and roofs through piped stormwater systems into the Mangati Stream at or about GR: P19:096-404

Expiry Date: 1 June 2020

Review Date(s): June 2004, June 2008, June 2014

Site Location: Connett/Paraitē Roads, Bell Block, New Plymouth

Legal Description: Lot 1 DP 10763 Blk II Pariututu SD

Catchment: Mangati

Consent 4302-2

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

1. This consent shall be exercised generally in accordance with the information submitted in support of application 1663 and to ensure the conditions of this consent are maintained.
2. The consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge.
3. Within 6 months of the granting of this consent a general outline of the methods, specifications, operating guidelines or other measures which represent the best practicable option will be supplied by the consent holder to the satisfaction of the Chief Executive, Taranaki Regional Council. This is also to include details of the proposed construction and timing of the third wetland pond and thereafter will be attached to this consent as Schedule A.
4. The consent holder shall be responsible for preventing, where possible, and mitigating any erosion which occurs as a result of the exercise of this consent.
5. 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 within three months of receipt of the report specified in special condition 3 and/or during the month of June 2004 and/or June 2008 and/or June 2014, 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 September 2002

For and on behalf of
Taranaki Regional Council

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: Nexans New Zealand Limited
Private Bag 2021
New Plymouth 4342

Decision Date: 25 June 2008

Commencement Date: 25 June 2008

Conditions of Consent

Consent Granted: To discharge stormwater and cooling water from an electric wire and cable manufacturing site into the Mangati Stream

Expiry Date: 1 June 2026

Review Date(s): June 2020 and/or within 3 months of receiving a notification under special condition 10

Site Location: Paraite Road, Bell Block

Legal Description: Lot 2 DP 338778

Grid Reference (NZTM) 1699510E-5678500N

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 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. Notwithstanding any other condition of this consent, 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 discharges shall be from a catchment area not exceeding 6.24 hectares.
3. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not directly to the stormwater catchment.
4. Constituents in the discharge shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range of 6.0 to 6.9
Suspended solids	Concentration not greater than 100 gm ⁻³
Oil and grease	Concentration not greater than 15 gm ⁻³

This condition shall apply prior to the 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 20 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 Mangati Stream:
 - 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.

Consent 4497-3

6. The consent holder shall maintain a contingency plan. The contingency plan shall be adhered to at all time 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.
7. The consent holder shall maintain stormwater and management plan. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
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, which 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 to be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
9. 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.
10. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice 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 10 above;for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 21 May 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: Greymouth Petroleum Acquisition Company Limited
P O Box 3394
NEW PLYMOUTH 4341

Consent Granted
Date: 1 June 2010

Conditions of Consent

Consent Granted: To discharge treated stormwater from a pipeyard used for the cleaning and storage of casing and drilling equipment, and the storage of hazardous substances, onto and into land in circumstances where it may enter the Mangati Stream at or about (NZTM) 1699849E-5678405N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: 15 De Havilland Drive, Bell Block

Legal Description: Lot 4 DP 15326

Catchment: Mangati

General condition

- a. The consent holder shall pay to the Taranaki Regional Council [the 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 1.5 hectares.
3. All stormwater, except for that which is directed to tradewaste, shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this consent.
4. Constituents of the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
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 20 metres downstream of the point where the discharge enters water, 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 Mangati Stream:
 - 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. All on site operations, maintenance activities and contingency measures shall be undertaken in accordance with the GMP Environmental Limited Pipeyard Environmental Management Plan dated February 2010 or any subsequent reviews.

Consent 4664-3

7. The consent holder shall review the GMP Environmental Limited Pipeyard Environmental Management 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 Plan;
 - the matters which shall be addressed within the plan review; and
 - the reasons or anticipated results of the matters requiring review.

The reviewed Plan shall document all operations, maintenance activities 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.

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 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 June 2010

For and on behalf of
Taranaki Regional Council

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: First Gas Limited
Private Bag 2020
New Plymouth 4342

Decision Date: 17 December 2015

Commencement Date: 17 December 2015

Conditions of Consent

Consent Granted: To discharge stormwater and vehicle wash water to the Mangati Stream

Expiry Date: 1 June 2032

Review Date(s): June 2020, June 2026

Site Location: 38-48 Connett Road West, Bell Block

Legal Description: Lot 1 DP 12815 (discharge source and discharge point 3)
Lot 4 & 5 DP 12815 (discharge points 1 and 2)

Grid Reference (NZTM) 1699708E-5678603N (discharge point 1 to NPDC system)
1699629E-5678680N (discharge point 2 to receiving water via NPDC ponds)
1699809E-5678503N (discharge 3 point to receiving water)

Catchment: Mangati

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

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from an area not exceeding 4 hectares.
3. Within 12 months of the commencement of this consent the consent holder shall install a treatment system that will treat the vehicle wash water to 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

4. Prior to leaving the property the constituents of all stormwater discharges 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

5. The consent holder shall sample the treated wash water at intervals not exceeding 6 months and analyse the samples for pH, suspended solids, biochemical oxygen demand, filtered biochemical demand, and oil and grease within 24 hours of the sample being taken. The consent holder shall supply the results of the sampling required, to the Chief Executive of the Taranaki Regional Council within 20 working days of the sampling.
6. After allowing for reasonable mixing, within a mixing zone extending 30 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.

