Ample Group Ltd

Monitoring Programme

Annual Report

2020-2021

Technical Report 2021-47

Working with people | caring for Taranaki

Taranaki Regional Council

Taranaki Regional Council
Private Bag 713
Stratford

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Executive summary

Ample Group Ltd (the Company) operate an abattoir and rendering plant, located on Mountain Road at Stratford, in the Kahouri Stream catchment, a tributary of the Patea River. The Company currently processes only beef. Wastewater is treated in a two pond system, which is either irrigated to land when conditions allow, or to the Kahouri Stream, ideally during high flow conditions. This report for the period July 2020 to June 2021 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of the Company's activities.

During the monitoring period, Ample Group Ltd demonstrated an overall poor level of environmental performance.

The Company holds six resource consents, which include a total of 92 conditions setting out the requirements that the Company must satisfy. The Company holds one consent to allow it to take and use water, two consents to discharge effluent and stormwater into the Kahouri Stream, two consents to discharge wastewater and degenerating product to land, and one consent to discharge emissions into the air at this site.

The Council's monitoring programme for the year under review included four inspections, eight water samples collected for physicochemical analysis, two wastewater samples collected for physiochemical analysis, four hydrological gaugings and two, three site biomonitoring surveys.

The monitoring indicated that while environmental performance was good in some areas, there were also areas that needed improvement. There needs to be a focus on minimising the generation of wastewater as a significant amount of wastewater appears to be sourced from groundwater infiltration of the wastewater ponds. Water abstraction levels were not recorded due to power failure to a datalogger. The discharge of wastewater into the Kahouri Stream did not meet the required dilution level but did not cause any noticeable impact on the macroinvertebrate communities of the Kahouri Stream. The irrigation of wastewater onto land needs to be improved, with better rotation of paddocks to prevent excessive amounts of wastewater being discharged onto the same paddock. There was no evidence of excessive leaching of irrigation water into nearby waterbodies, with only minor changes in water quality parameters for the unnamed tributary and Kahouri Stream as they flowed through the Company's site.

The rendering plant did not operate during the period under review and this has significantly reduced odour issues with no odour complaints related to the site. Furthermore, disposal of dead stock/material is being achieved by sending all material offsite as opposed to burying waste, further reducing the potential for odour to be generated at the site, and the flow of contaminants to groundwater.

There were several incidents of non-compliance during the period under review. Firstly, there was an incident in relation to a faulty datalogger. The purpose of the datalogger was to record water abstraction from the Kahouri Stream. Its failure prevented assessment of several consent conditions. Secondly, the wastewater records indicated that there were several instances of discharges to land that exceeded the maximum allowable irrigated depth as a 15 day rolling average. Thirdly, the wastewater records indicated that discharges to the Kahouri Stream did not meet the 1:100 dilution factor. Fourthly, provided wastewater data had significant amounts of information missing which prevented a comprehensive assessment of several consent conditions in two separate consents. The Company is under three separate abatement notices for previous non-compliance of consent conditions relating to water abstraction, discharge of wastewater to land and discharge of wastewater to the Kahouri Stream. Two infringement notices for non-compliance with resource consents have been issued.

During the year, the Company demonstrated a level of environmental and administrative performance that was poor overall. While there were no significant adverse environmental effects arising from the Company's

non-compliance, there were several issues of non-compliance that required enforcement interventions by the Council.

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

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance has continued to be poor overall. This report includes recommendations for the 2021-2022 year.

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1 Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is for the period July 2020 to June 2021 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Ample Group Ltd (the Company). The Company operates an abattoir and rendering plant situated on Mountain Road (SH3) at Stratford, in the Kahouri Stream catchment, a tributary of the Patea River. These resource consents were previously held by Gold International Meat Processors Ltd, but were transferred to the new owner on 18 January 2016.

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 to cover emissions to air from the site.

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of the Company's use of water, land and air, and is the fourth 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. All previous reports covering activities at the site are included in the bibliography and references section at the end of this report as well as the 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 2021-2022 monitoring year.

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

1.1.3 The Resource Management Act 1991 and monitoring

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

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

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

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the Company, this report also assigns them a rating for their environmental and administrative performance during the period under review.

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

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

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

Environmental Performance

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

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

For example:

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

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

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

Administrative performance

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

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

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

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

For reference, in the 2020-2021 year, consent holders were found to achieve a high level of environmental performance and compliance for 86% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 11% of the consents, a good level of environmental performance and compliance was achieved. [1]

1.2 Process description

The Company operates an abattoir and rendering plant situated beside State Highway 3 at the Kahouri Stream Bridge, about one kilometre north of Stratford. The facility generally operates Monday to Friday and currently slaughters cattle and historically slaughtered sheep and pigs.

Meat meal and tallow are also by-products that could be manufactured onsite through the rendering plant, but this was not operational during the monitoring period. The rendering plant processes soft and hard offal from the adjacent abattoir. Material is processed in one of two batch cookers. Heating requirements are supplied from two package boilers. Cooked material is discharged into a percolator pan and the product centrifuged to remove surplus tallow. Solid material is milled and bagged. Tallow is refined and stored in

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

bulk. The batch melter used has a capacity of 1,500 kg raw material. Cooker gases are routed to a trash cyclone, then to an indirect condenser, with non-condensable gases passed to a compost filter before discharge to atmosphere. The rendering plant was not operated during the period under review.

