Mangati Catchment

Joint Monitoring Programme

Annual Report

2019-2020

Technical Report 2020-77

Working with people | caring for Taranaki

Taranaki Regional Council

Taranaki Regional Council
Private Bag 713
Stratford

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Executive summary

This report is the Annual Report for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with 14 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 III) 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 2019-2020 monitoring period a total of one water abstraction consent, 16 water discharge consents, four air discharge consents and one discharge to land consents were held by industries in this catchment. This report covers the results and findings during this monitoring period for these 22 consents, which contain a total of 227 special conditions that the consent holders must satisfy. It represents the 23rd report produced by Council to cover water discharges by industries within the catchment and their effects, and is the thirteenth 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 52 site inspections, discussions with site operators over site management, 47 discharge samples, 12 receiving water samples, 16 macroinvertebrate samples, and several 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.

Receiving water monitoring results for the year were generally in line with historical ranges, and the trend of increased BOD results at the top of the catchment, as noted in the previous monitoring year, appears to have been short-lived. It appears that there may also be an emerging trend of reducing metals concentrations, particularly in dissolved copper and zinc, at the site below pond 4 and the bypass drain, as well as at the coast.

During the period under review, the instream dissolved zinc and copper concentrations met the appropriate USEPA acute or chronic exposure guidelines in 11 of the 12 samples. None of the 12 instream samples taken during the period under review exceeded the 0.025 g/m^3 Regional Freshwater Plan unionised ammonia guideline or the 0.9 g/m^3 total ammonia national guideline.

Overall, the results of biological surveys indicated that macroinvertebrate health was generally ‘poor’ for the surveyed sites in the Mangati Stream and this was attributed to discharges to the stream which had a significant negative impact on the macroinvertebrate communities present.

There were 10 substantiated non-compliances recorded in the Mangati catchment during the period under review, eight 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, Barton Holdings Limited demonstrated a high level of environmental and administrative performance and compliance with their resource consent defined in Section 1.1.4.

During the year, First Gas Ltd demonstrated a high level of environmental and administrative performance with their resource consent.

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

During the year, J Swap's level of environmental and administrative performance were both high as defined in Section 1.1.4.

During the year, McKechnie Aluminium Solutions Ltd demonstrated a good level of environmental performance and compliance with their resource consent. The Company demonstrated a high level of administrative performance.

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

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 demonstrated a high level of environmental and administrative performance and compliance with their resource consents.

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

During the year, an improvement was required from Tegel Foods Ltd (feed mill) in regards to environmental performance and compliance with their resource consents. A high level of administrative performance was demonstrated as defined in Section 1.1.4.

Overall, during the period under review, an improvement was required in Tegel Foods Ltd (poultry processing plant) level of environmental performance and compliance with their resource consents. There were ongoing issues in regards to site management and this resulted in an infringement fine being issued. A high level of administrative performance was demonstrated as defined in Section 1.1.4.

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

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 continue to follow up with these situations at the end of the period under review.

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

This report includes recommendations for the 2019-2020 year.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the Annual Report for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) on the monitoring programme associated with 22 resource consents held by companies within the Mangati catchment. It is the 23rd 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. The total catchment area is approximately 6.1 km^2. 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, boarders the stream immediately below the industrial area. The beach at the mouth of the stream is also a popular recreational area.

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 though annual programmes;
- the resource consents held by the 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 2020-2021 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 an activity, and may include cultural and social-economic effects;
b. physical effects on the locality, including landscape, amenity and visual effects;
c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
e. risks to the neighbourhood or environment.

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

1.1.4 Evaluation of environmental and administrative performance

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

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

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

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

Environmental Performance

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

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

For example:

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

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

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

Administrative performance

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

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

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

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

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.[1]

1.1.5 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 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.

Stormwater discharge consents have standardised special conditions that:

- Requires the consent holder to adopt best practice.
- Limits the area from which stormwater can be discharged.
- Requires the use of a stormwater treatment system.
- Places limits on constituents of the discharge, with specific regard to pH, suspended solids and oil and grease.
- Requires that the discharge does not cause certain effects in the receiving waters.

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

- Requires that the consent holder maintain a spill contingency plan to ensure that in the event of an unforeseen situation, the chances of a spillage resulting in an unauthorised discharge leaving the site are minimised.
- Requires that the consent holder maintain and adhere to a management plan to ensure that the consent holder examines the activities taking place on site, and puts appropriate controls in place to minimise the potential for stormwater contamination to occur due to routine activities to ensure that the consent holder examines the activities taking place on site, and puts appropriate controls in place to minimise the potential for stormwater contamination to occur due to routine activities.
- Requires the consent holder to notify Council prior to making any changes to the site or site processes.
- Provide for lapse and review of the consent.

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 2026	1 June 2032
Barton Holdings Ltd	7707-1	To discharge stormwater into the Mangati Stream	31 May 2011	-	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	-	1 June 2026
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 2026	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	-	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	-	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 2026	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
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

Consent holder	Resource consent	Purpose	Granted	Next review date	Expiry date
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 2023	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 2023	1 June 2026
	7389-1	To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream	30 March 2009	-	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	-	1 June 2026
Air discharge permit					
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	-	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 2026	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 2026	1 June 2032
Discharges of waste to land					
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 2026	1 June 2032
Water abstraction permits					
Tegel Foods Ltd (Poultry Plant)	6357-1*	To take and use groundwater from a bore for food processing and washdown purposes *Note: this consent was not exercised and lapsed in May 2020	20 May 2005	-	1 June 2038

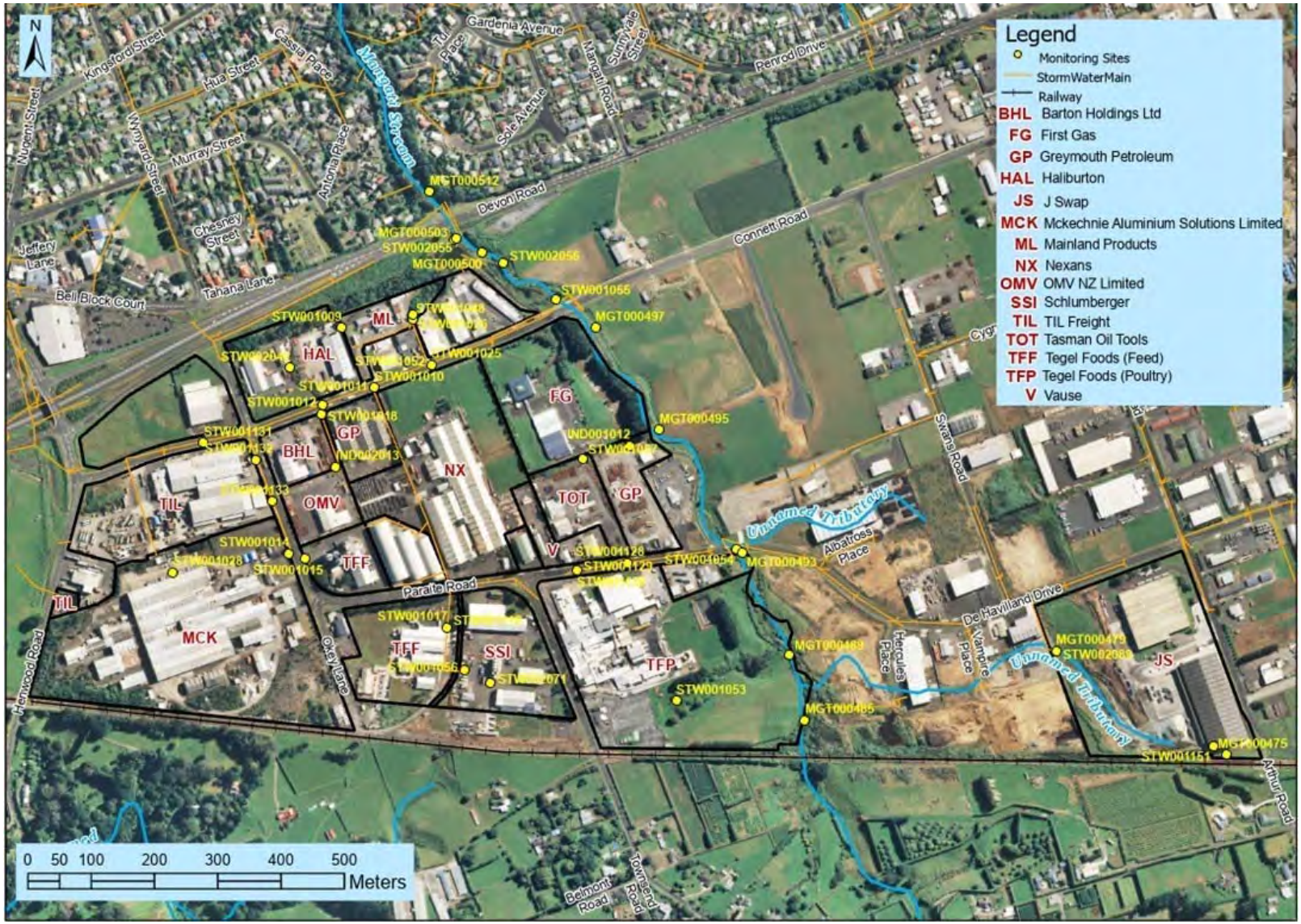

Figure 2 Location of consent holders, discharge sites, and surface water monitoring sites

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 an officer of the Council carried out a total of 52 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 particular 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 three surveys were performed. A reduced wet weather run was undertaken on 30 September 2019, with a full run carried out on 4 June 2020. A dry weather survey was undertaken on 31 January 2020. Discharge samples are also collected where possible during wet weather inspections.

Overall 47 discharge samples and 12 receiving water samples were taken during the 2019-2020 period.

In relation to the monitoring of air emissions, the Council undertook odour surveys in the neighbourhood of the site inspected and 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 2018-2019 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 31 October 2019 and 10 February 2020.

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 one was due to be undertaken during the 2019-2020 monitoring period. As a result of the Covid-19 lockdown, this has since been re-scheduled for the 2020-2021 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 2019-2020 period the Council continued to maintain a hydrological and meteorological recording station at the bottom of the industrial catchment. This site had been fitted with a multi parameter sonde for the continuous monitoring of pH, conductivity, turbidity, dissolved oxygen and dissolved organic matter during the 2016-2017 period.

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 30 September and 28 November 2019, and 20 March and 3 June 2020.

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

During the 2017-2018 and 2018-2019 monitoring periods 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. Two abatement notices were issued to BHL during the 2018-2019 period.

During the current monitoring period management of the site was significantly improved, with the site found to be neat and tidy during all inspections. Little or no tracking was observed and all chemicals were noted as being stored appropriately.

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 three times during the year. However a sample was only collected on one of these visits as no discharge was occurring on the other two occasions.

The results of the chemical monitoring for this site are given in Table 2.

Table 2 Chemical monitoring results for BHL stormwater discharge, site STW001138

Parameter	BOD	Conductivity	Oil and Grease	pH	Suspended solids	Temp.	Turbidity
Unit	g/m³	mS/m@25°C	g/m³	pH	g/m³	Deg.C	NTU
30 Sep 2019 (w)	2.8	8.9	< 4	7.5	6	13.6	4.2
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	nd	nd	nd	nd	nd	nd	nd
Consent Limit	*25*	-	*15*	*6-9*	*100*	-	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The sample taken on 30 September complied with consent conditions at the time of sampling.

2.2.3 Investigations, interventions, and incidents

During the period under review, the Council was not required to undertake enforcement action, in association with BHL's conditions in resource consents or provisions in Regional Plans.

2.3 Discussion

2.3.1 Discussion of site performances

The significant and persistent issues noted at the site during the 2017-2018 and 2018-2019 periods appeared to have been resolved during the current monitoring period, especially in regards to contamination in stormwater drains, lack of maintenance of mitigation measures, and tracking of product. The site was found to be well managed during all inspections.

2.3.2 Environmental effects of exercise of consents

The stormwater discharge sample taken during the period under review was found to be compliant with the limits set by the consent.

2.3.3 Evaluation of performance

A tabular summary of BHL's compliance record for the year under review is set out in Table 3.

Table 3 Summary of performance for BHL 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	Yes
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	Yes
5. Limits on chemical composition of discharge	Discharge sampling	Yes
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	Received	Yes – plan due for update

Purpose: *To discharge stormwater into the Mangati Steam*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
9. Provision (by 31 July 2011), maintenance and adherence to stormwater management plan	Received	Yes – plan due for update
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	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

During the year, Barton Holdings Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent defined in Section 1.1.4.

2.4 Recommendation from the 2018-2019 Annual Report

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

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.

Recommendation one was implemented, while additional monitoring was not required as per recommendation two. A review of consent conditions was not undertaken as per recommendation three, however an assessment of sampling point access and safety was carried out as part of a separate TRC investigation, and the issue was addressed during this.

2.4.1 Alterations to monitoring programmes for 2020-2021

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

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

- reporting to the regional community.

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

It is proposed that for 2020-2021 that the monitoring programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

2.5 Recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Barton Holdings Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

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. Although the stormwater discharge from this site is consented, up to the end of the 2003-2004 monitoring period the consent holder had not been included in the compliance monitoring programme for the Mangati Catchment.

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 additional inspections are carried out on occasions 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 30 September 2019 and 31 January 2020.