Consent 4780-2.0

7. 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.
8. The site shall be operated in accordance with a 'Stormwater 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 loading and unloading of materials;
 - b) storage of hazardous chemical;
 - c) wash water sampling and analysis procedures;
 - d) scheduling of wash water sampling;
 - e) general housekeeping; and
 - f) management and maintenance of the vehicle wash bay treatment system.
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 consents@trc.govt.nz.
10. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
 - a) during the month of June 2020 and/or June 2026; and/or
 - b) within 3 months of receiving a notification under special condition 9 above;
 - c) within 12 months of the installation of the vehicle wash treatment system.

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

Transferred at Stratford on 20 June 2016

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of
Consent Holder: Tasman Oil Tools Limited
PO Box 3140
NEW PLYMOUTH 4312

Decision Date (Review): 05 August 2014

Commencement Date 05 August 2014 (Granted Date: 26 November 2001)
(Review):

Conditions of Consent

Consent Granted: To discharge up to 112 litres/second of stormwater including washdown water from a storage and maintenance yard for oil field drilling equipment into an unnamed tributary of the Mangati Stream

Expiry Date: 01 June 2020

Review Date(s): Within 3 months of receiving notification under special condition 4

Site Location: 13 De Havilland Drive, Bell Block

Legal Description: Lot 3 DP 14795 (Discharge source & site)

Grid Reference (NZTM) 1699760E-5678367N

Catchment: Mangati

*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 shall be exercised generally in accordance with the information submitted in support of application 1566 and to ensure the conditions of this consent are maintained.
- 2. The consent holder shall keep and make available to the Chief Executive, Taranaki Regional Council, upon request, records of the date, frequency and duration of all washing conducted outside the constructed washpad; such records to be kept for at least 12 months.
- 3. The consent holder shall notify the Chief Executive, Taranaki Regional Council 48 hrs prior to yard washings being undertaken for periods in excess of 8 hours in any seven day period.
- 4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes in the processes undertaken at the site, or the chemicals used or stored on site, which could alter the nature of the discharge. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and to be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
- 5. The stormwater treatment system shall be maintained to the satisfaction of the Chief Executive, Taranaki Regional Council.
- 6. The following concentrations shall not be exceeded within the discharge effluent:

Component	Concentration
pH (range)	6.0-9.0
suspended solids	100 gm ⁻³
oil and grease	15 gm ⁻³
dissolved copper	0.05 gm ⁻³
dissolved lead	0.2 gm ⁻³
dissolved zinc	0.65 gm ⁻³

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

Consent 4812-2.1

7. After allowing for a 20 metre mixing zone extending downstream of the discharge point the discharge shall not give rise to any of the following effects in the receiving waters of the Mangati Stream:
 - 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.
8. The consent holder shall prepare and maintain a contingency plan to the satisfaction of the Chief Executive, Taranaki Regional Council, outlining measures and procedures undertaken to prevent spillage or accidental discharge of contaminants, and procedures to be carried out should such a spillage or discharge occur.
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 2014; and/or
 - b. within 3 months of receiving a notification under special condition 4 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.
10. There shall be no discharge of wastes containing surfactants, solvents, or any other degreasing agents.
11. 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 05 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: Nexans New Zealand Limited
Private Bag 2021
New Plymouth 4342

Decision Date: 24 February 2015

Commencement Date: 24 February 2015

Conditions of Consent

Consent Granted: To discharge emissions into the air from an electric wire and cable manufacturing plant and associated activities

Expiry Date: 1 June 2032

Review Date(s): June 2020, June 2026 and in accordance with special condition 8

Site Location: 69 Paraitē Road, Bell Block

Legal Description: Lot 1 DP 435659 (Discharge source & site)

Grid Reference (NZTM) 1699564E-5678312N

*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 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.
4. That the consent holder shall control all emissions to the atmosphere from the site of contaminants other than carbon dioxide, carbon monoxide, and nitrogen oxides, in order 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 is not increased above background levels:
 - a. by more than 1/30th of the relevant Workplace Exposure Standard-Time Weighted Average (exposure averaged over a duration as specified for the Workplace Exposure Standard-Time Weighted Average), or by more than 1/10th of the Workplace Exposure Standard-Short Term Exposure Limit over any short period of time (all terms as defined in Workplace Exposure Standards, 2010, Department of Labour); or
 - b. if no Short Term Exposure Limit is set, by more than the General Excursion Limit at any time (all terms as defined in Workplace Exposure Standards, 2010, Department of Labour).
5. 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.

Consent 5417-2.0

6. The consent holder shall maintain a permanent record of any complaints received alleging adverse effects from or related to the exercise of this consent. This record shall include the following, where practicable:
- a) the name and address of the complainant, if supplied;
 - b) date, time and details of the alleged event;
 - c) weather conditions at the time of the alleged event (as far as practicable);
 - d) investigations undertaken by the consent holder in relating to the complaint and any measures adopted to remedy the effects of the incident/complaint; and
 - e) measures put in place to prevent occurrence of a similar incident.