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

The wastewater treatment system is a conventional two-pond system, which is essentially a scaled-up version of those used to treat farm dairy wastes. It consists of an anaerobic pond of approximately 2,000 m^3 volume followed by an aerobic pond about of 3,200 m^2 in area. In 2011, this system experienced a large upgrade. The treated wastewater, which was originally discharged to an unnamed tributary of the Kahouri Stream, was now being irrigated to land when conditions allowed, or discharged to the Kahouri Stream during high flows, when adequate dilution existed. Initially, only the land around the abattoir received irrigated wastewater, but in 2013 the irrigation area was expanded significantly, to include the area on the other side of Mountain Road (Figure 1).

Wastewater comes from three main sources, namely the slaughterhouse, stockyards and rendering plant. Slaughterhouse 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. Waste liquor and floor washings from the rendering process are pumped up to the drainage system. Boiler condensate is disposed of in a soak hole.

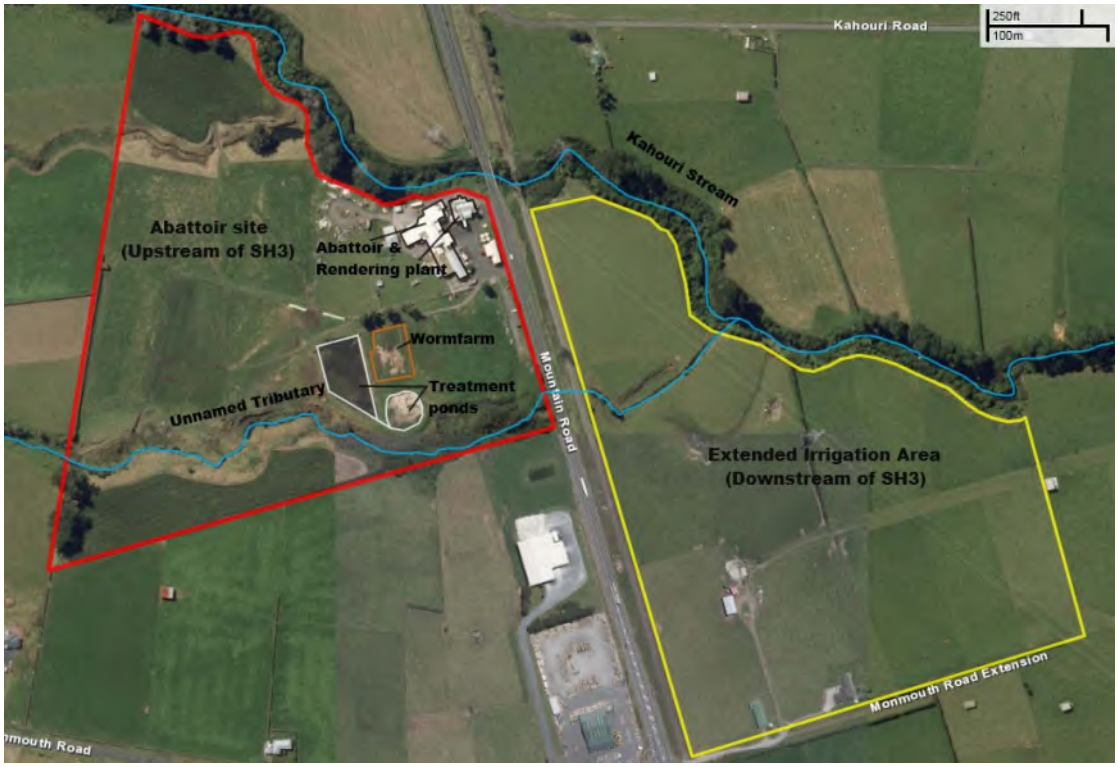

Figure 1 The Company's site, including irrigation areas

The Company disposes of material unsuitable for rendering by composting in a paddock next to the effluent treatment system, an area commonly referred to as the worm farm. The composted material is then spread over pasture. Runoff from this area is also directed to the wastewater treatment system. The Company no longer buries material onsite.

1.3 Resource consents

The Company holds six resource consents the details of which are summarised in the table below. Summaries of the conditions attached to each permit 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 permits held by the Company during the period under review.

Table 1 Summary of the various consent types issued by the Council

Consent number	Purpose	Granted	Review	Expires
Water abstraction permits				
5176-2	To take water from the Kahouri Stream for stock and yard washing purposes	7 July 2016	June 2022	1 June 2034
Water discharge permits				
7662-1	To discharge treated wastewater directly into the Kahouri Stream	7 November 2011	June 2022	1 June 2028
7660-1	To discharge uncontaminated stormwater to land	7 November 2011	June 2022	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 2022	1 June 2028
Discharges of waste to land				
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 2022	1 June 2028
6570-1	To cover the discharge of degenerating raw product onto and into land in the vicinity of an unnamed tributary of the Kahouri Stream	24 March 2005	NA	1 June 2022

1.4 Monitoring programme

1.4.1 Introduction

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

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

The monitoring programme for the Company's abattoir and rendering plant site consisted of four primary components as set out in sections below.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;

- discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The Company's abattoir and rendering plant site was visited eight times during the monitoring period. The site visits comprised of four compliance monitoring inspections and four hydrological inspections. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the Company were accessed so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The hydrological inspections were undertaken in order to maintain the rating curve for the staff gauge located at the Mountain Road Bridge and if required, download flow data from the datalogger.

1.4.4 Chemical sampling

The Council undertook sampling of the discharges from the site. The irrigated wastewater discharge to land was sampled on two occasions. The samples were analysed for calcium, conductivity, potassium, potassium adsorption ratio, magnesium, sodium, ammoniacal nitrogen, nitrates, pH, sodium adsorption ratio, temperature, total nitrogen and total phosphorus.

