Mangati Catchment

Joint Monitoring Programme

Annual Report

2020-2021

Technical Report 2021-74

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 2020 to June 2021 by the Taranaki Regional Council (the Council) describing the monitoring programme associated with 13 industries within the catchment of the Mangati Stream, Bell Block.

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

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 2020-2021 monitoring period a total of one water abstraction consent, 15 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 21 consents, which contain a total of 226 special conditions that the consent holders must satisfy. It represents the 24th report produced by Council to cover water discharges by industries within the catchment and their effects, and is the 14th combined report to cover abstractions and discharges to all media.

Monitoring during the year under review included 68 site inspections, discussions with site operators over site management, 59 discharge samples, 26 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.

During the period under review, the instream dissolved zinc and copper concentrations met the appropriate USEPA acute or chronic exposure guidelines in all 36 samples. None of the 26 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 was one substantiated non-compliance recorded in the Mangati catchment during the period under review which 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 and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

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 **high** level of environmental and administrative performance and compliance with their resource consent

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 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, Tegel Foods Ltd (Feed Mill) demonstrated a **good** level of environmental performance and compliance with their resource consent. The Company demonstrated a **high** level of administrative performance as defined in Section 1.1.4.

During the year, Tegel Foods Ltd (Poultry Processing) 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, TIL Freighting Ltd demonstrated a **high** level of environmental performance and compliance with their resource consent. The Company demonstrated a **good** level of administrative performance 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.

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

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 improved to a high level in the year under review. It is noted that onsite improvements have been made by several consent holders that had previously had issues, or required interventions and enforcement action as a result of significant events. Council officers continue to follow up with any situations at the end of the period under review as necessary.

This report includes recommendations for the 2021-2022 year.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is for the period July 2020 to June 2021 by the Taranaki Regional Council (the Council) on the monitoring programme associated with 21 resource consents held by 13 consent holders in the Mangati Catchment.

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

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of the use of water, land and air by these consent holders, and is the 24th combined annual report by the Council for this catchment.

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 (Figure 1). Historically, the industrial areas were located predominantly on the western side of the stream however ongoing development since 2016 has resulted in more sites on the eastern side. These sites fall under permitted activity rules and are not covered by this monitoring report. Upstream, land use is pastoral and horticultural. Downstream, the Mangati flows through the residential area of Bell Block. The Mangati Reserve (Photo 1), with its popular well maintained walkway, borders the stream immediately below the industrial area. The beach at the mouth of the stream is also a popular recreational area (Photo 2).

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

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

Photo 1 Mangati Reserve at Parklands Avenue

Photo 2 Mangati Stream at the Coast

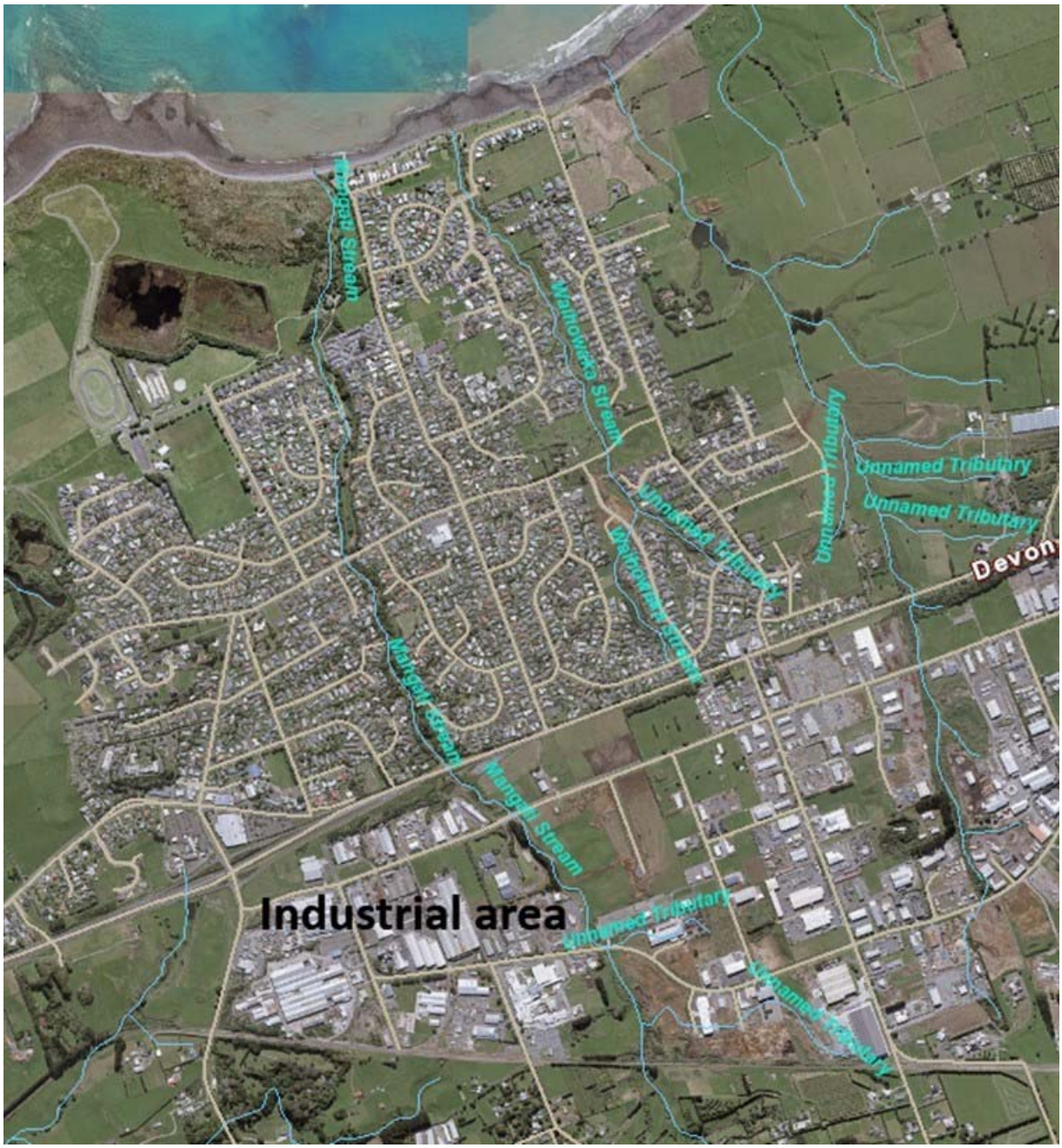

Figure 1 Mangati Catchment

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about:

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites 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.

Sections 2-15 separately detail each company's onsite activities and performance.

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

Subsections 2 and 3 present the monitoring results 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.

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

Section 17 discusses the general site performance of the consent holders within the catchment, their interpretation, and their significance for the environment in the immediate vicinity of the sites under discussion.

Section 18 presents recommendations to be implemented in the 2021-2022 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

a. the neighbourhood or the wider community around an activity, and may include cultural and social-economic effects;
b. physical effects on the locality, including landscape, amenity and visual effects;
c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
e. risks to the neighbourhood or environment.

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

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the consent holders, this report also assigns a rating as to each 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 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% of the consents, a good level of environmental performance and compliance was achieved. [1]

1.2 Resource consents

The resource consents covered by the Mangati Catchment Joint Monitoring Programme are shown in Table 1 and their locations are shown in Figure 2. A total of 21 consents were included in the monitoring programme during the 2020-2021 monitoring period. Of these, 16 licence discharges to water, one licences a discharge to land, four licence discharges to air, and one licences groundwater abstraction. These consents include a total of 226 special conditions. There are a small number of other consented discharges in the catchment, such as agricultural discharges, which are not covered directly by this monitoring programme.

Outlines of the companies' activities and the special conditions on their consents are presented in Sections 2- 15 of this report, and copies of the full consents are given in numerical order in Appendix I.

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

- require the consent holder to adopt best practice;
- limit the area from which stormwater can be discharged;
- require the use of a stormwater treatment system;
- limit constituents of the discharge, with specific regard to pH, suspended solids and oil and grease;
- require that the discharge does not cause certain effects in the receiving waters;
- require that the consent holder maintain a spill contingency plan;
- require that the consent holder maintain and adhere to a management plan;
- require the consent holder to notify Council prior to making any changes to the site or site processes;
- set a lapse date (where applicable); and
- set dates for optional review.

[1] The Council has used these compliance grading criteria for more than 17 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

Table 1 Resource consents in the Mangati Catchment

Consent holder	Resource consent	Purpose	Granted	Next review date	Expiry date
Water discharge permits					
Barton Holdings Ltd	7707-1	To discharge stormwater into the Mangati Stream	31 May 2011	-	1 June 2026
First Gas Ltd	4780-2	To discharge stormwater and vehicle wash water to the Mangati Stream	17 Dec 2015	June 2026	1 June 2032
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	6 Aug 2020	-	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 Oct 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	2 Nov 2007	-	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 Sept 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	6 Aug 2020	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	8 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 Aug 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 Aug 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 Feb 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 Dec 2013	June 2023	1 June 2026
	7389-1	To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream	6 Aug 2020	-	1 June 2026
TIL Freighting Ltd	6952-1	To discharge stormwater from a truck depot into and onto land in the vicinity of the Mangaone Stream in the Waiwhakaiho catchment	20 Sept 2006	-	1 June 2020
	7578-1	To discharge stormwater from a truck depot into the Mangati Stream	20 Apr 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 Feb 2015	June 2026	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 Nov 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 Oct 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	17 Apr 2015	-	1 June 2038

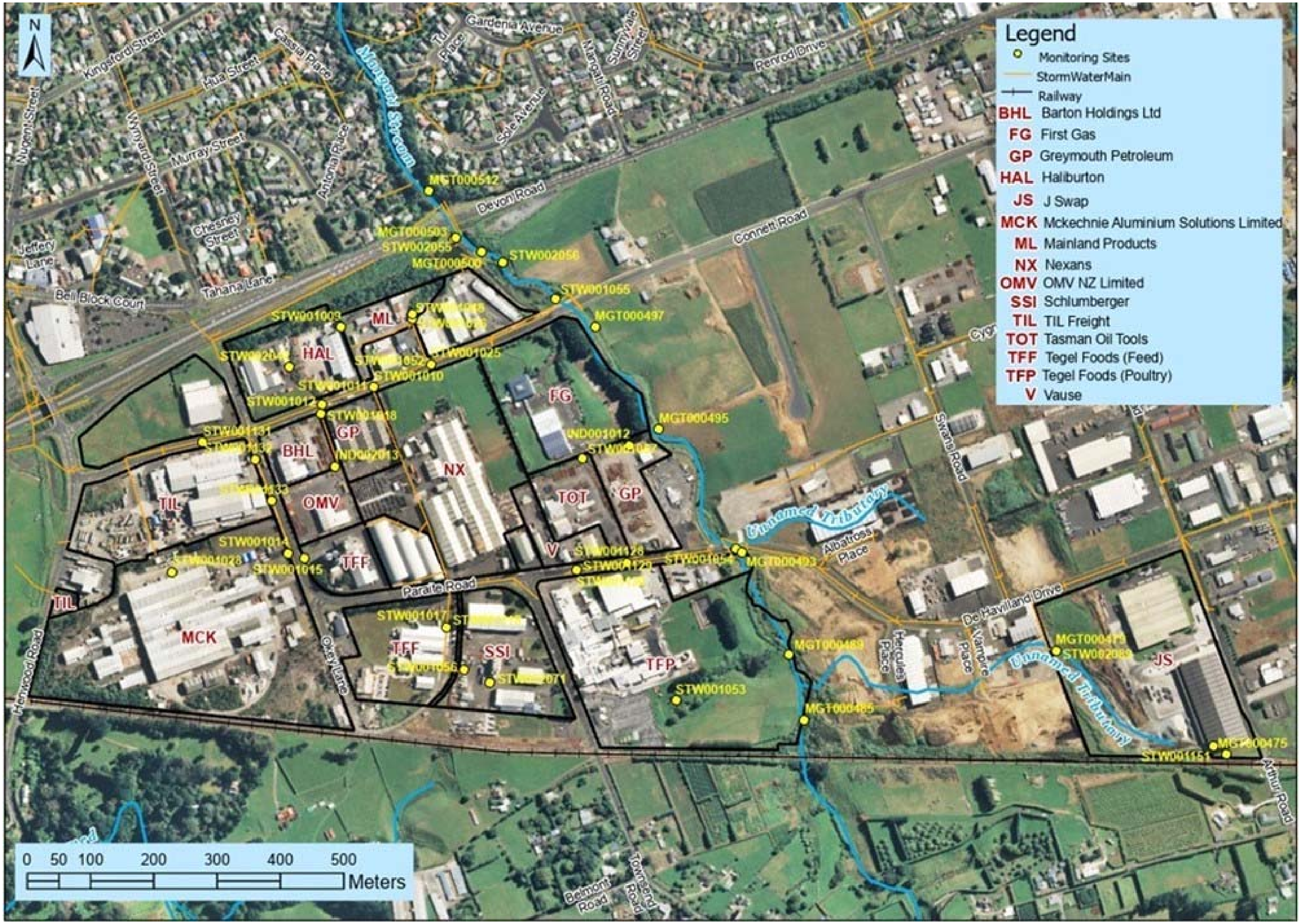

Figure 2 Location of consent holders, discharge sites, and surface water monitoring sites

1.3 Monitoring programme

1.3.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for the industries in the Mangati catchment consisted of nine 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

Council officers undertook 68 routine site inspections of the consent holders' sites. With regard to consents for discharges to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. During inspections at sites with air discharge consents, ambient monitoring of suspended particulate and other emissions were undertaken as appropriate.

1.3.4 Discharge sampling

The Council took 52 stormwater samples either via integrated catchment sampling runs or individually during wet weather inspections. Each sample was analysed for the expected contaminants and other physical characteristics of the discharges from each site.

1.3.5 Receiving water sampling

The Council took 31 receiving water samples during two integrated wet weather surveys and one dry weather survey. Each sampling site (Figure 2) is located to serve as either an upstream control or downstream impact assessment site for any given discharge.

1.3.6 Air monitoring

The Council undertook odour surveys in the neighbourhood of each site during inspections 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 of Tegel Poultry Ltd's feed mill site.

1.3.7 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 January 2021 and 7 May 2021.

1.3.8 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 triennial 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 2020 lockdown, this was re-scheduled for the 2020-2021 period.

1.3.9 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 undertakes reviews to ensure that the required records are being kept and that any 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

1.3.10 Hydrological and environmental telemetry

During the 2020-2021 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 since the 2016-2017 period.

2 Barton Holdings Ltd

2.1 Site description

Barton Holdings Ltd (Barton) supplies liquid and dry stock feed from a 0.46 ha storage site at 21 Paraite Road, in the industrial area of Bell Block (Photo 3). GrainCorp Feeds Ltd originally operated this site, however during the 2017-2018 monitoring period, the consent was transferred to Barton.

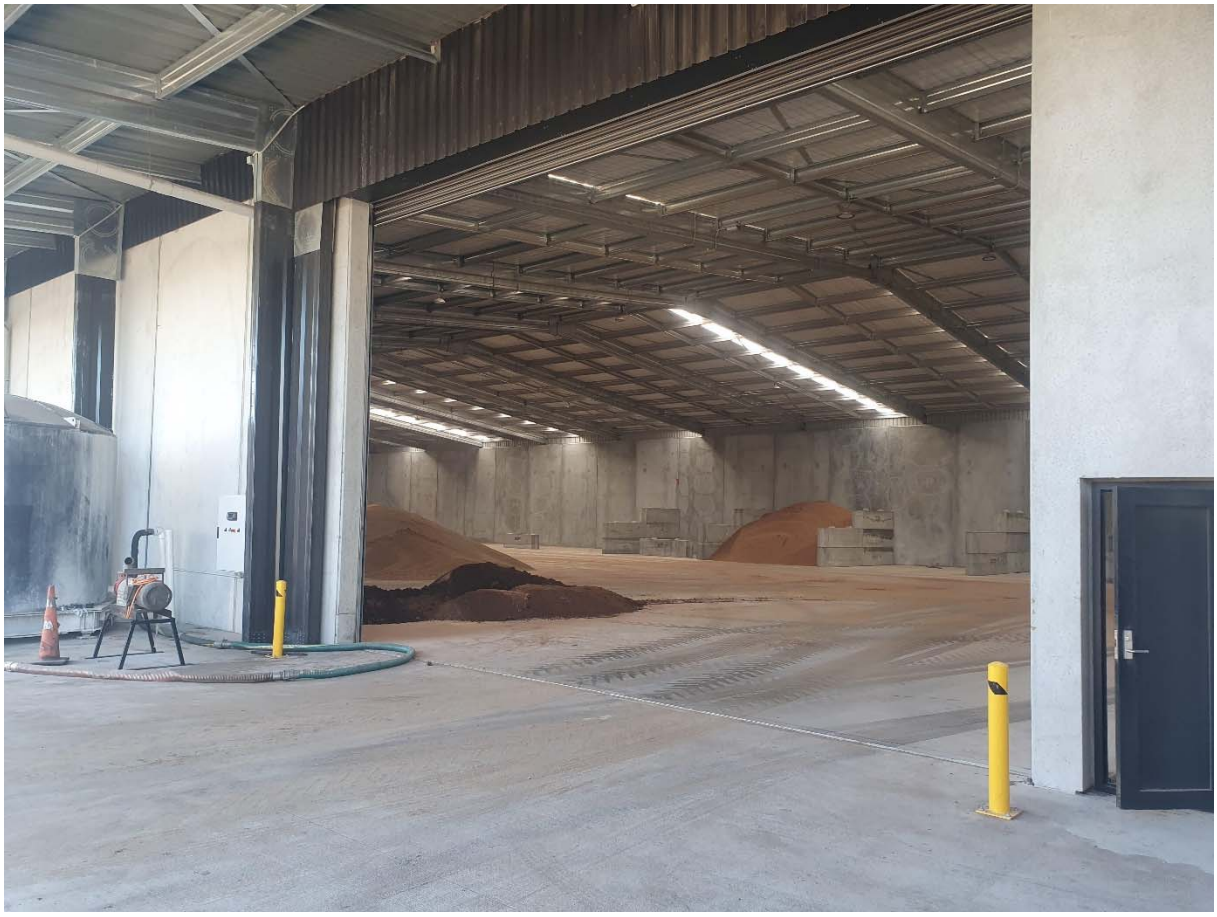

Photo 3 New storage shed at Barton site, June 2021

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

Barton holds water discharge permit **7707-1** to cover the discharge of stormwater into the Mangati Stream. This consent contains the standard special conditions as given in Section 1.2 and two additional special conditions requiring all hazardous substances to be bunded (Photo 4) and limiting the filtered carbonaceous BOD (CBOD) in the Mangati Stream below the mixing zone.

