# **Ample Group Ltd**

Monitoring Programme
Annual Report
2022-2023

Technical Report 2023-85





Taranaki Regional Council Private Bag 713 Stratford

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## **Executive summary**

Ample Group Ltd (the Company) operate an abattoir on Mountain Road, Stratford, in the Kahouri Stream catchment and within the shared rohe of Ngāti Ruanui, Ngatiruahine, and Ngāti Maru. The Company slaughters and processes cattle. In the past the Company also operated a rendering plant which further processed products however this was decommissioned several years ago. Wastewater from the stockyards and from the abattoir building is discharged into a two pond treatment system and preferentially irrigated to land, or to the Kahouri Stream during high flow conditions. Activities on the site including the stockyards, irrigation to land, and disposal of paunch to land have the potential to cause nuisance odour effects on surrounding properties.

This report for the period July 2022 to June 2023 details the compliance monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental performance and compliance with its resource consents during the period under review.

During the monitoring period Ample Group Limited demonstrated a good level of environmental performance, but received an 'improvement required' rating for administrative performance, resulting in an overall rating of 'improvement required'.

The Company holds five resource consents which include a suite of conditions setting out the requirements that the Company must comply with to minimise adverse effects to the environment. The Company holds one consent to allow it to take and use stream water, two consents to discharge treated wastewater and stormwater into the Kahouri Stream, one consent to discharge treated wastewater to land, and one consent to discharge contaminants into the air.

The Council's monitoring programme for the year under review included three site inspections, two water quality sampling surveys, three hydrological gaugings and two biomonitoring surveys.

Overall the monitoring indicated that the environmental performance was good in the 2022-2023 monitoring year. In response to an abatement notice issued in 2021-2022 accumulated waste material around the site was mostly removed during this monitoring period, with only small pieces of polystyrene noted in paddocks during the final inspection. Inspections confirmed ongoing compliance with this notice. There were no samples collected from the Kahouri Stream during a wastewater discharge event so it is not possible to determine if the water quality-related consent limits were complied with. However, the biomonitoring surveys concluded that point source discharges of wastewater had not caused a significant adverse effect on the macroinvertebrate community in the Kahouri Stream. The health of the macroinvertebrate community at selected locations was described as good, very good, or excellent at the time of the surveys. The results of stream samples collected during the rest of the year complied with the relevant consent conditions which ensure a minimum level of water quality.

The management of the disposal treated wastewater to land resulted in one paddock exceeding the nitrogen loading threshold, and the consent limit on wastewater application depth was exceeded in most paddocks. The Company was issued with infringement notice in August 2022 and May 2023 in relation ponding and overland flow of irrigation water to the Kahouri Stream. In May 2023 an attempt to resolve this by moving the irrigator resulted in wastewater landing on an adjacent property. The results of the water quality analyses and the conclusion of the biomonitoring report indicate that any effects of these unauthorised discharges were not significant, and within those provided for by the consent. Recently, the Company advised Council of the challenges it was having with irrigating to land within the parameters of the consent. Plans are in place to expand the irrigation area in the future and a new pond has been added to help with storage capacity.

This report recommends that the Company implement more self-monitoring of the wastewater parameters in order to better manage the nitrogen loading and application depth. Currently the Council provides the nitrogen data to the Company and the lag-time (sometimes weeks or annually) restricts adaptive

management needed to control nitrogen loading. Improved self-monitoring will likely improve adaptive management of wastewater disposal in a manner that may ensure compliance with the nitrogen loading and application depth limits.

For reference, in the 2022-2023 year consent holders were found to achieve a high level of environmental performance and compliance for 878 (87%) of the 1007 consents monitored through the Taranaki monitoring programmes. Another 96 (10%) of the consents achieved a good level of environmental performance and compliance. A further 27 (3%) of consents monitored required improvement in their performance, while the remaining one (<1%) achieved a rating of poor.<sup>1</sup>

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance continues to require improvement. However environmental performance specifically improved from poor to good in the current monitoring period. This report includes recommendations for the 2023-2024 year.

<sup>1</sup> The Council has used these compliance grading criteria for more than 19 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

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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 2021 to June 2022 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Ample Group Ltd (the Company). The Company operates an abattoir situated on Mountain Road (SH3) at Stratford, in the Kahouri Stream catchment, in the shared rohe of Ngati Ruanui, Ngatiruahine, and Ngāti Maru.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consents held by the Company that relate to abstractions and discharges of water within the Kahouri Stream catchment, and the air discharge permit which authorises emissions to air from the site.

In accordance with the *Resource Management Act 1991* (RMA) environmental management should be integrated across the water air and land domains so that a consent holder's use of these resources can be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly.

This report discusses the environmental effects of the Company's use of water, land and air, and is the eighth annual report by the Council for the Company. Previously, a single report was produced for Gold International Meat Processors Ltd (for the period 2014-2015) and Taranaki Abattoirs Ltd (for the period 2010-2014). Before 2010 monitoring of the site was reported in a Kahouri Stream Catchment report, which included a number of industries. References for all previous reports are included in the bibliography and references section at the end of this report.

#### 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 Company/companies in the Kahouri Stream 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 Company's site/catchment.

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

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

**Section 4** presents recommendations to be implemented in the 2022-2023 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 socialeconomic 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

In addition to discussing the details of the performance and extent of compliance by the consent holder, this report also assigns a rating to the Company's environmental and administrative performance during the period under review. The rating categories are high, good, improvement required and poor for both environmental and administrative performance. The interpretations for these ratings are found in Appendix II.

For reference, in the 2022-2023 year consent holders were found to achieve a high level of environmental performance and compliance for 878 (87%) of the 1007 consents monitored through the Taranaki monitoring programmes. Another 96 (10%) of the consents achieved a good level of environmental performance and compliance. A further 27 (3%) of consents monitored required improvement in their performance, while the remaining one (<1%) achieved a rating of poor.<sup>2</sup>

## 1.2 Location and process description

The Company operates an abattoir situated beside State Highway 3 at the Kahouri Stream Bridge, approximately one kilometre north of Stratford. The facility generally operates Monday to Friday. Cattle are received and held in the stockyards before being slaughtered and processed inside the abattoir building.

Water supply for the site comes from two sources. Water for stock and yard washing used to be drawn at a small weir on a tributary of the Kahouri Stream, but a consent variation in 2008 allowed the point of take to be from the Kahouri Stream, approximately 200 m upstream of the abattoir. Water for abattoir and process areas comes from the Stratford municipal supply.

<sup>&</sup>lt;sup>2</sup> The Council has used these compliance grading criteria for more than 19 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

Wastewater is generated in the abattoir and stockyards. Abattoir wastewater passes through a screening system that removes gross solids and then flows by gravity to the anaerobic pond. Drainage from the partially covered stockyards is also gravity-fed to the treatment system. Boiler condensate is disposed of in a soak hole.

The wastewater treatment system is a conventional two-pond system, similar too but a larger scale version of those used to treat farm dairy wastes. It consists of an anaerobic pond of approximately 2,000 m³ in volume, followed by an aerobic pond about of 3,200 m² in area. In 2011, this system underwent a large upgrade. During this monitoring year work began on the construction of a new treatment pond. The treated wastewater was originally discharged to a tributary of the Kahouri Stream but is now being preferentially irrigated to land when conditions allow, or discharged to the Kahouri Stream during high flow conditions provided for by a resource consent. Irrigation to land has always occurred on cut and carry paddocks owned by the Company but since 2013 grazing paddocks on the other side of Mountain Rd have been leased for additional irrigation area (Figure 1).

The Company disposes of paunch (stomach contents) onto land next to the wastewater treatment system in an area referred to as the worm farm. The leachate from the worm farm contains a high concentration of organic content and microorganisms and the Company is required to minimise discharge into the wastewater treatment system. The composted material is then spread over pasture.

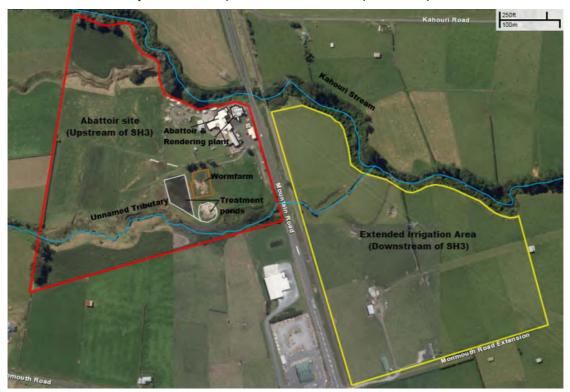


Figure 1 The Company's site, including irrigation areas

#### 1.3 Resource consents

The Company holds five resource consents, the details of which are summarised in the table below. Summaries of the conditions for each consent are set out in Section 3 of this report.

A summary of the various consent types issued by the Council is included in Appendix I, as are copies of all consents held by the Company during the period under review.

Table 1 Summary of the consent held by the Company

Consent number	Purpose	Granted	Next Review	Expires					
	Water abstraction permits								
5176-2	To take water from the Kahouri Stream for stock and yard washing purposes	7 July 2016	June 2025	1 June 2034					
	Water discharge permi	its							
7662-1	To discharge treated wastewater directly into the Kahouri Stream	7 November 2011	June 2024	1 June 2028					
7660-1	To discharge uncontaminated stormwater to land	7 November 2011	N/A	1 June 2028					
	Air discharge permit								
4055-3	To discharge emissions to air, in association with meat processing, rendering and associated activities	7 November 2011	June 2024	1 June 2028					
	Discharges of waste to lo	and							
5221-2	To discharge treated wastewater from a treatment system onto and into land in the vicinity of an unnamed tributary of the Kahouri Stream	7 November 2011	June 2024	1 June 2028					

## 1.4 Monitoring programme

#### 1.4.1 Introduction

Section 35 of the RMA imposes obligations on 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 on 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 Company's abattoir site consisted of four components as set out in sections below.

#### 1.4.2 Programme liaison and management

There can be 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.

#### 1.4.3 Site inspections

Three of the four scheduled compliance monitoring inspections of the site were conducted during the 2022-2023 monitoring year. The site inspections involved discussions with the Company about consent related

matters and observations of the yard area, stormwater drains, irrigation paddocks, worm beds and the wastewater ponds. Air inspections were limited to observing any detectable odour or visible dust during the site inspection. The inspection reports can be found in section 2.1.1 below. The reporting data collected by the Company was provided during the monitoring year and assessed as it was submitted. Three of the four scheduled hydrological inspections were undertaken to gauge the flow rate and stream stage and, if required, to download flow data from the data logger. The data is used to maintain a rating curve for the staff gauge located at the Mountain Road Bridge which informs when discharges to the stream may occur within the parameters of the consent conditions.