In addition, sampling was undertaken in an attempt to understand the degree of leaching that may be occurring in relation to the irrigation of wastewater or burial of poor quality product. This sampling was undertaken on two occasions at four sites. These sites were located near where the site boundary crossed the upstream and downstream ends of the Kahouri Stream and unnamed tributary. These samples were analysed for conductivity, dissolved reactive phosphorus, faecal coliforms, unionised ammonia, ammoniacal nitrogen, nitrate, pH, suspended solids, temperature, total nitrogen and turbidity.

1.4.5 Biomonitoring surveys

A biological survey was performed on two occasions at three sites in the Kahouri Stream to determine whether the discharge of treated wastewater from the site has had a detrimental effect upon the macroinvertebrate communities of the stream.

2 Results

2.1 Water

2.1.1 Inspections

On 24 September 2020 the first compliance monitoring inspection was undertaken. The water levels of both the anaerobic and aerobic ponds were relatively high. The worm farm was well grassed and there was a slight odour from fresh paunch. There had been stock grazing around the top pond which had caused areas of disturbed earth on a steep slope which could lead to sediment entering the stream. The unnamed tributary of the Kahouri Stream was not fenced and stock had access to the stream from the top pond. The site needed rubbish removed and disposed of properly. Concreted areas were generally clean and tidy with no issues with stormwater or product.

On the 14 December 2020 the second compliance monitoring inspection was undertaken. The water levels of both the anaerobic and aerobic ponds were relatively low. The cut and carry area had been recently cut and turned into silage which was pleasing to note. The worm farm had several areas of fresh paunch but there was little odour. In general the site was clean and tidy and no issues were noted.

On the 6 April 2021 the third compliance monitoring inspection was undertaken. The water levels of both the anaerobic and aerobic ponds were relatively high. The worm farm had a reasonably large amount of exposed paunch which looked like it needed spreading. However, little odour was being generated at the worm farm or in general. The lower half of the unnamed tributary still has willows which need removing. There were discarded pieces of silage wrapping on one of the paddocks. Concreted areas were generally clean and tidy with no issues with stormwater or product.

On the 8 June 2021 the fourth compliance monitoring inspection was undertaken. The water levels of both the anaerobic and aerobic ponds were relatively high. The worm farm looked well grassed with fresh paunch being added at the time of the inspection. There was little to no odour being generated at the worm farm or in general around the site. Concreted areas were generally clean and tidy with no issues with stormwater or product.

The first hydrological inspection was completed on 21 September 2021. Discharge at time of gauging was calculated to be 0.357 m^3/s. Stage height was 0.590 m.

The second hydrological inspection was completed on 5 February 2021. Discharge at time of gauging was calculated to be 0.120 m^3/s. Stage height was 0.275 m. Water equipment was checked and found to be recording correctly.

The third hydrological inspection was completed on 20 May 2021. Discharge at time of gauging was calculated to be 0.948 m^3/s.

The fourth hydrological inspection was completed on 7 July 2021. The data logger was found to be unpowered and unresponsive. The Company was required to contact their service provider to retrieve any data that exist on the datalogger. The Council strongly recommended that telemetry and a secondary power source was set-up to avoid these situations.

2.1.2 Results of abstraction and discharge monitoring

Various sites are monitored for discharge or receiving environment water quality monitoring. The site locations are summarised in Table 2 and shown in Figure 2.

Table 2 Detail for those sites monitored for discharge or receiving environment water quality

Sample source	Site	Site code	Site Description
Discharge to Kahouri Stream	D1	IND003002	Wastewater discharge pumped to Kahouri Stream
Irrigated effluent	I1	IND004008	Effluent irrigated to land
Kahouri Stream	K1	KHI000295	Upstream property boundary
	K2	KHI000300	Downstream property boundary and approx. 90 m downstream of wastewater discharge (SH3)
	K3	KHI000305	65 m downstream of KHI000300
Unnamed tributary	T1	KHI000294	Upstream property boundary
	T2	KHI000302	Approx. 50 m downstream of previous wastewater discharge