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

The site was found to be neat and tidy with no issues noted during inspections. The truck wash area was not in use during any visits, and showed no sign of recent discharge.

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 resource consents or provisions in Regional Plans.

3.3 Discussion

3.3.1 Discussion of site performance

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

3.3.2 Environmental effects of exercise of consent

There were no adverse 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' compliance record for the year under review is set out in Table 4.

Table 4 Summary of performance for First Gas 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	Yes
2. Specifies catchment area	Inspection	Yes
3. Require treatment of vehicle wash water	Wash bay decommissioned	N/A
4. Limits on chemical composition of discharge	Visual inspection	Yes
5. Sampling of wash water	Wash bay decommissioned	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	No review option until June 2020	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

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

3.3.4 Recommendations from the 2018-2019 Report

In the 2018-2019 Report, it was recommended:

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.

Recommendations one and three were implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

3.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the monitoring programme remains at a similar level as that for the 2019-2020 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 2020-2021.

3.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of First Gas Ltd's site in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

4 Greymouth Petroleum Acquisition Company Ltd

4.1 Introduction

4.1.1 Process description

Greymouth Petroleum Acquisitions Company Ltd's (Greymouth Petroleum) pipe 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 has been used for cleaning and preservation of casing and drill pipe.

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 Tools 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 14 August and 16 September 2019, and 23 March and 27 May 2020.

Inspections focused 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 well managed.

During the inspection on 23 March 2020 it was noted that the processing of synthetic based drilling muds was occurring onsite to remove excess mud and reduce mud weight. Equipment had been positioned within the bulk storage bund, and a D-tank had been placed onsite to store the excess mud. Sawdust was being mixed in before the mud was transported offsite for disposal. Spilled mud was noted on the ground around the area. This activity had not been noted during previous inspections, and an explanation was requested from the Company as the process was also not included in the current management plan for the site.

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 three times for sampling during the period under review. Discharge was occurring during one of the wet weather runs, while there was no discharge on the other two occasions (Table 5).

Table 5 Chemical monitoring results for Greymouth Petroleum's stormwater discharge, site IND001012

Parameter	Conductivity	Acid Soluble Copper	Dissolved Copper	Oil and Grease	pH	Suspended solids	Temp.	Acid Soluble Zinc	Dissolved Zinc
Unit	mS/m@25°C	g/m³	g/m³	g/m³	pH	g/m³	Deg.C	g/m³	g/m³
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	12.8	<0.010	<0.010	< 0.7	6.9	< 3	13.8	0.03	0.03
Consent Limit		-		*15*	*6-9*	*100*	-		-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

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 that they may become entrained in stormwater and discharged offsite.

4.2.3 Investigations, interventions, and incidents

Table 6 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to GPL's activities during the 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 6 Incidents, investigations, and interventions summary table - Greymouth Petroleum

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
23 March 2020	During a routine inspection it was found that an activity at the site was being undertaken that was not covered by the site management plan	N	Explanation requested	Site management plan reviewed and updated to include the activity

4.3 Discussion

4.3.1 Discussion of site performance

In general, the site was tidy and well managed for the monitoring year under review. An inspection in March 2020 found that a new method of screening drilling muds was being carried out onsite, and this activity was not covered by the site management plan at the time. Following consultation with TRC staff and a letter of explanation, a detailed review was carried out of the current activities and mitigation measures that occur onsite. The environmental management plan for the site was subsequently updated to better reflect this.

4.3.2 Environmental effects of exercise of consent

Receiving environment monitoring found no increases in metals concentrations were noted 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/m^3.

In previous years increases in turbidity and suspended solids have been 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 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	Yes
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	**No**
7. Plan to be reviewed on request from Council or prior to changes at the site	Updated document supplied June 2020	Yes
8. 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 Overall assessment of administrative performance in respect of this consent		**High** **Good**

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

4.3.4 Recommendation from the 2018-2019 Annual Report

In the 2018-2019 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 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.

Recommendations one was implemented during the 2019-2020 monitoring period, while additional investigations or interventions were not considered necessary as per recommendation two. A review of the consent as per recommendation three was completed in August 2020 and this will be discussed in the annual report for 2020-2021.

4.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the monitoring programme remains at a similar level to that carried out in 2019-2020. 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 2020-2021.

4.4 Recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Greymouth Petroleum Acquisitions Company Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

5 J Swap Contractors Ltd

5.1 Introduction

5.1.1 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.

5.2 Results

5.2.1 Inspections

The site was visited on 23 October and 28 November 2019, and 20 March and 8 June 2020.

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

The site was observed to be neat and tidy during all inspections. Washwater from the truck wash was being captured and directed to the separator for disposal to tradewaste. Sweeping was being undertaken regularly and there was no sign of product tracking out of the sheds or offsite. The stormwater drains were clear and free-flowing, and the filter socks in each drain were in good condition.

5.2.2 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 unnamed tributary of Mangati Stream that is piped alongside the yard (site STW001151). Water from the other areas of the yard are directed to the onsite treatment wetland before being discharged via decanters to the piped tributary (site STW002089).

The sampling sites were visited three times during the year, twice during wet weather and once during dry weather. The wetland generally operates at a very low level, and no discharges were occurring during any visit at STW002089, whilst STW001151 was discharging during one of the wet weather surveys. The results from chemical monitoring are given in Tables 8 and 9.

Table 8 Results from monitoring of stormwater from J Swap wetland, 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
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	nd	nd	nd	nd	nd	nd	nd

Parameter	BODC	Conductivity	Oil and Grease	pH	Suspended solids	Unionised ammonia	Temp.
Units	**g/m³**	**mS/m@25°C**	**g/m³**		**g/m³**	**g/m³**	**Deg.C**
Consent Limits	*5*	-	*15*	*6-9*	*100*	*0.025**	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

Table 9 Results from monitoring of stormwater from J Swap roof, site STW001151

Parameter	BOD	Conductivity	Oil and Grease	pH	Suspended solids	Unionised ammonia	Temp.
Unit	**g/m³**	**mS/m@25°C**	**g/m³**	**pH**	**g/m³**	**g/m³**	**Deg.C**
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	2	9.8	a	6.8	< 3	0.000029	15.0
Consent limits	*5*	-	*15*	*6-9*	*100*	*0.025**	-

Key: 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

At the time of sampling, the discharges at site STW001151 complied with consent conditions. Unionised ammonia in the discharge was well below the allowable level in the receiving waters.

5.2.3 Investigations, interventions, and incidents

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

5.3 Discussion

5.3.1 Discussion of site performance

The site was observed to be neat and tidy during all inspections. These results demonstrate the continued improvement to general housekeeping and onsite practices that has been noted onsite since the 2018-2019 monitoring year.

5.3.2 Evaluation effects of exercise of consent

During the year under review, no adverse effects were detected in regard to J Swap's stormwater discharges. Water quality sampling results for the monitoring year indicate that stormwater is infrequently discharged from the site, and is of high quality when these discharges do occur.

5.3.3 Evaluation of performance

A tabular summary of J Swap's compliance record for the year under review is set out in Table 10.

Table 10 Summary of performance for J Swap 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	Yes
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	Sampling	Yes
7. Submit final stage one stormwater plans	Documents received	Yes
8. Construction as per plans	Construction completed	Yes
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. Notify Council prior to changes that could alter nature of discharge	Inspection and liaison with consent holder	Yes
15. Lapse of consent	Consent exercised	N/A
16. Review of consent	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

During the year, J Swap's level of environmental and administrative performance were both high as defined in Section 1.1.4.

5.3.4 Recommendation from the 2018-2019 Annual Report

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

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.

Recommendations one and three were implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

5.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains at a similar level to that of 2019-2020.

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 2020-2021.

5.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of J Swap Contractors Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

6 McKechnie Aluminium Solutions Ltd

6.1 Introduction

6.1.1 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 Paraite 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. 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 are 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.

6.2 Results

6.2.1 Inspections

The site was visited on 30 September and 25 November 2019, and 20 March and 3 June 2020.

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

An inspection was conducted on 25 November 2019 as a follow-up to the abatement notice issued on 1 November 2019 as a result of a spill onsite (refer to section 6.2.3 below). The inspection found that improvements had been made to the design of the outlet from the tank which should ensure that any future spills will be contained within the bunded area and reduce the risk of discharges offsite. The stormwater system was observed to be generally tidy and dry with no discharges offsite. However, it was noted that the covers to the separator were not fully sealed and it appeared that swarf was entering the treatment system at these points and becoming mobilised. The consent holder was asked to ensure that all drain covers were fully sealed and secure.

The site was observed to be generally clean and tidy, with no significant issues noted in the final two inspections of the year on 20 March and 3 June 2020.

6.2.2 Results of discharge monitoring

McKechnie's eastern stormwater is monitored primarily where it joins the Paraite 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 11 and Table 12.

Site STW001014 was visited three times during the period under review, twice during wet weather surveys and once during a dry weather survey. During the dry weather run no discharge was occurring and therefore no sample was 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 11 Chemical monitoring results for McKechnie's eastern stormwater discharge, site STW001014

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	Consent Limit
Acid soluble aluminium	g/m³	0.35	nd	0.69	-
Conductivity @25°C	mS/m	5.6	nd	5.0	-
Acid soluble copper	g/m³	0.055	nd	0.096	-
Dissolved copper	g/m³	0.030	nd	0.019	-
Acid soluble lead	g/m³	0.0040	nd	0.013	-
Oil and Grease	g/m³	< 0.7	nd	< 0.7	*15*
pH	pH	7.2	nd	6.4	*6-9*
Suspended solids	g/m³	6	nd	20	*100*
Temperature	Deg.C	14.5	nd	15.5	-
Turbidity	FNU	7.0	nd	5.4	-
Acid soluble zinc	g/m³	0.57	nd	0.38	-
Dissolved zinc	g/m³	0.52	nd	0.26	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

Site STW001028 was also visited three times during the year under review, twice during wet weather surveys and once during a dry weather survey. Samples were not collected on two occasions as no discharge was

occurring. Compliance was achieved with consent limits for pH and oil and grease in the sample collected on 4 June 2020, however a suspended solids result of 230 g/m^3 was over the 100 g/m^3 consent limit. Further investigation found that sediment deposited on the base of the pipe had potentially been disturbed by the sample collection process and was overrepresented in the sample results.

Table 12 Chemical monitoring results for McKechnie's northern stormwater and cooling water, site STW0001028

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	Consent Limit
Acid Soluble Aluminium	g/m^3	nd	nd	3.3	-
Conductivity @ 25°C	mS/m	nd	nd	14.9	-
Acid Soluble Copper	g/m^3	nd	nd	1.04	-
Dissolved Copper	g/m^3	nd	nd	0.084	-
Oil and Grease	g/m^3	nd	nd	< 0.7	15
pH	pH	nd	nd	8.8	6-9
Suspended solids	g/m^3	nd	nd	**230**	100
Temperature	Deg.C	nd	nd	15.8	-
Turbidity	FNU	nd	nd	196	-
Acid Soluble Zinc	g/m^3	nd	nd	4.9	-
Dissolved Zinc	g/m^3	nd	nd	0.16	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

6.2.3 Investigations, interventions, and incidents

Table 13 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to McKechnie's activities during the 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 13 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
18 October 2019	Self-notification was received regarding a spill of spent caustic soda. Investigation found that the spill had resulted from a hose disconnecting while spent caustic was being transferred to a tanker for disposal offsite. Staff onsite stopped and contained the spill using absorbent materials, before engaging a contractor who diluted and remove any caustic using a vacuum truck. The spill was not discharged to	N	Abatement notice	There was concern that best practice is not being followed onsite as required by resource consent conditions. An abatement notice was issued requiring compliance with resource consent conditions. Re-inspection found that the abatement notice was being complied with at the time of inspection

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
	the stormwater system, and no effects on the receiving environment were noted at the time of inspection			

6.3 Discussion

6.3.1 Discussion of site performance

Inspections found that the site was generally well managed during the period under review. There was one minor spill which the consent holder notified the Council of, and follow-up inspections found that appropriate action had been taken and that no further issues had arisen as a result of onsite activities.

6.3.2 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.

Whilst there were measureable increases in dissolved copper and zinc in the receiving water below the pond's outlets, no significant adverse effects were noted.

6.3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 14.

Table 14 Summary of performance of McKechnie 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**
2. Consent to be exercised in accordance with application information	Inspection and discussion with consent holder	Yes
3. Limit on stormwater catchment	Inspection	Yes
4. Discharge cannot cause specified adverse effects beyond mixing zone	Observation and receiving water sampling	Yes
5. Limits on chemical composition of discharge	Discharge sampling	Mostly – elevated suspended solids linked to sample collection process
6. Maintenance of a contingency plan	Updated plan received January 2018	Yes

Purpose: *To discharge stormwater (including cooling water) from an industrial site*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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	No further opportunity for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Good** **High**

N/A = not applicable or not assessed

During the year, McKechnie Aluminium Solutions 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.

6.3.4 Recommendation from the 2018-2019 Annual Report

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

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.

All three recommendations were implemented during the 2019-2020 monitoring period.

6.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the monitoring programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

6.4 Recommendation

1. THAT, in the first instance, monitoring programmed for consented activities of McKechnie Aluminium Solutions Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

7 New Plymouth District Council

7.1 Introduction

7.1.1 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 Paraite 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.