#### 1.4.4 Chemical sampling

The monitoring programme includes collecting water samples from the wastewater irrigation pipe, and from the tributary and stream, and analysing them to determine compliance with water quality-related consent conditions. The consent includes limits for the quality of water irrigated to land and to the stream. This year, samples were collected from the treated wastewater line during irrigation, but not while the treated wastewater was being discharged to the stream.

A synoptic survey collects samples from the Kahouri Stream and tributary at the same time to measure water quality in both waterways at a single point in time. The results of the downstream samples are compared to the upstream samples, and the difference between the two is assumed to be the overall impact of the Site's point source and diffuse discharges.

Water samples are analysed for a suite of parameters and contaminants depending on the type of survey. A full list of analytes can be found below.

- calcium
- conductivity
- potassium
- potassium adsorption ratio
- magnesium
- sodium
- ammoniacal nitrogen
- ammonia
- turbidity
- · electrical conductivity
- Total suspended solids
- chloride
- nitrate-nitrite
- total kjeldahl nitrogen
- dissolved reactive phosphorous
- Total phosphorous
- biochemical oxygen demand
- nitrates
- Ha
- sodium adsorption ratio (SAR)
- temperature
- total nitrogen
- total phosphorous

#### 1.4.5 Biomonitoring surveys

Biannual biological monitoring surveys of Kahouri Stream are undertaken each year to measure the impact of the site's point source wastewater discharges on the in-stream macroinvertebrate community. Condition 13(g) of consent 7662-1 includes a condition which prohibits significant adverse effects on aquatic life in the stream. This is determined by comparing the health of the upstream macroinvertebrate community with the downstream community using three indices.

There are five in-stream monitoring locations on the site, three in the Kahouri Stream and two in the tributary. Each waterway has one site at the upstream boundary and one at the downstream boundary so that any change in the water chemistry between it entering and leaving the site can be quantified. There are no in-stream monitoring locations on the leased property. Samples are also taken from the wastewater pond pipe to assess the quality of the wastewater discharged to land and to the stream. The details of the monitoring sites are summarised in Table 2 and the locations shown on the map in Figure 2.

Table 2 Monitoring site details

Sample source	Site	Site code	Site Description
Discharge to Kahouri Stream	D1	IND003002	Wastewater discharge pumped to Kahouri Stream
Irrigated wastewater I1 IND004008 Wastewa		Wastewater irrigated to land	
	K1	KHI000295	Upstream property boundary
Kahouri Stream	K2	KHI000300	Downstream property boundary and approx. 90 m downstream of wastewater discharge (SH3)
	К3	KHI000305	65 m downstream of KHI000300
	T1	KHI000294	Upstream property boundary
Unnamed tributary	T2	KHI000302	Approx. 50 m downstream of previous wastewater discharge



Figure 2 Sites monitored for discharge or receiving environment water quality

Two biological monitoring surveys were conducted, in spring and summer, at three sites in the Kahouri Stream. The results can be found in section 2.1.5.1 below.

#### 2 Results

#### 2.1.1 Inspections

#### 13 September 2022

The weather was overcast with showers, but becoming fine. There was no odour at the carpark. Overall the site was looking tidy, however small amounts of raw material were noted on the gravel yard and efforts need to be made to pick these up. Two seagulls were noted scavenging this material. There was no blood or product on or in any of the other stormwater areas. The worm farm had a reasonably large amount of exposed paunch, however, little odour was being generated. There were no stock grazing on the cut and carry paddocks. There was irrigation to land at the time of the inspection, however no samples were taken. The water levels at the anaerobic and aerobic ponds were moderate, with the staff gauge at the aerobic pond reading approximately 1.3. It was noted that a drain had been constructed between the anaerobic and aerobic ponds. Less litter and fatty deposits were visible on the anaerobic pond, compared with that noted during the previous inspection. Recent wet weather meant there was ponding of water in some paddocks and raceways, however these were expected to lower throughout the day. The site was exited at approximately 12.55 pm.

#### 6 December 2022

There was no odour at the carpark. Overall the site was looking tidy. There was no blood or product on or in any of the stormwater areas. The worm farm had a reasonably large amount of exposed paunch, however, little odour was being generated. There were no stock grazing on the cut and carry paddocks. There was irrigation to land at the time of the inspection, and samples were taken. The water level at the anaerobic pond looked relatively high, while the level of the aerobic pond looked moderate. There was an adequate amount of freeboard available in the aerobic pond, as indicated by the staff gauge. There was a green scum that had accumulated at one edge of the aerobic pond, while the anaerobic pond appeared bubbling and gaseous. It was noted that a new pump has been installed at the aerobic pond and that works are being undertaken to install new irrigation lines. Samples were collected from two sites in the Kahouri Stream, and two sites in the unnamed tributary of the Kahouri Stream, as part of a synoptic survey. Efforts need to be made to dispose of litter properly as items such as polystyrene, disposable gloves and plastic wrap were noted in the paddocks behind the building. The site was exited at approximately 11.35 am

#### April 2023

A warrant was shown to a staff member on arrival, during sign-in at reception at approximately 10.50 am. The weather was overcast and cool. There was no odour at the carpark. Overall the site was looking tidy, however small amounts of rubbish (polystyrene) were noted in some paddock areas and efforts need to be made to pick these up. There was no blood or product on or in any of the stormwater areas. The worm farm had a reasonably large amount of exposed paunch, however, little odour was being generated. There were no stock grazing on the cut and carry paddocks. There was no irrigation to land from the aerobic pond at the time of the inspection, and no samples were taken. Sludge from the anaerobic pond was being spread to land at the time of the inspection. The water levels at the anaerobic and aerobic ponds were moderate, however the staff gauge at the aerobic pond read below 2.0. Recent wet weather meant there was ponding of water in some paddocks and raceways, however these were expected to lower throughout the day. The site was exited at approximately 11.15 am.

#### 2.1.2 Abstraction data

Consent 5176-2 authorises the Company to abstract water from the Kahouri Stream for stock and yard washing purposes. The company is required to maintain a verified flow meter and data logger at the point of abstraction and make these records available to the Council. The data logger records data at 15 minute

intervals and provides data on abstraction volume and flow rate. Telemetry was installed by the Company to ensure compliance with consent 5176-2, and continuous data has been available since 28 February 2022.

The rate of abstraction is restricted to 3.25 L/s continuous flow, and the abstraction volume restricted to 178 m³/day. No abstraction is allowed when the Kahouri Stream flow is less than 55 L/s immediately downstream of the intake point. The rate of abstraction during this monitoring year was maintained below the consent limit, and, with two exceptions, remained below 2 L/s (Figure 3). On 13 January 2023 the rate briefly reached 3.38 L/s and returned to a normal rate within one hour. The rate did not exceed the 5% threshold provided for by the consent to allow for inaccuracies of flow meters.

Similarly, the volume of water abstracted from the stream each day of the monitoring period was less than the consent limit. The greatest volume of water abstracted in a single day was 47 m<sup>3</sup> in September 2022. Otherwise the daily volume rarely exceeded 45 m<sup>3</sup> which is 25% of the consent limit.

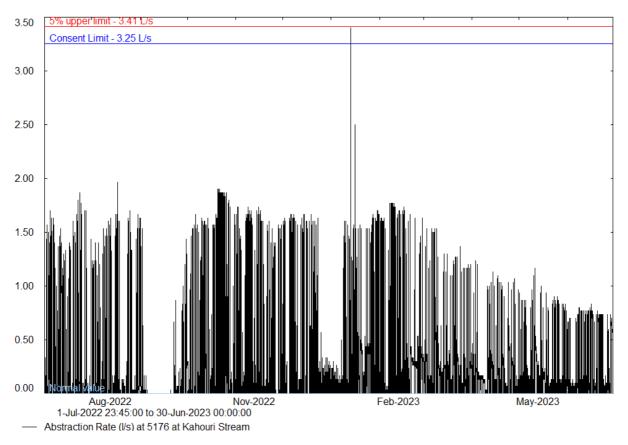


Figure 3 Rate of abstraction from the Kahouri Stream, 2022-2023

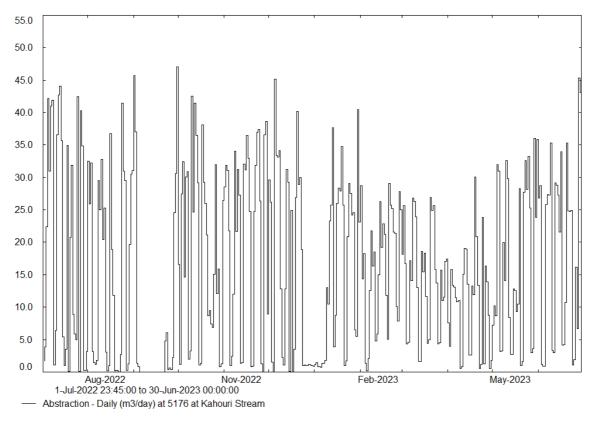


Figure 4 Volume of abstraction from the Kahouri Stream, 2022-2023.

### 2.1.3 Wastewater irrigation

Wastewater from the treatment pond is irrigated to two areas, one is owned by the Company and the other is leased from a neighbouring farm. The majority of the irrigation this year occurred on land west of Mountain Road (SH3) which is owned by the Company (paddocks 3-9, Figure 5) and largely used for cut and carry. In the absence of stock on these paddocks the nitrogen loading rate limit in consent 5221-2 is 600 kg/m². The leased paddocks east of SH3 (paddocks 10-15, Figure 6) are also used to graze stock and accordingly the nitrogen loading rate limit is 200 kg/m² to account for nitrogen contributions from animal waste.



Figure 5 The irrigation areas, showing the cut and carry paddocks as presented in the Wastewater Management Plan 2020



Figure 6 The irrigation areas, showing the grazed paddocks as presented in the Wastewater Management Plan 2020

Table 3 presents both the volume of wastewater and estimated rate of total nitrogen applied to land in the 2022-2023 period. Based on submitted data a total of 80,079.4 m³ of wastewater was irrigated to 13 paddocks. Six of the cut and carry paddocks received between 107 and 536 m³/ha which is less than the consent limit of 600 m³/ha. Paddock 7 was the only one to exceed the consent limit and received 732 m³/ha, 21% more than provided for by the consent.