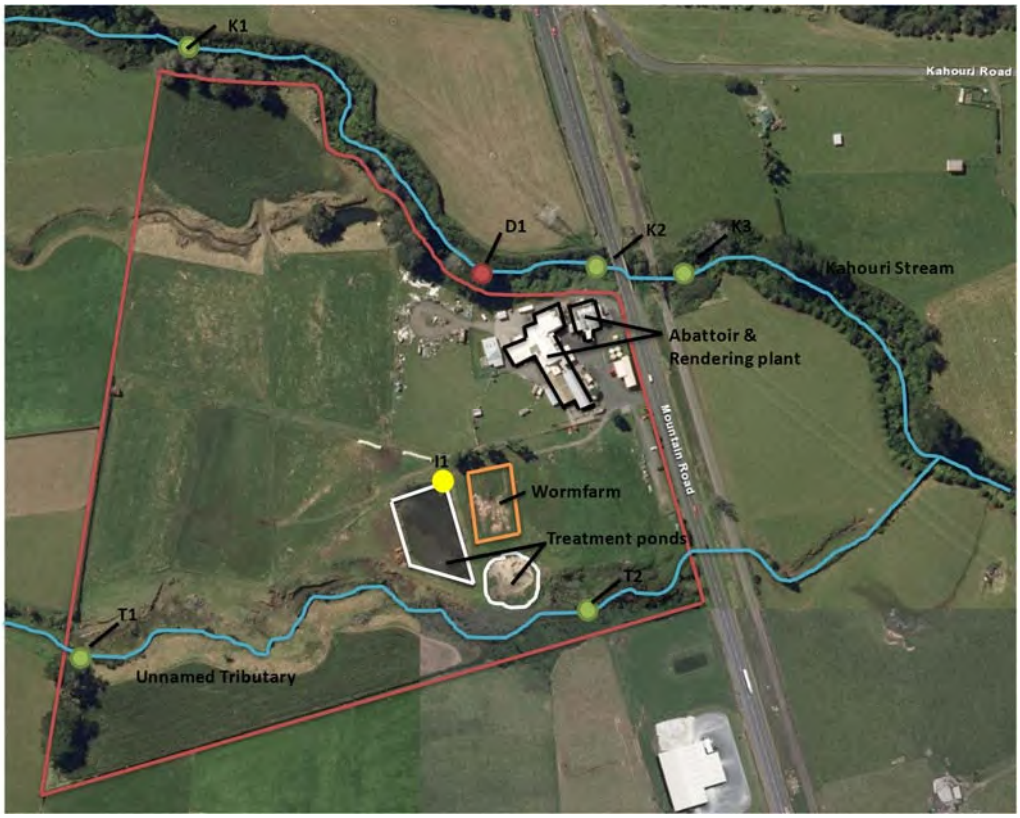

Figure 2 Sites monitored for discharge or receiving environment water quality

2.1.3 Provision of consent holder data

2.1.3.1 Abstraction data

The Company abstracts water from the Kahouri Stream, under consent 5176-2. Under this consent, they are required to maintain a verified flow meter and datalogger at the point of abstraction and make these records available to the Council. The datalogger records data at 15 minute intervals and provides data on abstraction volume and flow rate. The flowmeter appears to have suffered power failure. The Company has been issued an infringement notice due to the loss of flow data.

The rate of abstraction is limited to a rate of 3.25 L/s continuous flow and a volume of 178 m^3/day, with no abstraction allowed when the Kahouri Stream flow is less than 55 L/s immediately downstream of the intake

point. In previous years the Company has been well under consent conditions. For example, during the 2018-2019 monitoring year the highest daily volume abstracted was 32 m^3, which is less than one fifth of the daily maximum limit, and the maximum continuous flow rate limit was 2.41 L/s, which was less than three quarters of the flow rate limit.

2.1.3.2 Irrigated wastewater

The irrigation of wastewater has occurred over two areas in the past. The majority of the irrigation occurred on land west of Mountain Road (SH3) owned by the Company (Figure 3 and Figure 4). The Wastewater Irrigation Management Plan relevant to the 2020-2021 period identified the land surrounding the abattoir as cut and carry. This means that the land was not to be stocked, and the feed grown on this land was to be harvested and removed, to be fed to stock offsite. With no stock contributing nitrogen in the form of urine and faeces to land a higher nitrogen application rate can be applied. The consent allows for the application of up to 600 kg of nitrogen per hectare per year to cut and carry paddocks (paddocks 3-9), while a lower limit of 200 kg of nitrogen per hectare per year applies to the land east of SH3 (paddocks 10 and 15), as this land is also used by the landowner to run stock. Table 3 presents various water quality parameters obtained on two sampling occasions for the irrigated wastewater. This shows that the sodium absorption ratio (SAR) never exceeded the consented value of 15.

Table 3 Irrigated wastewater water quality parameters

Parameter	12/04/21	8/06/21
pH Units	7.8	7.8
Electrical Conductivity (EC) mS/m	88.5	62.2
Total Calcium g/m^3	14.9	13.1
Total Magnesium g/m^3	3.8	2.7
Total Potassium g/m^3	25	16.5
Total Sodium g/m^3	54	34
Potassium Absorption Ratio (PAR) (mmol/L)	0.9	0.6
Sodium Absorption Ratio (SAR) (mmol/L)	3.3	2.2
Total Nitrogen g/m^3	78	51
Total Ammoniacal-N g/m^3	66	47
Nitrate-N + Nitrite-N g/m^3	0.22	0.08
Total Kjeldahl Nitrogen (TKN) g/m^3	78	50
Total Phosphorus g/m^3	10.4	5.8

Table 4 presents both the volume of wastewater and estimated total nitrogen applied to land in the 2020-2021 period. The total nitrogen loading has been estimated using the nitrogen concentration from the irrigated wastewater samples. According to Company data eight paddocks were used. The nitrogen volumes that paddocks received were below the 600 kg hectare/year limit for cut and carry paddocks and below 200 kg hectare/year limit for grazed paddocks (10 to 15). It should be noted that the quality of this wastewater can vary both between occasions, and throughout the day. In addition, the sporadic use of the stirrer will also influence the nitrogen content of the effluent. Therefore, the figures provided in Table 4 are indicative only. Furthermore, the wastewater statistics were calculated using less than 3 months of data and will be an under estimate of the real figure, but even if the below figures were multiplied by a scaling factor of 4, the results would still be compliant.

Table 4 Total volume of wastewater and total nitrogen applied to land during the reported period

Parameter	Paddock number												
	3	4	5	6	7	8	9	10	11	12	13	14	15
Total volume (m^3)	1,100	160	870	730	560	80	0	1,770	80	0	0	0	0
Total N (kg/ha)	29	12	88	71	46	5	0	26	1	0	0	0	0