The consent holder shall make the complaints record available to officers of Taranaki Regional Council, on request.

7. The consent holder shall provide to the Taranaki Regional Council during November 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;
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 any consultation under special condition 5 above;

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

Transferred at Stratford on 21 May 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: Tegel Foods Limited
Private Bag 2015
New Plymouth 4340

Decision Date: 24 October 2014

Commencement Date: 24 October 2014

Conditions of Consent

Consent Granted: To discharge poultry processing wastes by burial into land in the vicinity of the Mangati Stream in emergency circumstances only

Expiry Date: 01 June 2032

Review Date(s): June 2020 and/or June 2026

Site Location: 91 Paraita Road, Bell Block

Legal Description: Lot 1 DP 10331 Pt Sec 14 Blk II Paritutu SD (site of discharge)

Grid Reference (NZTM) 1699935E-5678077N

Catchment: Mangati

*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 shall only be exercised in an emergency situation when there are no reasonable alternatives. No discharge shall occur unless the Chief Executive, Taranaki Regional Council (or his/her delegate) has confirmed that it complies with this requirement.
2. Before exercising the consent, the consent holder shall advise the Chief Executive, Taranaki Regional Council (CETRC), of:
 - Details of the emergency,
 - Why alternative disposal methods are unavailable,
 - Estimated volume of material,
 - Location of burial pits,
 - Estimated duration of emergency,

The discharge shall than only occur after the CETRC (or his/her delegate) has confirmed that the proposed discharge complies with condition 1. In confirming that the proposal complies with condition 1, the CETRC may limit the duration or scale of the discharge and require the information listed above to be updated for the discharge to be extended

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 actual or likely adverse effect on the environment associated with the discharge of contaminants from the site, including but not limited to effects on any water body or soil.
4. All burial trenches shall be located no closer than 25 metres to any surface water body.
5. All burial trenches shall be constructed so that the base is located above the level of groundwater.
6. The consent holder shall maintain records of any disposal including date, type of waste discharged, volume of waste discharged per day and the location waste was discharged, and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.

Consent 5494-2.0

7. The consent holder shall maintain and regularly update a 'Burial Management Plan' that has been approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the burial will be managed to achieve compliance with the conditions of this consent and shall include as a minimum:
 - a. Circumstances when the consent may be exercised,
 - b. Procedure for advising the CETRC to determine compliance with condition 1,
 - c. What information will be provided to the CETRC in order for him/her to determine compliance with condition 1,
 - d. The identification of key personnel responsible for managing and implementing the emergency burial;
 - e. The design of the burial pits; and
 - f. The area in which the burial pits can be located.
 - g. The location of pits in which material has been disposed of.
 - h. On-going management of the burial areas.

Any changes to the plan shall not take effect until they have been approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.

8. This consent shall lapse on 01 June 2032, 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 24 October 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:	Schlumberger New Zealand Limited PO Box 7146 New Plymouth 4341	
Decision Date (Change):	08 June 2010	
Commencement Date (Change):	08 June 2010	(Granted Date: 23 March 2002)

Conditions of Consent

Consent Granted:	To discharge treated stormwater from a synthetic liquid mud plant and storage site into the Mangati Stream	
Expiry Date:	01 June 2020	
Review Date(s):	Within three months of receiving a notification under special condition 8	
Site Location:	68-92 Paraiti Road, Bell Block	
Legal Description:	Lot 1 DP 20999 & Lot 1 DP 11201	
Grid Reference (NZTM)	1699611E-5678151N and/or 1699565E-5678094N and/or 1699605E-5678163N and/or 1699631E-5678166N	
Catchment:	Mangati	

*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 the Resource Management Act 1991, to prevent or minimise any adverse effects of the discharge on the receiving environment.
2. The maximum stormwater catchment area shall be no more than 1.77 ha.
3. The consent holder shall ensure that the discharge from the Liquid Mud Plant is treated and managed in the manner described in the MI SWACO *Paraitē Road Facility Stormwater Management Plan* issue [A, 0, document number NZ-HSE-707], or to no lesser standard in an alternative system, as approved in writing by the Chief Executive, Taranaki Regional Council.
4. Constituents in the discharge shall meet the following standards:

Constituent	Standard
pH	Within the range 6.0 to 9.0
Oil & grease	Concentration not greater than 15 gm ⁻³
suspended solids	Concentration not greater than 100 gm ⁻³
Biochemical oxygen demand	Concentration not greater than 7 gm ⁻³
Unionised ammonia	Concentration not greater than 0.025 gm ⁻³

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

5. After allowing for reasonable mixing, within a mixing zone extending 20 metres downstream of the discharge point, the discharge shall not give rise to any of the following effects in the receiving waters of the Mangati Stream:
 - 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. By 8 September 2010 the consent holder shall provide an updated contingency plan, which shall thereafter be maintained by means of reviews at not more than 2 yearly intervals. 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.

Consent 5987-1

7. The consent holder shall maintain a stormwater management plan, which shall be reviewed at not more than 2 yearly intervals. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
- a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.