The rate of total nitrogen applied to the grazed paddocks was between 17 and 51 m³/ha and all complied with the consent limit of 200 m³/ha. The records include 1,615 m³ of wastewater which was irrigated to

multiple paddocks concurrently and is shown in the 'shared' column of Table 3, but the rate of nitrogen loading per paddock cannot be determined.

Table 3 Volume of wastewater and rate total nitrogen applied to each paddock, 2022-2023 (exceedance in **bold**).

D	Paddock number													
Parameter	3	4	5	6	7	8	9	10	11	12	13	14	15	Shared
Total volume (m³)	4,926	12362	253	6672	10,917	3760	11,473	3171	1436	1279	940	1057	777	1615
Total N (kg/ha)	107	431	21	536	732	199	312	38	21	17	12	51	41	N/A

Table 4 presents the laboratory results of the wastewater pond samples collected on 16 December 2022 and 17 April 2023. The only limit placed on the wastewater quality is for the sodium absorption ratio (SAR) which is restricted to 15 mmol/L. The results for this year were 2.5 and 3.3 mmol/L which are less than the consent limit.

Table 4 Irrigated wastewater water quality parameters

Parameter	6 December 2022	17 April 2023
pH Units	7.6	7.6
Electrical Conductivity (EC) mS/m	60.2	67.7
Total Calcium g/m³	13.3	13.4
Total Magnesium g/m³	2.4	2.9
Total Potassium g/m³	16.6	19.6
Total Sodium g/m³	37	51
Potassium Absorption Ratio (PAR) (mmol/L)	0.6	0.7
Sodium Absorption Ratio (SAR) (mmol/L)	2.5	3.3
Total Nitrogen g/m³	50	56
Total Ammoniacal-N g/m³	45	47
Nitrate-N + Nitrite-N g/m³	0.8	<0.02
Total Kjeldahl Nitrogen (TKN) g/m³	49	56
Total Phosphorus g/m³	7.3	9.3

Condition 12 of resource consent 5221-2 restricts the irrigation of wastewater to 24 mm over any 15 day period. Table 5 presents a summary of the maximum application depth during any 15 day period for each paddock. All seven of the cut and carry paddocks exceeded the 15 day application rate consent limit based on the preceding 14 days. The number of exceedance days for the monitoring year ranged between 29 and 185. Two of the six grazing paddocks received wastewater at a rate which exceeded the 15 day application rate limit.

Table 5 Paddock number and maximum 15-day application depth during 2022-2023 (exceedance in **bold**).

Paddock number	3	4	5	6	7	8	9	10	11	12	13	14	15
Maximum	29	185	82	107	175	86	74	-	-	-	-	28	28

Excessive application can result in surface ponding, runoff into waterways, leaching to groundwater, and pasture damage (Regional Fresh Water Plan for Taranaki, appendix VIIA). Scheduled inspections of the irrigation area did not note any runoff, nor was there any excessive ponding, however the Company received infringement notices in August 2022 and May 2023 for unauthorised discharges of wastewater.

In accordance with the consent, irrigating wastewater to land is to be prioritised over discharging it to the Kahouri Stream because nitrogen and other contaminants can be assimilated in the soil to a greater extent than in waterways. Figure 7 shows a comparison of the volumes discharged to land and the stream each year since the 2011-2012 monitoring year. There has been an increase in the total volume of wastewater discharged since 2020-2021 when production was restricted by the Covid-19 pandemic measures. This year 80,079 m³ of wastewater was disposed of either to land or the Kahouri Stream. This year 84% of the wastewater was discharged to land which is the second highest percentage since 2011-2012 and aligns with the requirement to maximise wastewater discharge to land instead of to the stream. As can be seen in the graph the total volume discharged to the stream, and the proportion of overall discharges, has generally declined over time.

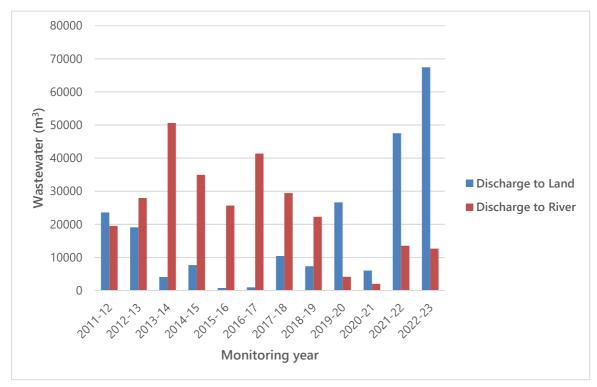


Figure 7 Volume of wastewater discharged to land and water since 2011/2012

#### 2.1.4 Provision of management/contingency plans

Various consents held by the Company include requirements for the preparation of contingency or management plans. Some of these plans are required to be revised every few years. The consent that authorises discharges of wastewater to land requires the provision of a Wastewater Irrigation Management Plan, and that this plan be reviewed every two years. The most recent version of this plan was received on 21 July 2020 from the Company and the next is required during the 2023-2024 monitoring year. The Company has also updated its contingency plan in 2020, which is intended to meet the requirements of resource consent 4055-3 (special condition 3) and resource consent 6570-1 (special condition 5).

#### 2.1.5 Synoptic survey

Synoptic surveys were carried out on the 6 December 2022 and on 17 April 2023 to quantify the concentrations of contaminants in the Kahouri Stream and tributary at a single point in time. Differences

between the upstream and downstream results are used to indicate the likely impact of diffuse discharges from the site, most likely from sub-surface flows contaminated by the wastewater irrigation to land.

Samples were collected from two locations in the Kahouri Stream, K1 and K2, and two locations in the tributary, T1 and T2 (Table 2 and Figure 2). The results of the laboratory analysis of the samples are presented in Table 6.

Table 6 Water quality sample results from the Kahouri Stream and Tributary, 2022-2023 (downstream increases in **bold**)

		6/12/	2022		17/04/2023				
Parameter	Kahouri Stream		Tribu	utary	Kahouri	Stream	Tributary		
	U/S	D/S	U/S	D/S	U/S	D/S	U/S	D/S	
Unionised Ammonia (g/m³-N)	0.00015	0.00020	0.00015	0.00053	0.00007	0.00012	0.00008	0.00034	
Turbidity (NTU)	1.33	1.15	1.33	1.12	1.75	1.69	2.2	2.2	
рН	76	7.6	7.6	7.6	7.5	7.5	7.4	7.3	
Electrical Conductivity (mS/m)	10.4	9.9	10.4	10.7	10.3	10.2	10.8	11.0	
Total Suspended Solids (g/m³)	3	< 3	3	3	< 3	5	4	8	
Temperature (°C)	13.1	12.9	13.1	13.5	12.9	12.9	13.4	13.5	
Total Nitrogen (g/m³)	1.17	1.03	1.17	1.26	1.05	1.04	1.19	1.29	
Total Ammoniacal Nitrogen (g/m³-N)	0.017	0.022	0.017	0.062	0.011	0.016	0.013	0.065	
Nitrate-N + Nitrite-N (g/m³-N)	1.13	0.94	1.13	1.13	0.94	0.93	1.09	1.14	
Total Kjeldahl Nitrogen (g/m³)	< 0.10	< 0.10	0.10	0.14	0.11	0.11	< 0.10	0.15	
Dissolved Reactive Phosphorus (g/m³)	0.006	0.011	0.006	<0.004	0.017	0.019	0.005	0.006	
Escherichia coli (MPN / 100 mL)	260	326	260	579	488	727	435	345	

Samples collected from the downstream boundary monitoring site of the Kahouri Stream during both monitoring surveys reported similar results to the upstream monitoring location, with the exception of unionised ammonia, total ammoniacal nitrogen, dissolved reactive phosphorous, and E.coli. These compounds were present at higher concentrations than those at the upstream boundary and indicate that diffuse discharges from the paddocks are impacting the stream water quality. These compounds are commonly associated with effluent and organic-rich wastewater discharges.

Some of the reported results of the samples taken from the downstream monitoring site in the tributary were also higher than those at the upstream site. As with the Kahouri Stream results, the concentrations of unionised ammonia, total ammoniacal nitrogen, dissolved reactive phosphorous, and E.coli were generally higher than the upstream levels. Additionally, total nitrogen and total Kjeldahl nitrogen results were higher downstream.

Localised contamination of sub-surface discharges may also be a result of the historical burial of waste animal products. There has been no burial of waste product for some time, however the decomposition of organic matter may take years to complete.

#### 2.1.5.1 Biological monitoring

#### Spring survey – October 2022

The Kahouri Stream sites had moderate macroinvertebrate community richness ranging between 13 and 18 taxa, showing a gradual decrease in a downstream direction. Sites 1 and 2 recorded only slightly fewer taxa richness than that recorded in the previous survey, however the taxa richness recorded at site 3 was seven taxa fewer than that recorded previously. This was the lowest value to date for this site (13 taxa). All sites were either equal to or less than their respective medians.

Macroinvertebrate Community Index (MCI) scores were 126 units, 136 units and 129 units at sites 1, 2, and 3 respectively. These scores were reflective of 'very good' macroinvertebrate community health at all three sites. The result for site 1 is a significant increase compared to previous survey results (a difference of 14 units) when the health was rated 'good'. The MCI scores of all sites were significantly higher than their respective site medians. Both sites 2 and 3 recorded the highest MCI values to date for their respective sites. Site 2 was 10 MCI units higher than the 'control' site 1, while site 3 was 3 units higher. There were no significant differences in MCI values between sites, indicating no evidence of recent toxic discharges adversely affecting macroinvertebrate communities of the Kahouri Stream.