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

Photo 4 Truck wash and bunded storage areas, June 2021

2.2 Results

2.2.1 Inspections

Three routine inspections were conducted at the site during the monitoring period, on 28 July 2020, 26 November 2020, and 9 June 2021.

28 July 2020

An inspection to assess compliance with resource consent conditions was carried out in cloudy weather with light wind conditions. The site was relatively clean and dry. The eastern loading doors were open and a small amount of palm kernel was visible inside the shed. No dust and only minimal onsite odours were noted emitting the building. A small amount of unknown liquid had spilled onto the sealed yard near the northern entrance. This was dry and not discharging to the drains, however it was advised that this would need to be cleaned to avoid runoff to the stormwater system. Chemicals onsite were stored and bunded appropriately, with no sign of spills or leaks. Construction was underway on the neighbouring gravel yard for the new storage shed, staff were advised to ensure that the stormwater plan and relevant consents were updated before this site became operational. At the time of inspection, the site was compliant with consent conditions.

26 November 2020

The site was inspected in overcast, wet weather with light wind conditions. The site was clean and tidy, with no sign of spills or leaks from the chemical storage area. One bay of the storage shed was open, with a small amount of product stockpiled inside and minimal odours being emitted. There were no vehicle movements

at the time, and no tracking from roadways. The stormwater system was fully contained and discharging a high flow volume at the time, and samples were collected for analysis. The new storage shed on the eastern site was still under construction. There were no dust or odour issues on the site, and all consent conditions were being complied with.

9 June 2021

A site inspection was carried out in overcast weather with light wind conditions. The site was clean and tidy, and well-maintained with signs of recent sweeping. Filter socks were in place and generally in good condition, although one was in need of repair. All chemicals were stored in a dedicated bunded area with drainage to sumps and trade waste. There were no sign of spills or leaks, and no product tracking offsite. The new storage shed had been completed and was operating at the time, with a moderate amount of palm kernel piled near the entrance door. There were no odour or dust issues and the site was compliant with consent conditions.

2.2.2 Results of discharge monitoring

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

The discharge point was visited on three occasions during the year and the results of the discharge monitoring are given in Table 2.

Table 2 Barton stormwater sampling results, site STW001138

Parameter	Unit	12 Oct 2020	26 Nov 2020	17 Aug 2021	*Consent limits*
Temperature	°C	14.7	16.0	12.2	-
pH	pH	7	6.7	7.3	*6-9*
Conductivity	mS/cm	4.6	1.3	9.2	-
Suspended Solids	g/m^3	26	56	56	*100*
Turbidity	FNU	11.1	13.3	24	-
TBOD	g O_2/m^3	2.8	1.3	17	*25*
Hydrocarbons					
C7-C9	g/m^3	< 0.10	< 0.4	-	-
C10-C14	g/m^3	< 0.2	< 1.0	-	-
C15-C36	g/m^3	< 0.4	< 2	-	-
Total HC	g/m^3	< 0.7	< 4	-	*15**

All samples collected during the period under review complied with consent conditions.

2.3 Evaluation of performance

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

Table 3 Summary of performance for Barton 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
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 as defined in Section 1.1.4.

3 First Gas Ltd

3.1 Site 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 (Photo 5). The remaining 40 percent is covered in grass. The maintenance shed is enclosed, and any wash water from inside the shed is directed to a holding system which is emptied by a licensed wastewater collector.

Photo 5 View of stormwater catchment at First Gas site

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. The onsite vehicle wash bay is currently decommissioned and no longer discharges to the stormwater system (Photo 6).

Photo 6 Decommissioned wash bay, August 2020

First Gas holds consent **4780-2** to discharge stormwater and vehicle wash water to the Mangati Stream. The consent contains the standard special conditions as set out in Section 1.2. It also contains extra conditions that are specific to the site, requiring any vehicle wash water be treated and the consent holder to sample and analyse the wash water.

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

3.2 Results

3.2.1 Inspections

Two routine inspections were conducted at the site during the monitoring period, on 6 August 2020 and 16 November 2020.

6 August 2020

An inspection was conducted in overcast weather with light rainfall ongoing. The site was tidy and quiet with normal vehicle movements. The wash-down bay had been decommissioned and was now used for additional vehicle parking. The drain and sump from the bay were clear with no sheen or foaming present and no sign of recent use. All chemicals were appropriately stored and bunded with no sign of spills or leaks. The site was dry and all stormwater drains were clear. There were no dust issues and all consent conditions were being complied with.

13 November 2020

The site was inspected in overcast weather with light rain and wind conditions. The site was clean and well-maintained with all stormwater onsite captured and directed to perimeter drains. The decommissioned wash

bay showed no signs of recent use. Hazardous storage areas were tidy and well contained. Stormwater from the lower yard discharges to the grassed areas onsite before entry to the Mangati Stream, which provides some measure of sediment control. There were no odour or dust issues, and the site was compliant at the time.

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**

N/A = not applicable or not assessed

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

4 Greymouth Petroleum Acquisitions Company Ltd

4.1 Site description

Greymouth Petroleum Acquisitions Company Ltd's (GPL) 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 (Photo 7).

Photo 7 Storage areas and bunding on GPL site, September 2020

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.

In the 2020-2021 period, a separate sediment retention pond was installed in the stormwater system below the interceptor but above the final holding pond (Photo 8). Originally the discharge from the holding pond entered a small open drain where it mixed with discharges from Tasman Oil Tools and First Gas prior to being discharged to the Mangati Stream. Works undertaken in the 2016-2017 monitoring period resulted in the discharges from First Gas and Tasman Tools being piped along the bottom of the dry stream bed and GPL stormwater discharging to a gravel filter bed laid over the top of the pipework (Photo 9). These works were undertaken to improve the quality of the discharges from the GPL site.

Photo 8 New sediment retention pond, September 2020

Photo 9 Gravel filter bed installed on GPL pond discharge outlet, September 2020

Greymouth Petroleum holds water discharge permit **4664-3** to cover the discharge of treated stormwater from a pipe yard used for the cleaning and storage of casing and drilling equipment, and the storage of hazardous substances. The consent contains the standard special conditions as given in Section 1.2.

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

4.2 Results

4.2.1 Inspections

Four routine inspections were conducted at the site during the monitoring period, on 2 September 2020, 25 November 2020, 16 March 2021, and 24 June 2021.

2 September 2020

An inspection was carried out in fine weather with calm wind conditions. The site was tidy with bunding in place in appropriate areas. The stormwater treatment system was in good operating condition. No discharge was occurring at the time. There were no odour or dust issues, and the site was compliant with resource consent conditions.

25 November 2020

The site was inspected in wet, overcast weather with light northerly wind conditions. The rainfall at the time of the visit was consistent with a 1 in 20 year rainfall event. The site was inundated with rain which had caused localised ponding in low-lying areas. Stormwater was found to be discharging over the boundary into a neighbouring property, and discussions were held onsite about improving bunding to ensure all runoff on the site was captured and directed to the treatment system. Hydrocarbon sheens were noted in two areas of the site, however the stormwater drains and discharge point were clear. The system was discharging at the time, and improving the visual clarity of the Mangati Stream. All consent conditions were being complied with.

16 March 2021

An inspection to assess compliance with resource consent conditions was carried out in fine, dry weather with light easterly wind conditions. The site was relatively quiet and tidy. A small number of storage containers were located in an uncontained area of the site, and discussions were held with site operators around installing temporary bunding to prevent non-compliant discharges. The stormwater system was operating well, and the sediment settling pond was visually clear with no discharge. At the time of inspection, the site was compliant with consent conditions.

24 June 2021

An inspection to assess compliance with resource consent conditions was carried out in cloudy weather with light westerly wind conditions. The site was tidy and a large volume of equipment that had previously been stored on the yard had since been removed. The stormwater system was in good operating condition, with perimeter drains dry and free from obstructions. The settling pond was slightly discoloured but not discharging. A newly-installed sediment retention pond above this point was operating well. Discussions were held with staff onsite about removing vegetation on the boundary. The preferred option would be to fell any large trees and avoid using heavy machinery that could potentially discharge sediment off the site. There were no issues with odour, and all dust levels were within allowable limits. At the time of inspection, the site was compliant with consent conditions.

4.2.2 Results of discharge monitoring

The primary monitoring site for GPL's discharge is at site (IND001012) where it exits the gravel filter bed into a drain which discharges to the Mangati Stream. The recent stormwater upgrades and introduction of the gravel filter bed have reduced the frequency of discharge from the GPL site.

The site was visited three times for sampling during the period under review. Discharge was occurring during one of the visits, while there was no discharge on the other two occasions. The results are displayed in Table 5.

Table 5 GPL discharge sampling results, site IND001012

Parameter	Unit	12 Oct 2020	*Consent limits & ANZECC guideline values*
Temperature	°C	13.7	-
pH	pH	7.4	*6-9*
Conductivity	mS/m	6.1	-
Suspended solids	g/m³	28	*100*
Turbidity	NTU	38	-
Metals (acid soluble)			
Copper	g/m³	0.0066	*1.4*
Zinc	g/m³	0.0151	*8.0*
Metals (dissolved)			
Copper	g/m³	0.011	-
Lead	g/m³	0.013	-
Zinc	g/m³	0.03	-
Nutrients			
NH_3	g/m³	< 0.00006	-
NH_4	g/m³	< 0.010	-
NNN	g/m³	0.103	-
DRP	g/m³	< 0.004	-
Hydrocarbons			
C7 - C9	g/m³	< 0.4	-
C10 - C14	g/m³	< 1.0	-
C15 - C36	g/m³	< 2	-
Total HC	g/m³	< 4	*15**

**HC measured in place of oil & grease*

Copper, lead and zinc are monitored at this site as it is known that, historically, greases containing these contaminants were washed from pipes and the wash water was discharged to land. Although the grease currently used does not contain these elements, and the wash down wastewater is now directed to trade waste, 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.

All sampling results were compliant with consent conditions for the period under review. The concentration of suspended solids in the discharge has improved following the installation of the sediment retention pond and the gravel filter bed on the holding pond outlet.

4.3 Evaluation of performance

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

Table 6 Summary of performance for GPL 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	Yes
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** **High**

N/A = not applicable or not assessed

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

5 J Swap Contractors Ltd

5.1 Site 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 of palm kernel expeller cattle feed (PK). There are two feed stores on the site in which PK is stored, screened and then loaded on to trucks for delivery (Photo 10). A small section of one of the buildings is occupied by Ballance Agri-Nutrients where fertilisers are stored and transferred.

Photo 10 View of PK stockpiled inside J Swap storage shed, July 2020

J Swap operate a truck wash onsite which sends wash water to trade waste (Photo 11). 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.

J Swap holds water discharge permit **10085-1** to discharge stormwater from a transport depot into an unnamed tributary of the Mangati Stream. This consent contains special consent conditions as given in Section 1.2. as well as five extra conditions that deal with site development and the provision of stormwater system designs and as built plans.

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

Photo 11 Truck wash on J Swap yard, July 2020

5.2 Results

5.2.1 Inspections

Three routine inspections were conducted at the site during the monitoring period, on 28 July 2020, 26 November 2020, and 9 June 2021.

28 July 2020

An inspection was carried out in overcast weather with light wind conditions. The site was tidy and quiet with limited vehicle movements. The truck wash showed signs of recent use, and all wash water was captured and directed to the separator for disposal to trade waste. Sweeping had recently been completed and there was no sign of tracking from the sheds or offsite. The stormwater drains were clean and filter socks were in place and in good condition. The wetland was dry with no sign of recent flow. There were no odour or dust issues, and the site was compliant at the time.

26 November 2020

The site was inspected in overcast weather with heavy rainfall and light wind conditions. The yard was tidy, with moderate traffic movements occurring. All stormwater was being captured and directed to the system for treatment, with no sign of overflows despite the heavy showers at the time. All wastewater from the truck wash was discharging to trade waste via the separator. The stormwater drains were operating at high flows, and the grates and filter socks were in good condition. The wetland had some ponded water, but was not discharging. Samples were collected from both discharge points, and analysis showed all consent conditions were being complied with.

9 June 2021

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light wind conditions. The site was relatively quiet and had minimal traffic movements. The yard was clean and showed evidence of regular sweeping. There was a small amount of product tracking a short distance from the storage shed, but no product had been tracked off the site. The truck wash was tidy and in good operating condition. Stormwater drains were clear and dry with filter socks in place. There were no discharges of stormwater from the site, and all dust levels were within allowable limits. At the time of inspection, the site was compliant with consent conditions.

5.2.2 Results of discharge monitoring

Treated stormwater is discharged to the Mangati Stream in two places. Roof water combined with stormwater from the truck wash area discharges directly to the piped unnamed tributary of Mangati Stream (site STW001151) whilst water from the other areas of the site are directed to a wetland constructed on top of the piped tributary. The wetland discharges via two floating decanters and a riser directly into the piped tributary (site STW002089).

The results of discharge monitoring for combined roof stormwater and the wetland discharges are given in Table 7 and

Table 8 respectively.

Table 7 J Swap roof stormwater sampling results, site STW001151

Parameter	Unit	12 Oct 2020	26 Nov 2020	17 Aug 2021	*Consent limits*
Temperature	°C	13.2	15.8	11.8	-
pH	pH	6.6	6.4	6.2	*6-9*
Conductivity	mS/m	1.0	12.8	6.7	-
Suspended solids	g/m^3	3	< 3	11	*100*
Turbidity	FNU	-	1.39	1.24	-
CBOD	g O_2/m^3	< 1.0	1.1	3.8	*5*
TBOD	g O_2/m^3	-	-	< 0.8	-
Nutrients					
NH_3	g/m^3	0.00005	0.000049	< 0.000010	*0.025**
NH_4	g/m^3	0.047	0.073	0.016	-
DRP	g/m^3	0.012	-	-	-
Hydrocarbons					
C7 - C9	g/m^3	-	< 0.10	-	-
C10 - C14	g/m^3	-	< 0.2	-	-
C15 - C36	g/m^3	-	< 0.4	-	-
Total HC	g/m^3	-	< 0.7	-	*15**

** NH_3 limits apply to instream only (not discharge); HC measured in place of oil & grease*

Table 8 J Swap wetland stormwater sampling results, site STW002089

Parameter	Unit	12 Oct 2020	26 Nov 2020	*Consent limits*
Temperature	°C	13.2	15.6	-
pH	pH	7.0	6.8	*6-9*
Conductivity	mS/m	7.3	0.2	-
Suspended solids	g/m^3	4	< 3	*100*
Turbidity	FNU	-	0.31	-
CBOD	g O_2/m^3	1.9	< 1.0	*5*
Nutrients				
NH_3	g/m^3	< 0.00003	0.000023	*0.025**
NH_4	g/m^3	< 0.010	0.014	-
DRP	g/m^3	< 0.004	-	-
Hydrocarbons				
C7 - C9	g/m^3	-	< 0.10	-
C10 - C14	g/m^3	-	< 0.2	-
C15 - C36	g/m^3	-	< 0.4	-
Total HC	g/m^3	-	< 0.7	*15**

** NH_3 limits apply to instream only (not discharge); HC measured in place of oil & grease*

All results for both sited were within consented limited and historical ranges. The quality of both site discharges continues to be maintained at a high standard, with consistently low concentrations of suspended solids, CBOD and nutrients. There have been no hydrocarbons detected in either discharge since the current method of testing was introduced in 2019.