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 worknotification@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 2008 and/or June 2014; 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 actual or potential adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 10 December 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: Schlumberger New Zealand Limited
PO Box 7146
New Plymouth 4341

Decision Date (Review): 27 August 2008

Commencement Date 27 August 2008 (Granted Date: 4 July 2002)
(Review):

Conditions of Consent

Consent Granted: To discharge treated washwater and stormwater from a storage and maintenance premises for oil field exploration equipment into the Mangati Stream

Expiry Date: 01 June 2020

Review Date(s): Within 3 months of receiving a notification under special condition 2

Site Location: 94 Paraiti Road, Bell Block, New Plymouth

Legal Description: Lot 2 DP 20437 Lot 2 DP 20999 Blk II Paritutu SD

Grid Reference (NZTM) 1699611E-5677951N

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 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 [unchanged]

1. This consent shall be exercised in accordance with the information submitted in support of application 1914, and special conditions 3, 4 and 7 below, and to ensure the conditions of this consent are maintained.

Condition 2 [changed]

2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes in the processes undertaken at the site, or the chemicals used or stored on site, which could alter the nature of the discharge. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and to be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.

Conditions 3 to 7 [unchanged]

3. The consent holder shall prepare and maintain an operation, management and maintenance plan to the satisfaction of the Chief Executive, Taranaki Regional Council, detailing the procedures in place to ensure effective performance of the washwater treatment system.
4. The consent holder shall prepare and maintain a stormwater management plan to the satisfaction of the Chief Executive, Taranaki Regional Council, controlling the items and methods by which storage in the stormwater catchment may occur.

5. The following concentrations shall not be exceeded within the discharge effluent:

Component	Concentration
pH (range)	6.0-9.0
suspended solids	100 gm ⁻³
oil and grease	15 gm ⁻³
dissolved copper	0.05 gm ⁻³
dissolved lead	0.2 gm ⁻³
dissolved zinc	0.65 gm ⁻³

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

6. After allowing for a 20 metre mixing zone extending downstream of the discharge point the discharge shall not give rise to any of the following effects in the receiving waters of the Mangati Stream:
- the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - any conspicuous change in the colour or visual clarity;
 - any emission of objectionable odour;
 - the rendering of fresh water unsuitable for consumption by farm animals;
 - any significant adverse effects on aquatic life.
7. Within three months of the granting of this consent, the consent holder shall prepare and maintain a contingency plan to the satisfaction of the Chief Executive, Taranaki Regional Council, outlining measures and procedures undertaken to prevent spillage or accidental discharge of contaminants, and procedures to be carried out should such a spillage or discharge occur.

Condition 8 [changed]

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:
- during the month of June 2014; and/or
 - within 3 months of receiving a notification under special condition 2 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.

Consent 6032-1

Condition 9 [new]

9. There shall be no discharge of wastes containing surfactants, solvents, or any other degreasing agents.

Transferred at Stratford on 10 December 2014

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of
Consent Holder: Tegel Foods Limited
Private Bag 2015
New Plymouth 4340

Decision Date
(Change): 17 April 2015

Commencement Date
(Change): 17 April 2015 (Granted: 20 May 2005)

Conditions of Consent

Consent Granted: To take and use groundwater from a bore for food processing and washdown purposes

Expiry Date: 1 June 2038

Review Date(s): June 2020, June 2026, June 2032

Site Location: 91 Paraitē Road, Bell Block

Legal Description: Lot 1 DP 10331 Pt Sec 14 Blk II Paritutu SD

Grid Reference (NZTM) 1699868E-5677951N

Catchment: Mangati

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

Consent 6357-1.2

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The exercise of this consent shall be undertaken in general accordance with the documentation submitted in support of application 2939 and shall ensure the efficient and effective use of water. In the case of any contradiction between the documentation submitted in support of application 2939 and the conditions of this consent, the conditions of this consent shall prevail.
2. The volume of groundwater abstracted shall not exceed 3000 cubic metres per day at a rate not exceeding 35 litres per second.
3. The abstraction shall be managed so that the water level in the bore does not fall below 35 metres below ground level at any time.
4. The consent holder shall maintain a record of the abstraction including date, pumping hours and daily volume abstracted and make these records available to the Chief Executive, Taranaki Regional Council, no later than 31 July of each year, or earlier upon request.
5. The consent holder shall install and maintain a water meter and on the pump system, approved by the Chief Executive, Taranaki Regional Council, for the purposes of recording the abstraction.
6. This consent shall be subject to monitoring by the Taranaki Regional Council and the consent holder shall meet all reasonable costs associated with the monitoring.
7. This consent shall lapse on 20 May 2020, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 6357-1.2

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 during the month of June 2008 and/or June 2014 and/or June 2020 and/or June 2026 and/or June 2032, 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 April 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: TIL Freightng Limited
Private Bag 2039
New Plymouth 4342

Decision Date: 20 September 2006

Commencement Date: 20 September 2006

Conditions of Consent

Consent Granted: To discharge stormwater from a truck depot into and onto land in the vicinity of the Mangaone Stream in the Waiwhakaiho catchment