Semi-quantitative Macroinvertebrate Community Index (SQMCI) scores are generally more sensitive than MCI values as the calculations take into account abundances as well as tolerance values. SQMCI scores were 7.6 units, 7.2 units, and 7.8 units at sites 1, 2, and 3 respectively. These scores were reflective of 'excellent' macroinvertebrate community health. Macroinvertebrate communities in this survey were dominated by three mayfly taxa (*Coloburiscus*, *Deleatidium*, and *Nesameletus*), which ranged from 'abundant' to 'extremely abundant' at all three sites. Site 1 recorded a significantly higher SMQCI than that recorded in the previous survey, while sites 2 and 3 recorded similar values. All sites recorded values higher than their respective site medians, although not significantly. There were no significant differences between sites. Site 2 recorded 0.4 units lower than the 'control' site 1, however increased again further downstream with site 3 recording 0.2 units higher than site 1. EPT taxa ranged between 10-13 taxa over the three sites. These SQMCI results indicate no evidence of recent toxic discharges adversely affecting macroinvertebrate communities of the Kahouri Stream.

The absence of sewage fungus at any of the sites indicates little nutrient enrichment downstream of the discharge point.

Overall, this survey indicates that wastewater discharges from the Ample Group Ltd site was not having a significant adverse effect on the macroinvertebrate communities in the Kahouri Stream.

#### Summer survey – March 2023

The Kahouri Stream sites had moderate macroinvertebrate community richness ranging between 11 and 17 taxa. Taxa richness was lower to historical medians at all three sites. Taxa richness at sites 2 and 3 was higher than the 'control' site 1 and showed a gradual increase in a downstream direction.

MCI scores represented 'good' macroinvertebrate community health at the 'control' site 1 and site 3, and showed 'very good' health at site 2. All sites recorded lower MCI values than that recorded in the previous survey, with significant differences found at sites 1 and 2. There were no significant differences recorded between the sites in the current survey.

SQMCI scores were reflective of 'very good' health at sites 1 and 2, and 'excellent' health at site 3. SQMCI scores increased gradually in a downstream direction, with the SQMCI score at site 3 being 0.4 units higher than the 'control' site 1. The SQMCI scores recorded in the current survey were not significantly different to historic site medians at any of the three sites.

The absence of sewage fungus at any of the sites indicates little nutrient enrichment downstream of the discharge point.

Overall, this survey indicates that wastewater discharges from the Ample Group Ltd site was not having a significant adverse effect on the macroinvertebrate communities in the Kahouri Stream.

## 2.2 Incidents, investigations, and interventions

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

For all significant compliance issues, as well as complaints from the public, the Council maintains a database which includes events where the individual/organisation has notified the Council. Details of any investigation and remedial action taken are recorded for non-compliant events

Where complaints have been raised against a particular site, and there is the potential for legal liability, the Council must be able to prove by investigation that the identified individual/organisation is responsible for the incident (or that the allegation cannot be proven).

Table 7 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to the Company's activities during the 2022-2023 period. This table summarises all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

In analysing irrigation data for the preparation of this report exceedances of the nitrogen loading rate and application depth limits were identified. Due to the cumulative nature of these activities it is not always possible to identify exceedances during the monitoring year and address them at the time. Council is still considering the enforcement options available, and will be working proactively with the consent holder to review wastewater management processes to avoid non-compliance in the future. In a meeting in November 2023 the Company advised the monitoring officer of the challenges it was having with irrigating to land within the parameters of the consent. Plans are in place to expand the irrigation area in the future and a new pond has been added to help with capacity.

Table 7 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
19/08/2022	Self-notification of a potential pond overflow, further investigation found the site to be operating within consent conditions	Y	No	N/A
31/08/2022	Unauthorised discharge of wastewater to land found during analysis of irrigation data	N	Infringement notice	N/A
05/05/2023	A complaint was received. Investigation found that there was an unauthorised discharge of wastewater to land where it may enter water	N	Infringement notice	N/A
23/06/2023	Incorrect flow meter installed	Y	Advice	Replaced and certified 21/07/2023
Multiple	Exceedance of nitrogen loading and application depth limits.	N	Under consideration	ТВА

## 3 Discussion

## 3.1 Environmental effects and site performance

Inspections of the site found that, in general, the yards, ponds and irrigation areas were in tidy and well managed. The stormwater drains were clear of debris and any other material, such as blood or animal product which might result in elevated levels of organic contaminants, the aerobic pond was maintained according to the consent conditions, and the irrigation fields were generally clear of ponding when the irrigators were on. On one occasion ponding was recorded in an irrigation field however the officer considered that the water would readily soak into the soil within three hours as provided by the resource consent. The worm beds were generally well maintained and there was no significant odour reported during any of the inspections.

During this monitoring year the Company was issued two infringement notices related to the unauthorised discharge of wastewater to land which could have entered a waterway. Additionally, a review of the irrigation records indicated that the application of wastewater to paddock 7 resulted in the paddock receiving 21% more nitrogen/m³/ha than the consent limit. Further, of the 13 paddocks that received wastewater, nine exceeded the application depth limit for any 15 day period. The environmental risk of adding wastewater to saturated soil is that it results in overland flow of contaminants to waterways.

The results of the stream monitoring indicate that wastewater discharges are having an effect on water quality. Downstream concentrations of unionised ammonia, total ammoniacal nitrogen, dissolved reactive phosphorous, and E.coli were higher than upstream levels. These compounds are commonly associated with effluent and organic-rich wastewater discharges. The results were less than the limits in the relevant consent conditions, and therefore the effects were within that provided for by the consent.

The biological surveys conducted to infer the ecological impact of wastewater discharges into the stream found that the in-stream biological community was good, very good, or excellent at the time of the surveys. The surveys concluded that the discharges had not had a significant ecological adverse effect during the monitoring year.

There were no air quality complaints received and no odour issues identified during inspections.

## 3.2 Evaluation of performance

A tabular summary of the consent holder's compliance record for the period under review is set out in Table 8 to Table 12.

Table 8 Summary of performance for consent 7662-1

Pu	Purpose: To discharge treated wastewater directly into the Kahouri Stream						
	Condition requirement	Means of monitoring during period under review	Compliance achieved?				
1.	Best practicable option	Inspections	Yes				
2.	Notification prior to any changes to processes	Council notified	Yes				
3.	Prohibits the consent to be exercised while consent 0108-4 is current	Consent expired	Yes				
4.	Install flow meter	Inspections	No				

Purpose: To discharge treated wastewater directly into the Kahouri Stream						
	Condition requirement	Means of monitoring during period under review	Compliance achieved?			
5.	Meter verification documentation submitted	Liaison with consent holder	Yes			
6.	Install staff gauge in Kahouri Stream	Inspections	Yes			
7.	Maintain staff gauge rating curve	Inspections	Yes			
8.	Minimise clean water entering treatment system	Review of records, inspections	Yes			
9.	Manage worm bed to minimise discharge to treatment system	Inspections	Yes			
10.	Prohibits the operation of aerators and stirrer while discharge occurs	Inspections	Yes			
11.	Discharge shall only occur when flow rates are 330 L/s or greater	Review of records, inspections	Yes			
12.	Minimum dilution ratio of 1 part wastewater to 100 parts receiving water	Review of records, water quality sampling	Yes			
13.	Effects on receiving water beyond the 50 m mixing zone	Water quality sampling, inspections	Yes			
14.	Suspended solids and turbidity limits	Water quality sampling	Yes			
15.	Safe site access	Inspections	Yes			
16.	At least 200 mm of freeboard available at end of working day	Inspections	N/A			
17.	Install and maintain a permanent marker within the aerobic pond	Inspections	Yes			
18.	Preference given to discharge to land	Inspections, review of records	Yes			
19.	Manage wastewater treatment system to maximise quality	Inspections	Yes			
20.	Total BOD limit	Discharge quality sampling	Yes			
21.	Install and maintain a tap on the wastewater line	Inspections	Yes			
22.	Monitor and record the discharge	Review of records	Yes			
23.	Riparian management plan	Liaison with consent holder, inspections	Yes			
24.	Notification of environmental incidents	Liaison with consent holder, inspections	N/A			
25.	Lapse of consent	Consent exercised within lapse period	N/A			

Purpose: To discharge treated wastewater directly into the Kahouri Stream						
Condition requirement	Compliance achieved?					
26. Optional review of consent	N/A					
Overall assessment of consent compl of this consent	Good					
Overall assessment of administrative	Good					

## Table 9 Summary of performance for consent 5221-2

Purpose: To discharge treated wastewater from a treatment system onto and into land in the vicinity of an unnamed tributary of the Kahouri Stream					
	Condition requirement	Means of monitoring during period under review	Compliance achieved?		
1.	Best practicable option	Inspections	Yes		
2.	Notification prior to any changes to processes	Council notified	Yes		
3.	Install flow meter	Inspections	No		
4.	Meter verification documentation submitted	Liaising with consent holder	Yes		
5.	Follow wastewater irrigation management plan	Inspections	Yes		
6.	Update wastewater irrigation management plan	Liaising with consent holder	Yes		
7.	Review wastewater irrigation management plan	Liaising with consent holder	Yes		
8.	Designate a person to manage the irrigation system	Liaising with consent holder, inspections	Yes		
9.	Operation of aerator and stirrer	Inspections	Yes		
10.	Restrictions on nitrogen levels	Liaising with consent holder, inspections	No		
11.	Wastewater irrigation management plan submitted prior to nitrogen loading	Liaising with consent holder, inspections	Yes		
12.	Wastewater application must not exceed 24 mm	Review of records	No Enforcement action being considered		
13.	Sodium absorption ratio shall not exceed 15	wastewater sampling	Yes		
14.	Prohibits discharge to water from irrigation	Inspections	Yes		
15.	Restrictions on the wastewater discharge spray zone	Inspections	Yes		

Purpose: To discharge treated wastewater from a treatment system onto and into land in the vicinity of an unnamed tributary of the Kahouri Stream

Condition requirement	Means of monitoring during period under review	Compliance achieved?
16. Prohibits discharge beyond the boundary of the property	Inspections	Yes
17. Preference given to discharge to land	Inspections, review of records	Yes
18. Application of pond solids to avoid discharge to water	Inspections	Yes
19. Daily discharge records	Review of records	Yes
20. Notification of any environmental incidents	Liaising with consent holder, inspections	Yes
21. Notification information	Liaising with consent holder, inspections	Yes
22. Optional review of consent	Not exercised	N/A
Overall assessment of consent complion of this consent	Improvement required	
Overall assessment of administrative	Improvement required	

Table 10 Summary of performance for consent 7660-1

Purpose: To discharge uncontaminated stormwater to land, in association with meat processing, rendering and associated activities						
	Condition requirement	Compliance achieved?				
1.	Best practicable option	Inspections	Yes			
2.	Prevent discharge from contamination	Inspections	Yes			
3.	Constituents of the discharge	Inspections, water quality sampling	Yes			
4.	Optional review of consent	Not exercised	N/A			
	Overall assessment of consent compliance and environmental performance in respect  of this consent					
Ov	Overall assessment of administrative performance in respect of this consent  High					

N/A = not applicable

Table 11 Summary of performance for consent 4055-3.