5.3 Evaluation of performance

A tabular summary of J Swap's compliance record for the year under review is set out in Table 9.

Table 9 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

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?**
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 Contractors Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

6 McKechnie Aluminium Solutions Ltd

6.1 Site description

McKechnie Aluminium Solutions Ltd (MCK) 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 MCK 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 MCK'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 (Photo 12). 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.

Photo 12 Scrap sorting yard at MCK site, May 2020

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 (Photo 13);
- 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. MCK 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.

Photo 13 Hazardous chemical storage and bunding, July 2020

MCK holds water discharge permit **3139-3** to cover the discharge of stormwater (including cooling water) from an industrial site into an unnamed tributary of the Mangati Stream. This consent contains the standard special conditions as given in Section 1.2

The permit is attached to this report in Appendix I.

In addition to 3139-3, water discharge permit **1857-6** is held to discharge stormwater from the western part of the industrial site, adjacent to Henwood Road, to a tributary of the Mangaone Stream in the Waiwhakaiho catchment. McKechnie also holds air discharge consent **4034-3** to provide for the discharge of emissions into the air from extrusion and re-melting of aluminium and associated activities. The monitoring of these consents is discussed in a separate report.

6.2 Results

6.2.1 Inspections

Three routine inspections were conducted at the site during the monitoring period, on 31 July 2020, 26 November 2020, and 24 May 2021.

31 July 2020

An inspection was carried out in overcast weather with moderate wind conditions. The site was busy with normal operations. The scrap area was tidy and had been recently swept, although swarf was noted tracking towards drains in the high traffic volume areas. The drain screens were in place on all stormwater drains and were in generally good condition although some cleaning was required to remove swarf accumulations. All hazardous chemicals onsite were appropriately stored and bunded with no sign of spills or leaks. The bunds contained clear stormwater only. Unloading of chemicals was underway at the time and appropriate spill containment measures were in place. Spills kits were in place and in good condition. All stormwater drains onsite were clean and free-flowing, although not discharging at the time. The stormwater outlet to the Mangaone Stream was clear and dry. The waste oil storage area was tidy and the containment value was closed, all ponded water had recently been pumped out. There were no odour or dust issues at the time and all consent conditions were being complied with.

26 November 2020

The site was inspected in warm, cloudy weather following heavy rain earlier in the day. Normal operations were underway and the scrap area was busy and full of material. Swarf was noted tracking toward the drains in this area, which had drain screens in place and required cleaning. All hazardous chemicals and waste materials onsite were appropriately bunded and stored with no sign of spills or leaks. The stormwater system was in good condition and operating at the time. Samples were collected from both discharge points and the results were within acceptable limits. The site was compliant with all consent conditions at the time of inspection.

24 May 2021

An inspection was conducted in cloudy weather with strong north easterly wind conditions. The site was busy, in particular the scrap yard had high volumes of vehicle movements. Drain screens were in place in this areas and required regular cleaning due to the high volumes of swarf. All hazardous chemicals were appropriately stored and bunded, with no containment issues. The bunds contained low levels of clear stormwater. A new building was under construction to house a second powder coat production line. All stormwater drains were clear with no sign of recent flow. There were no odour or dust issues, and all consent conditions were being complied with.

6.2.2 Results of discharge monitoring

MCK's eastern stormwater is monitored 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).

Both sites were 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 samples were collected.

The results from discharge monitoring at both sites are given in Table 10 and Table 11.

Table 10 MCK Paraite Road stormwater sampling results, site STW001014

Parameter	Unit	12 Oct 2020	26 Nov 2020	Resource consent limits
Temperature	°C	14.5	17.4	-
pH	pH	7.0	7.8	*6-9*
Conductivity	mS/m	6.1	4.4	-
Suspended solids	g/m³	12	10	*100*
Turbidity	FNU	12	10	-
Metals (acid soluble)				
Aluminium	g/m³	0.24	0.87	-
Copper	g/m³	0.093	0.048	-
Lead	g/m³	0.007	0.0044	-
Zinc	g/m³	0.48	0.34	-
Metals (dissolved)				
Copper	g/m³	0.02	0.0194	-
Zinc	g/m³	0.29	0.23	-
Hydrocarbons				
C7 - C9	g/m³	-	< 0.10	-
C10 - C14	g/m³	-	< 0.2	-
C15 - C36	g/m³	-	0.8	-
Total HC	g/m³	-	0.9	*15**

**HC measured in place of oil & grease*

Table 11 MCK onsite stormwater sampling results, site STW001028

Parameter	Unit	12 Oct 2020	26 Nov 2020	Resource consent limits
Temperature	°C	14.5	17.4	-
pH	pH	6.7	6.9	*6-9*
Conductivity	mS/m	3.6	2.2	-
Suspended solids	g/m³	< 3	< 3	*100*
Turbidity	FNU	1.01	1.51	-
Metals (acid soluble)				
Aluminium	g/m³	< 0.06	0.063	-
Copper	g/m³	0.019	0.049	-
Lead	g/m³			-
Zinc	g/m³	0.56	0.42	-
Metals (dissolved)				

Parameter	Unit	12 Oct 2020	26 Nov 2020	Resource consent limits
Copper	g/m³	0.0128	0.024	-
Zinc	g/m³	0.53	0.42	-
Hydrocarbons				
C7 - C9	g/m³	-	< 0.10	-
C10 - C14	g/m³	-	< 0.2	-
C15 - C36	g/m³	-	< 0.4	-
Total HC	g/m³	-	< 0.7	*15**

**HC measured in place of oil & grease*

The samples complied with limits on the pH range, suspended solids and oil and grease.

Copper, lead and zinc levels are not specified in consent conditions, however these parameters are monitored because they are likely present on site, and the possibility exists of them becoming entrained within the discharge.

6.3 Evaluation of performance

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

Table 12 Summary of performance of MCK 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	Yes
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	Yes
6. Maintenance of a contingency plan	Updated plan received January 2018	Yes
7. Maintenance of stormwater management plan	Plan received – update due	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

Purpose: *To discharge stormwater (including cooling water) from an industrial site*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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, McKechnie Aluminium Solutions Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

7 New Plymouth District Council

7.1 Site 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.

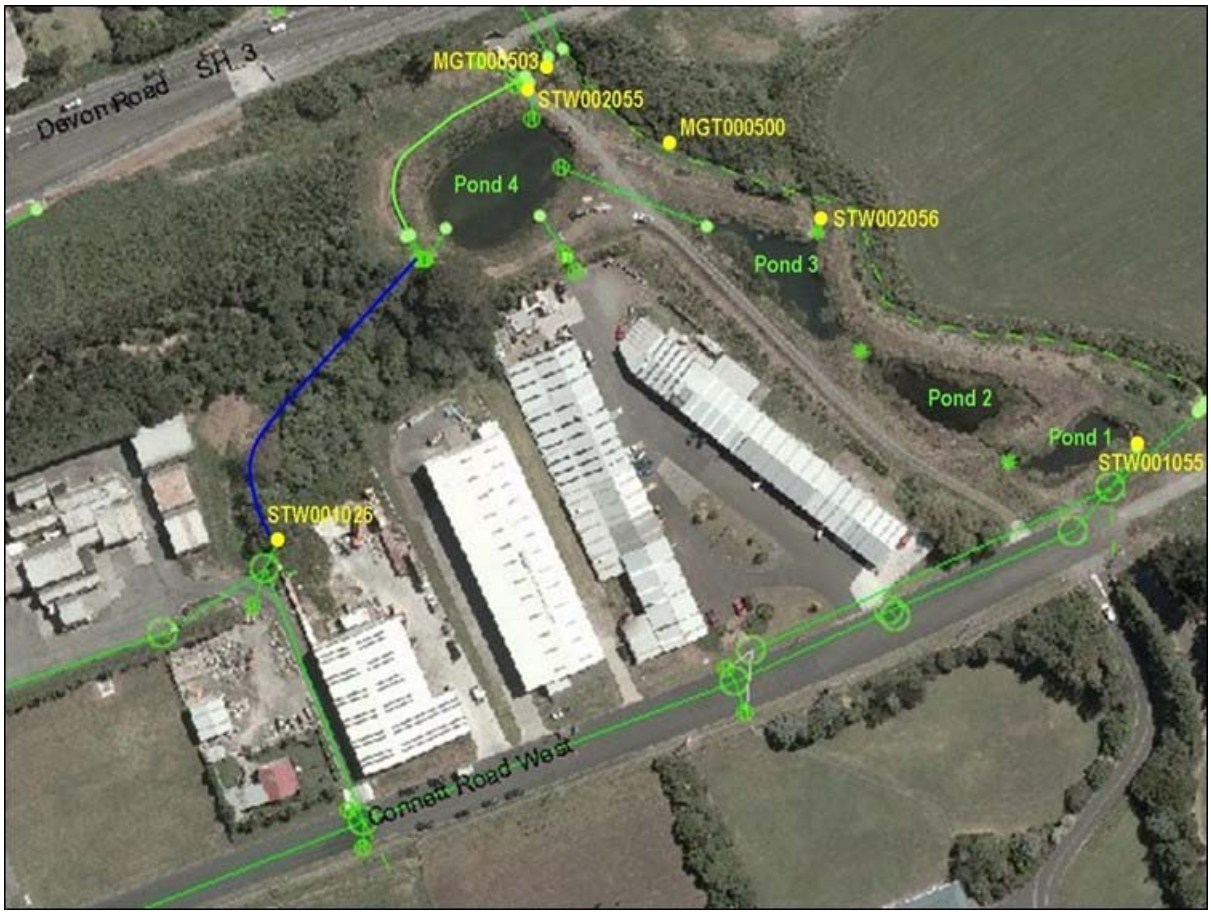

Figure 3 NPDC stormwater reticulation system and sampling points

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 (Photo 14) 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.

NPDC holds permit **4302-2** to cover the discharge up to 5,200 L/s of stormwater from industrial sealed areas and roofs. The consent has five conditions, which cover adoption of best practice to prevent or minimise adverse effect on the receiving environment, requirement for management plan, prevention and mitigation of any erosion, and review of conditions.

The permit is attached to this report in Appendix I.

Photo 14 NPDC stormwater pond 2, September 2021

7.2 Results

7.2.1 Inspections

Six routine inspections were conducted at the discharge points during the monitoring period, on 31 July 2020, 31 August 2020, 4 November 2020, 25 November 2020, 25 January 2021, and 9 June 2021.

31 July 2020

The discharge from the NPDC stormwater system was inspected in overcast weather with moderate wind conditions. The stormwater ponds were operating at a low level with stagnant or very low flow rates between ponds. Ponds 1 and 2 were clear. Pond 3 was discharging at a low flow rate of approximately 0.5 L/s, and was a slightly turbid brown colour. Pond 4 was not discharging at the time. The Mangati Stream was flowing at a low, steady rate and was slightly turbid with a faint grey colour. All assessed conditions were compliant.

31 August 2020

An inspection to assess compliance with resource consent conditions was conducted in cloudy weather with light north westerly wind conditions. The Mangati stormwater pond system was compliant with resource consent conditions and no issues were raised at the time of inspection.

4 November 2020

The discharge from the NPDC stormwater system was inspected in hot, cloudy weather with moderate wind conditions. Rain overnight had resulted in discharges from Ponds 1, 2 and 3. The ponds were in good operating condition and no sheens or scums were noted on the surface of each. Streambank planting had

prevented erosion and all ponds were fully contained. Samples were collected from the discharge at Pond 3, and Pond 4 was sampled a fortnight later as weather conditions permitted. All results were within acceptable limits and the assessed conditions were compliant for the site.

25 November 2020

An inspection to assess compliance with resource consent conditions was conducted in wet, overcast weather with light northerly wind conditions. The rainfall at the time was equivalent to a 1 in 20 rainfall event. All four ponds were full, and the stormwater overflow channel was in use at the time. No erosion was noted, and the discharges from the ponds were improving the visual clarity of the Mangati Stream. No issues were raised at the time of inspection

25 January 2021

An inspection was carried out in hot, fine weather with light westerly wind conditions. The Mangati stormwater pond system was compliant with resource consent conditions at the time of the visit.

9 June 2021

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light wind conditions. The ponds were operating at a moderately low level, with stagnant or low flows between each. Ponds 1 and 2 were clear and not discharging. Pond 3 was discharging at a low flow rate of approximately 0.5 L/s and was a slightly turbid brown colour. Pond 4 was not discharging at the time. The Mangati Stream was flowing at a low, steady rate and was slightly turbid with a faint grey colour. At the time of inspection, the site was compliant with consent conditions.

7.2.2 Results of stormwater discharge monitoring

Stormwater is discharged to the Mangati Stream from the NPDC treatment wetlands, and from at various points from roads running through the industrial area. The results of monitoring in the Mangati Stream itself are reported in Section 16.1.

Stormwater that is discharged to the Mangati Stream from roads running through the industrial area is monitored at three points, De Havilland Drive West, Connett Road West, and the NPDC industrial drain.

Two NPDC stormwater drains terminate at the ponds system. Site STW001055 discharges into Pond 1, while STW001051 discharges directly to Pond 4.

The NPDC wetlands system has two locations discharging treated stormwater to the Mangati Stream. Pond 4 discharges at site STW002055, while pond 3 is at site STW002056.

7.2.2.1 De Havilland Drive West

The De Havilland Drive stormwater system discharges directly into the Mangati Stream (site STW001054). It has stormwater components from several small industrial sites, as well as 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 site was visited on four occasions during the monitoring period. Three were during wet weather events, while the fourth was during dry weather, low flow conditions. Results of the sampling are displayed in Table 13.

Table 13 NPDC de Havilland Drive West stormwater sampling results, site STW001154

Parameter	Unit	28 Oct 2020	22 Feb 2021	17 Aug 2021	*RFWP Guideline*
Temperature	°C	14.3	16.6	14.1	-
pH	pH	6.9	6.9	6.3	*6-9*
Conductivity	mS/m	< 0.1	13.8	30.4	-
Suspended solids	g/m^3	4	< 3	4	*100*
Turbidity	NTU/FNU	6.3	1.17	6.9	-
TBOD	g O_2/m^3	1	2.5	1.9	-
Nutrients					
NH_3	g/m^3	0.0006	0.0056	0.000053	-
NH_4	g/m^3	0.26	2.5	0.11	-
DRP	g/m^3	< 0.1	13.8	30.4	-
Hydrocarbons					
C7 - C9	g/m^3	< 0.10	-	< 0.10	-
C10 - C14	g/m^3	< 0.2	-	< 0.2	-
C15 - C36	g/m^3	< 0.4	-	< 0.4	-
Total HC	g/m^3	< 0.7	-	< 0.7	*15**

**HC measured in place of oil & grease*

The de Havilland Drive catchment area typically discharges high quality stormwater, due to its relatively small size and fewer inputs from industrial sites. This is shown in the low suspended solids concentrations and hydrocarbon results which are frequently below the limits of detection. BOD results during the summer low flow survey were slightly elevated, but no impacts were measured in the receiving waters as a result of the discharge.

7.2.2.2 Connett Road West

The Connett Road stormwater system captures runoff from the remaining catchment area, which includes the majority of consented discharges as well as sites operating under permitted activity rules.

7.2.2.2.1 Connett Road discharges to NPDC wetlands system

Stormwater and runoff from the Connett Road carriageway discharges into pond 1 of the NPDC treatment wetland (site STW001055) as well as pond 4 (STW001051).

Pond 1 influent stormwater was sampled four times during the monitoring period, while pond 4 influent was visited three times but only sampled once due to access restrictions. The results of these surveys are displayed in Table 16 and Table 15.

Table 14 NPDC pond 1 influent stormwater sampling results, site STW001055

Parameter	Unit	12 Oct 2020	04 Nov 2020	22 Feb 2021	17 Aug 2021	*RFWP Guideline*
Temperature	°C	14.6	16.8	15.8	12.7	-
pH	pH	7.1	7.0	6.8	6.6	*6-9*
Conductivity	mS/m	3.7	14.3	27.4	7.2	-
Turbidity	NTU/FNU	2.8	1.71	0.47	6.6	-

Parameter	Unit	12 Oct 2020	04 Nov 2020	22 Feb 2021	17 Aug 2021	*RFWP Guideline*
TBOD	g O_2/m^3	1.4	0.8	1.6	1.8	-
Nutrients						
NH_3	g/m^3	0.00012	< 0.00004	< 0.00003	< 0.000010	-
NH_4	g/m^3	0.036	< 0.010	< 0.010	0.01	-
DRP	g/m^3	0.009	0.004	< 0.004	0.007	-
Metals (acid soluble)						
Copper	g/m^3	< 0.010	0.0047	< 0.010	0.011	-
Zinc	g/m^3	0.1	0.057	0.06	0.1	-
Metals (dissolved)						
Copper	g/m^3	0.0043	-	0.001	0.0052	-
Zinc	g/m^3	0.085	0.051	0.061	0.085	-
Hydrocarbons						
C7 - C9	g/m^3	-	< 0.10	-	< 0.10	-
C10 - C14	g/m^3	-	< 0.2	-	< 0.2	-
C15 - C36	g/m^3	-	< 0.4	-	< 0.4	-
Total HC	g/m^3	-	< 0.7	-	< 0.7	*15**

**HC measured in place of oil & grease*

BOD and conductivity results for the pond 1 influent indicate that the water entering the wetlands system was of sufficiently high quality at the time of sampling. There were low levels of dissolved metals detected in the influent, which are attributed to the various industries and activities that occur within this area.