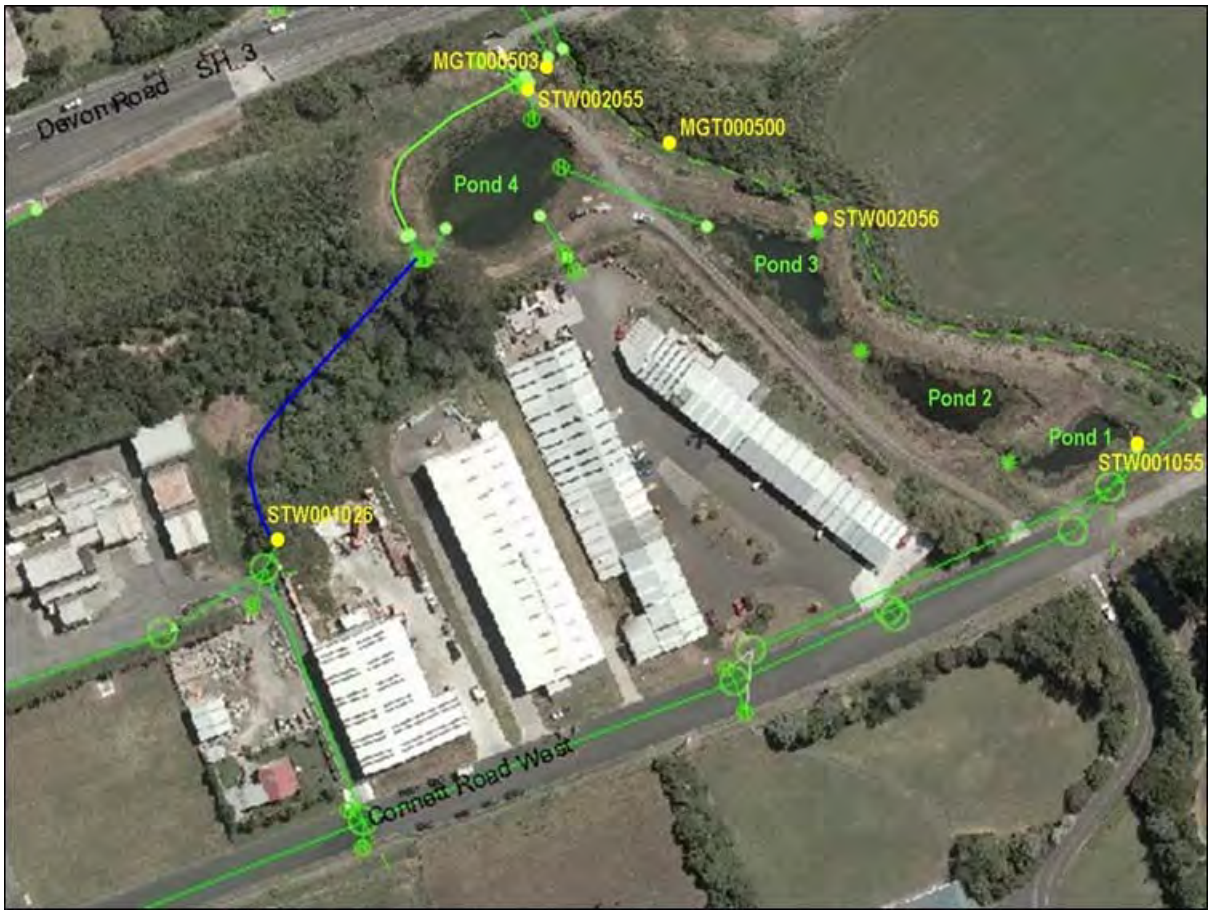

Figure 3 NPDC stormwater flow paths and sampling points

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 (Figure 3).

More recently, the eastern side of the Mangati catchment has been developed along de-Havilland Drive and Connett Rd. 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 Rd area discharges to land via rain cells buried under the grass verges with a 150 ml overflow pipe discharging to the stream. In heavy rain events further overflow is provided by grass swales on the road verge.

7.2 Results

7.2.1 Inspections

During the period inspections were undertaken in the area of the constructed ponds, and of the discharges to the Mangati Stream 30 July, 16 September, 30 September, and 28 November 2019, and 20 March, 23 March, 29 April, and 8 June 2020.

The inspections focused 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.

7.2.2 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 respectively). 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 discharges 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 MPC Kinetic Well Services workshop on the northern side of the road.

The results from chemical monitoring of stormwater from De Havilland Drive are given in Table 15, and indicate that the discharge is of good quality with all parameters complying with RFWP limits.

Table 15 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
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	1.9	10.2	0.029	< 0.7	6.8	9	15.5	0.00037
RWFP limits	*5*	-	-	*15*	*6-9*	*100*	-	*0.025*

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

7.2.3 Investigations, interventions, and incidents

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

7.2.3.1 NPDC Annual Reports

Annual reports are required from NPDC by the wastewater treatment plant consent. These reports summarise the sewage pump station and reticulation overflows, and also contain a summary of any upgrade works or investigations into infiltration issues undertaken by NPDC throughout the district.

Several minor sewage overflows in and around the reticulation network were reported, however these did not involve the Mangati Stream or its tributaries.

7.3 Discussion

7.3.1 Discussion of site performance

There were no issues noted with regards to the performance of the stormwater ponds during the 2019-2020 monitoring period.

7.3.2 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 copper and zinc 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 17 covering the combined discharges and Section 18 covering the Mangati Stream chemical monitoring.

7.3.3 Evaluation of performance

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

Table 16 Summary of performance for NPDC 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	No
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 Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

During the year, NPDC demonstrated a high level of environmental and administrative performance and compliance with their resource consent conditions as defined in section 1.1.4.

7.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

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 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains unchanged from that of 2019-2020.

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 2020-2021.

7.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of New Plymouth District Council in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

8 Nexans New Zealand Ltd

8.1 Introduction

8.1.1 Process description

The electric wire and cable manufacturing plant of Nexans New Zealand Ltd (Nexans) was established on Paraite 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 which is then used for cooling water.

Nexans also holds an air discharge consent 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.

8.2 Results

8.2.1 Inspections

The site was inspected on 30 September 2019 and 31 January 2020.

The inspections focused 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. Staff onsite continue to demonstrate a high standard of housekeeping and general maintenance, and spill contingency equipment was clearly marked and available around the site and in high risk areas.

8.2.2 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 17 and Table 18.

The uppermost monitoring point was visited twice, once during a wet weather survey and once during a dry weather survey, however no discharge was occurring on either occasion.

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/m^3, suspended solids 7 g/m^3). The samples are therefore inspected visually and analysed for turbidity, with full suspended solids analysis to be undertaken if required.

Table 17 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**
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	nd	nd	nd	nd	nd	nd	nd	nd	nd
Consent limits	-	-	-	*15*	*6-9*	-	-	-	-

Key: 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.

Table 18 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**
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	nd	nd	nd	nd	nd	nd
Consent limits	-	-	*15*	*6-9*	-	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

8.2.3 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.

8.3 Discussion

8.3.1 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. Nexans continue to demonstrate an ongoing commitment to maintaining a high standard of site management, which is reflected in the consistently high quality of discharges from the site.

8.3.2 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.

8.3.3 Evaluation of performance

A tabular summary of Nexans compliance record for the year under review is set out in Table 19 and Table 20.

Table 19 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
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	No discharge during sampling runs during monitoring period	N/A
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

Purpose: *To discharge stormwater and cooling water*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
9. Provision for consent to lapse if not exercised	Consent has been exercised	N/A
10. Optional review provision re environmental effects and notifications of changes (S.C.9)	No further opportunity for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

Table 20 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
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	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **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.

8.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

Recommendations one and three were implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

8.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

8.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Nexans New Zealand Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

9 OMV New Zealand Ltd

9.1 Introduction

9.1.1 Process description

OMV New Zealand Ltd (OMV) currently 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. Any equipment returned from off-shore is washed off-shore if required, and is clean when it is returned to 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.

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.

9.2 Results

9.2.1 Inspections

The site was visited on 30 September 2019 and 31 January 2020.

The inspections focused 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.

9.2.2 Results of discharge monitoring

OMV's primary monitoring site is immediately below the oil separator that treats the site stormwater before it is discharged (IND002013). This site was visited on three occasions during the year with two samples collected during wet weather surveys. A sample was not collected during the dry weather survey as no discharge was occurring. The results from chemical monitoring at this site are given in Table 21.

Table 21 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
30 Sep 2019 (w)	2.2	6.3	< 0.7	6.5	43	12.8	0.136
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd

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**
4 Jun 2020 (w)	1.5	7.0	< 0.7	6.9	15	14.4	-
Consent Limits	*16*	-	*15*	*6-9*	*100*	-	*10*

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The discharge complied with consent conditions for ammoniacal nitrogen, BOD, pH range, oil and grease and suspended solids during the period under review.

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 OMV's conditions in resource consents or provisions in Regional Plans.

9.3 Discussion

9.3.1 Discussion of site performance

The site was well managed during the period under review, with no issues noted during inspections. General housekeeping and activities onsite were carried out to a high standard, and there were no spills or unauthorised materials noted during inspections.

9.3.2 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.

9.3.3 Evaluation of performance

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

Table 22 Summary of performance for OMV 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
4. Discharge cannot cause specified adverse effects beyond mixing zone	Inspections and sampling	Yes
5. Maintenance of a contingency plan for action to be taken to prevent spillage	Inspection	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?**
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	Next opportunity for review June 2026	Yes
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

During the year, 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.

9.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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 3913-3.1 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.

Recommendations one was implemented during the monitoring period, while additional monitoring, investigation or intervention was not considered necessary as per recommendation two. Although a review was not sought as per recommendation three, the consent has since gone through the review process in relation to the provision of a safe all-weather sampling point, this will be discussed in the 2020-2021 annual report.

9.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

9.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of OMV New Zealand Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

10 Schlumberger New Zealand Ltd

10.1 Introduction

10.1.1 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. Wash-down of drilling mud and occasionally oil residue from down-hole tools occurs onsite, and this water is discharged to the stormwater system following treatment in an onsite 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 m^3 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 Swaco 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 located outdoors and all stormwater and potential contaminants are captured and contained within the surrounding bunded area. 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, which minimises the potential of a spill occurring unnoticed. Sandbags and spill kits 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.

10.2 Results

10.2.1 Inspections

This site was inspected on 23 October 2019 and 31 January 2020.

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

The site was found to be tidy and well managed during both inspections with no issues noted. In general, the yards and surrounding area were kept clear and tidy of contaminants, and no spills or unauthorised discharges noted.

The rear yard was resealed with hot mix during the monitoring year, to minimise dust from heavy traffic movements. This unexpectedly prevented access to the stormwater sampling site, but this issue was quickly remedied after notifying staff onsite.

10.2.2 Results of discharge monitoring

The site is graded such that the majority of the stormwater from the consented LMP and office complex area exits the site at the southwest corner. This is monitored at STW002071. The discharge flows through a stormwater pipe passing through the rest of the Schlumberger site (site STW001056), and the ABB site (site STW001017). Stormwater from the adjacent site, formerly occupied by Mainfreight, exits the site at two points; at the middle of the western boundary of the site (STW001118) which joins the stormwater network on the ABB site, and at the northwest corner of the site to the Paraite Road stormwater drains. The results from chemical monitoring at site STW002071 are given in Table 23, and the results from the chemical monitoring at site STW001056 are given in Table 24.

Site STW001118 was not sampled during the period under review due to access issues as the former ABB site (on which the manhole is located) is now vacant.

Site STW002071 was visited on three occasions during the year, twice during wet weather surveys and once during a dry weather survey. No samples were able to be collected as no discharge was occurring during two of the surveys, while during one of the wet weather surveys access to the sampling site was prevented by equipment which was stored over the manhole.

Table 23 Chemical monitoring results for stormwater discharged from Schlumberger's LMP site, STW002071

Parameter	BOD	Conductivity	Oil and Grease	pH	Suspended solids	Temperature	Un-ionised ammonia
Unit	g/m³	mS/m@25°C	g/m³	pH	g/m³	Deg.C	g/m³
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	nd	nd	nd	nd	nd	nd	nd
Consent limit	*5*	-	*15*	*6-8*	*100*	-	*0.025*

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The majority of the stormwater and washdown water exit the site at monitoring point (STW001056) which is also affected by stormwater discharged from the area housing the LMP. The site was visited three times during the year, twice during wet weather and once during a dry weather. Samples were collected during one wet weather survey, while no discharge was occurring on the other two occasions. The results of this sampling are given in Table 24.

Table 24 Chemical monitoring results for Schlumberger's stormwater discharge site, STW001056

Parameter	Conductivity	Dissolved copper	Acid soluble lead	Oil and grease	pH	Suspended solids	Temp	Dissolved zinc
Unit	mS/m@25°C	g/m³	g/m³	g/m³		g/m³	Deg.C	g/m³
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	8.3	<0.010	<0.002	< 0.7	7.4	< 5	15.1	0.09
Consent limits	-	*0.05*	*0.02**	*15*	*6-9*	*100*	-	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey
* limit is for dissolved lead

The sample was within consented limits for dissolved copper, oil and grease, lead, pH, and suspended solids. Samples collected by the consent holder on 11 November 2019 also complied with consent limits for pH, oil & grease, dissolved copper, dissolved lead and dissolved zinc (the samples were not analysed for suspended solids).