	Condition requirement	Means of monitoring during period under review	Compliance achieved?
1.	Best practicable option	Inspections	Yes
2.	Consent holder to maintain a contingency plan	Inspections	Yes
3.	Submit contingency plan	Liaising with consent holder	Yes
4.	Notification of any changes to plant processes	Liaising with consent holder	Yes
5.	Prohibits fish being received or processed onsite	Inspections	Yes
6.	Only offal from purpose killed animals shall be received and processed onsite	Inspections	Yes
7.	Prohibits putrescible materials to be stored onsite	Inspections	Yes
8.	Emissions must be extracted to the biofilter	Inspections	N/A
9.	Discharge temperature must not exceed 35°C	Data review	N/A
10.	Calibration of the temperature detector	Liaising with consent holder	N/A
11.	Record the non-condensable gas line	Liaising with consent holder, inspections	N/A
12.	Minimise emissions	Inspections	No
13.	Prohibits objectionable or offensive odour beyond the boundary of the site to the extent where this odour causes an adverse effect	Inspections	Yes
14.	Prohibits objectionable or offensive dust beyond the boundary of the site	Inspections	Yes
15.	Consent holder to notify Council of any adverse environmental incidents.	Liaising with consent holder, inspections	Yes
16.	Optional review of consent	Not exercised	N/A
Ove	erall assessment of consent compl	iance and environmental performance in respect	High
of t	his consent		_
Ove	erall assessment of administrative	performance in respect of this consent	High

Table 12 Summary of performance for consent 5176-2

	Condition requirement	Means of monitoring during period under review	Compliance achieved?			
1.	Best practicable option	Data review	Yes			
2.	Abstraction rates	Data review	Yes			
3.	Water meter and data logger installed and maintained	Council notified, inspections	Yes			
4.	Documentation from a suitably qualified person certifying water measuring and recording equipment	Council notified	Yes			
5.	Advise Council of broken down or non-operational equipment	Council notified, inspections	Yes			
6.	Accessible and retrievable records	Inspections	No			
7.	Abstraction records	Data review	Yes			
8.	Minimum flow in Kahouri Stream	Data review	Yes			
9.	Intake screened	Inspections	Yes			
10.	Staff gauge	Inspection	Yes			
11.	Consent given effect	Council notified, data review	Yes			
12.	Optional review of consent	Not exercised	N/A			
	erall assessment of consent compl	iance and environmental performance in respect	High			
Ove	Overall assessment of administrative performance in respect of this consent  High					

During the year, the Company demonstrated a level of environmental performance that was good, but administrative performance requires improvement, as defined in Appendix II. During the year under review there were four incidents recorded that related to the Company's activities although these did not result in any demonstrable significant adverse effects as concluded by the water quality analyses and biomonitoring report. The resource consents require that the site minimise adverse effects as far as practicable. This can be achieved by improved administrative processes such as closer monitoring of nitrogen loading to paddocks. The previous monitoring report indicated that the consent holder needed to give a higher priority to administrative performance and consent compliance.

Table 13 below summarises the environmental performance ratings since 2010.

Table 13 Evaluation of environmental performance over time

Year	Consent no	High	Good	Improvement required	Poor
2000/2010	0108-4	-	1	-	-
2009/2010	4055-3	-	1	-	-

Year	Consent no	High	Good	Improvement required	Poor
	5176-1	-	1	-	-
	5221-2	1	-	-	-
	6570-1	-	1	-	-
	0108-4	-	1	-	-
	4055-3	-	1	-	-
2010/2011	5176-1	-	1	-	-
	5221-2	1		-	-
	6570-1		1	-	-
	0108-4		1	-	-
	4055-3		1	-	-
2011/2012	5176-1	-	1	-	-
	5221-2	-	1	-	-
	6570-1	-	1	-	-
	4055-3	-	1	-	-
	5176-2	-	1	-	-
2012/2012	5221-1	-	-	1	-
2012/2013	6570-1	-	-	1	-
	7660-1	-	1	-	-
	7662-1	-	1	-	-
	4055-3	1	-	-	-
	5176-2	1	-	-	-
2012/2014	5221-1	-	1	-	-
2013/2014	6570-1	-	1	-	-
	7660-1	1	-	-	-
	7662-1		1	-	-
	4055-3	1	-	-	-
	5176-2	1	-	-	-
2014/2015	5221-1	-	1	-	-
2014/2015	6570-1	-	1	-	-
	7660-1	1	-	-	-
	7662-1		1	-	-
	4055-3	1	-	-	-
2015/2016	5176-2	1	-	-	-
	5221-1	-	1	-	-

Year	Consent no	High	Good	Improvement required	Poor
	6570-1	1	-	-	-
	7660-1	1	-	-	-
	7662-1	-	1	-	-
	4055-3	1	-	-	-
	5176-2	-	-	1	
2016/2017	5221-2	-	1	-	-
2010/2017	6570-1	-	1	-	-
	7660-1	-	1	-	-
	7662-1	-	1	-	-
	4055-3	1		-	-
	5176-2	-	1	-	-
2017/2010	5221-2	-	1	-	-
2017/2018	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	1	-	-
	4055-3	1	-	-	-
	5176-2	-	1	-	-
2010/2010	5221-2	-	-	1	-
2018/2019	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	-	1	-
	4055-3	1	-	-	-
	5176-2	-	-	-	1
2010/2020	5221-2	-	-	-	1
2019/2020	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	-	-	1
	4055-3	1	-	-	-
	5176-2	-	-	-	1
2020/2021	5221-2	-	-	-	1
2020/2021	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	-	-	1
2021/2022	4055-3	1	-	-	-

Year	Consent no	High	Good	Improvement required	Poor
	5176-2	-	1		-
	5221-2	-	1		-
	6570-1	1	-	-	-
	7660-1	1	-	-	-
	7662-1	-	1	-	-
	4055-3	1			
	5176-2	1			
2022/2023	5221-2			1	
	7660-1	1			
	7662-1	1			
Totals		28	40	6	6

## 3.3 Recommendations from the 2021-2022 Annual Report

The 2021-2022 Annual Report made the following recommendations:

- 1. THAT the monitoring of consented activities at Ample Group Ltd in the 2023-2024 year continue at the same level as in 2022-2023.
- 2. THAT should there be issues with environmental or administrative performance in 2023-2024, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
- 3. THAT the Company in the 2023-2024 monitoring year prioritise administrative performance, particularly in regard to recording hydrological and wastewater data.
- 4. THAT the Company in the 2023-2024 monitoring year prioritise environmental performance, particularly in regard to wastewater discharge volumes to the Kahouri Stream and paddocks.

The monitoring schedule continued as it had the previous year, although one site inspection and one hydrological inspection were not conducted, and no samples were collected during the discharge of wastewater into the Kahouri Stream. Administrative performance improved overall as records were provided more regularly.

## 3.4 Alterations to monitoring programmes for 2023-2024

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 should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site(s) in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2023-2024.

## 3.5 Exercise of optional review of consent

Resource consents 5221-2, 7662-1 and 4055-3 provide for an optional review of the consent in June of any year. Consent 5176-2 1 provides for an optional review of the consent in June of 2019 and at 3 yearly intervals thereafter. These conditions allow the Council to review the conditions of the consent if there are grounds.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review of the condition of consents 5221-2, 7662-1 and 4055-3.

## 4 Recommendations

- 1. THAT the monitoring of consented activities at Ample Group Ltd in the 2023-2024 year shall continue at the same level as in 2022-2023.
- 2. THAT should there be issues with environmental or administrative performance in 2023-2024, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
- 3. THAT the Company in the 2023-2024 monitoring year shall prioritise administrative performance, particularly in regard to recording wastewater discharge data.
- 4. THAT the company should undertake their own nitrogen monitoring to inform their wastewater irrigation management. The Council will continue to collect samples to validate the company's results.

#### Glossary of common terms and abbreviations

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

Biomonitoring Assessing the health of the environment using aquatic organisms.

BOD Biochemical oxygen demand. A measure of the presence of degradable organic matter,

taking into account the biological conversion of ammonia to nitrate.

BODF Biochemical oxygen demand of a filtered sample.

Bund A wall around a tank to contain its contents in the case of a leak.

CBOD Carbonaceous biochemical oxygen demand. A measure of the presence of degradable

organic matter, excluding the biological conversion of ammonia to nitrate.

COD Chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a

sample by chemical reaction.

Conductivity, an indication of the level of dissolved salts in a sample, usually measured

at 25°C and expressed in µS/cm.

Cumec A volumetric measure of flow- 1 cubic metre per second (1 m<sup>3</sup>s-<sup>1</sup>).

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/m²/day grams/metre²/day.

g/m<sup>3</sup> 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.

Incident An event that is alleged or is found to have occurred that may have actual or potential

environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean

such an outcome had actually occurred.

Intervention Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the

likelihood of an incident occurring.

Investigation Action taken by Council to establish what were the circumstances/events surrounding

an incident including any allegations of an incident.

Incident Register The Incident Register contains a list of events recorded by the Council on the basis that

they may have the potential or actual environmental consequences that may represent

a breach of a consent or provision in a Regional Plan.

L/s Litres per second.

m<sup>2</sup> Square Metres.

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<sub>4</sub> Ammonium, normally expressed in terms of the mass of nitrogen (N).

NH<sub>3</sub> Unionised ammonia, normally expressed in terms of the mass of nitrogen (N).

NO<sub>3</sub> 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).

pH A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower

than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a

pH of 4 is ten times more acidic than a pH of 5.

Physicochemical Measurement of both physical properties (e.g. temperature, clarity, density) and

chemical determinants (e.g. metals and nutrients) to characterise the state of an

environment.

Resource consent Refer Section 87 of the RMA. Resource consents include land use consents (refer

Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits

(Section 14) and discharge permits (Section 15).

RMA Resource Management Act 1991 and including all subsequent amendments.

SS Suspended solids.

SQMCI Semi quantitative macroinvertebrate community index.

Temp Temperature, measured in °C (degrees Celsius).