Table 15 NPDC pond 4 influent stormwater sampling results, site STW001051

Parameter	pH	Temperature	Conductivity	Suspended solids	Turbidity
Units	**pH**	**°C**	**mS/cm**	**g/m^3**	**FNU**
28 Oct 2020	6.8	14.9	1.9	14	13
RFWP Guideline	*6-9*	-	-	-	-

Pond 4 influent was within historical ranges during the monitoring period. This site predominantly drains sites operating under permitted activity rules, and as such the monitoring regime is reduced. The outlet from pond 4 is piped to pond 3 and so this stormwater does receive some form of treatment as a result.

7.2.2.2.2 Connett Road West stormwater

Samples are also collected from various locations in the reticulation system to assess the performance of individual consent holders. In total, four sites are routinely visited and samples collected if the stormwater system is flowing at that site at the time. Of the four sites, three were unable to be accessed safely or were not discharging at the time of the visit:

NPDC stormwater middle Connett Road (STW001010): This site receives stormwater discharges from the MCK, Tegel Feed Mill, and TIL sites.

NPDC stormwater Central Drain (STW001011): This site receives stormwater discharges from Nexans, Schlumberger, Tegel Feed Mill, and Tegel Processing sites.

NPDC stormwater upper Connett Road (STW001012): This site receives stormwater discharges from Barton, OMV, and neighbouring properties.

The remaining site was sampled once during the monitoring period and the results are displayed in Table 16:

NPDC stormwater upper Connett Road (STW001012): This site acts as an overflow to the industrial drain, and carries the combined discharges from the sites listed above as well as runoff from nearby road ways.

Table 16 NPDC mid Connett Road West stormwater sampling results, site STW001052

Parameter	pH	Temperature	Conductivity	TBOD	Turbidity
Units	**pH**	**°C**	**mS/cm**	**g O2/m³**	**FNU**
12 Oct 2020	8.1	14.6	3.8	1.2	11.9
RFWP Guideline	*6-9*	-	-	-	-

The low BOD and conductivity results for this site indicate there was sufficient dilution occurring at the time of sampling, and as a result no impacts were noted in the receiving waters. STW001052 discharges during high flows only, when the normal operating capacity of the Connett Road stormwater system has been exceeded.

7.2.2.3 NPDC industrial drain

Along with the de Havilland Drive and Connett Road stormwater systems, a third reticulation point discharges to the Mangati Stream via an industrial drain situated to the rear of the Mainland Products site. This drain encompasses the northern perimeter of the Mangati industrial zone. The sampling site (STW001026) at this point includes discharges from the former Halliburton site (now operated by Egmont Honey), Mainland Products, a range of smaller permitted activity sites, and also high flow inputs from the NPDC Connett Road West storm pipe. Sampling results are displayed in Table 17.

The industrial drain flows into the Mangati at sampling site MGT000503. Chemical sampling results from this point are shown in Table 18.

Table 17 NPDC industrial drain stormwater sampling results, site STW001026

Parameter	Unit	12 Oct 2020	17 Aug 2021	*RFWP Guideline*
Temperature	°C	14.7	12.4	-
pH	pH	6.7	6.3	*6-9*
Conductivity	mS/m	3.7	7.2	-
Suspended solids	g/m³	15	23	*100*
Turbidity	NTU/FNU	6.0	14.5	-
TBOD	g O_2/m³	2.5	3.5	-
Nutrients				
NH_3	g/m³	0.000098	< 0.000010	-
NH_4	g/m³	0.071	< 0.010	-
DRP	g/m³	0.021	0.009	-
Metals (acid soluble)				
Copper	g/m³	< 0.010	0.016	-
Zinc	g/m³	0.19	0.16	-
Metals (dissolved)				

Parameter	Unit	12 Oct 2020	17 Aug 2021	*RFWP Guideline*
Copper	g/m³	0.0062	0.008	-
Zinc	g/m³	0.16	0.129	-
Hydrocarbons				
C7 - C9	g/m³	< 0.10	< 0.10	-
C10 - C14	g/m³	< 0.2	< 0.2	-
C15 - C36	g/m³	< 0.4	< 0.4	-
Total HC	g/m³	< 0.7	< 0.7	*15**

**HC measured in place of oil & grease*

Table 18 NPDC industrial drain to Mangati Stream, site MGT000503

Parameter	Unit	28 Oct 2020	16 Sep 2021	*RFWP Guideline*
Temperature	°C	14.4	14.2	-
pH	pH	6.3	6.4	*6-9*
Conductivity	mS/m	14.9	17.5	-
DO	mg/l	5.18	6.93	-
	%	50.3	68.6	-
Suspended solids	g/m³	4	8	*100*
Turbidity	NTU/FNU	2.6	1.81	-
COD	g O_2/m³	< 6	< 6	-
TBOD	g O_2/m³	< 0.4	< 0.4	-
Nutrients				
NH_3	g/m³	0.000021	0.000037	-
NH_4	g/m³	0.037	0.062	-
DRP	g/m³	< 0.004	< 0.004	-
Metals (acid soluble)				
Copper	g/m³	< 0.010	< 0.010	-
Zinc	g/m³	0.05	0.02	-
Metals (dissolved)				
Copper	g/m³	0.0021	0.0009	-
Zinc	g/m³	0.05	0.021	-
Hydrocarbons				
C7 - C9	g/m³	< 0.10	< 0.10	-
C10 - C14	g/m³	< 0.2	< 0.2	-
C15 - C36	g/m³	< 0.4	< 0.4	-
Total HC	g/m³	< 0.7	< 0.7	*15**

**HC measured in place of oil & grease*

7.2.2.4 NPDC wetlands discharges to Mangati Stream

Water from the NPDC wetland pond 3 discharges into the Mangati Stream over a v-notch weir (STW002056). When there is higher flow from moderate rainfall, stormwater will also discharge into pond 4, which then flows into pond 3. There is also provision for pond 4 to discharge directly into the Mangati Stream (STW002055) when the water level in the pond increases to a certain height.

Samples were collected from the weir at pond 3 on four occasions. The overflow pipe from pond 4 to the Mangati Stream was also discharging on two of these visits, and samples were taken. The results are displayed in Table 19 and Table 20 respectively.

Table 19 NPDC wetland pond 3 discharge to Mangati Stream, site STW002056

Parameter	Unit	28 Oct 2020	04 Nov 2020	22 Feb 2021	16 Sep 2021	*RFWP Guideline*
Temperature	°C	15.2	18.7	15.8	12.9	-
pH	pH	6.8	6.9	7.1	6.6	*6-9*
Conductivity	mS/m	5.8	8.6	15.1	8	-
Suspended solids	g/m^3	6	10	11	6	*100*
Turbidity	NTU/FNU	4.1	7.3	10.3	6.4	-
COD	g O_2/m^3	8	10	18	11	-
CBOD	g O_2/m^3	-	< 1.0	-	-	-
TBOD	g O_2/m^3	1.5	3.9	4.9	1.5	-
Nutrients						
NH_3	g/m^3	0.000166	0.00015	0.00049	0.00034	-
NH_4	g/m^3	0.105	0.054	0.121	0.39	-
DRP	g/m^3	< 0.004	< 0.004	< 0.004	< 0.004	-
Metals (acid soluble)						
Aluminium	g/m^3	0.07	0.048	< 0.06	0.15	-
Copper	g/m^3	< 0.010	0.0068	< 0.010	< 0.010	-
Lead	g/m^3	< 0.002	0.00055	< 0.002	< 0.002	-
Zinc	g/m^3	0.13	0.157	0.05	0.16	-
Metals (dissolved)						
Copper	g/m^3	0.0051	0.0046	0.002	0.0056	-
Zinc	g/m^3	0.136	0.145	0.036	0.155	-
Hydrocarbons						
C7 - C9	g/m^3	< 0.10	< 0.10	-	< 0.10	-
C10 - C14	g/m^3	< 0.2	< 0.2	-	< 0.2	-
C15 - C36	g/m^3	< 0.4	< 0.4	-	< 0.4	-
Total HC	g/m^3	< 0.7	< 0.7	-	< 0.7	*15**

**HC measured in place of oil & grease*

Table 20 NPDC pond 4 overflow discharge to Mangati Stream, site STW002055

Parameter	Unit	28 Oct 2020	18 Nov 2020	*RFWP & ANZECC guideline values*
Temperature	°C	15.4	18.7	-
pH	pH	7.3	6.8	*6-9*
Conductivity	mS/m	6.3	10.9	-
Suspended solids	g/m^3	5	18	*100*
Turbidity	NTU/FNU	4.5	11.4	-
COD	g O_2/m^3	10	18	-
CBOD	g O_2/m^3	-	1.4	-
TBOD	g O_2/m^3	1.7	4.5	-
Nutrients				
NH_3	g/m^3	0.00084	0.00022	-
NH_4	g/m^3	0.168	0.093	-
DRP	g/m^3	< 0.004	< 0.004	-
Metals (acid soluble)				
Aluminium	g/m^3	0.06	0.137	-
Copper	g/m^3	< 0.010	0.0161	-
Lead	g/m^3	< 0.002	0.00185	-
Zinc	g/m^3	0.17	0.15	-
Metals (dissolved)				
Copper	g/m^3	0.0054	0.0083	-
Zinc	g/m^3	0.165	0.124	-
Hydrocarbons				
C7 - C9	g/m^3	< 0.4	< 0.10	-
C10 - C14	g/m^3	< 1.0	< 0.2	-
C15 - C36	g/m^3	< 2	< 0.4	-
Total HC	g/m^3	< 4	< 0.7	*15**

**HC measured in place of oil & grease*

The results from chemical monitoring of stormwater from the NPDC reticulation and treatment wetlands indicated that all parameters complied with RFWP limits. Historical and current activities within this stormwater catchment have resulted in elevated levels of dissolved metals in the discharge, however these concentrations were within expected ranges. Dissolved metals concentrations in this area continue to show fluctuating trends, with higher concentrations noted during the summer low flow period.

7.3 Evaluation of performance

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

Table 21 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.

8 Nexans New Zealand Ltd

8.1 Site 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 and 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 (Photo 15). 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.

Photo 15 Secure storage at Nexans site, May 2021

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.

Nexans holds permit **4497-3** to discharge stormwater and cooling water from an electric wire and cable manufacturing site off Paraite Road, and air discharge permit **5417-2** to discharge emissions into the air from an electric wire and cable manufacturing plant and associated activities.

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

8.2 Results

8.2.1 Inspections

Two routine inspections were conducted at the site during the monitoring period, on 6 August 2020 and 24 May 2021.

6 August 2020

The site was inspected in overcast weather with moderate rain and light wind conditions. The site was tidy and busy with normal operations underway. All hazardous materials were appropriately bunded and stored with no signs of spills or leaks. The copper liquor tank bund was in good condition and contained a small amount of clear stormwater. The stormwater system was tidy and discharging at the time. All drain filters were in place. There were no odour or dust issues, and the site was compliant with consent conditions at the time.

24 May 2021

An inspection was conducted in fine weather with strong south easterly wind conditions. The site was busy with normal operations and yard areas were clean and tidy. All chemicals and oils were securely bunded and contained, and the Inspecting Officer noted that all hazardous substances were very clearly and well labelled. The copper liquor tank bund was secure and in good condition with a small amount of clear stormwater contained within the bund. The site stormwater system was tidy and in good operating condition with drain filters in place. Spills kits were located in various areas and well stocked. There were no odours or dust noted, and the site was compliant with resource consent conditions.

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, and was visited twice during the monitoring period although it was only discharging on one visit (Table 22).

Table 22 Nexans stormwater sampling results, site STW001025

Parameter	pH	Temperature	Conductivity	Turbidity	Metals (acid soluble)		Metals (dissolved)	
					Copper	Zinc	Copper	Zinc
Units	pH	°C	mS/cm	FNU	g/m³	g/m³	g/m³	g/m³
12 Oct 2020	7.4	13.7	2.5	0.47	0.01	0.04	0.0042	0.03
Consent limit	*6-9*	-	-	-	-	-	-	-

All results were within allowable limits. 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.

8.3 Evaluation of performance

A tabular summary of Nexans compliance record for the year under review is set out in Table 23 and Table 24.

Table 23 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
9. Provision for consent to lapse if not exercised	Consent has been exercised	N/A

Purpose: *To discharge stormwater and cooling water*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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**

N/A = not applicable or not assessed

Table 24 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 demonstrated a high level of environmental and administrative performance and compliance with their resource consents as defined in section 1.1.4.

9 OMV New Zealand Ltd

9.1 Site description

OMV New Zealand Ltd (OMV) currently manages a 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 (Photo 16).

Photo 16 Bunding in place beside OMV wash facility, August 2018

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.

OMV holds water discharge permit **3913-3** to cover the discharge of stormwater from an industrial site into an unnamed tributary of the Mangati Stream. The consent contains the standard special consent conditions as given in Section 1.2 with one modified condition that places a limit on the BOD concentration in the discharge.

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

9.2 Results

9.2.1 Inspections

One routine inspection was conducted during the monitoring period, on 9 June 2021.

9 June 2021

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light wind conditions. The site was tidy and quiet with no traffic movements during the visit. All chemicals were appropriately stored and bunded on bulk container bunds, which contained low volumes of clear rain water. There were no spills or sheens noted on the site. All wash water was captured and directed to the interceptors and trade waste system, which was tidy and well maintained. The stormwater drains were clear and in good operating condition with one exception, and the site manager advised that this would be addressed immediately. The quarantine area of site was tidy and well managed with the stormwater drain clear and free of obstructions. There were no odour or dust issues, and the site was compliant with consent conditions.

9.2.2 Results of receiving environment 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 four occasions during the year with three 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 25.

Table 25 OMV stormwater sampling results, site IND002013

Parameter	Unit	12 Oct 2020	08 Dec 2020	17 Aug 2021	*Consent limits*
Temperature	°C	14.4	18.3	12.2	-
pH	pH	6.7	6.6	6.4	*6-9*
Conductivity	mS/m	4.1	3.9	6.6	-
Suspended solids	g/m^3	25	9	19	*100*
Turbidity	FNU	8.2	4.6	4.2	-
COD	$g\ O_2/m^3$	10	8	< 6	
TBOD	$g\ O_2/m^3$	1.4	3.4	0.9	*16*
Nutrients					
NH_3	g/m^3	0.000098	0.000126	-	-
NH_4	g/m^3	0.068	0.082	0.06	*10*
DRP	g/m^3	0.022	-	-	-
Hydrocarbons					
C7 - C9	g/m^3	< 0.10	< 0.10	< 0.10	-
C10 - C14	g/m^3	< 0.2	< 0.2	< 0.2	-

Parameter	Unit	12 Oct 2020	08 Dec 2020	17 Aug 2021	*Consent limits*
C15 - C36	g/m^3	< 0.4	< 0.4	< 0.4	-
Total HC	g/m^3	< 0.7	< 0.7	< 0.7	*15**

**HC measured in place of oil & grease*

The sampling showed that OMV continue to demonstrate good compliance with consented limits in the discharge. Suspended solids and ammoniacal nitrogen (NH_4) concentrations were consistently low for the duration of the monitoring period.

9.3 Evaluation of performance

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

Table 26 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
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**

N/A = not applicable or not assessed

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

10 Schlumberger New Zealand Ltd

10.1 Site 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 (Photo 17). Washwater containing 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 (Photo 18). 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.

Photo 17 Schlumberger yard and lay dawn area, October 2019

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.

Photo 18 View of wash bay, October 2019

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

Schlumberger holds discharge permit **6032-1** to discharge treated wash water and stormwater from a storage and maintenance premises for oil field exploration equipment into the Mangati Stream. The company also holds discharge permit **5987-1** to discharge treated stormwater from a synthetic LMP and storage site into the Mangati Stream, although this consent is in the process of being combined with 6032-1 to cover the entire site.

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

10.2 Results

10.2.1 Inspections

Two routine inspections were conducted at the site during the monitoring period, on 6 August 2020 and 24 May 2021.