Expiry Date: 01 June 2020

Site Location: 26 Paraita Road, New Plymouth

Legal Description: Lot 1 DP 9791 & Lot 1 DP 330342

Grid Reference (NZTM) 1699110E-5678250N

Catchment: Waiwhakaiho

Tributary: Mangaone

*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 of the discharge on any water body.
2. The maximum stormwater catchment area shall be no more than 4.575 hectares.
3. Prior to the exercise of this consent, the consent holder shall provide for the written approval of the Chief Executive, Taranaki Regional Council, a stormwater management plan.
4. Prior to the exercise of this consent, the consent holder shall provide for the written approval of the Chief Executive, Taranaki Regional Council, site specific details relating to contingency planning for the truck depot.
5. All stormwater to be discharged under this consent shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this consent.
6. The design, management and maintenance of the stormwater system shall be generally undertaken in accordance with the information submitted in support of application 4350. In the case of any contradiction between the documentation submitted in support of application 4350 and the conditions of this consent, the conditions of this consent shall prevail.
7. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not to the stormwater catchment.

Consent 6952-1

8. The discharge shall not give rise to any of the following effects in the receiving waters:
 - 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) any significant adverse effects on aquatic life.
9. The discharge onto and into land shall occur a minimum of 30 metres from any surface water body. Discharge shall be onto and into land and there shall be no direct discharge to surface water.
10. 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.
11. 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, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 11 December 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: W Abraham Limited
PO Box 4016
New Plymouth 4340

Decision Date: 11 May 2015

Commencement Date: 11 May 2015

Conditions of Consent

Consent Granted: To discharge emissions into the air from the operation of a crematorium including a natural gas-fired cremator

Expiry Date: 1 June 2032

Review Date(s): June 2020, June 2026

Site Location: 10 Swans Road, Bell Block

Legal Description: Lot 2 DP 429053 (Discharge source & site)

Grid Reference (NZTM) 1700244E-5678513N

*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 effects on the environment arising from discharges to air from the site.
2. The consent holder shall undertake the activity in general accordance with the application for this consent (7147-2.0) and the application for the expired consent (7147-1.0). If there is a conflict between the applications the later application shall prevail, and if there is a conflict between the applications and consent conditions the conditions shall prevail.
3. Prior to undertaking any alterations to the plant, process, or operations, which may significantly change the nature or quantity or concentration 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.
4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, shall at least 2 working days before any maintenance that may affect or include the calibration, monitoring, or process control of the cremators. Notification shall include the consent number and a brief description of the work to be done, and be emailed to worknotification@trc.govt.nz.
5. The consent holder shall at all times operate, maintain, supervise, monitor and control all processes so that emissions authorised by this consent are maintained at a practicable minimum.
6. The cremators and all duct work shall be maintained leak proof and gas tight to prevent the discharge of gases from the duct work or cremator, other than through the stack.
7. The stack flue and duct work leading to the stack shall be adequately insulated to avoid, as far as practicable, the condensation of liquids or the formation of soot smuts.
8. The consent holder shall take all reasonable steps to reduce and minimise the quantity of materials (such as PVC, metals, and other materials listed in the guidelines published by the Australasian Cemeteries and Crematoria Association (May 2004): *Contents of coffins delivered for cremation*) combusted within the cremator.
9. The consent holder shall remove all external casket fittings containing metals or PVC prior to cremation.

Consent 7147-2.0

10. The cremator shall be interlocked so as to prevent the introduction of a coffin to the primary chamber unless the temperature in the secondary combustion zone exceeds 750°C.
11. The minimum stack height for the discharge of exhaust emissions from the cremator shall be eight metres above ground level.
12. The cremator shall be operated so that the temperature within or at the outlet from the secondary chamber exceeds 750°C at all times that a cremation is taking place (i.e. from the moment of introduction of a casket into the primary chamber). If the temperature within or at the outlet from the secondary chamber falls below 750°C while a cremation is taking place, the operator shall take all practicable steps or the controls shall be automatically set so as to return and maintain the temperature to or above 750°C.
13. The cremator shall maintain both a primary combustion and a secondary combustion zone. The secondary chamber shall be sized so as to have a minimum residence time of 1.57 seconds at 750°C. The consent holder shall provide certified 'as-built' drawings and calculations demonstrating compliance with this condition to the Chief Executive, Taranaki Regional Council, prior to exercise of the consent.
14. In any one cremation cycle not more than two one-minute averages of the opacity readings shall exceed 20% obscuration or Ringelmann Scale 1.
15. The concentration of carbon monoxide at the outlet from the secondary combustion chamber shall not exceed 100 mg/m³ (expressed at reference conditions 0°C and 101.3 kPa).
16. The consent holder shall continuously record the opacity in the exhaust gases at the outlet of the secondary chamber or exhaust ducting.
17. The consent holder shall continuously record the temperature of gases within or at the outlet of the secondary chamber.
18. The consent holder shall maintain the schedule of maintenance and calibration of the cremator including but not limited to its controlling, recording, and monitoring equipment and systems.
19. 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.
20. The consent holder shall control all emissions to the atmosphere from the site of contaminants other than those expressly provided for under special condition 19, in order that they do not individually or in combination with other contaminants cause a hazardous, noxious, dangerous, offensive or objectionable effect at or beyond the boundary of the property.