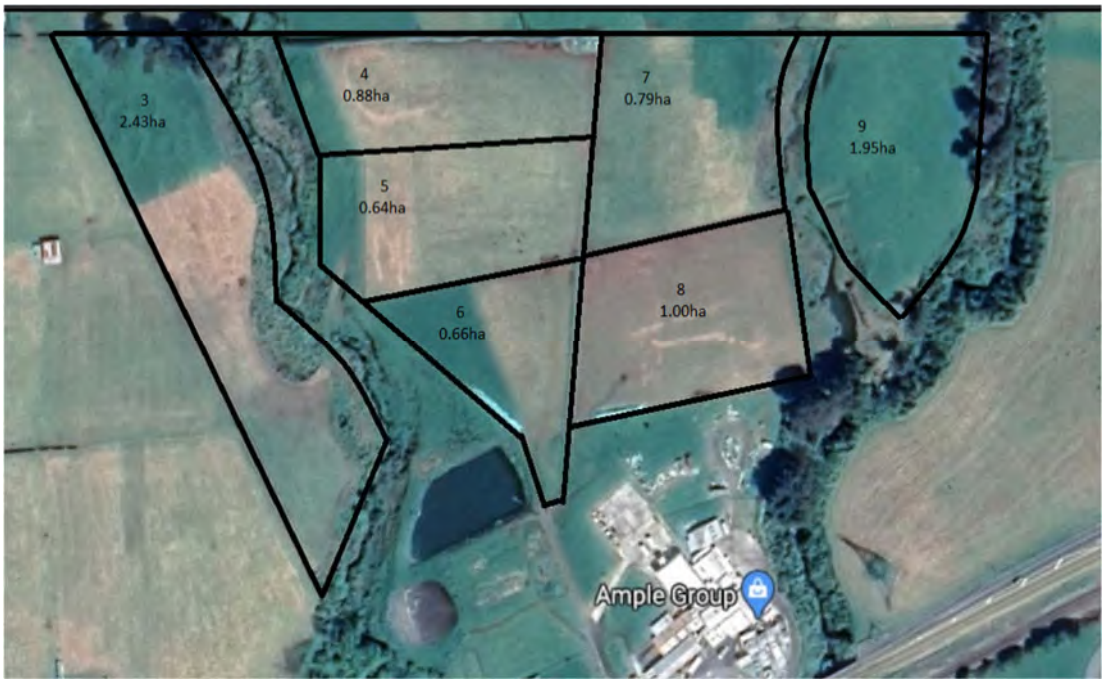

Figure 3 The irrigation areas, showing the cut and carry paddocks as presented in the Wastewater Management Plan 2020

Figure 4 The irrigation areas, showing the grazed paddocks as presented in the Wastewater Management Plan 2020

There is also a restriction on the application depth within any area of irrigation, which is not to exceed 24 mm over any 15 day period. Table 5 presents a summary of the application depth for the reported period. Of the eight paddocks that received wastewater, five exceeded the maximum application depth of 24 mm over a 15 day period. Essentially, every 240 m^3 of wastewater needs to be irrigated over one hectare of land in a 15 day period in order to comply with this condition. In contrast, for example, provided data shows 740 m^3 of wastewater was irrigated to paddock 5 over a consecutive five day period in April.

Table 5 Paddock size and application depth statistics for the paddocks that received irrigated wastewater during the reported period

Paddock number	3	4	5	6	7	8	9	10	11	12	13	14	15
Paddock size (ha)	2.43	0.88	0.64	0.66	0.79	1.00	0.9	4.4	3.7	3.9	4.2	1.1	1.0
Maximum 15 day application depth (mm)	41	18	116	58	37	47	0	22	2	0	0	0	0

The intention of this condition, which is consistent with appendix VIIA of the Regional Freshwater Plan, is to avoid surface ponding, runoff into waterways, leaching and groundwater contamination. Exceeding this limit may also lead to damaged pasture. Although inspections of the irrigation area did not note any runoff, nor was there any excessive ponding, the consent holder does need to manage the irrigation system with this condition in mind, particularly since paddock 5 and to a lesser extent 3, 6, 7, and 8 exceeded the limit by a substantial margin. The Company has previously been given an abatement and infringement notice for non-compliance with this resource consent condition. There needs to be better management of the rotation system to ensure that the appropriate amount of wastewater is irrigated to each paddock to be compliant with the resource consent condition and to minimise any environmental harm.

It should be noted that irrigation to pasture is preferable over discharges directly to the Kahouri Stream, and the nutrient loadings of the wastewater were within consent conditions. Previously, significant amounts of water (presumably groundwater) entering the wastewater ponds has been shown to be the main contributor to the wastewater ponds as wastewater discharge volumes are correlated with rainfall. If the Company prevented ingress of outside sources of water entering the wastewater system then issues with wastewater volume would likely be reduced, or alternatively having more storage capacity would make it easier to discharge wastewater appropriately. It should be noted that condition 8 of resource consent 7662-1 requires uncontaminated stormwater to be prevented from entering the wastewater system, though groundwater rather than stormwater is most likely the major source of uncontaminated water into the ponds.

2.1.3.3 Other nitrogenous wastes

From time to time the consent holder may discharge vermicast from the worm farm and blood from the abattoir to land. A record of each discharge must be kept, and these have been provided to Council. No vermicast was spread during the reported period and the consent holder has stated that blood is now transported to an offsite rendering plant.

2.1.3.4 Discharge to the Kahouri Stream

When the discharge consent was originally applied for, the applicant (Taranaki Abattoirs) committed to restricting the discharge rate to 3.3 L/s. Although this was not included as a consent condition, the consent did require that no discharge was to occur when flows in the Kahouri Stream were less than 330 L/s to enable compliance with the 1:100 dilution ratio also required by consent. When the discharge figures are assessed, it was possible to calculate statistics for the discharge rates. However, as the majority of the wastewater data was not provided it was not possible to ascertain compliance for the majority of the period under review.