6 August 2020

The site was inspected in overcast weather with light wind conditions. The site was tidy and quiet with laydown areas clear of contaminants. All chemicals were appropriately bunded and stored, and there were no signs of spills or leaks. The waste oil sump in the wash bay contained some standing water, and all sumps and drains in the surrounding area were clear with no sheens visible. The mud tanks storage area was clean, bunding was intact and in good conditions, and all valves on the bunds were closed. There were no odour or dust issues, and the site was compliant with consent conditions at the time.

24 May 2021

An inspection was conducted in fine weather with strong south easterly wind conditions. There was no vehicle activity on the site at the time, and the lay down areas were clear of contaminants with no tracking noted. All hazardous materials were appropriately stored and bunded. The vehicle wash bay was clear and tidy, however the waste oil bins in the bay were full and one was missing a lid. All stormwater sumps and drains on the site were clear and tidy with no oil sheens or scums visible. There were no odours or dust noted despite the strong winds, and the site was compliant with resource consent conditions.

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).

Both sites were 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 during the dry weather survey as no discharge was occurring.

The results from chemical monitoring at site STW001056 are given in Table 27, and the results from the chemical monitoring at site STW002071 are given in Table 28.

Table 27 Schlumberger stormwater sampling results, site STW001056

Parameter	Unit	12 Oct 2020	07 Dec 2021	*Consent limits*
Temperature	°C	13.7	18.6	-
pH	pH	6.7	7	*6-9*
Conductivity	mS/m	11.6	7.9	-
Suspended solids	g/m^3	< 3	5	*100*
Turbidity	NTU/FNU	1.33	14.3	-
COD	g O_2/m^3	< 6	< 6	
Nutrients				
NH_4	g/m^3	0.07	-	-
Metals (acid soluble)				
Copper	g/m^3	< 0.010	-	-
Zinc	g/m^3	< 0.002	0.00115	-
Metals (dissolved)				
Copper	g/m^3	0.0012	-	*0.05*
Zinc	g/m^3	0.052	0.101	*0.65*
Hydrocarbons				
C7 - C9	g/m^3	< 0.10	< 0.10	-
C10 - C14	g/m^3	< 0.2	< 0.2	-
C15 - C36	g/m^3	< 0.4	< 0.4	-
Total HC	g/m^3	< 0.7	< 0.7	*15**

**HC measured in place of oil & grease*

Table 28 Schlumberger mudplant stormwater sampling results, site STW002071

Parameter	Unit	12 Oct 2020	07 Dec 2021	*Consent limits*
Temperature	°C	14.1	17.7	-
pH	pH	6.7	7.7	*6-9*
Conductivity	mS/m	20.3	20.8	-
Suspended solids	g/m^3	21	11	*100*
Turbidity	NTU/FNU	4.8	3.9	-
TBOD	g O_2/m^3	1	1.9	*7*
Nutrients				
NH_3	g/m^3	0.000084	0.0006	*0.025*
NH_4	g/m^3	0.071	0.027	-
Metals				
Copper (acid soluble)	g/m^3	-	0.0018	-
Copper (dissolved)	g/m^3	-	0.0016	*0.05*
Hydrocarbons				
C7 - C9	g/m^3	< 0.4	< 0.11	-
C10 - C14	g/m^3	< 1.0	< 0.3	-
C15 - C36	g/m^3	< 2	< 0.4	-
Total HC	g/m^3	< 4	< 1.0	*15**

**HC measured in place of oil & grease*

The results of sampling indicate that the site has not been particularly active for the monitoring period, and this is reflected in the high quality of the discharges from both parts of the plant. All results were within consented limits and expected ranges.

10.3 Evaluation of performance

A tabular summary of Schlumberger's compliance record for the year under review is set out in Table 29 and Table 30.

Table 29 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

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?**
5. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
6. Preparation and maintenance of contingency plan re measures to prevent spillage or accidental discharge and avoid, remedy or mitigate effects	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 30 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

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?**
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
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 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.

11 Tasman Oil Tools Ltd

11.1 Site description

Tasman Oil Tools Ltd (Tasman Tools) operates 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 trade waste. 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 (Photo 19).

Photo 19 Sediment controls on Tasman Tools' perimeter drain, September 2020

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 trade waste 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 wash water is captured and directed to trade waste.

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.

Tasman Oil holds water discharge permit **4812-2** to cover the discharge up to 112 L/s of stormwater including wash down water from a storage and maintenance yard for oil field drilling equipment into an unnamed tributary of the Mangati Stream. This consent contains the standard special conditions and four additional special conditions.

The permit is attached to this report in Appendix I.

11.2 Results

11.2.1 Inspections

Four routine inspections were conducted at the site during the monitoring period, on 2 September 2020, 12 November 2020, 25 January 2021, and 30 June 2021.

2 September 2020

An inspection was conducted in fine weather with calm wind conditions. At the time of inspection, all conditions for all consents were being complied with.

12 November 2020

The site was inspected in wet, overcast weather with light northerly wind conditions. The rainfall at the time of the visit was consistent with a 1 in 20 year rainfall event. The site was inundated with rain which had caused localised ponding in low-lying areas. The hydrocarbon interceptor was underwater at the time, however no visual sheens were noted. The holding pond was operating at near-full capacity and approaching the overflow point with less than 0.1m freeboard available. The discharge from the site was mostly clear. Forklifts operating on the site at the time were disturbing sediment and causing discolouration. The Mangati Stream was very turbid and the discharge from the site was improving visual clarity in the stream. All consent conditions were compliant at the time of inspection.

25 January 2021

An inspection was carried out in hot, fine weather with light westerly wind conditions. The site was tidy and compliant with resource consent conditions at the time of the visit.

30 June 2021

The site was inspected in fine weather with calm wind conditions. The site was tidy and the perimeter ring drain had recently been cleaned with leaves and debris removed. Staff had implemented a new practice of water blasting drill pipe on the sealed wash pad, which appeared to be working well. The unsealed areas of

site continued to pose a high risk of sediment discharge. The stormwater holding pond was turbid and discoloured following recent rain, and was operating at a level below the discharge pipe. No visual effects were noted in the downstream receiving environment. At the time of inspection, all consent conditions were compliant.

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 were collected twice during wet weather surveys, and no discharge was occurring during the dry weather survey. The results for the period under review are given in Table 31.

Table 31 Tasman Tools stormwater sampling results, site STW001057

Parameter	Unit	12 Oct 2020	17 Aug 2021	*Consent limits*
Temperature	°C	14.7	11.5	-
pH	pH	7.3	7.3	*6-9*
Conductivity	mS/m	4.4	27.6	-
Suspended solids	g/m³	10	**124**	*100*
Turbidity	NTU	10.1	189	-
Nutrients				
NH_3	g/m³	< 0.00006	< 0.00005	-
NH_4	g/m³	< 0.010	< 0.010	-
NNN	g/m³	0.048	< 0.002	-
DRP	g/m³	0.015	0.004	-
Metals (acid soluble)				
Copper	g/m³	0.013	0.085	-
Zinc	g/m³	0.03	0.21	-
Metals (dissolved)				
Copper	g/m³	0.0047	0.0119	*0.05*
Zinc	g/m³	0.0091	0.0107	*0.65*
Hydrocarbons				
C7 - C9	g/m³	< 0.4	< 0.4	-
C10 - C14	g/m³	< 1.0	< 1.0	-
C15 - C36	g/m³	< 2	< 2	-
Total HC	g/m³	< 4	< 4	*15**

**HC measured in place of oil & grease*

The suspended solids concentration in the August 2021 survey was in excess of the consent limit, however due to lack of sufficient discharge volume, a representative sample had been collected directly from the stormwater pond. All other results were within consent limits and historical ranges.

11.3 Evaluation of performance

A tabular summary of Tasman Tools' compliance record for the year under review is set out in Table 32.

Table 32 Summary of performance for Tasman 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
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, 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.

12 Tegel Foods Ltd – Feed Mill

12.1 Site 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.

Tegel hold water discharge permit **2335-4** to discharge stormwater from a stock/poultry feed manufacturing site to the NPDC stormwater drainage network; and air discharge permit **4038-6** to cover the discharge emissions into the air from the milling and blending of grain and/or animal meals together with associated activities.

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

12.2 Results

12.2.1 Inspections

Four routine inspections were conducted during the monitoring period, on 1 September 2020, 24 November 2020, 22 January 2021, and 24 June 2021.

1 September 2020

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light north westerly wind conditions. Both the feedmill site and the neighbouring former ABB site were visited. A number of points were raised with staff onsite regarding best practice and general housekeeping. Some product was noted on the ground at the rear of Shed 3, there was an open, unbunded IBC on the site which appeared to contain water of unknown origin, and a stormwater drain on the ABB site was blocked with debris and what appeared to be product that had tracked from the sheds. An improvement in the general maintenance of the site was required, however there were no discharges off the site at the time and all stormwater drains were clear of contaminants. There were no offensive or objectionable odours, and the site was deemed compliant at the time of inspection.

24 November 2020

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light northerly wind conditions. The site was again found to be in need of maintenance. The stormwater filter bags were full and required cleaning. Grain had discharged to ground beside Shed 3, debris was

accumulating in corners of the site and sweeping was required here and around areas such as the storage sheds and silos. The need for improvement was discussed with site staff at the time. The ABB site was clean and tidy with no issues. The site was deemed compliant with consent conditions.

22 January 2021

An inspection was conducted in cloudy weather with light westerly wind conditions. A noticeable improvement in site housekeeping was noted, with yard areas clean and tidy. Drain wardens were in good condition and had been maintained and cleaned. The storage sheds, high traffic areas, and workshop were all tidy with minimal product tracking noted. Some organic material was noted around the first flush system, which includes the weighbridge, silos and truck loading area, however this was not unexpected and these areas were well managed. There were no odour or dust issues on the site. All consent conditions were being complied with at the time of inspection.

24 June 2021

The site was visited in cloudy weather with light westerly wind conditions. The site was generally tidy and regular road sweeping was evident. The drains were being cleaned on a fortnightly basis. There was some build-up of product in corners and between items stored on the yard, and this was discussed with staff at the time and raised as a maintenance activity. A reminder was given to routinely maintain stormwater drains and high risk areas to avoid non-compliant discharges. There were no issues with dust and all consent conditions were compliant.

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 site was sampled twice during the monitoring period (no samples were collected during the dry weather survey), and the results are given in Table 33.

Table 33 Tegel Feed Mill stormwater sampling results, site STW001015

Parameter	Unit	12 Oct 2020	17 Aug 2021	*Consent limits*
Temperature	°C	14.3	14.2	-
pH	pH	7.0	6.6	*6-9*
Conductivity	mS/m	9.1	7.9	-
Suspended solids	g/m^3	31	59	*100*
Turbidity	NTU/FNU	25	32	-
COD	g O_2/m^3	54	65	-
TBOD	g O_2/m^3	9	26	*25*
Nutrients				
NH_3	g/m^3	0.00073	0.000151	-
NH_4	g/m^3	0.29	0.143	-
DRP	g/m^3	0.057	0.018	-
Hydrocarbons				
C7 - C9	g/m^3	-	< 0.10	-
C10 - C14	g/m^3	-	< 0.2	-

Parameter	Unit	12 Oct 2020	17 Aug 2021	*Consent limits*
C15 - C36	g/m³	-	< 0.4	-
Total HC	g/m³	-	< 0.7	*15**

**HC measured in place of oil & grease*

The BOD concentration of 26 g/m³ measured in August 2021 was within the margin of error for the parameter method. All other parameters were within consented limits and historical ranges for the monitoring period. BOD concentrations from the site have traditionally been elevated in the stormwater discharge, and the current results were within historical medians.

12.3 Evaluation of performance

A tabular summary of Tegel's compliance record for the year under review is set out in Table 34 and Table 35.

Table 34 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	Yes – although BOD levels continue to be elevated
2. Limits stormwater catchment area	Inspections	Yes
3. Limits on chemical composition of discharge	Sampling of discharges	Yes –BOD results within margin of error
4. Discharge cannot cause specified adverse effects beyond mixing zone	Receiving water sampling	Yes
5. Wastewater tank to be replaced with trade waste 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

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?**
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		**Good** **High**

N/A = not applicable or not assessed

Table 35 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, Tegel Foods Ltd (Feed Mill) demonstrated an overall good level of environmental performance and a high level of administrative performance with their resource consents as defined in Section 1.1.4. Elevated levels of BOD continue to be noted in site stormwater discharges, and further work is needed to address this issue.

13 Tegel Foods Ltd – Poultry Processing Plant

13.1 Site 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 trade waste sewer. Modifications have been made to divert runoff from the live bird reception area and yard to the trade waste 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 trade waste catchments. A new chlorinated water tank has been installed within a bunded area that drains to trade waste.

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.

Discharge to water

Tegel hold water discharge permit **3470-4** to discharge stormwater from a poultry processing plant site to the NPDC drainage network; and discharge permit **7389-1** to cover the discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream.

Discharge to air

Tegel holds air discharge permit **4026-3** to discharge emissions into the air from the processing of animal matter and associated processes.

Discharge to land

Tegel hold discharge permit **5494-2** to discharge poultry processing wastes by burial into land in the vicinity of the Mangati Stream in emergency circumstances only.

Abstraction of water

Tegel holds water permit **6357-1** to cover the take and use of groundwater from a bore for food processing and wash down purposes. This consent has never been exercised and lapsed in June 2020.

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

13.2 Results

13.2.1 Inspections

Four routine inspections were conducted during the monitoring period, on 2 September 2020, 24 November 2020, 22 January 2021, and 24 June 2021. These inspections focused on the discharge of stormwater (consents 3470-4 and 7389-1) and air discharges (consent 4026-3). The consent for the discharge of contaminants to land (5494-2) and the taking of groundwater (6357-1) were not exercised during the period under review.

2 September 2020

An inspection to assess compliance with resource consent conditions was carried out in fine weather with calm wind conditions. The site was tidy and clean with sufficient bunding in place, although it was identified that the potassium storage area is high risk and needs to be assessed. A strip drain had been installed to capture any spills or leaks from the ammonia plant, which discharged to trade waste. The stormwater system on the site was tidy and in good condition with drain wardens well maintained. Some leaching of contaminants from a previously identified storage building was ongoing, and works were underway to construct an internal wall in the building to prevent this. The wetland was well vegetated and appeared healthy. The final discharge was clear and no effects were noted in the stream as a result. There were no offensive or objectionable odours on site or around the holding pond, and the site was compliant at the time of inspection.

24 November 2020

An inspection to assess compliance with resource consent conditions was carried out in overcast weather with light northerly wind conditions. The site was clean and tidy with no spills or sheens noted. Slight leaching of contaminants from the storage building was occurring, but this was not discharging to any drains onsite. New chemical storage and bunding practices were being developed and a new chemical store had been created further away from buildings and stormwater drains. This had resulted in less runoff to the wetland and reducing loading on the stormwater system. The system itself was tidy with drain guards in place and in good condition. The wetland was in good condition and discharging a clear flow to the Mangati Stream which was have no visual effect. There were no dust or odour issues noted on the site, and waste bin lids were in place. A neutral odour was detected downwind of the wastewater pond and there were no dust or odour issues noted at the time. The site was compliant with all consent conditions.

22 January 2021

An inspection was conducted in cloudy weather with light westerly wind conditions. The yard was generally tidy, however a white stain was observed on the ground beside the leaking storage building, and this was found to have tracked to a nearby stormwater drain which contained some foam. The appearance of the discharge was consistent with wash water from a container, a number of which had been stored nearby. Staff onsite undertook to investigate and the stormwater system was cleaned, with no discharge occurring offsite. The rest of the yard was in good condition and the stormwater system was not discharging at the

time. The wetland appeared healthy and was not discharging to the Mangati Stream. There were no issues with odour or dust on the site. Odour detected at the boundary was believed to be associated with offal and feather collection, however this was not offensive or objectionable. All consent conditions were being complied with at the time of inspection.

24 June 2021

The site was visited in cloudy weather with light westerly wind conditions. A new maintenance officer had recently started and the site was looking tidy and well maintained. The drain wardens were in good condition and had been recently cleaned. There was very little rubbish or debris noted on the site, and barriers had been installed to prevent wash water from exiting the buildings and discharging to ground, which appeared to have resolved the leaching from the storage building. The wetland was in excellent condition with noticeable new growth and a visual improvement to water clarity throughout the extent of the wetland. The final discharge was clear and there were no effects noted in the downstream receiving waters. Very little odour was encountered on the site or discharging from the wastewater holding pond. There were no issues with dust and all consent conditions were compliant.

13.2.2 Results of receiving environment monitoring

13.2.2.1 De Havilland Drive stormwater discharges

Stormwater from the northern and eastern parts of the site is discharged via three lateral connections to NPDC's network on de Havilland Drive. These sites (STW001130, STW001129 and STW001128) were visited three times for sampling during the monitoring year, and samples were collected once in October 2020. An additional sample was collected from STW001130 only during August 2021. Results for each site are shown in Table 36 and Table 37.