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 Schlumberger's conditions in resource consents or provisions in Regional Plans.

10.3 Discussion

10.3.1 Discussion of site performance

The site was found to be generally neat and tidy and well managed with no issues noted during inspections. Activities onsite and general housekeeping continue to be carried out to a high standard, and there were no spills or uncontained contaminants noted during visits. This was reflected in the quality of the stormwater discharged off the site.

Updated management and contingency plans were received on 20 August 2019.

10.3.2 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.

10.3.3 Evaluation of performance

A tabular summary of Schlumberger's compliance record for the year under review is set out in Table 25 and Table 26.

Table 25 Summary of performance for Schlumberger 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	Yes
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

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?**
6. Preparation and maintenance of contingency plan re measures to prevent spillage or accidental discharge and avoid, remedy or mitigate effects	Updated plan received August 2019	Yes
7. Preparation and maintenance of stormwater management plan re measures to minimise contaminants in the stormwater	Updated plan received August 2019	Yes
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	Consent expired June 2020	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

Table 26 Summary of performance for Schlumberger 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	Inspection and discussion with consent holder.	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	Updated plan received August 2019	Yes
4. Maintenance of stormwater management plan	Updated plan received August 2019	Yes
5. Limits on chemical composition of discharge	Sampling	Yes
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	Updated plan received August 2019	Yes

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?**
8. Optional review provision re environmental effects and notifications of changes	Consent expired June 2020	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 Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

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

10.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

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

10.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains similar to that undertaken in the 2019-2020 year. It is also proposed that consent 5987-1 not be renewed, and instead the relevant special conditions be incorporated into the renewal of consent 6032, and this consent be updated to include the entire site. 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 2020-2021.

10.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Schlumberger New Zealand Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT the conditions for consent 5987 be incorporated into consent 6032 and the former allowed to expire.
3. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

11 Tasman Oils Tools Ltd

11.1 Introduction

11.1.1 Process description

Tasman Oil Tools Ltd (Tasman Tools) 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 Tools' 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 setting 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 First Gas 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 captured and directed 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.

11.2 Results

11.2.1 Inspections

Inspections were undertaken on 13 August and 16 September 2019, and 23 March and 1 May 2020.

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

The site was generally tidy and well managed with no significant issues noted during inspections.

11.2.2 Results of discharge monitoring

The primary monitoring site is at the discharge point from Tasman Tools' skimmer pit (site STW001057). Routine samples of the discharge were collected once during the period under review, while on one other occasion the site was visited no discharge was occurring. The results for the period under review are given in Table 27.

Table 27 Chemical monitoring results for Tasman Tools' 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/m³	g/m³	g/m³	g/m³		g/m³	Deg.C	g/m³	g/m³
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	8.2	0.040	<0.010	0.027	<0.7	8.2	62	13.6	0.08	<0.02
Consent limits	-	-	*0.05*	*0.5*	*15*	*6-9*	*100*	-	-	*0.65*

Key: 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.

11.2.3 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 Tools' conditions in their resource consent.

11.3 Discussion

11.3.1 Discussion of site performance

Tasman Tools generally maintained a good level of housekeeping during the year under review with no significant issues noted during inspections. Onsite works and activities were carried out to a high standard, with no evidence of spills or unauthorised discharges to the stormwater system noted during visits.

11.3.2 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 Tools' 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.

11.3.3 Evaluation of performance

A tabular summary of Tasman Tools' compliance record for the year under review is set out in Table 28.

Table 28 Summary of performance for Tasman Oil Tools 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
2. Yard washing records to be kept and provided to Council on request	Not requested during period under review	N/A
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
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	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

Purpose: *To discharge wash water and stormwater*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

N/A = not applicable or not assessed

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

11.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

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

11.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

11.3.6 Recommendation

1. THAT in the first instance, monitoring programmed for consented activities of Tasman Oil Tools Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.

2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

12 Tegel Foods Ltd – Feed Mill

12.1 Introduction

12.1.1 Process description

The New Plymouth feed mill of Tegel Foods Ltd (Tegel) has been in operation on their 1.6 ha site on Paraite 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 Paraite Road opposite the original feed mill site. The grain is transported across the road to the feed mill as required. This site currently operates under permitted activity rules.

12.2 Results

12.2.1 Inspections

The feed mill site was inspected on 19 August and 22 October 2019, and 23 March and 29 June 2020.

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

During the inspection on 19 August 2019 it was considered that the site was not adhering to the site Stormwater Management Plan due to tracking from the sheds which could lead to offsite effects. It was noted that in general other areas of the site were tidy with the exception of the area under the weighbridge which needed to be cleaned.

During the remaining inspections it was noted that in general good management practices were in place and areas of concern were found to be tidy and free of product. The inspecting officer noted some sewage fungus in low lying areas around the silos where water was pooling during the inspection on 29 June 2020. This fungus tracked to the stormwater sump and indicated nutrient-laden stormwater. Although this sump is captured by the first-flush system which initially directs stormwater to the trade waste system, there is concern that constant nutrient supply will exceed timeframes for trade waste and end up directed to the stormwater network. The consent holder was advised to ensure this area is regularly cleaned.

12.2.2 Results of discharge monitoring

Stormwater from the Tegel feed mill site discharges to the NPDC network and then to the NPDC wetlands. The stormwater enters the networks at two points; one is on Paraite 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 Paraite 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 29.

A sample was collected during a wet weather survey, while there was no discharge during the dry weather survey.

Table 29 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/m³ N	g/m³	g/m³	mS/m	g/m³	pH	g/m³	Deg.C	g/m³-N
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	0.012	116	10	6.1	<0.7	6.4	**250**	14.5	<0.000010
Consent limits	-	-	*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
nd not discharging at the time of sampling
(d) dry weather survey (w) wet weather survey

The sample collected complied with consent conditions for BOD, oil and grease, and pH. Suspended solids exceeded the consented limit, however no adverse effects were noted downstream and no further action was taken on this occasion. 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.

12.2.3 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.

Air discharge inspections were carried out on four occasions during the monitoring year, in conjunction with stormwater discharge monitoring site inspections.

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 for any of the inspections.

12.2.4 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 comprised of buckets elevated on a stand to a height of around 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/m^2/30 days or 0.13 g/m^2/day deposited matter. Consideration is given to the location of the industry and the sensitivity of the surrounding community, when assessing results against these values.

Deposition gauging is carried out triennially at the sites, this was last undertaken during the 2018-2019 monitoring period and is next scheduled during 2021-2022.

12.2.5 Investigations, interventions, and incidents

Table 30 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 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 30 Incidents, investigations, and interventions summary table, Tegel poultry processing plant

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
19 August 2019	Poor housekeeping on site was resulting in tracking of product into the yard, this was not considered best practice	N	Abatement notice	Re-inspection found the site to be compliant
27 November 2019	A complaint was received regarding odour from the site	Y	No	An assessment of odour at the complainants premise noted intermittent odours but these were not considered to be objectionable
12 February 2020	A complaint was received regarding odour from the site	Y	No	No odour was detected during an inspection

12.3 Discussion

12.3.1 Discussion of site performance

During the year under review there were some issues noted during the inspections, mainly regarding onsite housekeeping and tracking of feed mill material from the storage sheds. This resulted in product entering the stormwater system and affecting the quality of offsite discharges. More recent site visits have shown an improvement in site management and discharge quality.

12.3.2 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 suspended solids on one occasion, while all other parameters were within the consented limits. Sample results did not show any significant adverse effects in the Mangati Stream downstream of the site.

12.3.3 Evaluation of performance

A tabular summary of Tegel's compliance record for the year under review is set out in Table 31 and Table 32

Table 31 Summary of performance for Tegel 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	**No**
2. Limits stormwater catchment area	Inspections	Yes
3. Limits on chemical composition of discharge	Sampling of discharges	**No – elevated suspended solids 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	Next opportunity for review June 2023	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Improvement required** **High**

N/A = not applicable or not assessed

Table 32 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 $mg/m^2/day$)	Not assessed during monitoring period	N/A
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	Consent has expired	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

During the year, an improvement was required from Tegel Foods Ltd (feed mill) in regards to environmental performance and compliance with their resource consents. A high level of administrative performance was demonstrated as defined in Section 1.1.4.

12.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

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

12.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

12.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (feed mill) in the 2020-2021 year continues at a similar level to that programmed for 2019-2020, with the triennial deposition gauging next due in 2021-2022.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

13 Tegel Foods Ltd – Poultry Processing Plant

13.1 Introduction

13.1.1 Process description

Tegel Foods Ltd (Tegel) operates a poultry processing plant on Paraite 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. New structures included a new crate wash, concreting in the area around the ammonia plant, and 5,000 m^2 of roofing, which covers the bird reception area, renderable waste storage area, and areas that flowed to both the stormwater and tradewaste catchments. A new 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.

13.2 Results

13.2.1 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 were undertaken on 14 August and 24 October 2019, and 23 March and 4 June 2020.

During the inspection undertaken on 14 August 2019 it was noted that water containing nutrients was escaping one of the buildings. A temporary catchment drain had been installed on the side of the building that flowed to trade waste, however this was not fully effective. It was also noted that cement washings had been dumped into a stormwater sump. The sump appeared to have not been cleaned/maintained as required. Staff advised that this would be followed up with an investigation and the contractor would contacted to explain why this had occurred.

On 24 October 2019 the site inspection found non-compliance with consent conditions. It was considered by the inspecting officer that best practice was not being carried out and that Tegel had failed to follow the requirements of the site management plan. This breach of consent was in relation to poor maintenance of a drain warden over a stormwater sump. A staff member had signed off that it had been cleaned when it had not. Further enforcement was undertaken in relation to this as discussed below in section 13.2.5.

The site was found to be clean and tidy during the inspection conducted on 23 March 2020.

During the inspection on 4 June 2020 it was noted that works had been carried out inside the Lowbay Chiller to prevent wastewater/washwater from flowing under the door, as well as works to re-seal the guttering in place to capture any wastewater that escapes the building. It was noted that chemicals were being stored outside the storage shed and no physical measures/barriers were in place to prevent/control a spill (this is discussed further in section 13.2.5 below).

13.2.2 Results of discharge monitoring

Consent 7389 – treated stormwater discharge via wetland

Site STW001053 is the point at which Tegel discharges stormwater to the wetland. The site was visited twice during the monitoring period under review, once during a wet weather survey and once during a dry weather survey. Samples were collected on both occasions. These results are given in Table 33.

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 33 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
31 Jan 2020 (d)	0.36	2.8	26.5	0.162	a	8.2	13	20.0	0.0210
4 June 2020 (w)	0.78	2.0	10.0	0.151	<4	7.6	12	14.2	0.0084

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

Two samples were taken of the discharge from the wetland to the stream, once during a wet weather survey and once 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 34.

Table 34 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/m³ N	g/m³	mS/m@25°C	g/m³ P	g/m³	pH	g/m³	Deg.C	g/m³-N
31 Jan 2020 (d)	0.240	0.8	19.4	0.011	a	6.9	11	17.6	0.00066
4 June 2020 (w)	0.113	2.3	8.2	0.052	a	7.1	4	13.9	0.00033
Consent limit	-	*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
(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.

Consent 3470 – untreated stormwater discharges via De Havilland Drive

Stormwater from the predominantly from the northern and eastern of the site is discharged at via three lateral connections to NPDC's network on de Havilland Drive. These sites (STW001130, STW001129 and STW001128) were visited twice for sampling (once during dry weather and once in wet weather). The results are given in Table 35, Table 36, and Table 37.

Table 35 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/m³ N	g/m³	mS/m@25°C	g/m³ P	g/m³	pH	g/m³	Deg.C	g/m³-N
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 June 2020 (w)	ns	ns	ns	ns	ns	ns	ns	ns	ns
Consent Limit	-	*15*	-	-	*15*	*6-9*	*100*	-	-

Key: ns no samples collected due to safety reasons (no traffic management)
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

Samples were not collected from this location during the monitoring period as there was no discharge during the dry weather run and a sample was not able to be collected during the wet weather run as it was considered unsafe without traffic management.

Table 36 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/m³ N	g/m³	mS/m@25°C	g/m³ P	g/m³	pH	g/m³	Deg.C	g/m³-N
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 June 2020 (w)	ns	ns	ns	ns	ns	ns	ns	ns	ns

Parameter	Ammoniacal nitrogen	BOD	Conductivity	Dissolved reactive P	Oil and Grease	pH	Suspended solids	Temp.	Un-ionised ammonia
Unit	g/m³ N	g/m³	mS/m@25°C	g/m³ P	g/m³	pH	g/m³	Deg.C	g/m³-N
Consent Limit	-	*15*	-	-	*15*	*6-9*	*100*	-	-

Key: ns no samples collected due to safety reasons (no traffic management)
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

Samples were not collected from this location during the monitoring period as there was no discharge during the dry weather run and a sample was not able to be collected during the wet weather run as it was considered unsafe without traffic management.

Table 37 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/m³ N	g/m³	mS/m@25°C	g/m³ P	g/m³	pH	g/m³	Deg.C	g/m³-N
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 June 2020 (w)	ns	ns	ns	ns	ns	ns	ns	ns	ns
Consent Limit	-	*15*	-	-	*15*	*6-9*	*100*	-	-

Key: ns no samples collected due to safety reasons (no traffic management)
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

Samples were not collected from this location during the monitoring period as there was no discharge during the dry weather run and a sample was not able to be collected during the wet weather run as it was considered unsafe without traffic management.