Wastewater discharges to the Kahouri Stream complied with the minimum flow condition where no discharges are allowed below 330 L/s flow (Table 6). However, the wastewater discharges did not comply with the 1:100 dilution ratio condition. The stream flow must be a hundred times greater than the discharge rate to comply with the consent. Therefore, if the discharge rate is 19 L/s, the stream flow would need to be 1,900 L/s. However, there were only two recorded instances of discharges to the Kahouri Stream but both exceeded the allowed ratio. The two discharges recorded significantly exceeded the 3.3 L/s originally proposed (18.5 and 19.0 L/s). Although this is not non-compliant with the consent, as the consent does not specify a maximum discharge rate, the relatively high discharge rates make complying with the 1:100 dilution extremely difficult as the Kahouri Stream would need to be at extremely high flows in order to achieve the required dilution factor.

Based on the discharge rates and non-compliance with the consent the Company still needs to decrease the wastewater flow rate to the Kahouri Stream in combination with ensuring discharges only occur when the stream is in fresh/flood. Environmental affects as measured by macroinvertebrate health have been minor though, presumably due to the wastewater discharged into the stream being relatively dilute due to the large amounts of groundwater inputs into the wastewater ponds.

Table 6 Wastewater discharge to the Kahouri Stream (consent limit 1:100 dilution ratio and Kahouri Stream minimum flow of 330 L/s)

Date	Discharge rate (L/s)	Ratio	Mean stream flow (L/s)
09/07/20	18.49	1.94:100	955
18/05/21	19.05	1.28:100	1490

Another important consent condition requires that as far as practicable, discharge to the Kahouri Stream should be minimised and discharges to land are maximised. This means that even at times when adequate dilution is available in the Kahouri Stream, wastewater shall be irrigated to land, unless the land is saturated, and consequently is incapable of accepting the discharge. Figure 4 shows that the majority of wastewater was discharged to land. This remains at a satisfactory level and both occasions when discharges to the Kahouri Stream were recorded irrigation to land would not have been possible. Figure 5 presents a summary of the proportion of wastewater irrigated to land since November 2011. It shows that the majority of wastewater has historically been discharged to the Kahouri Stream. However, the volumes discharged to land were significantly higher than to the stream for the current monitoring period.

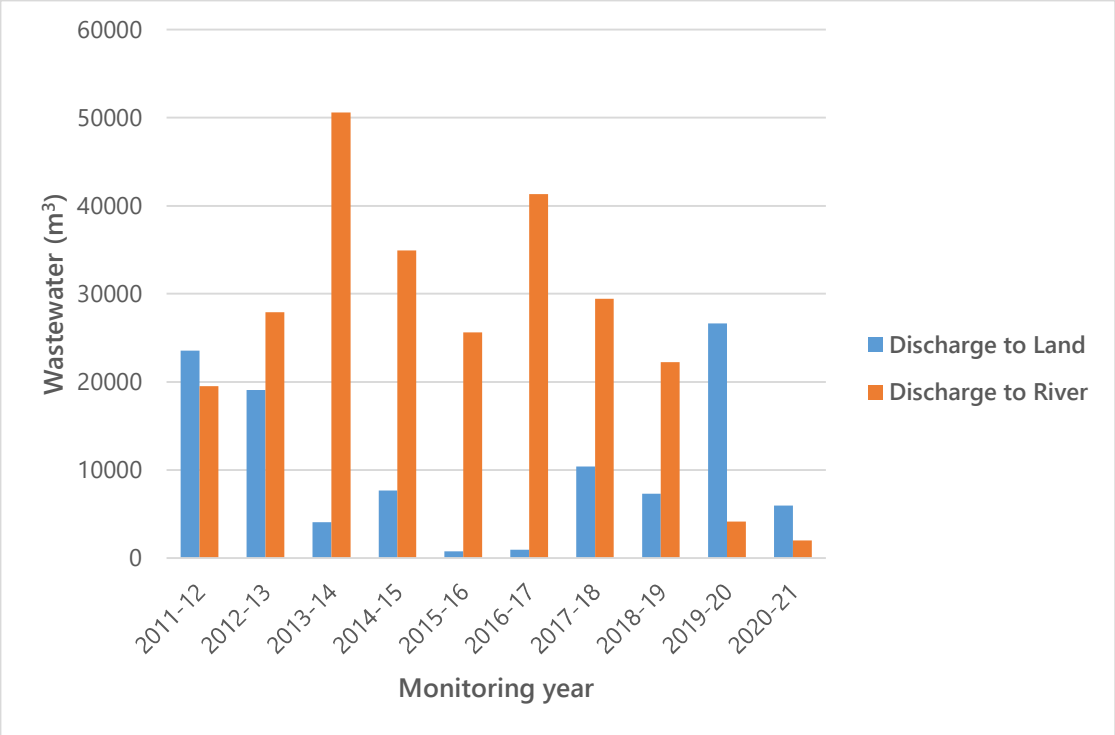

Figure 5 The volume of wastewater discharge to land and water

2.1.3.5 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 licenses the irrigation of wastewater to land requires the provision of a Wastewater Irrigation Management Plan, and that this plan be reviewed every two years. A new version of this plan was received on 21 July 2020 from the Company. 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).

2.1.4 Water chemistry – Synoptic survey

Two synoptic surveys were carried out on the 26 January 2021 and on 8 June 2021 in an attempt to quantify the impacts of any potential diffuse discharge(s) from the site, sourced from (for example) the irrigation of effluent to land or by burial of poor quality product that was not suitable for rendering. Sites K1, K2, T1 and T2 were sampled (Figure 2). The results indicate that any diffuse seepage from the site is having little influence on the Kahouri Stream, with little change in the parameters tested from the upstream site (K1) to the downstream site (K2) (Table 7).