Table 36 Tegel de Havilland Drive stormwater discharge sampling, 12 October 2020

	Site	STW001128	STW001129	STW001130	*Consent limits*
Parameter	**Description**	**Eastern manhole**	**Western manhole - Pipe A**	**Western manhole - Pipe B**	
Temperature	°C	14.7	14.2	14.3	-
pH	pH	7.0	6.5	6.9	*6-9*
Conductivity	mS/cm	1.7	2	1.5	-
Suspended Solids	g/m^3	< 3	3	4	*100*
Turbidity	NTU/FNU	0.65	1.73	2.7	-
TBOD	g O_2/m^3	1.1	1.4	0.6	*15*
Nutrients					
NH_3	g/m^3	0.00026	0.0001	< 0.00002	-
NH_4	g/m^3	0.111	0.11	< 0.010	-
DRP	g/m^3	0.04	0.025	< 0.004	-

**HC measured in place of oil & grease*

Table 37 Tegel de Havilland Drive stormwater sampling results, 17 August 2021

	Site	STW001130	*Consent limits*
Parameter	**Description**	**Western manhole - Pipe B**	
Temperature	°C	12.7	-
pH	pH	6.9	*6-9*
Conductivity	mS/cm	20.1	-
Suspended Solids	g/m^3	7	*100*
Turbidity	NTU/FNU	5.7	-
TBOD	g O_2/m^3	3	*15*
Nutrients			
NH_3	g/m^3	< 0.00003	-
NH_4	g/m^3	< 0.010	-
DRP	g/m^3	< 0.004	-

**HC measured in place of oil & grease*

The results show that the Tegel discharge to the de Havilland Drive stormwater network was of a consistently good standard, with all parameters measured within consented conditions.

13.2.2.2 Tegel wetland discharges to Mangati Stream

Site STW001053 is the point at which Tegel discharges stormwater to the polishing wetland. Stormwater from the site is screened and flows over a low weir and series of rip raps before entering the wetland. Samples are collected of the discharge as it flow over the weir due to access limitations.

The outlet from the wetland to the stream (site MGT000489) is considered to be the discharge point when assessing compliance with consent conditions. Comparison of results for this site with STW001053 allows for assessment of the treatment performance of the wetland.

Both sites were visited three times during the monitoring period. Samples were collected on each occasion, apart from the summer low flow survey, when only the final wetland outfall was discharging.

Results are shown in Table 38, Table 39, and Table 40.

Table 38 Tegel stormwater and wetland sampling results, 28 October 2020

	Site	STW001053	MGT000489	*Consent limits*
Parameter	**Description**	**Tegel stw to wetland**	**Tegel wetland to Mangati Stream**	
Temperature	°C	13.3	13.8	-
pH	pH	7.1	6.9	*6-9*
Conductivity	mS/m	3.4	9.2	-
DO	mg/L	-	7.78	-
	%	-	75.2	-
Suspended Solids	g/m^3	6	4	*100*
Turbidity	NTU/FNU	4.3	4	-
COD	g O_2/m^3	10	-	-
CBOD	g O_2/m^3	-	< 1.0	-

	Site	STW001053	MGT000489	*Consent limits*
Parameter	**Description**	**Tegel stw to wetland**	**Tegel wetland to Mangati Stream**	
TBOD	g O_2/m^3	2.9	1.2	*15*
Nutrients				
NH_3	g/m^3	0.0022	0.00027	*0.025*
NH_4	g/m^3	0.8	0.152	-
DRP	g/m^3	0.15	0.018	-
Hydrocarbons				
C7 - C9	g/m^3	< 0.4	-	-
C10 - C14	g/m^3	< 1.0	-	-
C15 - C36	g/m^3	< 2	-	-
Total HC	g/m^3	< 4	-	*15**

**HC measured in place of oil & grease*

Table 39 Tegel stormwater and wetland sampling results, 22 February 2021

	Site	STW001053	MGT000489	*Consent limits*
Parameter	**Description**	**Tegel stw to wetland**	**Tegel wetland to Mangati Stream**	
Temperature	°C	nd	17.2	-
pH	pH	nd	6.9	*6-9*
Conductivity	mS/m	nd	17.9	-
Suspended Solids	g/m^3	nd	3	*100*
Turbidity	NTU	nd	3	-
CBOD	g O_2/m^3	nd	< 1.0	-
TBOD	g O_2/m^3	nd	0.6	*15*
Nutrients				
NH_3	g/m^3	nd	0.00025	*0.025*
NH_4	g/m^3	nd	0.096	-
DRP	g/m^3	nd	0.006	-

**HC measured in place of oil & grease; nd: not discharging*

Table 40 Tegel stormwater and wetland sampling results, 17 August 2021

	Site	STW001053	MGT000489	*Consent limits*
Parameter	**Description**	**Tegel stw to wetland**	**Tegel wetland to Mangati Stream**	
Temperature	°C	13.2	13.2	-
pH	pH	6.8	6.5	*6-9*
Conductivity	mS/m	21.7	17.1	-
DO	mg/L	-	8.11	-
	%	-	77.9	-

	Site	STW001053	MGT000489	*Consent limits*
Parameter	**Description**	**Tegel stw to wetland**	**Tegel wetland to Mangati Stream**	
Suspended solids	g/m³	10	< 3	*100*
Turbidity	NTU/FNU	10.9	1.13	-
COD	g O_2/m³	136	-	-
CBOD	g O_2/m³	-	< 1.0	-
TBOD	g O_2/m³	77	0.5	*15*
Nutrients				
NH_3	g/m³	0.00156	0.000067	*0.025*
NH_4	g/m³	1.03	0.089	-
DRP	g/m³	0.133	0.006	-
Hydrocarbons				
C7 - C9	g/m³	< 0.4	-	-
C10 - C14	g/m³	< 1.0	-	-
C15 - C36	g/m³	< 2	-	-
Total HC	g/m³	< 4	-	*15**

**HC measured in place of oil & grease*

The discharge from the wetland was observed to be within the consent limits for BOD, unionised ammonia, hydrocarbon, pH and suspended solids in all samples.

The concentration of parameters within the wetland discharge demonstrates that it is providing some final stage treatment. In particular, the improvement in BOD concentration between the influent flow from STW001053 and the final discharge measured in August 2021.

13.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 41, Table 42, Table 43, Table 44 and Table 45.

Table 41 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	Yes – improvement noted during the monitoring year
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

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?**
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	Yes
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 Overall assessment of administrative performance in respect of this consent		**High** **High**

N/A = not applicable or not assessed

Table 42 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	Yes – improvement noted during the monitoring year
2. Limits stormwater catchment area	Inspection	Yes
3. All stormwater directed through treatment system (wetland), and wetland to be maintained to ensure effective treatment	Inspection and discussion with consent holder	Yes
4. Above ground hazardous substance storage to be bunded and not to drain directly to stormwater catchment	Inspection and discussion with consent holder	Yes- new storage area developed
5. Limits on chemical composition of discharge	Sampling and analysis of discharges	Yes
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

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?**
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 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 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
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

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?**
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 44 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

Table 45 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?**
10. Consent to be exercised in accordance with application information	Consent not exercised during period under review	N/A

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?**
11. Limit on abstraction rate: 3000 m^3/day and 35 L/s	Consent not exercised during period under review	N/A
12. Water level to be maintained above 35 m below ground level at all times	Consent not exercised during period under review	N/A
13. 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
14. Water meter to be installed and maintained	Not monitored. Tegel advised that they had no immediate plans to utilise the bore	N/A
15. Consent holder to meet reasonable costs associate with monitoring	Combined monitoring programme in place	Yes
16. Provision for consent to lapse if not exercised	**Consent lapsed on 20 May 2020**	N/A
17. 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

During the year, Tegel Foods Ltd – Poultry Processing demonstrated a high level of environmental and administrative performance and compliance with their resource consents as defined in Section 1.1.4.

14 TIL Freighting Ltd (now MOVe Freight Ltd)

14.1 Site description

TIL Freighting Ltd (TIL) (now MOVe Freight 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 (Photo 20), a truck wash facility and Ross Graham Motors workshop.

Photo 20 TIL truck parking area and hazardous storage lock up, July 2020

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 trade waste 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 trade waste, 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) (Photo 21) and the remainder is predominantly hard paved or metalled. Activities within the stormwater catchment include parking, loading, storage and heavy vehicle movements.

Photo 21 View inside TIL freight loading tunnel, May 2021

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.

TIL Ltd holds water discharge permit **7578-1** to cover the discharge of stormwater into the Mangati Stream; and discharge permit **6952-1** to cover the discharge of stormwater from a truck depot into and onto land in the vicinity of the Mangaone Stream in the Waiwhakaiho catchment.

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

14.2 Results

14.2.1 Inspections

Three routine inspections were conducted at the site during the monitoring period, on 31 July 2020, 26 November 2020, and 24 May 2021.

31 July 2020

An inspection was carried out in overcast weather with moderate wind conditions. The site was busy with normal operations. Several freight trucks were operating in the tunnel at the time, and all freight was appropriately stored with no sign of spills or leaks. The drain wardens were in place on one of the four drains in the tunnel, and there was no sign of recent flows in any of the sumps. The stormwater system was tidy and contained some ponded water with signs of recent discharge. Sock filters were in place and in good condition. The roadside drains were tidy with no sign of sediment tracking from the truck lay-down area or the site. There was sediment noted in the gutter leading to the tunnel and staff were advised that this required sweeping to prevent sediment discharges. There were no odour or dust issues at the time and all consent conditions were being complied with.

26 November 2020

The site was inspected in overcast weather with heavy showers and light south westerly wind conditions. The site was busy with high traffic volumes, and several trucks loading or unloading in the tunnel. All freight was stored appropriately and the stormwater sumps in this area showed no signs of recent flow. The stormwater system was fully contained despite the heavy rainfall, and drains and sock filters were clear and in good condition. The truck lay-down area was tidy with no sign of sediment tracking. The roadside drains were clear, but sediment had accumulated in the gutter beside the tunnel and staff carpark and required sweeping. Samples were collected from stormwater discharge points and the results were within acceptable limits. The site was compliant with all consent conditions at the time of inspection.

24 May 2021

An inspection was conducted in cloudy weather with strong north easterly wind conditions. The site was busy with forklift activity but few trucks onsite. All freight was appropriately stored with no sign of leaks or spills. The stormwater drain wardens had been removed from the sumps in the tunnel area, and were not available in case of spills. The nearby spills kits were inspected and were in poor condition with the bins being used for rubbish and general refuse. The truck lay-down area was tidy with no sediment tracking noted, however there was a build-up of sediment in the gutter leading to the staff carpark and tunnel area that had also been noted in previous visits. The strong winds on the site were contributing windblown dust to these areas. The site was not compliant with the stormwater management plan required by condition 7 and further enforcement was undertaken.

14.2.2 Results of receiving environment 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).

Stormwater from the north eastern area of the site, which contains the rest of the active areas including the freight tunnel, entranceways, and storage areas, is sampled from a stormwater drain on Paraite Road in front of the main truck exit (STW001132).

The sites were visited three times during the year, twice during wet weather surveys, and once during a dry weather survey. The results from chemical monitoring at both locations are given in Table 46 and Table 47.

Table 46 TIL stormwater sampling results, 12 October 2020

	Site	STW001132	STW001133	*Consent limits*
Parameter	**Description**	**Main exit**	**T & G**	
Temperature	°C	14.2	14.0	-
pH	pH	7.1	7.0	*6-9*
Conductivity	mS/cm	6.5	8.5	-
Suspended Solids	g/m^3	**119**	6	*100*
Turbidity	FNU	13	3.3	-
TBOD	g O_2/m^3	6	7	*7*
Nutrients				
NH_3	g/m^3	0.00045	0.00036	-
NH_4	g/m^3	0.138	0.138	-
DRP	g/m^3	0.1	0.009	-

Table 47 TIL stormwater sampling results, 26 November 2020

	Site	STW001132	STW001133	*Consent limits*
Parameter	**Description**	**Main exit**	**T & G**	
Temperature	°C	16.9	16.8	-
pH	pH	7.2	6.9	*6-9*
Conductivity	mS/cm	1.7	1.8	-
Suspended Solids	g/m^3	9	11	*100*
Turbidity	FNU	7.7	5.6	-
TBOD	g $O2/m^3$	1	0.9	*7*
Nutrients				
DRP	g/m^3	0.008	0.006	-
Hydrocarbons				
C7 - C9	g/m^3	< 0.10	< 0.10	-
C10 - C14	g/m^3	< 0.2	< 0.2	-

	Site	STW001132	STW001133	*Consent limits*
Parameter	**Description**	**Main exit**	**T & G**	
C15 - C36	g/m³	0.5	< 0.4	-
Total HC	g/m³	< 0.7	< 0.7	*15**

**HC measured in place of oil & grease*

The suspended solids concentration in the sampled collected in October 2020 had exceeded consented limits, however this was attributed to the sample collection process. The manhole lid is seated below the ground surface at that site, which had allowed sediment and debris to collect above it. As the manhole cover was removed, this material entered the stormwater drain, mixing with the site discharge and potentially causing the suspended solids limit to be breached.

The consent limits on biochemical oxygen demand, hydrocarbons, and pH range were observed as being complied with for all samples collected during the period under review.

14.3 Investigations, interventions, and incidents

Table 48 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to TIL's activities during the 2020-2021 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 48 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
24 May 2021	During a routine inspection it was observed that maintenance had not been carried out on the stormwater system	N	Abatement notice	Abatement notice EAC-24103 was issued and TIL subsequently increased the maintenance frequency at the site

14.4 Evaluation of performance

A tabular summary of TIL's compliance record for the year under review is set out in Table 49 and Table 50.

Table 49 Summary of performance for TIL 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

Purpose: *To discharge stormwater to the Mangati Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
4. Limits on chemical composition of discharge	Inspection and sampling	Yes – one exceedance of suspended solids not related to onsite activities
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	**No – maintenance required and plan due for review**
8. Written notification required regarding changes to activities at the site that alters nature of discharge	Inspection and discussion with consent holder. No changes	N/A
9. Provision for lapse of consent	Consent exercised	N/A
10. Optional review provision re environmental effects or notification of changes	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** **Good**

N/A = not applicable or not assessed

Table 50 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**

N/A = not applicable or not assessed

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

15 W Abraham Ltd

15.1 Site 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.

Abraham hold water discharge permit **7147-2** to discharge emissions into the air from the operation of a crematorium including a natural gas-fired cremator.

The permit is attached to this report in Appendix I.

15.2 Results

15.2.1 Inspections

The crematorium was visited on 1 September 2020, 15 February 2020 and 2 June 2021.

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.

15.3 Evaluation of performance

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

Table 51 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
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

Purpose: *To discharge emissions to air from a crematorium*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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
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, W Abraham Ltd demonstrated a high level of environmental and administrative performance and compliance with their resource consent as defined in Section 1.1.4.

16 Mangati Stream

16.1 Water quality monitoring

Sampling of the Mangati Stream was carried out on three occasions during the reporting period, concurrently with chemical surveys of the industrial stormwater drainage system. The surveys were completed twice under wet conditions and once during summer low flows.

During the period under review wet weather surveys were conducted on 12 October 2020, and a split run carried out over two days on 17 August and 16 September 2021. A dry weather survey was undertaken on 22 February 2021.

Six sites on the Mangati Stream directly, and three sites on associated tributaries 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 52 and Table 53.

Table 52 Mangati Stream sampling sites

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

Table 53 Sampling sites in associated tributaries of the Mangati Stream

Site	Location	GPS (NZTM)	Site code
Mangati above J Swap	Unnamed trib. above the J Swap site. Immediately below the railway bridge and above piped section.	E 1700772 N 5677898	MGT000475
Mangati at J Swap riser from wetland	Piped tributary below the J Swap wetland. Accessed via base of wetland riser	E 1700503 N 5678062	MGT000479
Mangati below GPL/Tasman Tools	Piped tributary discharging immediately below GPL site. Accessed via Mangati walkway.	E 1699876 N 5678411	MGT000498

Sampling 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.

16.1.1 October 2020 wet weather survey

Samples were collected from all six sites in the Mangati Stream, as well as the three tributary sampling sites, in wet weather conditions with moderately high flows. Results are displayed in Table 54 and Table 55.