Consent 7147-2.0

21. The discharges authorised by this consent shall not give rise to an odour at or beyond the boundary of the site that is offensive or objectionable.
22. For the purposes of special conditions 20 and 21, 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 ten (10) minutes continuously, or it occurs frequently during a single period of more than one (1) hour; 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 Taranaki Regional Council is satisfied that the declarations are not vexatious and that the objectionable or offensive odour was emitted from the site at the frequency and duration specified in (b). Each declaration shall be signed and dated and include:
 - i. the individuals' names and addresses;
 - ii. the date and time the objectionable or offensive odour was detected;
 - iii. details of the duration, frequency, intensity and nature of the odour that cause it to be considered offensive or objectionable;
 - iv. the location of the individual when it was detected; and
 - v. the prevailing weather conditions during the event.
23. At the written request of the Chief Executive, Taranaki Regional Council, the consent holder shall undertake emission test on discharges from the cremator. This emission testing shall:
 - a. be undertaken for all pollutants that are requested to be tested in writing by the Chief Executive, Taranaki Regional Council, for the volumetric flow of combustion gases, and for the oxygen concentration at the exit of the secondary chambers and at the test ports;
 - a. for each sample, be conducted over a complete cremation cycle, commencing as soon typical operating conditions have achieved, ending once calcining is complete, and over a period of at least one hour; and
 - b. comprise not less than three separate samples for each type of emission test undertaken, and shall have the concentration results corrected to 0 (zero) degrees Celsius, 1 (one) atmosphere pressure and on a dry gas basis.
24. The consent holder shall provide to the Chief Executive, Taranaki Regional Council, upon request, all monitoring (including results of all tests, relevant operating parameters, raw data, all calculations, assumptions and an interpretation of the results), and calibration and process control data whether generated and held by an operator, any automated process control systems or any agent of the consent holder.

Consent 7147-2.0

25. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2020 and/or June 2026 for the purpose of:
- a) adding, amending or deleting any limit on discharge or ambient concentrations of any contaminant or contaminants; and/or
 - b) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment caused by any discharge to the environment; and/or
 - c) requiring the consent holder to calibrate and/or maintain any monitoring and/or recording device to monitor combustion conditions or environmental performance of the cremator including but not limited to devices for the measurement and/or recording of oxygen and/or carbon monoxide within the secondary combustion chamber and/or exhaust stack; and/or
 - d) ensuring that the conditions are adequate to deal with any adverse effects of the discharge on the environment arising from the exercise of this consent which were 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 May 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: Tegel Foods Limited
Private Bag 2015
NEW PLYMOUTH 4340

Decision Date
(Review): 30 July 2012

Review Completed
Date: 30 July 2012 (Granted: 30 March 2009)

Conditions of Consent

Consent Granted: To discharge stormwater from a poultry processing plant
via a wetland into the Mangati Stream at or about (NZTM)
1700060E-5678081N

Expiry Date: 1 June 2026

Review Date(s): June 2012, June 2014, June 2020

Site Location: 91-95 Paraitē Road, Bell Block

Legal Description: Lot 1 DP 10331 Pt Sec 14 Blk II Paritutu SD
(Discharge source & site)

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 the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from a catchment area not exceeding 2.6 hectares.
3. All stormwater shall be directed for treatment through the stormwater treatment system, which includes a wetland of approximately 6224 m², for discharge in accordance with the special conditions of this permit. The consent holder shall regularly inspect and maintain the wetland to ensure that it provide the necessary stormwater treatment at all times.
4. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not directly to the stormwater catchment.
5. Constituents of the discharge from the wetland shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
Unionised ammonia	Concentration not greater than 0.025 gm ⁻³
BOD	Concentration not greater than 15gm ⁻³
Oil and grease	Concentration not greater than 15 gm ⁻³
pH range	Within the range 6-9
Suspended solids	Concentration not greater than 100 gm ⁻³

This condition shall apply at the point at which the discharge exits the wetland, at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

6. The discharge, from the point at which the flow from the wetland enters the Mangati Stream, 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 discharge, either by itself or in combination with other discharges shall not cause the concentration of filtered carbonaceous 5 day BOD to exceed 2 gm^{-3} in the Mangati Stream.
8. The wetland shall be maintained to a standard that ensures maximum effluent treatment, to the satisfaction of the Chief Executive, Taranaki Regional Council.
9. The consent holder shall complete all fencing and riparian planting in accordance with Riparian Management Plan [RMP450] before 31 December 2010.
10. 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.
11. The consent holder shall maintain a stormwater management plan. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
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, which could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.

Consent 7389-1

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 2012 and/or June 2014 and/or June 2020; and/or
 - 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 30 July 2012

For and on behalf of
Taranaki Regional Council

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: TIL Freight Limited
Private Bag 2039
New Plymouth 4342

Decision Date: 20 April 2010

Commencement Date: 20 April 2010

Conditions of Consent

Consent Granted: To discharge stormwater from a truck depot into the Mangati Stream

Expiry Date: 01 June 2026

Review Date(s): June 2020

Site Location: 24-26 Paraita Road, Bell Block

Legal Description: Lot 1 DP 9791 Pt Lot 1 DP 330342

Grid Reference (NZTM) 1699264E-5678299N and/or 1699239E-5678364N and/or
1699149E-5678391N

Catchment: Mangati

*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 2.60 ha.
3. Any significant volumes of hazardous substances [e.g. bulk fuel, molasses] 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.
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 & grease	Concentration not greater than 15 gm ⁻³
Biochemical oxygen demand	Concentration not greater than 7 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 20 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 Mangati Stream:
 - 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, which shall be reviewed at not more than 2 yearly intervals. 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.