Table 7 Water quality sample results from the Kahouri Stream and Tributary of the Kahouri Stream at sites on the upstream and downstream boundary of the property

Parameter	26/01/2021				8/06/2021			
	Kahouri Stream		Tributary		Kahouri Stream		Tributary	
	U/S	D/S	U/S	D/S	U/S	D/S	U/S	D/S
Unionised Ammonia (g/m^3-N)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Turbidity (NTU)	2.30	1.54	2.10	1.91	0.97	0.99	1.12	2.20
pH	7.6	7.9	7.5	7.5	7.3	7.4	7.2	7.5
Electrical Conductivity (mS/m)	10.5	10.8	11.3	11.4	10.4	10.4	11.1	11.3
Total Suspended Solids (g/m^3)	5	< 3	< 3	4	< 3	< 3	6	4
Temperature (°C)	15.4	15.4	17.2	17.5	10.5	10.3	11.0	11.1
Total Nitrogen (g/m^3)	0.70	0.79	0.80	0.86	1.07	1.09	1.29	1.29
Total Ammoniacal Nitrogen (g/m^3-N)	<0.010	0.087	0.015	0.077	0.014	0.015	0.015	0.059
Nitrate-N + Nitrite-N (g/m^3-N)	0.60	0.61	0.67	0.69	0.99	1.00	1.21	1.19
Total Kjeldahl Nitrogen (g/m^3)	0.11	0.19	0.13	0.17	< 0.10	< 0.10	< 0.10	0.10
Dissolved Reactive Phosphorus (g/m^3)	0.026	0.022	0.010	0.016	0.014	0.014	0.007	0.008
Escherichia coli (MPN / 100 mL)	166	291	435	345	308	166	71	112

The results also indicate that there was very little seepage of contaminants into the unnamed tributary. The unionised (free) ammonia concentration at all sites on both occasions was very low and well below 0.025 g/m^3. The less toxic ammoniacal nitrogen in the unnamed tributary showed a small increase in a downstream direction. The unionised ammonia and ammoniacal nitrogen increases in the past have been related to the historic, excessive, irrigation of wastewater by Taranaki Abattoirs, a company formerly located at the site and prior to the present Company taking control of the site, resulting in too much nitrogen being applied to land. The burial of poor quality product too close to the stream could also cause the observed results, though the Company is required to bury material well away from any waterways and has indicated that it has not buried any degenerating product for the monitoring year under review. Both activities have the potential to contaminate the shallow groundwater, which could flow to the unnamed tributary. It can take some time for the effects of contaminated groundwater to fully manifest in surface water, due to the slow rate that groundwater is replaced by clean water.

2.1.4.1 Biological monitoring

Two macroinvertebrate surveys were undertaken for the purpose of monitoring the health of the macroinvertebrate communities of the Kahouri Stream in relation to wastewater management at the site, primarily the discharge of treated wastewater to the stream.

The Council's standard 'kick-sampling' technique was used to collect streambed macroinvertebrates from three sites in the Kahouri Stream on 18 January 2021 and on 17 March 2020 to investigate the effects of the Company's discharges on macroinvertebrate health. Macroinvertebrates were identified, the number of different types of taxa counted (taxa richness), and MCI and SQMCI scores were calculated for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of nutrient pollution in streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to pollution. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in communities. Significant differences in either the MCI or the SQMCI between sites

indicate the degree of adverse effects (if any) of the discharges being monitored and enable the overall health of the macroinvertebrate communities to be determined. EPT taxa quantifies the number of mayflies, stoneflies and caddisflies present in the sample, and this can also be expressed as a proportion of the total number of taxa (%EPT) which is another useful statistic to gauge macroinvertebrate health.

It should be noted that special condition13 of the relevant consent (7662-1) includes the following statement:

"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."

The analysis of results was undertaken with this statement in mind.

During the January survey, the Kahouri Stream sites had moderate macroinvertebrate community richness with the two downstream sites having a taxa richness marginally higher or the same as the 'control' site. This indicates that there was no evidence of recent, toxic discharges negatively affecting macroinvertebrate communities. Taxa richness was similar between sites and to historical medians, though site 3 was marginally lower having a richness five taxa lower than its historical median.

MCI scores indicated that the macroinvertebrate community at sites 1 and 2 were in 'very good' health and site 3 was in 'good' health. There was a non-significant difference in scores between sites 1 and 2 and sites 2 and 3, but there was a significant decrease between sites 1 and 3 of 12 MCI units. However, there were no significant differences between historic medians apart from a significant increase at the control site or between current scores and the previous survey scores.

The SQMCI scores indicated very healthy macroinvertebrate communities with sites in 'excellent' or very good' health due to the abundance of the 'sensitive' mayflies *Deleatidium* numerically dominating the macroinvertebrate communities present there. There were no significant differences in SQMCI scores between sites and scores were very similar to their historic medians. EPT percentages were similar between sites with all three sites having an EPT percentage above 50% suggesting good preceding water quality.

The lack of sewage fungus at any of the sites also indicates little enrichment downstream of the discharge.

Overall, this survey indicates that Ample Group was not having a significant negative effect on the macroinvertebrate community health in the Kahouri Stream.

During the March survey, the Kahouri Stream sites had moderate macroinvertebrate community richness with the two downstream sites having a taxa richness marginally higher than the control site. This indicates that there was no evidence of recent, toxic discharges negatively affecting macroinvertebrate communities.

MCI scores indicated that the macroinvertebrate community at all sites were in good health. All three sites had similar or the same scores with no significant difference in scores between sites. MCI scores were also not significantly different to historic medians. The SQMCI scores indicated macroinvertebrate communities at all sites were in very good health. There were no significant differences in SQMCI scores between sites and scores were not significantly different to their historic medians. EPT percentages were also very similar between sites with all three sites having an EPT percentage of at least 50% suggesting good preceding water quality.