Table 54 Mangati Stream wet weather sampling results, 28 October 2020

	Site	MGT000485	MGT000493	MGT000497	MGT000500	MGT000512	MGT000550	*RFWP Guidelines*
Parameter	**Description**	**Above industrial area**	**Above de Hav Dr**	**Above Connett Rd**	**Below Pond 3**	**Below wetlands**	**Mangati at Coast**	
Temperature	°C	14.4	14.4	14.5	14.7	14.8	14.9	-
pH	pH	7.2	7.1	7	7.1	7.3	7.1	*6-9*
Conductivity	mS/m	18.9	18.5	16.9	14.2	13.1	12.1	-
DO	mg/L	8.43	8.46	7.81	8.06	8.16	9.41	-
	%	82.5	82.8	76.5	79.4	79.7	92	-
Suspended solids	g/m³	19	14	14	16	11	9	*100*
Turbidity	FNU	11.7	9.4	9.6	10.7	9.1	10.9	-
CBOD	g O_2/m³	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
TBOD	g O_2/m³	2	1.5	1.8	1.7	1.8	1.1	-
Nutrients								
NH_3	g/m³	0.00037	0.00038	0.00031	0.00032	0.00053	0.00023	*0.025*
NH_4	g/m³	0.093	0.106	0.108	0.106	0.102	0.063	-
NNN	g/m³	0.6	-	-	-	-	0.48	-
DRP	g/m³	0.007	0.006	0.006	0.004	0.005	< 0.004	-

Table 55 Mangati tributary wet weather sampling results, 28 October 2020

	Site	MGT000475	MGT000479	MGT000495	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	**Below GPL trib**	
Temperature	°C	15.1	14.2	14.4	-
pH	pH	6.7	7.3	7	*6-9*
Conductivity	mS/m	18.2	11.3	9	-
Suspended solids	g/m³	-	9	< 3	*100*
Turbidity	FNU	5.2	3.9	2.5	-
CBOD	g O_2/m³	2.1	1.2	-	-
Nutrients					
NH_3	g/m³	0.000057	0.00036	0.00008	*0.025*
NH_4	g/m³	0.041	0.071	0.029	-
NNN	g/m³	-	-	0.05	-

	Site	MGT000475	MGT000479	MGT000495	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	**Below GPL trib**	
DRP	g/m³	< 0.004	< 0.004	< 0.004	-

16.1.2 February 2021 dry weather survey

Samples were collected from all six sites in the Mangati Stream, as well as two in the associated tributaries, in dry weather with low flow conditions. Results are displayed in Table 56 and Table 57.

Table 56 Mangati Stream dry weather sampling results, 22 February 2021

	Site	MGT000485	MGT000493	MGT000497	MGT000500	MGT000512	MGT000550	*RFWP Guidelines*
Parameter	**Description**	**Above industrial area**	**Above de Hav Dr**	**Above Connett Rd**	**Below Pond 3**	**Below wetlands**	**Mangati at Coast**	
Temperature	°C	16.6	15.5	16.3	16.4	16.6	18.1	-
pH	pH	7.2	7.2	7.1	7.1	7.2	7.5	*6-9*
Conductivity	mS/m	22	22.8	24.6	23.7	23.8	21.4	-
DO	mg/L	-	5.44	4.52	6.32	7.25	-	-
	%	-	54.2	45.7	64.7	74.7	-	-
Suspended solids	g/m³	< 3	137	125	3	< 3	< 3	*100*
Turbidity	FNU	2.3	56	66	3.7	3.4	2.4	-
CBOD	g O_2/m³	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-
TBOD	g O_2/m³	1.1	2.8	1	1	1	0.5	-
Nutrients								
NH_3	g/m³	0.00105	0.00136	0.00118	0.00111	0.00126	0.0007	*0.025*
NH_4	g/m³	0.24	0.3	0.28	0.27	0.26	0.065	-
NNN	g/m³	-	-	-	-	0.59	1.01	-
DRP	g/m³	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	-

Table 57 Mangati tributary dry weather sampling results, 22 February 2021

	Site	MGT000475	MGT000479	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	
Temperature	°C	18.5	17.6	-
pH	pH	6.3	7.1	*6-9*
Conductivity	mS/m	21.4	20.7	-
Suspended solids	g/m³	-	< 6	*100*
Turbidity	FNU	4.4	6.6	-
CBOD	g O_2/m³	1.1	< 1.0	-
Nutrients				
NH_3	g/m³	0.00026	0.00075	*0.025*

	Site	MGT000475	MGT000479	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	
NH_4	g/m³	0.34	0.167	-
DRP	g/m³	< 0.004	< 0.004	-

16.1.3 August/September wet weather survey

Samples were collected from all six sites in the Mangati Stream, as well as the three tributary sampling sites, in wet weather conditions with moderate flows. Results are displayed in Table 58 and Table 59.

Table 58 Mangati Stream wet weather sampling results, August/September 2021

	Site	MGT000485	MGT000493	MGT000497	MGT000500	MGT000512	MGT000550	*RFWP Guidelines*
Parameter	**Description**	**Above industrial area**	**Above de Hav Dr**	**Above Connett Rd**	**Below Pond 3**	**Below wetlands**	**Mangati at Coast**	
Temperature	°C	13.1	13.2	13	13.9	13.4	13.4	-
pH	pH	6.7	6.7	6.6	6.9	7	7.2	*6-9*
Conductivity	mS/m	19	19.4	14.8	18.5	18.8	18.2	-
DO	mg/L	9.01	8.85	8.75	8.14	8.4	9.83	-
	%	86.5	85.3	84	79.6	81.7	96.8	-
Suspended solids	g/m³	6	5	84	5	6	< 3	*100*
Turbidity	FNU	4.3	4.8	48	4.5	3.7	2.2	-
CBOD	g O_2/m³	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
TBOD	g O_2/m³	0.7	0.7	2.5	< 0.4	< 0.4	0.4	-
Nutrients								
NH_3	g/m³	0.00012	0.000143	0.000098	0.00037	0.00037	0.00039	*0.025*
NH_4	g/m³	0.092	0.111	0.117	0.174	0.168	0.102	-
NNN	g/m³	0.92	-	-	-	-	0.89	-
DRP	g/m³	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	-

Table 59 Mangati tributary wet weather sampling results, August 2021

	Site	MGT000475	MGT000479	MGT000495	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	**Below GPL trib**	
Temperature	°C	14.1	13.7	13.8	-
pH	pH	6.5	6.5	6.5	*6-9*
Conductivity	mS/m	9.3	13.6	20.6	-
Suspended solids	g/m³	-	7	< 3	*100*
Turbidity	FNU	25	36	1.39	-
CBOD	g O_2/m³	1	-	< 1.0	-
TBOD	g O_2/m³	2.8	-	1.1	-

	Site	MGT000475	MGT000479	MGT000495	*RFWP Guidelines*
Parameter	**Description**	**Above J Swap trib**	**At J Swap wetland**	**Below GPL trib**	
Nutrients					
NH_3	g/m³	0.000028	0.000107	0.000055	*0.025*
NH_4	g/m³	0.036	0.136	0.074	-
NNN	g/m³	-	0.038	-	-
DRP	g/m³	-	< 0.004	-	-

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.

Of particular note are the pH ranges, and the suspended solids and unionised ammonia (NH_3) concentrations, which were all within and/or well below the guidelines from the Regional Fresh Water Plan for Taranaki. This has not historically been the case for this catchment, which has a long and varied history with water quality.

16.1.4 Nutrients

The BOD concentrations typically increase slightly when comparing the concentrations between the upper site (MGT000485) and the mid reaches of the industrial area (MGT000497). However improvements are noted further downstream at site MGT000550. It has been noted that nutrients at the upstream sites 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. Slight elevations in nutrient concentration are routinely detected immediately below the outlet of the NPDC wetlands (MGT000512) indicating there are still contributions from the stormwater system of these contaminants.

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.

16.1.5 Dissolved metals concentrations

There are several guidelines for zinc and copper for assessing water quality in terms of suitability for sustaining aquatic life. The United States Environmental Protection Agency (USEPA), in defining metals criteria for protection of freshwater aquatic life, has adopted the use of dissolved metals as most closely approximating the bio available fraction of metal in the water column. Previously, water quality criteria were based on total recoverable metal concentration.

The water quality criteria for dissolved copper and zinc, for water of hardness 50 g/m³ $CaCO_3$, are 0.005 g/m³ for Cu and 0.058 g/m³ for Zn respectively as a four day average, for chronic (long term) exposure. The corresponding criteria for acute (4-hour) exposure are 0.007 g/m³ for Cu and 0.064 g/m³ for Zn. Acute criteria only are applicable to wet weather sampling results, whereas both chronic and acute exposure criteria are applicable to dry weather sampling results.

Dissolved copper and zinc analyses were routinely carried out in the Mangati Stream, and results are displayed below in Table 60 and Table 61.

Table 60 Dissolved copper concentrations in the Mangati Stream

	MGT000485	MGT000493	MGT000497	MGT000500	MGT000512	MGT000550
28 Oct 2020	0.001	0.0009	0.0015	0.002	0.0022	0.002
22 Feb 2021	< 0.0005	0.0008	0.0009	0.0008	0.0007	0.001
17 Aug 2021	< 0.0005	< 0.0005	0.002	-	-	-
16 Sep 2021	-	-	-	0.0013	0.0012	0.0012
10-yearly minimum	*< 0.0005*	*0.0005*	*0.0008*	*0.0008*	*0.0008*	*<0.001*
10-yearly maximum	*0.003*	*0.006*	*0.005*	*0.005*	*0.0119*	*0.006*

Table 61 Dissolved zinc concentrations in the Mangati Stream

	MGT000485	MGT000493	MGT000497	MGT000500	MGT000512	MGT000550
28 Oct 2020	0.0023	0.0092	0.0115	0.032	0.036	0.023
22 Feb 2021	0.0016	0.0032	0.0036	0.0059	0.0055	0.006
17 Aug 2021	0.0015	0.0053	0.0183	-	-	-
16 Sep 2021	-	-	-	0.027	0.024	0.0178
10-yearly minimum	< 0.0010	<0.005	0.0033	0.0035	0.0042	0.0042
10-yearly maximum	0.034	0.17	0.034	0.084	0.087	0.088

All 36 samples collected during wet weather and dry weather surveys were below the USEPA chronic and acute exposure limits for both dissolved copper and dissolved zinc.

16.2 Biological monitoring

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 sampling survey.

16.2.1 Macroinvertebrate surveys

The routine surveys for the period under review were carried out on 31 January 2021 and 7 May 2021. These were the 50th and 51st 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 (site MGT000503, sampled during chemical sampling surveys).

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 62 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.

Table 62 Biomonitoring sites in the Mangati Stream catchment

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

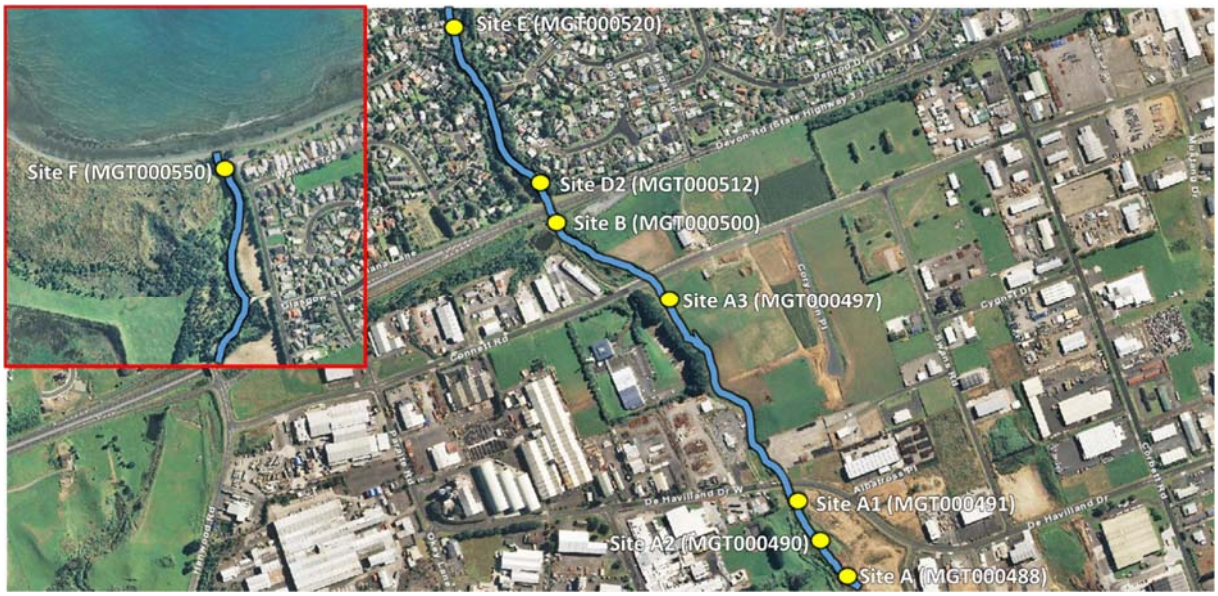

Figure 4 Macroinvertebrate sampling sites in the Mangati Stream

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 and conclusions of the macroinvertebrate survey reports are given below.

16.2.1.1 January 2021 survey

The Council collected streambed macroinvertebrates on 31 January 2021 from eight sites in the Mangati Stream, to determine whether stormwater and wastewater discharges from the Mangati industrial area have had any adverse effects on the macroinvertebrate communities of this stream. Macroinvertebrates were identified and the number of different types of taxa counted (taxa richness), and MCI and SQMCI scores calculated for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of nutrient pollution in streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to pollution. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in communities. Significant differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored and enable the overall health of the macroinvertebrate communities to be determined.

Macroinvertebrate taxa richness among the sites surveyed differed by up to nine taxa, a higher difference than typical between sites. Both sites A2 and A3 recorded taxa richness equal to the lowest ever recorded for the sites to date.

MCI scores varied among sites by a significant 24 units (51-72 MCI units), a range slightly lower than the preceding survey (30 units), but still larger than usual. MCI scores indicated that the surveyed reach was in 'very poor' to 'poor' health. There was a significant decline in MCI score between 'control' site A, and site A2 of 22 MCI units, while the MCI score recorded at site A1 was 2 units higher than that recorded at site A. The MCI scores recorded at the downstream sites A3, B, D2,E and F were not significantly different to one another, however were all significantly lower than that recorded at 'control' site A.

SQMCI scores indicated 'very poor' to 'poor' macroinvertebrate health in the surveyed reach of the Mangati Stream. SQMCI scores ranged between 1.2 and 3.5 units. Scores were not congruent with MCI scores. Despite a significant decline of 22 MCI units between 'control' site A and site A2, there was a slight increase in SQMCI score of 0.2 unit between the two sites. Site A3 recorded a 'very poor' SQMCI score which was significantly lower than all of the other sites surveyed. This could be attributed mainly to siltation at the site, the result of adjacent earthworks with poor silt controls. Downstream sites D2, E and F were the only three sites to record SQMCI scores higher than respective site medians, with the remaining sites recording lower than median scores. Both sites A and A3 recorded SQMCI significantly lower than their respective site medians, with site A3 recording the lowest SQMCI score for the site to date.

Overall, the results of the current survey indicate that macroinvertebrate community health was generally 'very poor' to 'poor' at the sites surveyed in the Mangati Stream. Results indicated that there had likely been an adverse effect on the macroinvertebrate community resulting from discharges from Tegel Poultry.

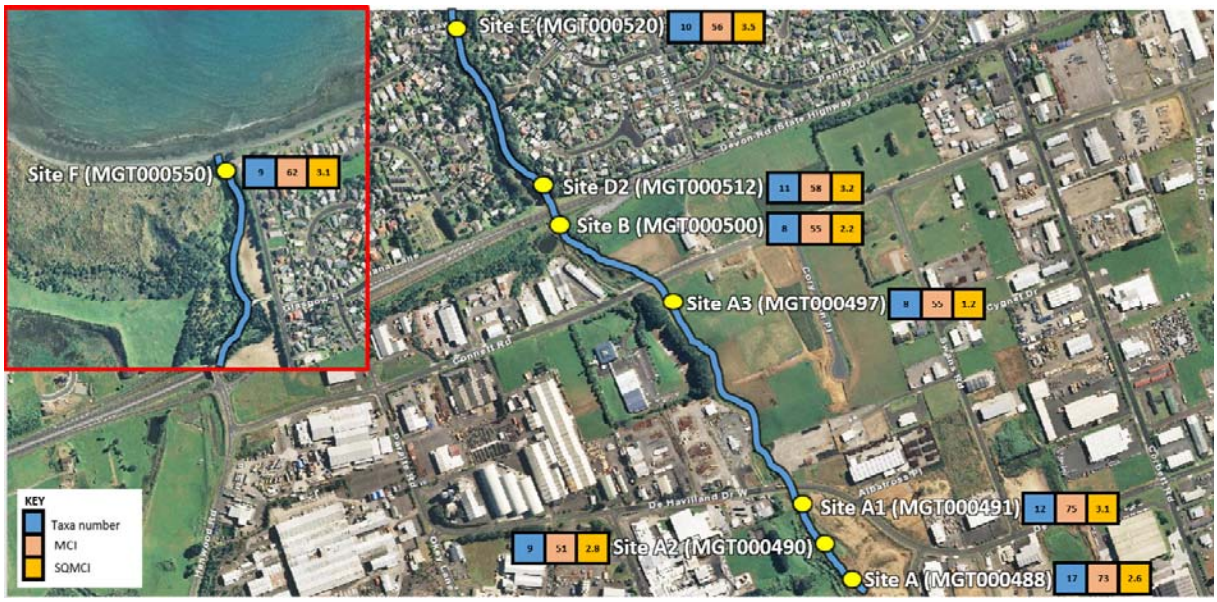

Figure 5 Biomonitoring sites in the Mangati Stream in relation to the Bell Block industrial area with taxa number, MCI scores and SQMCI scores for each site, 31 January 2021

16.2.1.2 May 2021 survey

The Council collected streambed macroinvertebrates on 7 May 2021 from eight sites in the Mangati Stream, to determine whether stormwater and wastewater discharges from the Mangati industrial area have had any adverse effects on the macroinvertebrate communities of this stream. Macroinvertebrates were identified and the number of different types of taxa counted (taxa richness), and MCI and SQMCI scores calculated for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of nutrient pollution in streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to pollution. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in communities. Significant differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored and enable the overall health of the macroinvertebrate communities to be determined.