Turb Turbidity, expressed in NTU.

UI Unauthorised Incident.

\*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 Manager within the Environment Quality department.

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### Appendix I

### Resource consents held by Ample Group Ltd

(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.

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

Name of Ample Group Limited Consent Holder: 3396 Mountain Road

RD 24

Stratford 4394

Decision Date: 7 November 2011

Commencement Date: 7 November 2011

#### **Conditions of Consent**

Consent Granted: To discharge emissions to air, namely odour and dust, in

association with meat processing, rendering and associated activities including waste treatment and disposal activities

Expiry Date: 1 June 2028

Review Date(s): June of any year

Site Location: 3326 Mountain Road and 17 Monmouth Extension, Stratford

Legal Description: Sec 62 Manganui Dist Blk XIII Huiroa SD, Pt Sec 12 Blk XIII

Huiroa SD and Pt Sec 2-4 Blk I Ngaere SD

Grid Reference (NZTM) 1709506E-5647939, 1709815E-5647783N,

1709874E-5647570N, 1709423E-5647438N and between 1709871E-5647776N, 1710911E-5647381N,

1710905E-5647127N, 1710301E-5647038N, 1710241E-5647326N, 1710019E-5647280N

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**

#### **General 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. On-site operations shall be undertaken in accordance with the *Contingency Plan for Taranaki Abattoir Co.* (1992) *Ltd and Stratford By Products Ltd,* submitted with the application (which details the management procedures to be undertaken on site to mitigate adverse odour effects), or any subsequent reviews.
  - Note: Where there may be inconsistencies between the information provided within the Plan and conditions of this consent, the conditions apply.
- 3. The consent holder shall update and submit to the Taranaki Regional Council, the *Contingency Plan for Taranaki Abattoir Co. (1992) Ltd and Stratford By Products Ltd* every two years so that, to the satisfaction of the Chief Executive of the Taranaki Regional Council, the Plan details how discharges to air from the site will be managed to ensure compliance with conditions 13 and 14 of this consent. The Plan shall include but not necessarily be limited to:
  - a) A description of the environmental effects being managed;
  - b) The identification of key personnel responsible for managing and implementing the management system for mitigating adverse effects;
  - c) A description of the activities on site and describe the main potential sources of odour emissions;
  - d) 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;
  - e) The identification and description of the odour and dust mitigation measures in place;
  - f) The identification and description of relevant operating procedures and parameters that need to be controlled to minimise emissions;
  - g) A description of contingency procedures for addressing emergency situations at the plant (such as equipment failure or spillage of raw material or chemicals) which could result in a discharge to air of odorous emissions that are offensive and objectionable beyond the boundary of the plant;
  - h) A description of monitoring and maintenance procedures for managing the odour mitigation measures including record keeping of control parameters and maintenance checks; and
  - i) Details of staff training proposed to enable staff to appropriately manage the odour mitigation measures.

#### Consent 4055-3

4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to undertaking any alterations to the plant, operations or processes which may significantly change the nature or quantity of contaminants discharged to air from the site. Any such change shall then only occur following receipt of any necessary approvals under the Resource Management Act 1991.

#### **Process control**

- 5. No fish or fish parts shall be received or processed on site.
- 6. Only offal derived from purpose killed animals shall be received and processed on site.
- 7. No putrescible materials shall be stored or left in any manner on site which causes them to putrefy and create an odour nuisance.
- 8. Emissions produced during and on the release of all rendering cooks shall be extracted to the biofilter for treatment prior to discharge.
- 9. The inlet temperature of the extracted air at the duct ahead of the biofilter shall not exceed 35°C for more than 15 minutes continuously at any one time.
- 10. The consent holder shall calibrate the temperature detector and recorder on the non-condensable gas line on a yearly basis. The calibration results shall be provided to the Chief Executive, Taranaki Regional Council.
- 11. The consent holder shall maintain the temperature detector and recorder on the non-condensable gas line so that it is in effective working order at all times.
- 12. The consent holder shall minimise the emissions and impacts of contaminants discharged into air from the site by the proper and effective operation, supervision, maintenance and control of all equipment and processes.

#### Odour

13. There shall be no objectionable or offensive odour to the extent that it causes an adverse effect at or beyond the boundary of the site.

Notes: For the purposes of this condition:

- The site is defined as Sec 62 Manganui Dist Blk XIII Huiroa SD (Consent holder's site), and Pt Sec 12 Blk XIII Huiroa SD and Pt Secs 2-4 Blk I Ngaere SD (Gilbert Farms' site); and
- Assessment under this condition shall be in accordance with the *Good Practice Guide for Assessing and Managing Odour in New Zealand, Air Quality Report 36, Ministry for the Environment, 2003.*

#### Consent 4055-3

#### **Dust**

- 14. The discharges authorised by this consent shall not give rise to suspended or deposited dust at or beyond the boundary of the site that, in the opinion of at least one enforcement officer of the Taranaki Regional Council, is offensive or objectionable. For the purpose of this condition, discharges in excess of the following limits are deemed to be offensive or objectionable:
  - a) dust deposition rate of 0.13 g/m²/day; and/or
  - b) suspended dust level of 3 mg/m<sup>3</sup>.

Note: For the purposes of this condition the site is defined as Sec 62 Manganui Dist Blk XIII Huiroa SD

#### Incident notification

15. Any incident related to this consent that results, or could result, in an adverse effect on the environment shall be notified to the Taranaki Regional Council as soon as practicable, together with the reasons for the incident, and measures taken to mitigate the effects of the incident and prevent a recurrence.

Note: For notification purposes, at the grant date of this consent, the Taranaki Regional Council's phone number is 0800 736 222 (24 hour service).

#### **Review**

- 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 during the month of June in any year for any of the following purposes:
  - a) Ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, and in particular to address any more than minor adverse effects relating to odour discharges from the site; and
  - b) To determine any measures that may be appropriate to comply with condition 1 of this consent, and which are necessary to address any adverse effects of odour from the site.

For and on behalf of

Transferred at Stratford on 18 January 2016

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 Ample Group Limited

Consent Holder: PO Box 193

Stratford 4352

Decision Date: 7 July 2016

Commencement Date: 7 July 2016

#### **Conditions of Consent**

Consent Granted: To take water from the Kahouri Stream for stock and yard

washing purposes

Expiry Date: 1 June 2034

Review Date(s): June 2019 and every 3 years thereafter

Site Location: 3396 Mountain Road, Stratford

Grid Reference (NZTM) 1709640E-5647873N

Catchment: Patea

Tributary: Kahouri

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. At all times 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 abstraction of water from the Kahouri Stream, including, but not limited to, the efficient and conservative use of water.
- 2. The rate of taking shall not exceed 3.25 litres per second, and the volume taken in any 24 hour period ending at midnight (New Zealand Standard Time) shall not exceed 178 cubic metres.
- 3. Before 1 September 2016 the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking (or a nearby site in accordance with Regulation 10 of the *Resource Management (Measurement and Reporting of Water Takes) Regulations* 2010. The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of ± 5%. Records of the date, the time and the rate and volume of water taken at intervals not exceeding 15 minutes, shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

Note: Water meters and dataloggers must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance water meters and dataloggers have a limited lifespan.

- 4. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring and recording equipment required by the conditions of this consent ('the equipment'):
  - a. has been installed and/or maintained in accordance with the manufacturer's specifications; and/or
  - b. has been tested and shown to be operating to an accuracy of  $\pm 5\%$ .

The documentation shall be provided:

- a) within 30 days of the installation of a water meter or datalogger;
- b) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
- c) no less frequently than once every five years.
- 5. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person and a maintenance report provided to the Chief Executive, Taranaki Regional Council within 30 days of the work occurring.

#### Consent 5176-2.0

- 6. Any water meter or datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval. In addition the data logger shall be designed and installed so that Taranaki Regional Council officers can readily verify that it is accurately recording the required information.
- 7. The records of water taken:
  - a. be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
  - b. specifically record the water taken as 'zero' when no water is taken; and
  - c. for each 12-month period ending on 30 June, be provided to the Chief Executive, Taranaki Regional Council within one month after end of that period.
- 8. No taking shall occur when the flow in the Kahouri Stream immediately downstream of the intake point is less than 55 litres per second.
- 9. The consent holder shall ensure that the intake is screened to avoid fish (in all stages of their life-cycle) entering the intake or being trapped against the screen.
- 10. A staff gauge shall be installed and a low flow rating curve established and maintained that determines the flow in the Kahouri Stream immediately downstream of the take site. The cost of the installation, and the establishment and maintenance of the rating shall be met by the consent holder.
- 11. This consent shall lapse on 30 September 2021, 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 during the month of June 2019 and at 3 yearly intervals thereafter for the purposes of:
  - a. ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time; and/or
  - b. requiring continuous measuring and recording of the flow immediately downstream of the take site; and/or
  - c. requiring any data collected in accordance with the conditions of this consent to be transmitted directly to the Taranaki Regional Council's computer system, in a format suitable for providing a 'real time' record over the internet.

Signed at Stratford on 7 July 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 Ample Group Limited Consent Holder: 3396 Mountain Road

**RD 24** 

Stratford 4394

Decision Date: 7 November 2011

Commencement Date: 7 November 2011

**Conditions of Consent** 

Consent Granted: To discharge treated wastewater, pond solids from a

wastewater treatment system, vermicast and blood onto and

into land

Expiry Date: 1 June 2028

Review Date(s): June of any year

Site Location: 3326 Mountain Road and 17 Monmouth Road Extension,

Stratford

Legal Description: Sec 62 Manganui Dist Blk XIII Huiroa SD, Pt Sec 12 Blk XIII

Huiroa SD and pt Sec 2-4 Blk I Ngaere SD

Grid Reference (NZTM) Between 1709506E-5647939, 1709815E-5647783N,

1709874E-5647570N, 1709423E-5647438N and between 1709871E-5647776N, 1710911E-5647381N,

1710905E-5647127N, 1710301E-5647038N,

1710241E-5647326N, 1710019E-5647280N

Catchment: Patea

Tributary: Kahouri

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

Page 1 of 6

#### **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**

#### **General conditions**

- 1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
- 2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or 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 approvals under the Resource Management Act 1991.

#### **Pre-activity requirements**

3. Before exercising this consent the consent holder shall install, and thereafter maintain, a flow meter. The flow meter shall measure the volume of the discharge to land to an accuracy of  $\pm$  5%.