13.2.3 Air

13.2.3.1 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.
- 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 14 August and 24 October 2019, and 23 March and 4 June 2020.

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.

13.2.4 Exercise of discharge to land consent

It was confirmed that no discharges to land occurred during the 2019-2020 monitoring period.

13.2.5 Investigations, interventions, and incidents

Table 38 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 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 38 Incidents, investigations, and interventions summary table, Tegel poultry processing plant

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
24 October 2019	During a routine inspection it was observed that maintenance had not been carried out on stormwater sumps	N	Explanation requested Infringement fine	Tegel immediately replaced 5 drain wardens and the remaining ones were lifted and cleaned. An employee was disciplined in relation to the incident
18 February 2020	A complaint was received regarding odour from the site	Y	None	An inspection did not find any offensive or objectionable odours and no further action was taken
23 March 2020	During routine monitoring inadequate bunding was observed around chemicals	N	Explanation requested	An explanation was received and accepted. The situation was resolved

13.3 Discussion

13.3.1 Discussion of site performance

There were several issues noted at the site during inspections in regards to site management, housekeeping and bunding of chemicals. Further action was taken in relation to these and follow-up inspections found that appropriate works had been carried out and site management had improved as a result.

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.

13.3.2 Environmental effects of exercise of consents

Samples that were collected during the monitoring period complied with consent conditions and no significant adverse effects were found in the receiving waters downstream of the site that were attributed to Tegel.

13.3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 39, Table 40, Table 41, Table 42 and Table 43.

Table 39 Summary of performance for Tegel 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 associate with monitoring	Combined monitoring programme in place	Yes
7. Provision for consent to lapse if not exercised	**Consent lapsed on 20 May 2020**	N/A
8. Optional review provision re environmental effects	Consent has lapsed	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		N/A N/A

N/A = not applicable or not assessed

Table 40 Summary of performance for Tegel 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**

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?**
2. Limits stormwater catchment area	Inspection	Yes
3. Limits on chemical composition of discharge	Sampling and analysis of discharges	Yes
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	Plan provided 2014	**No – stormwater plan not adhered to**
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 opportunity for review June 2023	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 41 Summary of performance for Tegel 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**
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	**No**
5. Limits on chemical composition of discharge	Sampling and analysis of discharges	Yes

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	Plan provided 2014 –new plan in development	Yes
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	No further opportunity for review prior to expiry	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 42 Summary of performance for Tegel 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 opportunity for review June 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

Table 43 Summary of performance for Tegel 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 opportunity for review June 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

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

this resulted in an infringement fine being issued. A high level of administrative performance was demonstrated as defined in Section 1.1.4.

13.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

All three recommendations were implemented during the period under review.

13.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the programme remains unchanged from that of 2019-2020.

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 2020-2021.

13.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (poultry processing plant) in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

14 TIL Freighting Ltd

14.1 Introduction

14.1.1 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 m^2 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 Paraite 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.

14.2 Results

14.2.1 Inspections

The TIL site was visited on 30 September and 25 November 2019, and 20 March and 3 June 2020.

Inspections focused 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 neat and tidy with no significant issues noted.

14.2.2 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 Paraite Road in front of Turners & Growers southern entrance (site, STW001133). The results from chemical monitoring at this location are given in Table 44. The site was visited three times during the year, twice 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 44 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	FNU
30 Sep 2019 (w)	0.8	3.7	0.025	<0.7	7.1	3	13.8	1.7
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	1.4	6.2	0.013	a	7.9	4	15.4	5.3
Consent limits	*7*	-	-	*15*	*6-*	*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 Paraite Road in front of the loading canopy (site STW001132). This site was visited three times during the year, twice during wet weather surveys and once during a dry weather survey. There was no discharge during the first two runs while the site was considered unsafe to access without traffic management during the final wet weather survey (Table 45).

Table 45 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	FNU
30 Sep 2019 (w)	nd	nd	nd	nd	nd	nd	nd	nd
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	ns	ns	ns	ns	ns	ns	ns	ns
Consent limits	*7*	-	-	*15*	*6-9*	*100*	-	-

Key: ns no samples collected due to safety reasons (no traffic management)
nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

14.2.3 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.

14.3 Discussion

14.3.1 Discussion of site performance

The site was found to be well managed during the period under review. Contingency and stormwater management plans need to be reviewed and updated for the site.

14.3.2 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.

14.3.3 Evaluation of performance

A tabular summary of TIL's compliance record for the year under review is set out in Table 46 and Table 47.

Table 46 Summary of performance for TIL 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

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?**
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	Consent has expired	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

Table 47 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	Yes
2. Limits stormwater catchment area	Inspection and discussion with consent holder	Yes
3. Above ground hazardous substance storage to be bunded	Inspection and discussion with consent holder	Yes
4. Limits on chemical composition of discharge	Not assessed during period under review	N/A
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	Yes - plan due 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	Yes - plan due for review

Purpose: *To discharge stormwater to the Mangati Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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	No further opportunity for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

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

14.3.4 Recommendations from the 2018-2019 Annual Report

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

1. THAT in the first instance, monitoring 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.

Recommendations one and three were 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 2020-2021

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

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

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

It is proposed that for 2020-2021 the monitoring programme remains similar to that undertaken in the 2019-2020 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 2020-2021.

14.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of TIL Freighting Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

15 W Abraham Ltd

15.1 Introduction

15.1.1 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 state of the art 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.

15.2 Results

15.2.1 Air

15.2.1.1 Inspections

The crematorium was visited on 1 November 2019, 24 January and 18 May 2020.

The inspections focused 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.

15.2.2 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.

15.3 Discussion

15.3.1 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.

15.3.2 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.

15.3.3 Evaluation of performance

A tabular summary of Abraham's compliance record for the year under review is set out in Table 48.

Table 48 Summary of performance for Abraham 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 opportunity for review in June 2026	N/A

Purpose: *To discharge emissions to air from a crematorium*		
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.

15.3.4 Recommendation from the 2018-2019 Annual Report

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

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.

Recommendations one and three were implemented, while it was not considered necessary to undertake additional monitoring as per recommendation two.

15.3.5 Alterations to monitoring programmes for 2020-2021

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

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

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

It is proposed that for 2020-2021 the 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 2020-2021.

15.4 Recommendations

1. THAT in the first instance, monitoring programmed for consented activities of W Abraham Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.

2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

16 Investigations, interventions, and incidents summary

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).

Incidents associated with industries monitored routinely under the Mangati Catchment Monitoring Programme are discussed in the section of the report describing the monitoring outcomes of the industries in question.

There were a total of nine unauthorised incidents not already covered by this report recorded on the Council's database in the Mangati catchment during the 2019-2020 period.

A summary of the responsible parties, and whether or not the incident could be substantiated, is provided in Table 49.

Table 49 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
Green & Dennis Wheeler	1* (air)	0
Kiwi Loos	0	1 (air)
Cowley & Peter Sole Transport	1 (air)	1 (air)
Taranaki Pine	0	1 (air)
Bevins	0	1 (air)
Natural event	0	2 (iron oxide)
Unsourced	0	1 (air)
Total	**2**	**7**

* Abatement and infringement notices were issued as a result of this

17 Chemical monitoring of combined discharges

17.1 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 onsite locations and in the sediments of the open stormwater drain to the Mangati.

Table 50 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/m³	g/m³	g/m³	g/m³	pH	g/m³	Deg. C	g/m³	g/m³
31 Jan 2020 (d)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4 Jun 2020 (w)	11.7	<0.010	<0.010	0.004	a	6.9	9	13.8	0.04	0.04
Greymouth Consent Limit	-	-	-	-	*15*	*6-9*	*100*	-	-	-
Tasman Tools Consent Limit	-	-	*0.05*	-	*15*	*6-9*	*100*	-	-	-

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

This site was visited twice during the year under review, once during a wet weather survey and once during a dry weather survey. A sample was taken during the wet weather survey, while no discharge was occurring on the other occasion (Table 50).

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).

17.2 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.

17.2.1 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 Paraite Road and Connett Road stormwater network.

The site was visited three times during the year, twice during wet weather surveys and once during a dry weather survey. Samples were collected on all occasions. The results for the Connett Road inlet to Pond 1 of the treatment system are given in Table 51.

Table 51 Chemical monitoring results for stormwater discharged to pond 1 from Connett Road (site 33), site STW001055

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	***RFWP*** *guideline*
Ammoniacal nitrogen	g/m³ N	0.032	0.046	0.042	-
BOD	g/m³	2.0	2.7	1.2	5
Conductivity @ 25°C	mS/m	6.7	15.7	9.9	-
Acid soluble copper	g/m³	0.0130	0.0310	0.029	-
Dissolved copper	g/m³	-	0.0184	0.012	-
DRP	g/m³ P	0.012	0.010	0.008	-
Oil and Grease	g/m³	< 0.7	a	< 0.7	*15*
pH	pH	7.1	7.0	7.1	*6-9*
Temperature	Deg.C	14.4	17.7	15.3	-
Turbidity	FNU	11.8	2.6	8.1	-
Un-ionised ammonia	g/m³	0.00010	0.00014	0.00014	*0.025*
Acid soluble zinc	g/m³	0.136	0.14	0.24	-
Dissolved zinc	g/m³	0.122	0.138	0.24	-

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

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

The industrial drain outlet was visited twice. One sample was collected in wet weather, while no discharge was occurring during dry weather. The results are given in Table 52.

Table 52 Chemical monitoring results for industrial drain outlet, site STW001026

Parameter	Unit	31 Jan 2020 (d)	4 Jun 2020 (w)	***RFWP*** *guideline*
Ammoniacal nitrogen	g/m³ N	nd	0.043	-
BOD	g/m³	nd	2.0	*5*
Conductivity @ 25°C	mS/m	nd	9.3	-
Acid soluble copper	g/m³	nd	0.036	-
Dissolved copper	g/m³	nd	0.016	-
DRP	g/m³ P	nd	0.08	-
Oil and Grease	g/m³	nd	< 0.7	*15*
pH	pH	nd	6.9	*6-9*
Temperature	Deg.C	nd	15.6	-
Turbidity	FNU	nd	10	-
Un-ionised ammonia	g/m³	nd	0.00011	*0.025*
Acid soluble zinc	g/m³	nd	0.30	-
Dissolved zinc	g/m³	nd	0.30	-

Key: nd not discharging at time of sampling survey
(d) dry weather survey (w) wet weather survey

The results of the sample were within RFWP BOD, oil and grease, pH and un-ionised ammonia limits.

The monitoring results for discharge from the industrial drain into the Mangati Stream are recorded in Table 53. This site was visited twice during the year, once during a wet weather survey and once during a dry weather survey. Samples were taken during the wet weather survey, 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.

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.

Table 53 Chemical monitoring results for the industrial drain discharge to Mangati Stream, site MGT000503

Parameter	Unit	31 Jan 2020 (d)	4 Jun 2020 (w)	***RFWP*** *guideline*
Aluminium acid soluble	g/m³	nd	0.36	
Ammoniacal nitrogen	g/m³ N	nd	0.052	-
BOD	g/m³	nd	<2	*5*
Conductivity @ 25°C	mS/m	nd	7.0	-
Acid soluble copper	g/m³	nd	0.034	-
Dissolved copper	g/m³	nd	0.0108	-
Dissolved oxygen	g/m³	nd	-	
Oxygen saturation	%	nd	-	
DRP	g/m³ P	nd	< 0.004	-
Acid soluble lead	g/m³	nd	0.019	
Oil and Grease	g/m³	nd	< 0.7	*15*
pH	pH	nd	7.1	*6-9*
Suspended solids	g/m³	nd	18	
Temperature	Deg.C	nd	14.9	-
Turbidity	FNU	nd	8.6	-
Un-ionised ammonia	g/m³	nd	0.00018	*0.025*
Acid soluble zinc	g/m³	nd	0.27	-
Dissolved zinc	g/m³	nd	0.22	-

Key: (d) dry weather survey (w) wet weather survey
nd not discharging

17.2.3 Pond 3 and 4 discharges

The results for the treated discharge from pond 3 to the stream are given in Table 54 and Table 55.

Table 54 Chemical monitoring results for pond 3 discharge to the Mangati Stream, STW002056

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	***RFWP*** *guideline*
Aluminium acid soluble	g/m³	0.113	<0.06	0.53	-
Ammoniacal nitrogen	g/m³ N	0.115	<0.010	0.029	-
BOD	g/m³	<0.8	4.4	1.9	*5*
COD	g/m³	<1.0	36	28	-
Conductivity @ 25°C	mS/m	10.6	21.9	5.9	-
Acid soluble copper	g/m³	0.0064	<0.010	**0.108**	-
Dissolved copper	g/m³	0.0042	0.0024	0.0196	-
DRP	g/m³ P	<0.004	0.005	0.005	-

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	*RFWP guideline*
Acid soluble lead	g/m³	0.00085	<0.002	**0.067**	
Oil and Grease	g/m³	<0.7	a	<4	*15*
pH	pH	6.7	7.1	7.3	*6-9*
Suspended solids	g/m³	8	29	44	
Temperature	Deg.C	13.2	22.5	15.4	-
Turbidity	NTU	8.0	9.1	11.9	-
Un-ionised ammonia	g/m³	0.000134	<0.00006	0.00015	*0.025*
Acid soluble zinc	g/m³	0.138	0.04	**0.47**	-
Dissolved zinc	g/m³	0.128	0.0099	0.32	-

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

The results of the discharge sampling show noticeable variation throughout the monitoring year, with the majority measured at or below historical median values (18% and 35% respectively). However, new maximum values were recorded for the acid soluble analyses of copper, lead, and zinc for the sample collected on 4 June 2020. Copper, zinc and lead concentrations were found to be within acceptable limits and below historical medians in samples collected on 30 September 2019 and 31 January 2020. Historically, there has been a generally decreasing trend in these metals at this site, and the results from 4 June indicate that a potential new source has been introduced. Further monitoring will be required to assess if this occurrence was limited to a single, unexpected discharge, or if a new trend is emerging.