Macroinvertebrate taxa richness among the surveyed sites differed by up to eight taxa, a higher difference than typical between sites. MCI scores varied among sites by a significant 21 units, a range slightly lower than the preceding survey, but still larger than typical. MCI scores indicated that the surveyed reach was in 'very poor' to 'poor' health. There were no significant differences in MCI score between sites A, A2 and A1 which contrasted to that previously recorded. While there was no significant differences in MCI scores between the upper sites in the current survey, both sites A and A1 recorded MCI scores significantly lower than their respective site medians and previous survey scores, which indicated degradation at these sites. It is possible that upstream influences have contributed to these results. The MCI scores recorded at the downstream sites B, D2, E and F were not significantly different to one another, nor were they significantly different to their respective site medians. All downstream sites B, D2, E and F recorded higher MCI scores than those recorded at 'control' site A. In addition, sites B, D2 and E all recorded MCI scores that were significantly higher than those recorded previously, by 12-19 units.

SQMCI scores indicated 'very poor' to 'fair' macroinvertebrate health in the surveyed reach of the Mangati Stream. SQMCI scores ranged between 1.9 and 4.0 units. The SQMCI scores recorded at sites A, A2,A1,A3, D2 and E were not significantly different to one another and were all reflective of 'very poor' macroinvertebrate community health, ranging between 2.1 and 2.8 units. Downstream site F recorded the highest SQMCI score of 4.0 units which was reflective of 'fair' health. Site B recorded the lowest SQMCI score

of 1.9 units, which was significantly lower than the scores recorded at both sites D2 and F. The three downstream sites; D2, E and F recorded SQMCI scores higher than their respective medians, while the remaining upstream sites all recorded lower SQMCI scores. Of these, upstream sites A, A2 and A1 all recorded significantly lower scores, while site F recorded a significantly higher score.

The results of the current survey indicate 'very poor' to 'poor' macroinvertebrate health in the Mangati Stream. The changes in community structures, numbers of taxa, and MCI values throughout the upper to mid reaches of the Mangati Stream, indicate that there has likely been upstream influences impacting the upper sites. There was an improvement in macroinvertebrate health recorded at site A2 and no significant differences above and below discharges from Tegel Poultry. As such, there were no obvious adverse effects on macroinvertebrate communities resulting from discharges from the Tegel Poultry site. Downstream of De Havilland Drive, where stormwater from De Havilland Drive West, Tasman Oil and Greymouth Petroleum enter, there was no deterioration in MCI score from that recorded upstream at 'control' site A. Overall, the current survey results suggest that stormwater and wastewater discharges from the Mangati industrial area have not had any significant adverse effects on the macroinvertebrate communities of this stream, although generally the upper sites showed a decrease in health compared to the lower sites and thus an upstream influence is suspected.

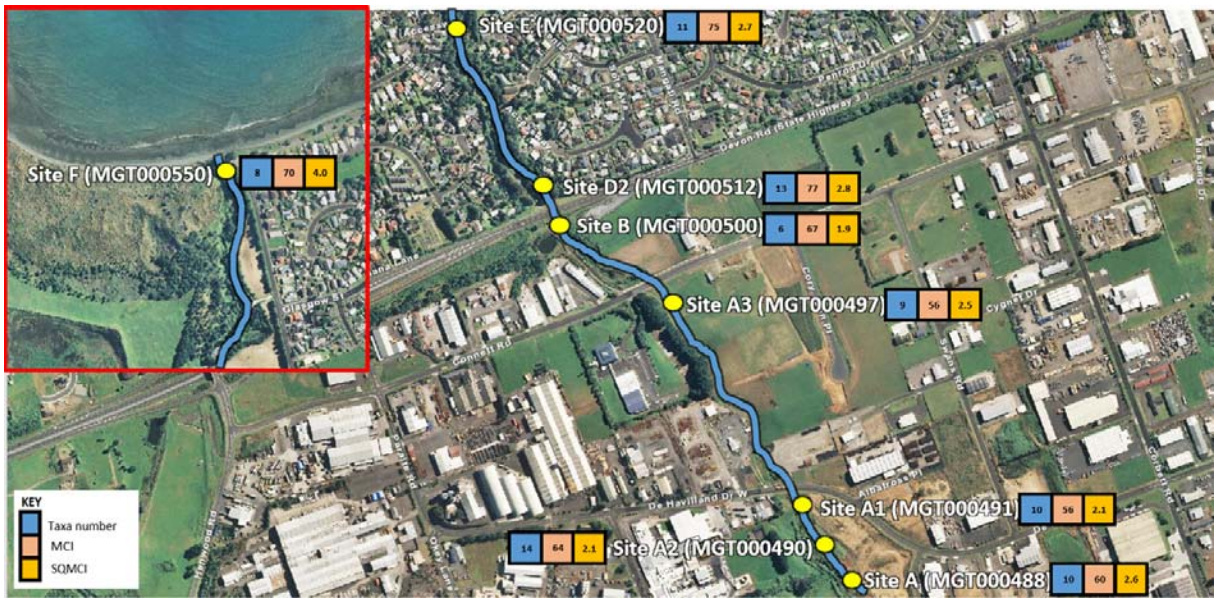

Figure 6 Biomonitoring sites in the Mangati Stream in relation to the Bell Block industrial area with taxa number, MCI scores and SQMCI scores for each site, 7 May 2021

16.2.2 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.

16.2.2.1 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 7).

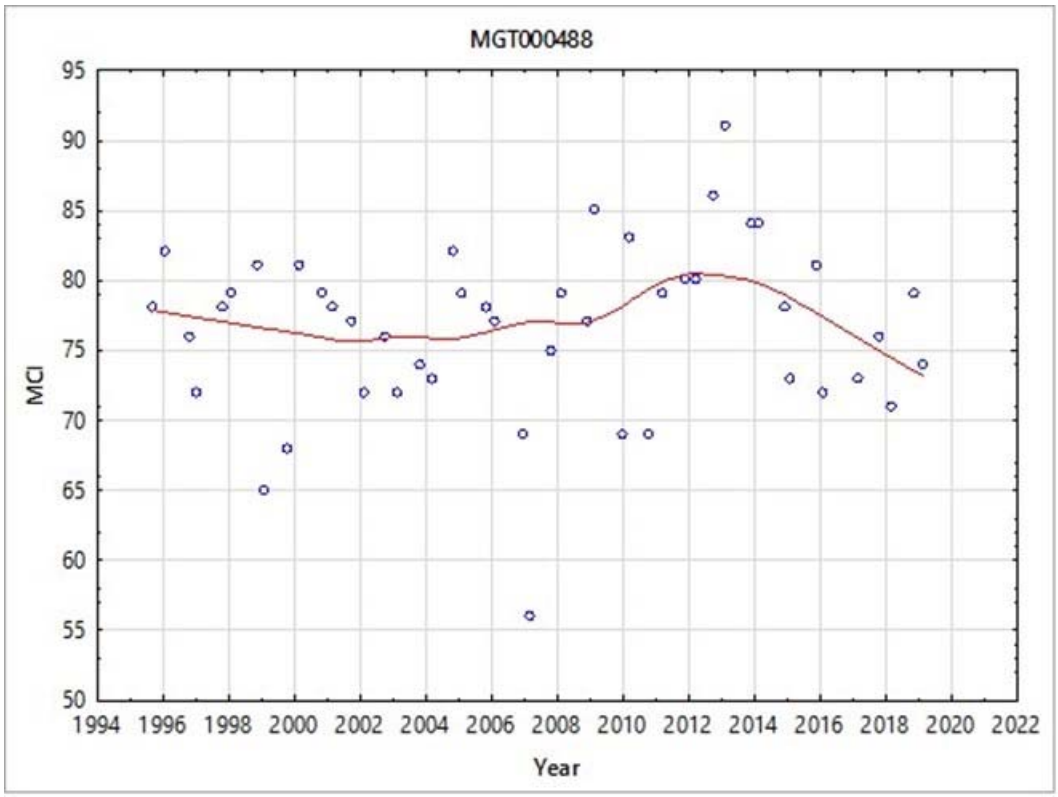

Figure 7 LOWESS trend plot of MCI data at site A, the railbridge (u/s industrial area)

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.

16.2.2.2 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 8).

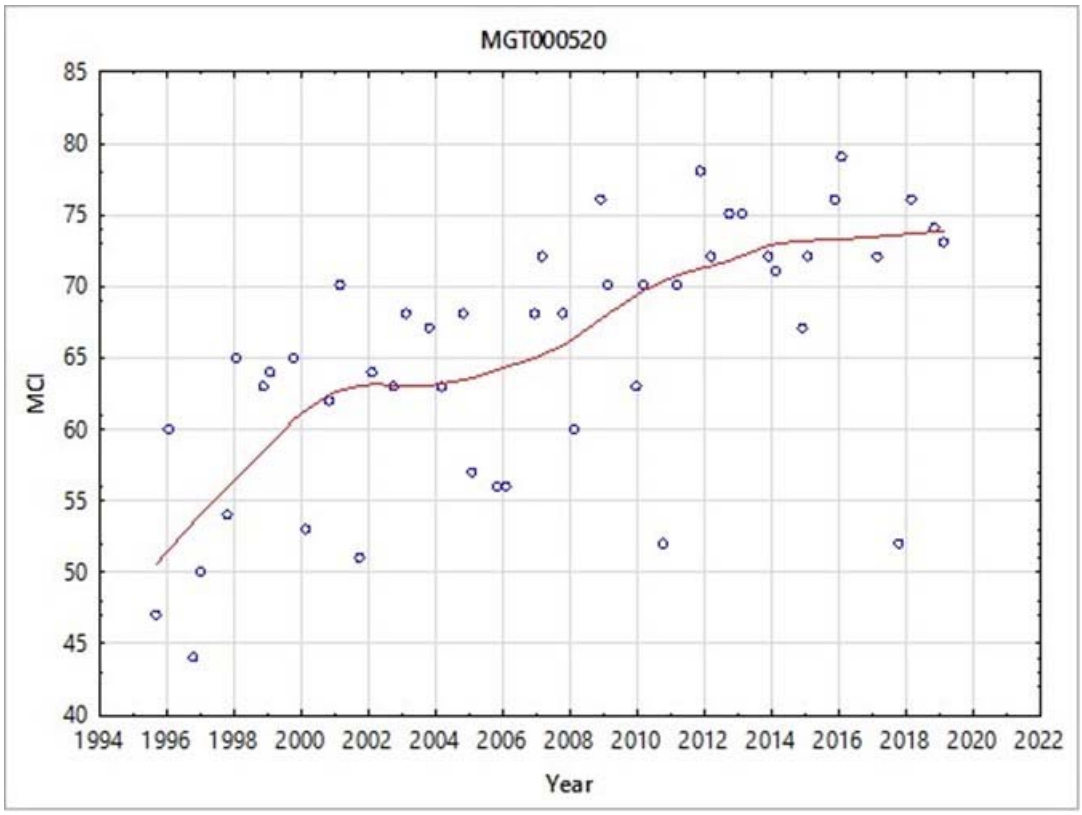

Figure 8 LOWESS trend plot at Site E, Te Rima Place (d/s of industrial area)

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.

17 Discussion

17.1 Discussion of site performance

A total of 68 compliance monitoring site visits were made to consent holders in the Mangati Catchment during the monitoring year under review.

One of the routine site inspections (2%) resulted in non-compliance and further enforcement action.

In general, sites were found to be relatively clean and well-maintained. General housekeeping, site sweeping, bunding requirements, drain cleaning and sediment controls were the most frequently mentioned areas requiring attention as noted by Inspecting Officers. Staff onsite were generally compliant and carried out required works in appropriate timeframes. Spills, sheens, and leaks noted onsite were dealt with at the time of each visit, and consent holders undertook upgrades and/or repairs to equipment and plant on each site as required. These works included installation of new sediment treatment systems, upgrading or replacing chemical storage facilities, construction of new site buildings, and regular updating of site stormwater management and spill contingency plans.

The site performance for each of the consent holders during the year was of an acceptable standard, and is reflected in the low volume of public complaints and incidents recorded for this catchment (zero complaints received over the 12-month monitoring period).

17.2 Environmental effects of exercise of consents

Council water quality surveys of the Mangati Stream showed that the concentrations of contaminants were generally relatively stable throughout the length of the catchment. The primary contaminants of concern were metals and metalloids, nutrients (nitrogen and phosphorus), suspended sediment, and biological oxygen demand. Of these, the nutrient values showed slight increases between upstream and downstream sites, but was within historical trends.

Metals and metalloid concentrations fluctuated throughout the catchment, and in-stream values were closely related to proximity to the source (site stormwater discharges). All results for the period under review were within acute and chronic toxicity guidelines.

Suspended solids, commonly sourced from yard dust and vehicle tracking, were the most frequently found contaminant of concern in site stormwater discharges, along with BOD concentrations. Samples collected from surface water sites, however, did not show any significant visual or chemical effects related to site discharges, indicating they were not having any measureable impact on the waterways.

Biological monitoring found that historical trends continued for the current monitoring period. The majority of macroinvertebrate sites in the Mangati Stream continue to be classified as “very poor” to “poor”.

17.3 Evaluation of performance

Tabular summaries of each consent holders’ compliance record for the period under review are set out in their individual sections of this report.

17.4 Recommendations from the 2019-2020 Annual Report

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

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. 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.
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.

17.5 Alterations to monitoring programme for 2021-2022

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

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

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

It is proposed that the monitoring programmed for all consented discharges in the Mangati Catchment in the 2021-2022 year continues at a similar level to that programmed for 2020-2021. It is also proposed that the programmes of works for the TIL Freighting Ltd site be renamed to MOVe Freight Ltd.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the sites in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2021-2022.

18 Summary of recommendations

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

Glossary of common terms and abbreviations

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

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

_____

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 PO Box 3394 New Plymouth 4341
Decision Date (Review):	6 August 2020
Commencement Date (Review):	6 August 2020 (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
Expiry Date:	1 June 2026
Site Location:	15 De Havilland Drive, Bell Block
Grid Reference (NZTM)	1699850E-5678410N
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 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. From 1 April 2021 the consent holder shall ensure that there is always clear and safe all-weather access to a point where the discharge can be sampled to check compliance with condition 4 above.

6. 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.

7. 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.

8. 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.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2020, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 6 August 2020

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:	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 8311 New Plymouth 4310
Decision Date (Review):	6 August 2020
Commencement Date (Review):	6 August 2020 (Granted 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:	1 June 2032
Review Date(s):	June 2026 and in accordance with special condition 9
Site Location:	29 Paraite Road, Bell Block
Grid Reference (NZTM)	1699411E-5678351M
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. From 1 April 2021 the consent holder shall ensure that there is always clear and safe all-weather access to a point where the discharge can be sampled to check compliance with condition 3 above.

5. 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.

6. The consent holder shall maintain and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.

7. The site shall be operated in accordance with a 'Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:

   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 that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.

9. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
   a) during the month of June 2020 and/or June 2026
   b) within 3 months of receiving a notification under special condition 8 above;

   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 6 August 2020

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 (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

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

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:	Tegel Foods Limited Private Bag 2015 New Plymouth 4340
Decision Date (Review):	6 August 2020
Commencement Date (Review):	6 August 2020 (Granted Date: 30 March 2009)

Conditions of Consent

Consent Granted:	To discharge stormwater from a poultry processing plant via a wetland into the Mangati Stream
Expiry Date:	1 June 2026
Review Date(s):	In accordance with special condition 14
Site Location:	91-95 Paraite Road, Bell Block
Grid Reference (NZTM)	1700060E-5678080N
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 2.6 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. From 1 April 2021 the consent holder shall ensure that there is always clear and safe all-weather access to a point where the discharge can be sampled to check compliance with condition 5 above .

7. 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.

8. 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.

9. The wetland shall be maintained to a standard that ensures maximum effluent treatment, to the satisfaction of the Chief Executive, Taranaki Regional Council.

10. The consent holder shall complete all fencing and riparian planting in accordance with Riparian Management Plan [RMP450] before 31 December 2010.

11. 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.

12. 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.

13. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site, 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.

14. 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 13 above;

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

Signed at Stratford on 6 August 2020

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

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

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