Consent 7578-1

7. The consent holder shall maintain a stormwater management plan, which shall be reviewed at not more than 2 yearly intervals. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
- a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.

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 worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
9. This consent shall lapse on 30 June 2015, 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.
10. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
- a) during the month of June 2012 and/or June 2014 and/or June 2020; 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.

Transferred at Stratford on 11 December 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: Barton Holdings Limited
PO Box 7021
Fitzroy
New Plymouth 4341

Decision Date: 31 May 2011

Commencement Date: 31 May 2011

Conditions of Consent

Consent Granted: To discharge stormwater into the Mangati Stream

Expiry Date: 1 June 2026

Review Date(s): June 2020 and/or within 3 months of receiving notification
under special condition 10

Site Location: 21 Paraita Road, Bell Block

Grid Reference (NZTM) 1699288E-5678418N

Catchment: Mangati

*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 0.464 ha.
3. By 31 July 2011 all stormwater from the loading/unloading areas shall be directed through the stormwater diversion system.
4. Any significant volumes of hazardous substances [e.g. bulk fuel, liquid stock feeds] 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
5 day total biochemical oxygen demand	Concentration not greater than 25 gm ⁻³
total available chlorine	1 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 20 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. After allowing for reasonable mixing, within a mixing zone extending 20 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to a filtered carbonaceous biochemical oxygen demand in the Mangati Stream exceeding 2 gm⁻³.

Consent 7707-1

8. By 31 July 2011 the consent holder shall provide, and thereafter maintain, a satisfactory 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.
9. By 31 July 2011 the consent holder shall provide, and thereafter maintain, a satisfactory 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.

10. 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.
11. 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.
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 2014 and/or June 2020; and/or
 - b) within 3 months of receiving a notification under special condition 10 above;for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Transferred at Stratford on 6 April 2018

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: J Swap Contractors Limited
PO Box 153
Matamata 3440

Decision Date: 7 October 2015

Commencement Date: 7 October 2015

Conditions of Consent

Consent Granted: To discharge stormwater from a transport depot into an unnamed tributary of the Mangati Stream

Expiry Date: 1 June 2032

Review Date(s): June 2020, June 2026 and in accordance with special condition 16

Site Location: 88 Corbett Road, Bell Block

Legal Description: Lot 1 DP 19102 Blk II Paritutu SD & Lot 1 DP 365852
(Discharge source & site)

Grid Reference (NZTM) 1700503E-5678062N

Catchment: Mangati

*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. This includes but is not limited to the minimisation of product being tracked or spilt within the stormwater catchment areas.
2. The stormwater discharged shall be from an area not exceeding 5.2 Ha
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 at a point below the manhole/scruffy dome inlet, prior to the stormwater entering the existing piped gully network (at NZTM 1700503E-5678062N), shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
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
carbonaceous biochemical oxygen demand	Concentration not greater than 5.0 gm ⁻³

5. The consent holder shall maintain safe and reasonable foot access to the site described in condition 4, so that samples of the discharge may be taken.
6. At a point 20 metres downstream of the confluence with the Mangati Stream (grid reference NZTM 1699964E-5678256N) the discharge shall not cause 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 and;
 - f) an unionised ammonia concentration greater than 0.025 g/m³.

Consent 10085-1.0

7. Before 15 December 2015, the consent holder shall submit the final stormwater system design for Stage One of the proposal and preliminary proof of concept designs for all planned stages of development, to the Chief Executive, Taranaki Regional Council. The design shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity, and shall:
 - a) be prepared by a suitably qualified professional engineer;
 - b) provide sufficient storage for a 1% AEP rainfall event less the pre-development flow (with allowance for climate change to 2090);
 - c) ensure that in rainfall events up to 1% AEP all discharges are made through designated detention ponds (with allowance for climate change to 2090);
 - d) ensure that discharges to the Mangati Stream are no greater than the pre-development flow rate; and
 - e) indicate how and where flow from over design events leaves the property in a controlled manner.
8. Before 31 May 2016 the consent holder shall construct Stage One of the stormwater system in accordance with the design required by condition 7.
9. As-built plans shall be certified by a Chartered Professional Engineer (CPEng) as being in accordance with the design plans certified in accordance with condition 7 and a copy of the as-built certification shall be submitted to the Chief Executive, Taranaki Regional Council, within 10 working days of completion of the works.
10. Before commencing any development beyond stage one, a final stormwater system design will be submitted to, and be approved by, the Chief Executive, Taranaki Regional Council, acting in a certification capacity, and shall:
 - a) be prepared by a suitably qualified professional engineer;
 - b) provide sufficient storage for a 1% AEP rainfall event less the pre-development flow (with allowance for climate change to 2090);
 - c) ensure that in rainfall events up to 1% AEP (with allowance for climate change to 2090) all discharges are made through designated detention ponds; and
 - d) ensure that discharges to the Mangati Stream are no greater than the pre-development flow rate.
11. As-built plans of the stormwater system for each subsequent stage of development shall be certified by a Chartered Professional Engineer (CPEng) as being in accordance with the design plans certified in accordance with condition 9 and a copy of the as-built certification shall be submitted to the Chief Executive, Taranaki Regional Council, within 10 working days of completion of the works.
12. By 15 December 2015 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 loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping;
 - d) management and maintenance of the truck wash grit trap and first flush diversion system;
 - e) the maintenance and management of all treatment systems; and
 - f) the minimisation of tracked and spilt product within stormwater catchment areas.