Notes: Flow meters must be installed, and regularly maintained, in accordance with the manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance flow meters have a limited lifespan.

A single flow meter may be installed for the purposes of meeting this condition and condition 4 of consent 7662-1 provided that the records submitted in accordance with condition 19 of this consent and condition 22 of consent 7662-1 clearly differentiate between the two receiving environments.

#### Flow meter certification

- 4. The consent holder shall provide the Chief Executive, Taranaki Regional Council with documentation from a suitably qualified person certifying that the flow meter:
  - a) has been installed and/or maintained in accordance with the manufacturers' specifications; and/or
  - b) has been tested and shown to be operating to an accuracy of  $\pm 5\%$ .

The documentation shall be provided:

- (i) within 30 days of the installation of a flow meter;
- (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the flow meter may not be functioning as required by this consent; and
- (iii) no less frequently than once every five years.

#### Management plan

- 5. The consent shall be exercised in accordance with the procedures set out in the Wastewater Irrigation Management Plan (submitted as further information to the application). In the case of any contradiction between the Plan and the conditions of this resource consent, the conditions of this resource consent shall prevail.
- 6. Within one month of the grant date of this consent, the consent holder shall amend and re-submit the Wastewater Irrigation Management Plan described in condition 5 of this consent so that, to the satisfaction of the Chief Executive, Taranaki Regional Council, the Plan details how the discharge will be managed to ensure that the conditions of this consent will be met. The Plan shall be amended to include, but not necessarily be limited to, the following details:
  - a) how the irrigation areas will be identified [e.g. paddock numbering system or large land areas broken down into 1 ha lots and numbered] and a plan/drawing showing the location and extent of each identified area. This system shall be used for record keeping purposes under condition 19;
  - b) the surface area of each irrigation area identified under clause a) above;
  - c) identification of the location and extent of irrigation main lines and hydrant locations on an aerial plan/drawing; and
  - d) the surface area of land required for a range of wastewater discharge volume scenarios, or a calculation which shows how the required land area will be worked out each time irrigation is initiated, to ensure that condition 10 will be met.
- 7. The Wastewater Irrigation Management Plan described in condition 5 of this consent shall be subject to review by the consent holder every two years from the commencement of consent, or upon two months notice by either the consent holder or the Taranaki Regional Council so that, to the satisfaction of the Chief Executive Taranaki Regional Council, the Plan details how discharges to land will be managed to ensure that the conditions of this consent are complied with. The Plan shall include but not necessarily be limited to:
  - a) the results of investigating the practicalities of increasing the land area available for irrigation and/or increasing wastewater application loading rates through implementing cut and carry areas, including the provision of supporting evidence for the outcome of the investigation;
  - b) designated application areas and buffer zones for streams and the property boundaries;
  - c) selection of appropriate irrigation methods for different types of terrain;
  - d) application rate and duration;
  - e) application frequency and nitrogen loading rate;
  - f) farm management and operator training;
  - g) soil and herbage management;
  - h) prevention of runoff and ponding;
  - i) minimisation and control of offsite odour and spray drift effects;
  - j) operational control and maintenance of the spray irrigation system;
  - k) monitoring of the effluent [physicochemical];
  - 1) monitoring of soils and herbage [physicochemical];
  - m) monitoring of groundwater beneath and beyond the irrigated area [physicochemical] (if required in accordance with condition 11 of this consent);
  - n) monitoring of local water supplies and remediation;
  - o) mitigation measures, including riparian planting and fencing;

- p) reporting monitoring data;
- q) monitoring of the tributaries draining the property;
- r) procedures for responding to complaints;
- s) notification to the council of non-compliance with the conditions of this consent;
- t) procedures for recording maintenance and repairs;
- u) procedures for draining and flushing the irrigation mainlines and laterals to prevent anaerobic conditions.

The objective of the plan shall be to minimise discharges to the Kahouri Stream under consent 7662-1 and maximise discharges to land.

A copy of the reviewed Plan shall be provided to the Department of Conservation and Fish and Game New Zealand (Taranaki Region), and the Taranaki Regional Council will take into account any comments received (within a two week timeframe from when the Plan was provided).

Note: For ease of assessment, the consent holder shall highlight the areas of the reviewed Plan where changes have been made from the previous Plan.

8. The consent holder shall designate a person with the necessary qualifications and/or experience to manage the wastewater irrigation system. This person shall be regularly trained on the content and implementation of the Wastewater Irrigation Management Plan, and shall be advised immediately of any revision or additions to the wastewater irrigation management plan.

#### **Application restrictions**

- 9. The aerator and stirrer shall be operated within the final pond of the wastewater treatment system while wastewater is being irrigated to land.
- 10. Over any 12 month period the Total Nitrogen applied to any hectare of land as a result of the wastewater, pond solids, blood and/or vermicast discharges and any other nitrogen inputs [e.g. urea] shall be no more than:
  - a) 200 kg for areas used for grazing; and
  - b) 600 kg for areas used for cut and carry, subject to condition 11 below.
- 11. Prior to applying a Total Nitrogen loading that exceeds 200 kg/ha/year in accordance with condition 10 (b) above, the consent holder shall amend and re-submit the Wastewater Irrigation Management Plan described in condition 5 so that, to the satisfaction of the Chief Executive, Taranaki Regional Council, the Plan details how the discharge will be managed to ensure that the conditions of this consent will be met. The Plan shall be amended to include, but not necessarily be limited to, procedures for monitoring and reporting on soil and groundwater quality.
- 12. The wastewater application depth within any area of irrigation shall not exceed 24 mm over any 15 day period.
- 13. The sodium absorption ratio [SAR] of the wastewater shall not exceed 15.

- 14. There shall be no discharge to water as a result of irrigating wastewater to land. In order to ensure there is no such discharge:
  - a) no irrigation shall occur closer than 25 m to any surface water body;
  - b) the discharge shall not result in surface ponding that remains for more than three hours after the discharge has ceased;
  - c) the discharge shall not occur on land with a slope that is likely to result in runoff; and
  - d) notwithstanding condition 12, the discharge shall not occur at a rate at which it cannot be assimilated by the soil/pasture system.
- 15. The extent of the wastewater discharge spray zone shall be at least:
  - a) 25 metres away from the bank of any surface waterbody;
  - b) 50 metres away from any bore, well or spring used for water supply;
  - c) 150 metres away from any dwellinghouse situated off the site, unless the written approval of the owner/occupier has been obtained to allow the discharge at a closer distance; and
  - d) 15 metres from State Highway 3.
- 16. No discharges, including spray drift, shall occur at or beyond the boundary of any property on which the discharge is occurring.
- 17. As far as practicable, discharges to the Kahouri Stream shall be minimised and discharges to land under consent 5221-2 maximised. This means that even at times when 1:100 dilution can be achieved in the Kahouri Stream, discharges shall be irrigated to land unless the land is saturated and consequently is incapable of accepting the discharge.
- 18. The application of pond solids, vermicast and/or blood to land shall be undertaken in a manner which avoids a discharge to surface water.

#### **Records**

- 19. The consent holder shall record the following information on a daily basis in association with irrigating the wastewater to land:
  - a) the date and pumping hours;
  - b) the volume of discharge [as measured in association with the flow meter required under condition 3];
  - c) the surface area of land irrigated;
  - d) the location[s] irrigated, using the system identified and approved under the Wastewater Irrigation Management Plan;
  - e) the application depth over the location[s] irrigated; and
  - f) the volume of Total Nitrogen applied over the location[s] irrigated [kg/ha] on any day, and a running total for each irrigation location for each calendar year.

This record shall be in an electronic format and submitted to the Taranaki Regional Council. The record format and frequency that the records are to be submitted is to be undertaken as advised by the Chief Executive, Taranaki Regional Council.

In addition, the consent holder will record the date, time and volume of other materials discharged to the irrigation area, including pond solids, blood and/or vermicast discharges and any other nitrogen inputs [e.g. urea], and will provide such records to the Chief Executive, Taranaki Regional Council, by 1 June of each year.

#### **Incident notification**

- 20. Any incident related to this consent that results, or could result, in an adverse effect on the environment shall be notified to the Taranaki Regional Council as soon as practicable, together with the reasons for the incident, and measures taken to mitigate the effects of the incident and prevent a recurrence.
- 21. Note: For notification purposes, at the grant date of this consent, the Taranaki Regional Council's phone number is 0800 736 222 [24 hour service].

#### **Review**

- 22. 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 in any year for any of the following purposes:
  - a) Ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, and in particular to address any more than minor adverse effects relating to water quality issues; and
  - b) To determine any measures that may be appropriate to comply with condition 1 of this consent, and which are necessary to address any adverse effects relating to the wastewater discharges from the site.

Transferred at Stratford on 18 January 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 Ample Group Limited Consent Holder: 3396 Mountain Road

**RD 24** 

Stratford 4394

**Decision Date:** 7 November 2011

Commencement Date: 7 November 2011

**Conditions of Consent** 

**Consent Granted:** To discharge uncontaminated stormwater from a site used

for meat processing and rendering onto and into land in a

manner where it may enter the Kahouri Stream

**Expiry Date:** 1 June 2028

Review Date(s): June 2016, June 2022

Site Location: 3326 Mountain Road, Stratford

Legal Description: Sec 62 Manganui Dist Blk XIII Huiroa SD

Grid Reference (NZTM) Between 1709729E-5647762N, 1709817E-5647767N,

1709834E-5647703N and 1709781E-5647688N

Catchment: Patea

Tributary: Kahouri

> 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**

#### **General condition**

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.

#### Water quality

- 2. Stormwater discharged under this consent shall be prevented from becoming contaminated from onsite processes, including by ensuring that contaminants from the rendering and/or abattoir processes do not enter the 'clean' areas of the site [being areas which do not discharge to the wastewater treatment system].
- 3. Constituents of the discharge shall meet the following standards shown in the following table:

Constituent	Standard		
рН	Within the range of 6.0 to 9.0		
Suspended solids	Concentration not greater than 100 gm <sup>-3</sup>		
Total recoverable oil and grease	Concentration not greater than 15 gm <sup>-3</sup>		

This condition shall apply before entry of the uncontaminated stormwater into a stormwater pipe and/or into or onto land at a designated sampling point[s] approved by the Chief Executive, Taranaki Regional Council.