On one occasion the BOD concentration was elevated, however this did not exceed the desired 5.0 g/m³ limit. Unionised ammonia was well below the 0.025 g/m³ value for all samples.

The results of discharge monitoring from pond 4 is present in Table 55. The site was visited three times during the year, twice during wet weather and once during dry weather. A discharge was occurring only during wet weather runs.

Table 55 Chemical monitoring results for pond 4 discharge to the Mangati Stream, site STW002055

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	*RFWP guideline*
Aluminium acid soluble	g/m³	0.21	nd	0.15	
Ammoniacal nitrogen	g/m³ N	0.21	nd	0.036	-
BOD	g/m³	2.0	nd	<2	*5*
COD	g/m³	<1.0	nd	8	
Conductivity @ 25°C	mS/m	11.9	nd	6.8	-
Acid soluble copper	g/m³	0.010	nd	0.0113	-
Dissolved copper	g/m³	0.0055	nd	0.0070	-
DRP	g/m³ P	<0.004	nd	<0.004	-
Acid soluble lead	g/m³	0.00171	nd	0.005	
Oil and Grease	g/m³	<0.7	nd	<0.7	*15*

Parameter	Unit	30 Sep 2019 (w)	31 Jan 2020 (d)	4 Jun 2020 (w)	*RFWP guideline*
pH	pH	6.8	nd	6.7	*6-9*
Suspended solids	g/m^3	18	nd	7	
Temperature	Deg.C	13.2	nd	14.2	-
Turbidity	FNU	13.2	nd	6.3	-
Un-ionised ammonia	g/m^3	0.00032	nd	0.000043	*0.025*
Acid soluble zinc	g/m^3	0.21	nd	0.17	-
Dissolved zinc	g/m^3	0.186	nd	0.16	-

Key: nd not discharging

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

The concentration of unionised ammonia at the time was well below the 0.025 g/m^3 RFWP permitted activity limit.

All other parameters were compliant with RFWP limits where applicable.

18 Receiving environment monitoring in the Mangati Stream

18.1 Mangati Stream water quality surveys

Sampling of the Mangati Stream itself was carried out on two 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 a wet weather survey was conducted on 31 January 2020 and a dry weather survey was undertaken on 4 June 2020.

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 56.

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 57.

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 56 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 100 m 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 approximately 1 km that is relatively flat, apart from the fall at the highway. The sixth site is below a steeper reach and is a 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 phosphorus do appear to be increasing in the stream at the railway site, above the industrial area, as well as throughout, 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 57 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
31 January 2020 – dry run							
BOD	g/m³	1.0	4.2	0.9	0.9	1.2	0.5
BODCF	g/m³	<1.0	1.7	<1.0	<1.0	<1.0	-
Conductivity @ 25°C	mS/m	24.8	24.6	29.4	27.7	27.3	25.5
Acid soluble	g/m³	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved copper	g/m³	<0.0005	0.0008	0.0008	0.0008	0.0010	0.0012
Dissolved oxygen	g/m³	3.61	3.35	2.11	4.93	5.74	8.83
DRP	g/m³ P	0.004	0.006	<0.004	<0.004	0.004	<0.004
Un-ionised ammonia	g/m³ N	0.00166	0.00199	0.00083	0.00089	0.00103	0.00058
Ammoniacal nitrogen	g/m³ N	0.320	0.450	0.182	0.169	0.145	0.034
Nitrate/nitrite	g/m³	-	-	-	-	0.56	0.80
pH	pH	7.2	7.1	7.1	7.2	7.3	7.7
Temperature	Deg.C	17.4	17.8	18.0	18.3	18.1	17.6
Suspended solids	g/m³	<3	26	<3	9	6	<3
Turbidity	FNU	3.2	11.6	2.9	4.3	4.2	3.0
Acid soluble zinc	g/m³	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Parameter		Mangati Stream					
		MGT000485 Railway	MGT000493 Above DeHav. Drive	MGT000497 Above Connett Road	MGT000500 Below pond 3	MGT000512 Below pond 4	MGT000550 At Coast
Dissolved zinc	g/m³	0.0024	0.0021	0.0033	0.0035	0.0042	0.0042
4 June 2020 – wet run							
BOD	g/m³	<2.0	<2.0	<2.0	0.4	3.1	2.0
BODCF	g/m³	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Conductivity @ 25°C	mS/m	19.8	18.4	19.8	17.7	8.4	13.1
Acid soluble	g/m³	0.0066	<0.010	0.0058	0.0070	0.0710	0.0084
Dissolved copper	g/m³	0.0016	0.0017	0.0025	0.0026	0.0119	0.0029
Dissolved oxygen	g/m³	8.31	8.48	7.75	8.16	10.0	9.63
DRP	g/m³ P	0.013	0.011	0.008	0.006	0.008	<0.004
Ammoniacal nitrogen	g/m³ N	0.070	0.090	0.097	0.075	0.044	0.048
Un-ionised ammonia	g/m³ N	0.00025	0.00020	0.00027	0.0027	0.00012	0.00011
Nitrate/nitrite	g/m³ N	0.82	-	-	-	-	0.48
Oil and Grease	g/m³	a	a	a	a	a	a
pH	pH	7.2	7.0	7.0	7.0	7.0	6.9
Suspended solids	g/m³	82	70	54	52	83	28
Temperature	Deg.C	13.7	13.7	14.0	20.0	14.8	14.6
Turbidity	FNU	44	35	34	33	15.2	15.6
Acid soluble zinc	g/m³	0.02	0.03	0.03	0.05	0.40	0.06
Dissolved zinc	g/m³	<0.02	<0.02	<0.02	0.04	0.24	0.03

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

18.1.1 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 particularly elevated in any of the surveys and none of the stream 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.

18.1.2 Zinc and copper

The results for acid soluble and dissolved zinc (Zn) and copper (Cu) concentrations in the water column of the Mangati Stream, are given in Table 58 and Table 59 for the period under review.

Table 58 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
31 Jan 2020 (d)	< 0.02	0.0024	<0.02	0.0021	<0.02	0.0033	<0.02	0.0035	<0.02	0.0042	<0.02	0.0042
4 Jun 2020 (w)	0.02	<0.02	0.03	<0.02	0.03	<0.02	0.05	0.04	0.40	**0.24**	0.06	0.03

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

Table 59 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/m3	CuD, g/m3	CuAs, g/m3	CuD, g/m3	CuAs, g/m3	CuD, g/m3	CuAs, g/m3	CuD, g/m3	CuAs, g/m3	CuD, g/m3	CuAs, g/m3	CuD, g/m3
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
31 Jan 2020 (d)	<0.010	<0.0005	< 0.010	0.0008	<0.010	0.0008	<0.010	0.0008	<0.010	0.0010	<0.010	0.0012
4 Jun 2020 (w)	0.0066	0.0016	< 0.010	0.0017	0.0058	0.0025	0.0070	0.0026	0.071	0.0119	0.0084	0.0029

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/m^3 $CaCO^3$, are 0.005 g/m^3 for Cu and 0.058 g/m^3 for Zn respectively as a four day average, for chronic (long term) exposure. The corresponding criteria for acute (4-hour) exposure are 0.007 g/m^3 for Cu and 0.064 g/m^3 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.

Dissolved zinc was above USEPA guidelines on one occasion at site MGT000512 (below pond 4 and wetland bypass drain). This is most likely attributed to the associated high levels measured in the discharge from pond 3.

All 12 samples collected during both wet weather and dry surveys were below the USEPA chronic and acute exposure limits for dissolved copper.

18.2 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.

18.2.1 Macroinvertebrate surveys

The routine surveys for the period under review were carried out on 31 October 2019 and 10 February 2020. These were the 48th and 49th 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 60 and Figure 4. 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 61 and the summary and conclusions of the macroinvertebrate survey reports are given below.

Table 60 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

Site No	Site code	Grid reference	Location
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

31 October 2019

On 31 October 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 seven taxa. Taxa richness generally declined in a downstream direction. All sites recorded taxa richness below their historic medians, and the lowest richness was 8 recorded at site B, D2, and E. A substantial drop in taxa occurred at site A2 and B.

MCI scores dropped significantly in a downstream direction by 27 units (85-58), a range that was comparable with the preceding survey (24 units). MCI scores indicated that the surveyed reach was in 'fair' health at the upper sites deteriorating to' very poor' health in a downstream direction (Figure 5).

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.

The SQMCI can be more sensitive to pollution compared with the MCI. SQMCI scores indicated 'very poor' macroinvertebrate health at all sites aside from site F which was in 'poor' health. The SQMCI in the upper sites indicated lower health than the MCI scores while the middle and lower sites were generally congruent with MCI. All upper sites (A, A2, A1, and A3) had SQMCI scores significantly lower than their respective historic medians. All sites had SQMCI scores lower than their respective historic medians aside from site E and F (Figure 6).

With regard to all three biotic indices, taxa richness, MCI and SQMCI scores, the decline in macroinvertebrate community health downstream of site A1 compared with upstream sites and the generally poor state of the macroinvertebrate taxa present indicates that there were likely discharges downstream of site A1. However, no sewage fungus was present suggesting any discharge was unlikely to be from a chronic organic discharge that would elevate BOD. The pattern of MCI decline suggests there could be multiple discharges having an additive effect in a downstream direction.

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 tendency for the stream to flash flood. 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 survey indicated that macroinvertebrate health was generally 'poor' for the surveyed sites in the Mangati Stream and that there was likely to have been multiple discharges below site A1, which had a significant negative impact on the macroinvertebrate communities present at lower sites.

Table 61 Numbers of taxa and MCI values recorded in previous surveys in the Mangati Stream together with the October 2019 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	51	16	9-29	16	15	78	56-91	74	85	3.7	2.2-4.7	3.9	2.7
A2	49	16	9-29	10	11	74	57-92	66	84	3.5	1.3-4.8	4.2	2.7
A1	51	15	7-23	14	14	73	47-89	73	73	3.5	1.5-4.7	4.9	2.3
A3	49	16	8-23	13	12	69	52-83	71	63	2.6	1.6-4.6	4.1	2.5
B	57	14	3-29	11	8	68	50-86	60	63	2.5	1.1-4.5	2.4	2.0
D2	33	11	4-18	8	8	68	40-78	50	60	2.5	1.1-3.5	2.2	2.4
E	56	10	3-22	12	8	65	44-79	73	58	2.5	1.1-3.9	4.0	2.5
F	50	11	2-22	13	10	68	30-79	66	70	2.5	1.2-4.1	4.0	3.5

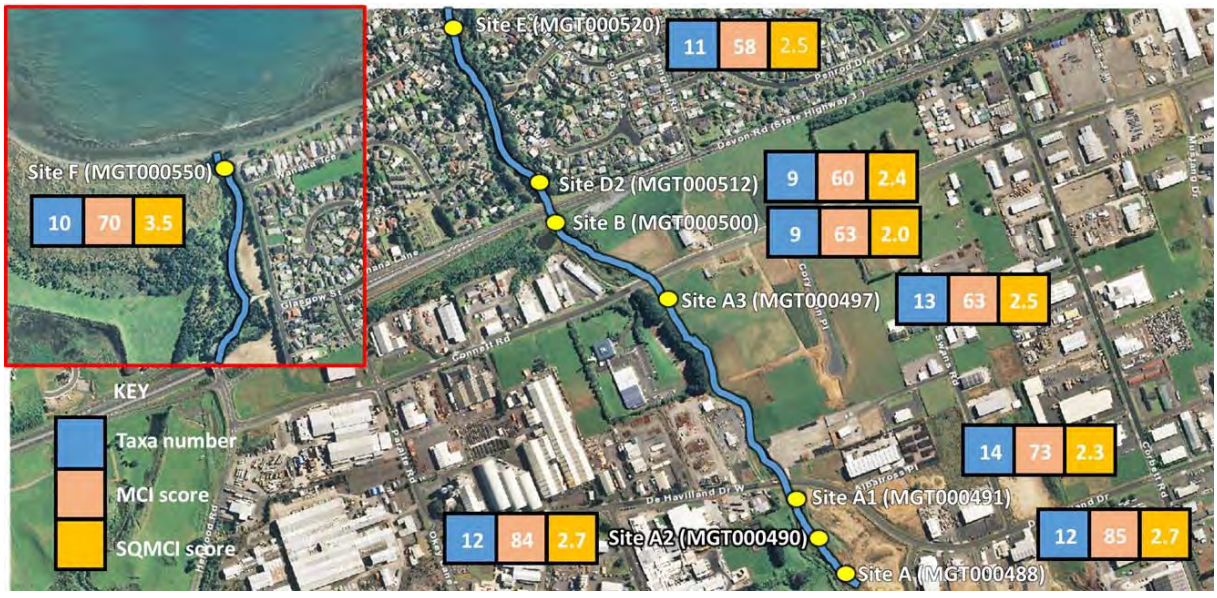

Figure 4 Biomonitoring sites in the Mangati Stream in relation to the Bell Block industrial area with taxa number, MCI scores and SQMCI scores for each site in October 2019