Consent 10085-1.0

13. By 15 December 2015, shall submit 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 kept up to date and be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.
14. 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.
15. This consent shall lapse on 31 December 2020, 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.
16. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
 - a) during the month of June 2020 and/or June 2026;
 - b) within 3 months of receiving a notification under special condition 14 above;

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

Signed at Stratford on 7 October 2015

For and on behalf of
Taranaki Regional Council

A D McLay
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	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> - 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
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> (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			

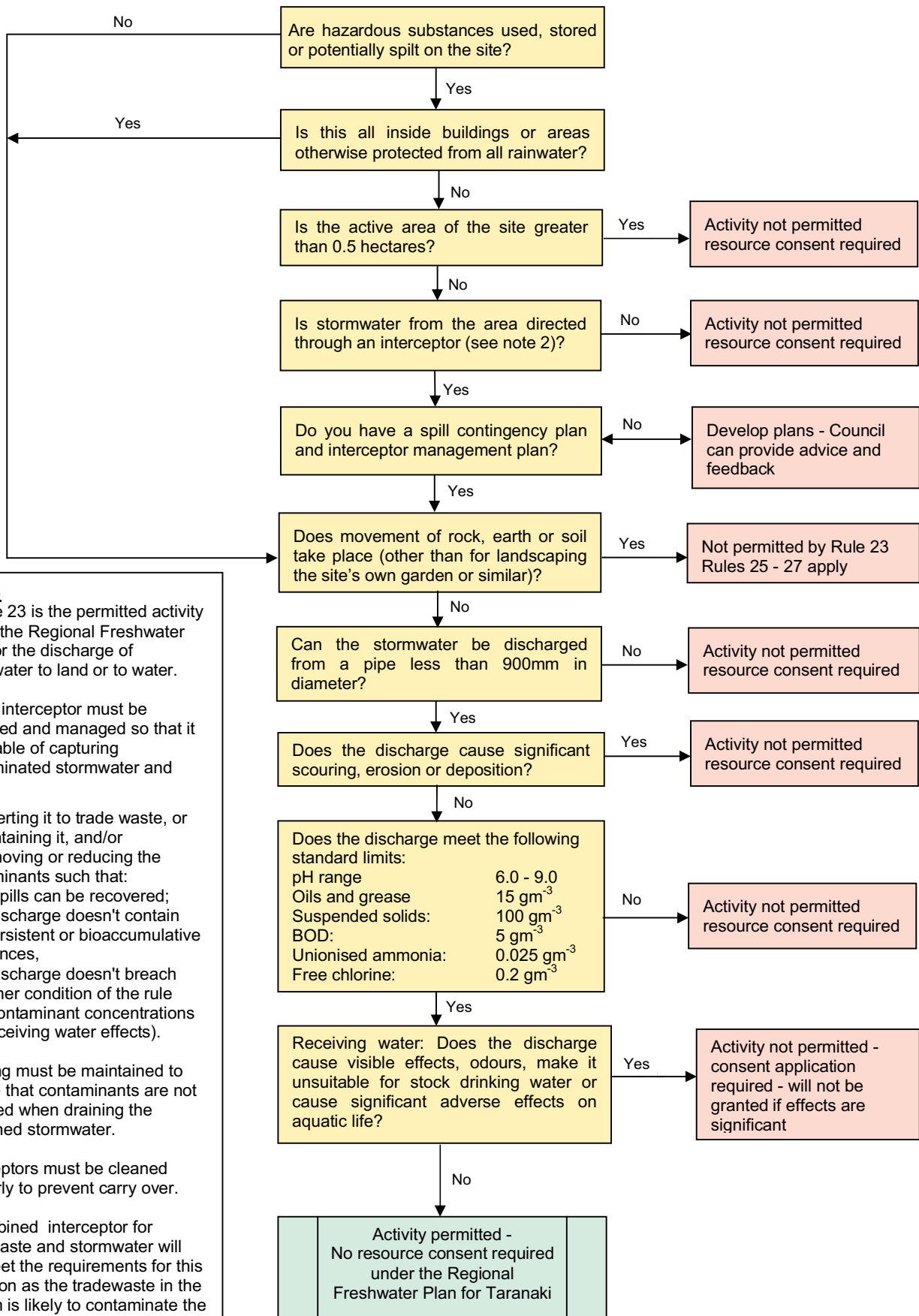
Explanation

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.