#### **Review dates**

- 4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2016 and/or 2022 for any of the following purposes:
  - a) Ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, and in particular to address any more than minor adverse effects relating to water quality issues; and
  - b) To determine any measures that may be appropriate to comply with condition 1 of this consent, and which are necessary to address any adverse effects relating to the wastewater discharges from the site.

Transferred at Stratford on 18 January 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 Ample Group Limited Consent Holder: 3396 Mountain Road

RD 24

Stratford 4394

Decision Date: 7 November 2011

Commencement Date: 7 November 2011

#### **Conditions of Consent**

Consent Granted: To discharge treated wastewater directly into the Kahouri

Stream

Expiry Date: 1 June 2028

Review Date(s): June of any year

Site Location: 3326 Mountain Road, Stratford

Legal Description: Sec 62 Manganui Dist Blk XIII Huiroa SD

Grid Reference (NZTM) 1709705E-5647806N

Catchment: Patea

Tributary: Kahouri

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**

#### **General conditions**

- 1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
- 2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or 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 approvals under the Resource Management Act 1991.

#### **Pre-activity requirements**

3. This consent shall not be exercised while consent 0108-4 (which authorises the discharge of wastewater to an unnamed tributary of the Kahouri Stream) is still current.

Note: this condition does not apply during the testing phase of commissioning the system that will be used for discharging under this consent.

4. Before exercising this consent the consent holder shall install, and thereafter maintain, a flow meter. The flow meter shall measure the volume of the discharge to the Kahouri Stream to an accuracy of  $\pm$  5%.

Notes: Flow meters must be installed, and regularly maintained, in accordance with the manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance flow meters have a limited lifespan.

A single flow meter may be installed for the purposes of meeting this condition and condition 3 of consent 5221-2 provided that the records submitted in accordance with condition 22 of this consent and condition 19 of consent 5221-2 clearly differentiate between the two receiving environments.

#### Flow meter certification

- 5. The consent holder shall provide the Chief Executive, Taranaki Regional Council with documentation from a suitably qualified person certifying that the flow meter :
  - a) has been installed and/or maintained in accordance with the manufacturers' specifications; and/or
  - b) has been tested and shown to be operating to an accuracy of  $\pm$  5%.

The documentation shall be provided:

- (i) within 30 days of the installation of a flow meter;
- (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the flow meter may not be functioning as required by this consent; and
- (iii) no less frequently than once every five years.

#### Staff gauge installation and flow curve establishment

- 6. The consent holder shall ensure that a staff gauge is installed and maintained to effectively display the water level in the Kahouri Stream at or around the point of discharge to an accuracy of 0.005 m.
- 7. The consent holder shall, as soon as practicable, ensure that sufficient stream flow measurements are undertaken to maintain a 'rating curve' that accurately translates the water level, as displayed on the staff gauge referenced in condition 6, to stream flow at or around the point of discharge.

Note: Work required by conditions 6 and 7 will be undertaken by the Taranaki Regional Council and all reasonable costs will be recovered from the consent holder through the annual compliance monitoring programme that is in place for the activity.

#### Minimisation of wastewater

- 8. All uncontaminated stormwater shall be prevented from entering the wastewater treatment ponds as far as practicable.
- 9. The worm bed area shall be managed to minimise leachate discharges to the pond treatment system as far as practicable (e.g. by covering the worm beds and/or vegetating land surfaces between worm bed rows) to the satisfaction of the Chief Executive, Taranaki Regional Council.

#### Discharges to the Kahouri Stream (at all times)

- 10. The aerator and stirrer shall not be operated within the wastewater treatment system while discharging to the Kahouri Stream.
- 11. Notwithstanding conditions 12 and 18 below, discharges to the Kahouri Stream shall only occur when stream flows are 330 L/s or greater.
- 12. A minimum dilution ratio of 1 part wastewater to 100 parts receiving water shall be maintained at all times in the receiving waters of the Kahouri Stream at the point of discharge.

- 13. Discharges into the Kahouri Stream shall not give rise to the following effects in the Kahouri Stream, beyond a mixing zone of 50 m:
  - a) a level of filtered carbonaceous BOD<sub>5</sub> of more than 2.00 gm<sup>-3</sup>;
  - b) a level of unionised ammonia of greater than 0.025 gm<sup>-3</sup>;
  - c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - d) any conspicuous change in the colour or visual clarity;
  - e) any emission of objectionable odour;
  - f) the rendering of fresh water unsuitable for consumption by farm animals;
  - g) any significant adverse effects on aquatic life; and
  - h) the generation of undesirable heterotrophic growths (sewage fungus).

Note: The difference in macroinvertebrate community between the upstream control site and the potential impact site immediately below the mixing zone will be examined in order to determine if the discharge has resulted in a 'significant adverse effect on aquatic life'. This will include examining any change in the Semi-Quantitative Macroinvertebrate Community Index (SQMCI), overall composition of the community (including %EPT) and Macroinvertebrate Community Index (MCI) . Should this examination identify a significant adverse effect caused by the discharge, this will constitute a breach of this condition.

- 14. After allowing for reasonable mixing, within a mixing zone extending 50 m downstream of the discharge point, the discharge shall not give rise to either of the following effects in the receiving waters of the Kahouri Stream:
  - a) an increase in suspended solids concentration in excess of 5 gm<sup>-3</sup>, when the stream turbidity as measured upstream of the discharge point is equal or less than 5 NTU (nephelometric turbidity units); or
  - b) an increase in turbidity of more than 50% when the stream turbidity as measured upstream of the discharge point is greater than 5 NTU (nephelometric turbidity units).
- 15. The consent holder shall establish and maintain a safe access way to the Kahouri Stream to enable water quality samples to be taken at the compliance point stated in conditions 13 and 14 above, and at a suitable control site upstream, the location of which is to be advised by the Chief Executive, Taranaki Regional Council.

#### Discharges to the Kahouri Stream after hours

- 16. At least 200 mm (426 m³) of freeboard must be made available within the aerobic pond at 5 pm of each working/operational day.
- 17. The consent holder shall install and maintain a permanent marker within the aerobic pond to show the level where the wastewater should be at or below in order to achieve the required freeboard stated under condition 16 above.

#### Restrictions on times of discharge

18. As far as practicable, discharges to the Kahouri Stream shall be minimised and discharges to land under consent 5221-2 maximised. This means that even at times when 1:100 dilution can be achieved in the Kahouri Stream, discharges shall be irrigated to land unless the land is saturated and consequently is incapable of accepting the discharge.

Note: This condition to minimise discharges to water does not apply to discharges outside of operational hours. Notwithstanding this, a 1:100 dilution must be met at all times, including outside of operational hours, in accordance with condition 12.

#### **Treated wastewater quality**

- 19. The wastewater treatment system shall be managed to maximise the quality of the wastewater discharged to the Kahouri Stream.
- 20. After treatment in the wastewater treatment system, the discharge shall not have a concentration of total carbonaceous BOD5 greater than 110 gm-3.
  - This condition shall apply before the discharge enters the Kahouri Stream at a designated sampling point(s) approved by the Chief Executive, Taranaki Regional Council.
- 21. The consent holder shall install a tap on the wastewater line, between the aerobic pond and the discharge point, to allow for the taking of samples in association with condition 20 above.

#### **Records**

- 22. The consent holder shall monitor and record the following information on a daily basis in association with discharging wastewater to the Kahouri Stream:
  - a) the date, the time, pumping hours and the rate of discharge for when discharges are manually initiated and halted, or the date or dates (when over a weekend) and the rate of discharge for automated discharges after hours;
  - b) the volume of discharge (as measured in association with the flow meter required under condition 4); and
  - c) the staff gauge reading, stream flow rate and dilution ratio (wastewater: receiving water) for when discharges are manually initiated and halted (i.e. not including automated discharges after hours). The stream flow rate shall be based on the rating curve established under condition 7.

This record shall be in an electronic format and submitted to the Taranaki Regional Council. The record format and frequency that the records are to be submitted is to be undertaken as advised by the Chief Executive, Taranaki Regional Council.

Note: if the discharge rate is varied on any day, then the records shall record the above information for each discharge event.

#### Mitigation

- 23. For the mitigation purposes of this consent and consent 0108-4, the consent holder shall undertake the following:
  - a) ensure that Taranaki Regional Council riparian management plan LM10/73 is reviewed by a Taranaki Regional Council Land Management Officer within one month of the grant date of this consent;
  - b) complete riparian planting and fencing on both sides of all watercourses on the site in accordance with the riparian management plan reviewed under clause (a) above by 30 September 2013; and
  - c) maintain the areas of riparian planting and fencing undertaken in accordance with clause (b) above for the duration of this consent, by ensuring the ongoing replacement of plants which do not survive, the eradication of weeds until the plants are well established, and the exclusion of stock from the planted areas.

#### **Incident notification**

24. Any incident related to this consent that results, or could result, in an adverse effect on the environment shall be notified to the Taranaki Regional Council as soon as practicable, together with the reasons for the incident, and measures taken to mitigate the effects of the incident and prevent a recurrence.

Note: For notification purposes, at the grant date of this consent, the Taranaki Regional Council's phone number is 0800 736 222 (24 hour service).

#### Lapse and review dates

- 25. This consent shall lapse on 7 November 2016, unless the consent is given effect to before the end of that period.
- 26. 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 in any year for any of the following purposes:
  - a) Ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, and in particular to address any more than minor adverse effects relating to water quality issues;
  - b) to take into account any Act of Parliament, regulation, national policy statement (including the National Policy Statement for Freshwater Management 2011), regional policy statement or regional rule which relates to limiting, recording, mitigating, setting or amending any limits or other criteria relating to nutrients, ecological health or other water quality parameters; and

#### Consent 7662-1

c) To determine any measures that may be appropriate to comply with condition 1 of this consent, and which are necessary to address any adverse effects relating to the wastewater discharges from the site.

In considering whether to initiate a review, the Taranaki Regional Council will take into account any views received from the Department of Conservation and Fish and Game New Zealand (Taranaki Region).

Transferred at Stratford on 18 January 2016

For and on behalf of Taranaki Regional Council

A D McLay

**Director - Resource Management** 

### Appendix II

Categories used to evaluate environmental and administrative performance

### Categories used to evaluate environmental and administrative performance

Environmental performance is concerned with <u>actual or likely effects</u> on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance <u>in site operations and management</u> 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 <u>and</u> 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.