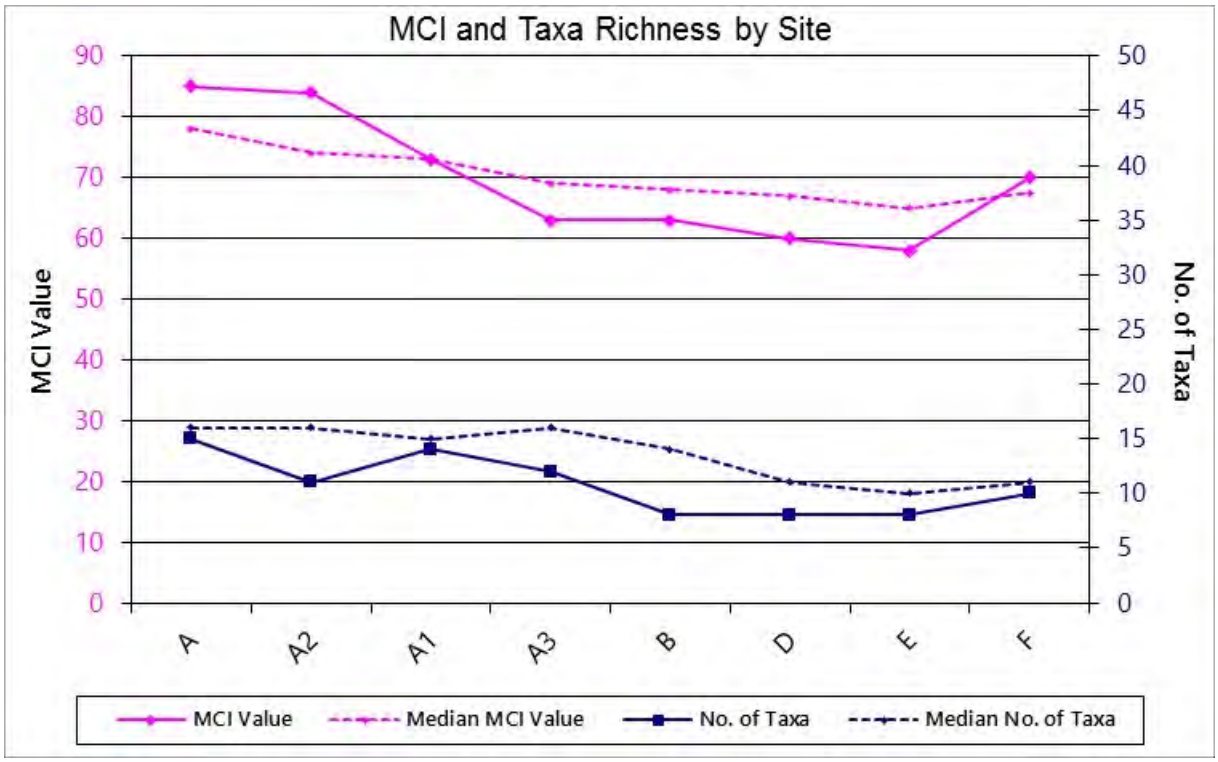

Figure 5 Numbers of taxa and MCI values recorded at sites in the Mangati Stream in the October 2019 survey

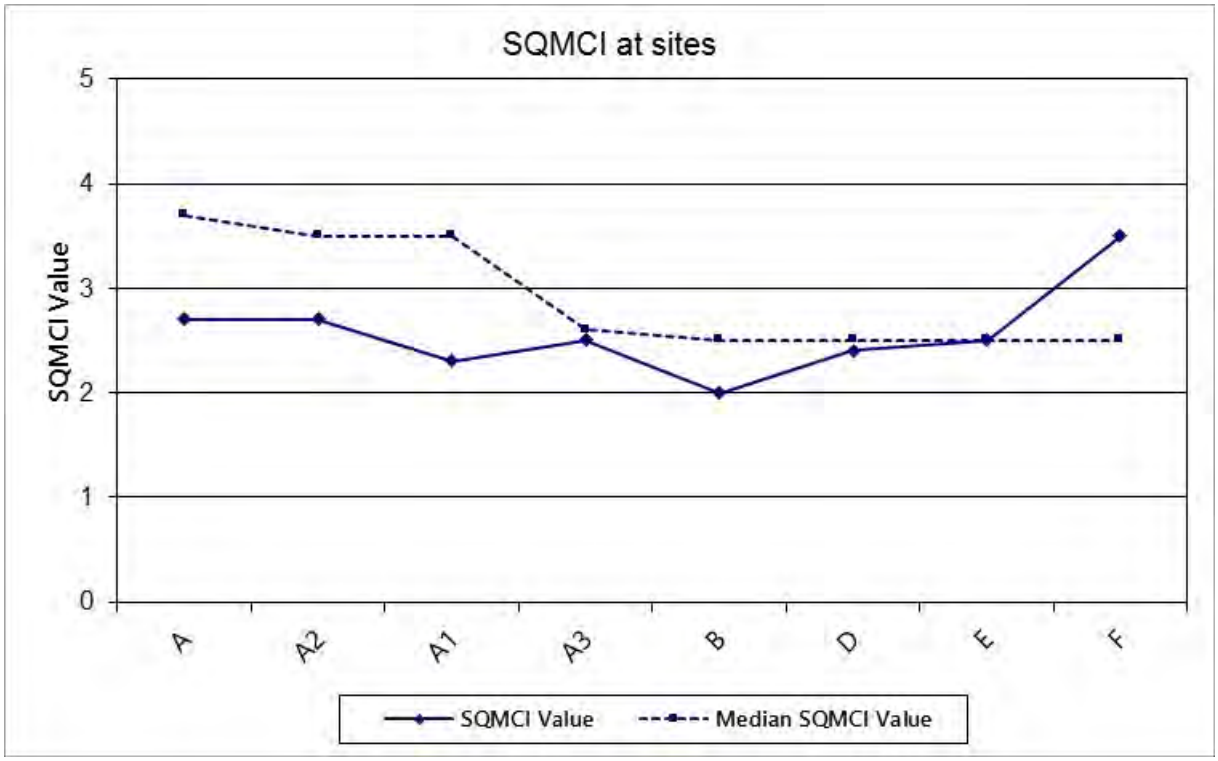

Figure 6 SQMCI values recorded at sites in the Mangati Stream in the October 2019 survey

10 February 2020

On 10 February 2020 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 five taxa, a fairly typical taxa richness difference between sites. The three upper sites (12-14 taxa) and the mid-reach site A3 (13 taxa) had moderate richness which were lower than historic medians. Site B had a low taxa richness of 9 which was 5 taxa lower than its historic median. Site D2, which is situated a short distance downstream of site B, had a similarly 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 (Figure 7, Table 62).

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 such as oligochaete worms and snails (*Potamopyrgus)* as well as 'moderately sensitive' taxa commonly associated with macrophytes such as amphipods (*Paracalliope*). The results of this survey in respect to community composition are largely congruent with past results.

MCI scores at all sites were lower than the previous survey, aside from site A3 and E. The upper sites had MCI scores that were significantly lower than the previous survey (23 units at site A and 17 units at site A2). This dramatic decrease in MCI at the upper sites was likely related to upstream influences unrelated to the industrial area as well as very low seasonal flows. The MCI scores among sites varied by a significant 16 units (53-69), a range that was much closer than the preceding survey (27 units), but still larger than usual. MCI scores indicated that the surveyed reach was generally in 'poor' health except for sites B and D2 which were in 'very poor' health. There was a significant decline of 14 units between site A1 and B, with a significant improvement of 16 units further downstream between site D2 and E. All sites apart from site E had scores lower than their respective historic medians with site A, B, and D2 recording a score significantly below their historic medians (Figure 8). 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 across all sites (Figure 9).

With regard to taxa richness and MCI score, it is apparent that stream health deteriorates at site B and D2 which is a consistent outcome when comparing surveys across years. This indicates that there is a negative effect from the wetland discharge. 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 A1 and E appeared to be causing relatively localised negative effects. Overall, the results of the current 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 A1, which had a significant negative impact on the macroinvertebrate communities.

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 tendency for the stream to flash flood. 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 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 sites B and D2.

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 February 2020 survey

Table 62 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	15	12	78	56-91	85	62	3.7	2.2-4.7	2.7	4.0
A2	48	16	9-29	11	12	74	57-92	84	67	3.5	1.3-4.8	2.7	3.0
A1	50	15	7-23	14	14	73	47-89	73	67	3.5	1.5-4.7	2.3	2.6
A3	48	16	8-23	12	13	69	52-83	63	63	2.6	1.6-4.6	2.5	3.5
B	56	14	3-29	8	9	68	50-86	63	53	2.5	1.1-4.5	2.0	2.4
D2	32	11	4-18	8	9	68	40-78	60	53	2.5	1.1-3.5	2.4	2.8
E	55	10	3-22	8	11	65	44-79	58	69	2.5	1.1-3.9	2.5	4.0
F	49	11	2-22	10	9	68	30-79	70	62	2.5	1.2-4.1	3.5	3.8

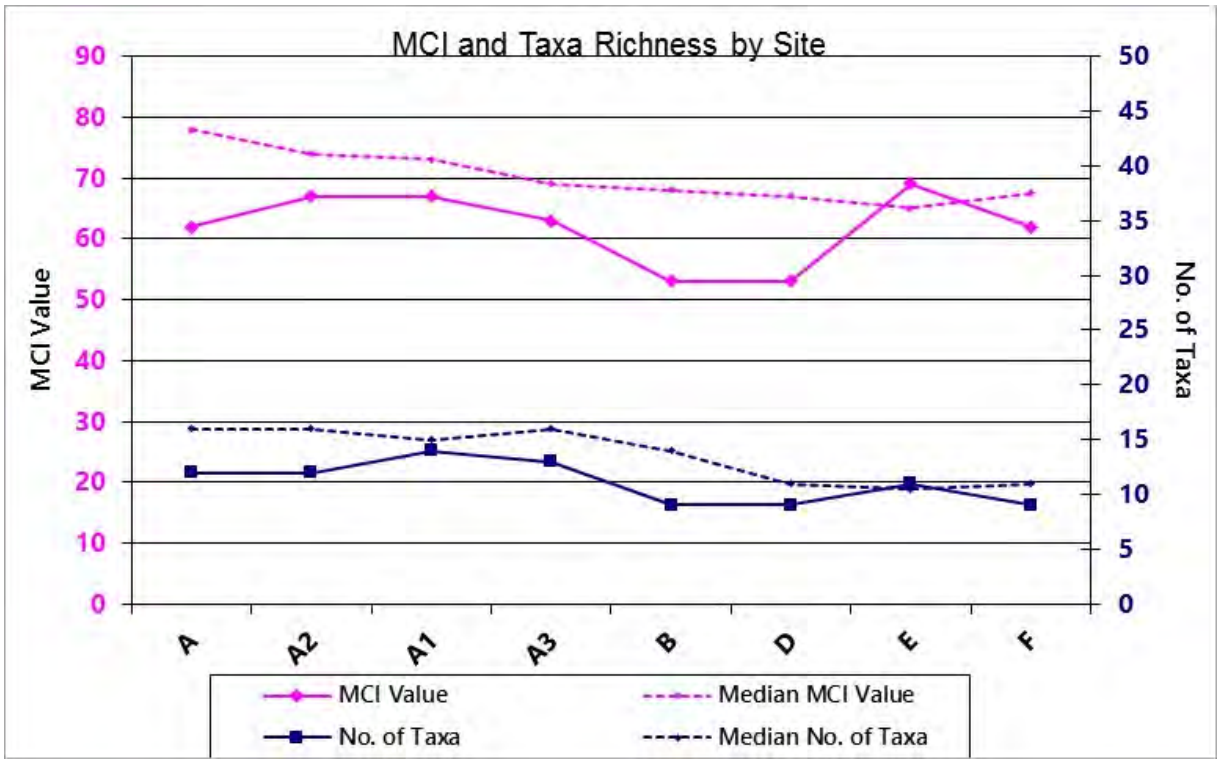

Figure 8 Numbers of taxa and MCI values recorded at sites in the Mangati Stream in the February 2020 survey

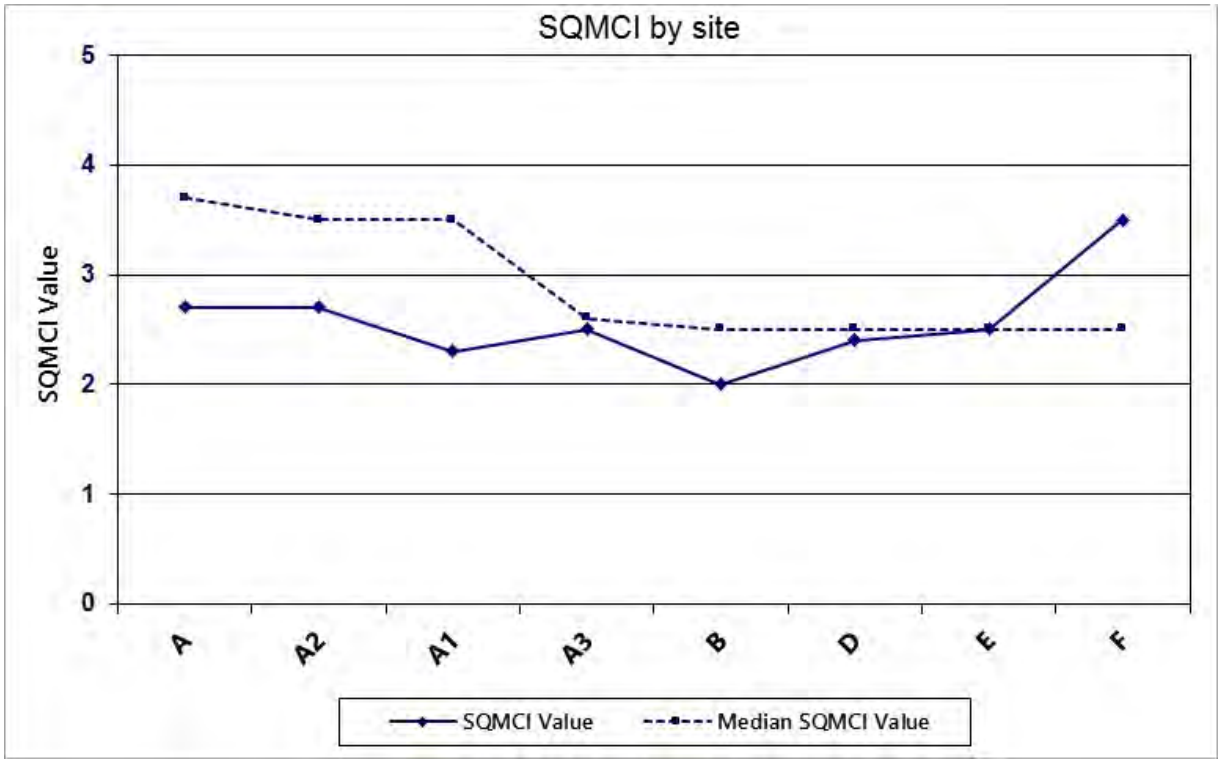

Figure 9 SQMCI values recorded at sites in the Mangati Stream in the February 2020 survey

18.2.2 Statistical analysis of macroinvertebrate results

In the 2018-2019 period a trending analysis of MCI results at two sites was used in monitoring the activities in the Mangati industrial catchment 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 (above industrial catchment) and site E (below industrial catchment), and site locations are shown in Figure 4. 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).

Taxa richness at both sites were similar to historic medians indicating no recent effects of illegal discharges, that unfortunately sometimes occur in the stream. MCI scores were congruent with taxa richness, with both sites having typical scores compared with historic medians.

The time trend analysis showed no significant trends for the upper site but there was a significant, positive trend at the lower site for the full dataset. This indicates that macroinvertebrate health has been improving at the lower site and suggests that improvements in water quality have largely occurred between the two sites. The lack of a significant trend for the ten-year dataset indicates that improvements have been recently levelling off.

18.2.2.1 Site A

A LOWESS trend plot with a moving average (tension 0.4) trendline was produce from all of the SEM results (1995-2019) for Site A in the Mangati Stream, located at the site downstream of the railbridge (Figure 10).

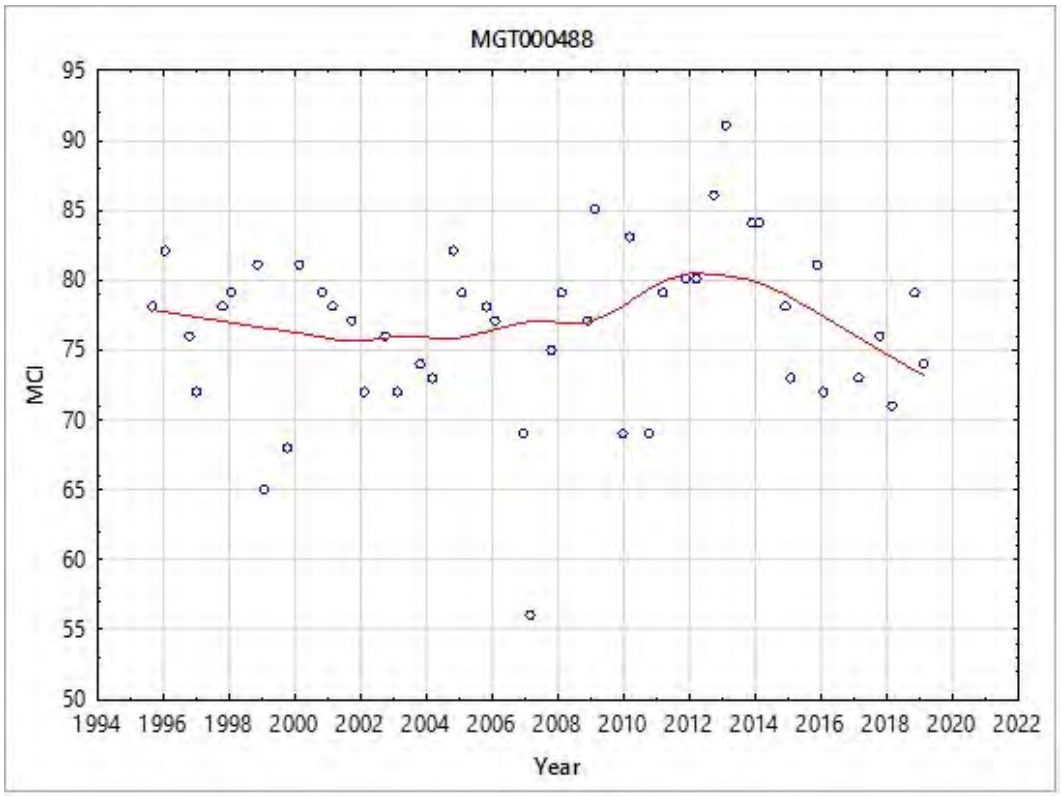

Figure 10 LOWESS trend plot of MCI data at site A, the railbridge (u/s industrial area)

There was a non-significant positive overall trend identified in the MCI scores over the full time range. The trendline had a range of eight units indicative of marginal ecological importance over the period. 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 after false discovery rate (FDR) analysis was applied, in contrast with the full dataset. This was associated 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.

18.2.2.2 Site E

A LOWESS trend plot with a moving average (tension 0.4) trendline was produce from all of the SEM results (1995-2019) for Site E in the Mangati Stream, located at the site at Te Rima Place (Figure 11).

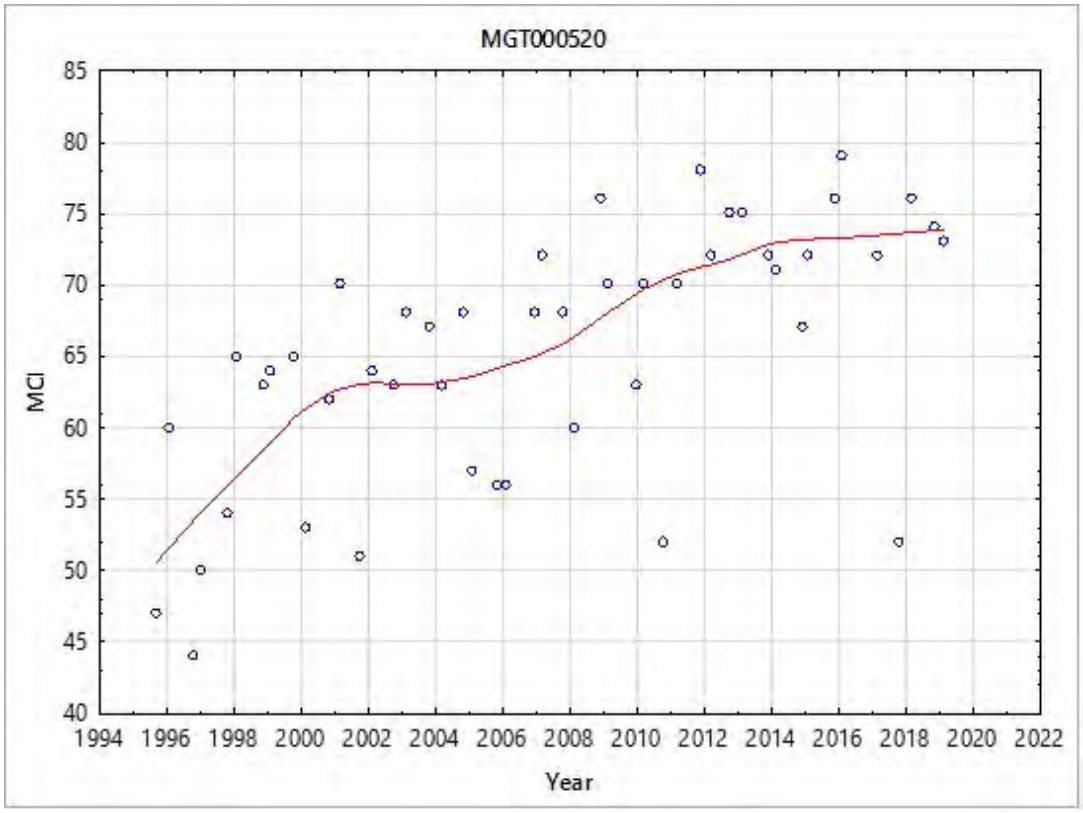

Figure 11 LOWESS trend plot at Site E, Te Rima Place (d/s of industrial area)

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.

19 Summary of recommendations

1. THAT in the first instance, monitoring programmed for the consented activities of Barton Holdings Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
2. THAT in the first instance, monitoring programmed for consented activities of First Gas Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
3. 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.
4. THAT in the first instance, monitoring programmed for consented activities of J Swap Contractors Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
5. 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.
6. THAT in the first instance, monitoring programmed for consented activities of New Plymouth District Council in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
7. 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.
8. THAT in the first instance, monitoring programmed for consented activities of OMV New Zealand Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
9. THAT in the first instance, monitoring programmed for consented activities of Schlumberger New Zealand Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020, and that the conditions for both consents be combined into consent 6032.
10. 0THAT in the first instance, monitoring programmed for consented activities of Tasman Oil Tools Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
11. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (feed mill) in the 2020-2021 year continues at a similar level to that programmed for 2019-2020, with the triennial deposition gauging next due in 2021-2022.
12. THAT in the first instance, monitoring programmed for consented activities of Tegel Foods Ltd (poultry processing plant) in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
13. THAT in the first instance, monitoring programmed for consented activities of TIL Freighting Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
14. THAT in the first instance, monitoring programmed for consented activities of W Abraham Ltd in the 2020-2021 year continues at a similar level to that programmed for 2019-2020.
15. THAT should there be issues with environmental or administrative performance at any of the sites in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

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

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
E.coli	*escherichia coli,* 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)

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

Water abstraction permits

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

Water discharge permits

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

Air discharge permits

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

Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

Land use permits

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

Coastal permits

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

Discharge Permit

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

Name of Consent Holder:	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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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}.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Greymouth 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

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 [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.

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

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

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

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

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	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.

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}
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 that 0.025 g/m^3.

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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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

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 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.

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

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Director-Resource Management

Consent 4302-2

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/Paraite Roads, Bell Block, New Plymouth
Legal Description:	Lot 1 DP 10763 Blk II Pariututu SD
Catchment:	Mangati

For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document

General conditions

a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.

b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.

c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:

i) the administration, monitoring and supervision of this consent; and
ii) charges authorised by regulations.

Special conditions

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

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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.

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:	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 Paraite 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 *Paraite 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Schlumberger New Zealand Limited PO Box 7146 New Plymouth 4341
Decision Date (Review):	27 August 2008
Commencement Date (Review):	27 August 2008 (Granted Date: 4 July 2002)

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 conditon 2
Site Location:	94 Paraite 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:

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. 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:

a. during the month of June 2014; and/or
b. 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Tasman Oil Tools Limited PO Box 3140 NEW PLYMOUTH 4312
Decision Date (Review):	05 August 2014
Commencement Date (Review):	05 August 2014 (Granted Date: 26 November 2001)

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.

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

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A D McLay
Director - Resource Management

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

Name of Consent Holder:	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 Paraite 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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.

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}
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.

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.

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

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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 m^2, 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.

Constituent	Standard
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.

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

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	TIL Freighting 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 Paraite 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	TIL Freighting 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 Paraite 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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 (PM_{10}) 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Tegel Foods Limited Private Bag 2015 NEW PLYMOUTH
Consent Granted Date:	23 November 2001

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 Paraite Road, Bell Block, New Plymouth
Legal Description:	Lots 3 & 4 DP 11072 Blk II Paritutu SD

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/m^3 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/m^2/30 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/m^3 (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.

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

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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;

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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.

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/m^3 (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.

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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	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 Paraite 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.

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

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 Paraite 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

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.

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

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A D McLay
Director - Resource Management