Overall, this survey indicates that discharges from Ample Group were not having a significant negative effect on the macroinvertebrate community health in the Kahouri Stream.

Copies of biomonitoring reports for this site are available from the Council upon request.

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 record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events

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

Table 8 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 2020-2021 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 8 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
07/07/21	Water intake data not recorded due to power failure to the datalogger	N	Enforcement action is being considered	To be determined
03/09/21	Wastewater data not fully provided – irrigation to land	N	Infringement notice	Fine
03/09/21	Wastewater volumes to land were too high	N		
03/09/21	Insufficient levels of wastewater dilution to the Kahouri Stream	N	Infringement notice	Fine
03/09/21	Wastewater data not fully provided – discharge to river	N		

3 Discussion

3.1 Discussion of site performance

In general, the Company's facilities were well kept but improvements could be made to the wastewater system and administration.

Biological sampling has found that discharges have complied with conditions relating to instream effects. Discharges were not affecting stream health and irrigation to land was not affecting water quality.

A review of the irrigation records indicates that nitrogen application has been within consents limits, with no paddocks receiving more than the consented limit though a lack of data impacts the ability to assess this condition. The sodium absorbance ratios in wastewater to land were well within the consent limit. Of the eight paddocks that received wastewater, five had an application depth that exceeded the limit of 24 mm in a 15 day period and better paddock rotation combined with reducing wastewater volumes by limiting groundwater ingress is required.

Review of the available data indicates that wastewater discharge rates have been significantly higher than was signalled during the consent renewal process and this has contributed to wastewater discharges to Kahouri Stream not meeting the dilution rate required by the consent.

The discharge records indicated that the majority of the wastewater was irrigated to land and not discharged to the Kahouri Stream. There have been improvements in the last couple of years increasing the amount discharged to land with the current results the best yet.

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

Record keeping was poor and needs to improve. The supplied wastewater data that is used to assess conditions in relation to irrigation to land and discharges to the Kahouri Stream in total covered a period of less than three months. For the data that was supplied there were some discrepancies including missing data and incorrectly labelled paddock numbers. No water abstraction records have been obtained and the datalogger was found to be unpowered and unresponsive during the last hydrological inspection.

Housekeeping was found to be good through most of the plant during inspections, with the yards kept clean and tidy. Contaminants were usually contained within the wastewater catchment, as opposed to the stormwater catchment.

The current consent holder no longer disposes of blood onsite. The worm farm has the potential to cause some odours to occur offsite and this area needs to be managed carefully to reduce the likelihood of this particularly during the summer months. This area also needs to be managed, so as to prevent birds from accessing material, and carrying it offsite.

The Company has produced an updated Wastewater Management Plan as required by consent 5221-2. The plan had been well out of date so it was pleasing to see an updated plan. The contingency plan as required by consent 4055-3 has also been updated.

3.2 Environmental effects of exercise of consents

The discharge of wastewater to the Kahouri Stream has not caused any recorded impact on the macroinvertebrate communities of this stream. Discharges to the Kahouri Stream did not meet the consented dilution volume, though nutrient levels in the wastewater were at an acceptable level. The continuous and maximum daily abstraction rates were not available. Based on previous monitoring years these were unlikely to have been exceeded. Monitoring of Kahouri Stream did not indicate any adverse effects as a result of the abstraction.

The irrigation of wastewater to land was undertaken with no significant adverse effects on the environment. Water quality monitoring indicated no significant differences in the water quality of the Kahouri Stream upstream and downstream of the site.

In relation to air emissions, there were no incidents related to odours and no odours were noticed during site inspections beyond the Company's boundary. The fact that the rendering plant was closed was likely to significantly reduce odour emissions though other potential sources of odour such as paunch processing were still present.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the period under review is set out in Table 9 to Table 14.

Table 9 Summary of performance for consent 7662-1

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	Inspections	Yes
4. Install flow meter	Inspections	Yes
5. Meter verification documentation submitted	Liaising 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	No
13. Effects on receiving water beyond the 50 m mixing zone	Water quality sampling, inspections	Yes

Purpose: *To discharge treated wastewater directly into the Kahouri Stream*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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	No
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
26. Optional review of consent	Not exercised	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Improvement required** **Poor**

N/A = not applicable

Table 10 Summary of performance for consent 6570-1

Purpose: *To discharge degenerating raw product 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. Exercise of consent shall be undertaken in accordance with application documentation	Inspections	Yes
3. Notification prior to exercise of consent	Council notified	Yes
4. Notification prior to burials	Council notified	N/A

Purpose: *To discharge degenerating raw product 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?**
5. Supply burial management plan	Contingency plan received	No
6. Only raw material to be disposed of in burial pits	Inspections	N/A
7. Emergency circumstances discharges to land	Inspections	N/A
8. No contaminants to enter surface water	Inspections and water quality sampling	Yes
9. Prohibits adverse effects on groundwater	Inspections	N/A
10. Consent holder to maintain and keep records	Request by Council for data	Yes
11. Discharge to be covered within four hours	Inspections	N/A
12. Minimum of 800mm of compacted soil to be placed on discharge wastes	Inspections	N/A
13. Site contoured	Inspections	N/A
14. Pasture re-established	Inspections	N/A
15. Lapse of consent	Consent exercised within lapse period	N/A
16. Optional review of consent	Not exercised	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

N/A = not applicable

Table 11 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	Yes
4. Meter verification documentation submitted	Liaising with consent holder	Yes
5. Follow wastewater irrigation management plan	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?**
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	Yes
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
13. Sodium absorption ratio shall not exceed 15	Irrigated wastewater quality sampling	Yes
14. Prohibits discharge to water from irrigation	Inspections	Yes
15. Restrictions on the wastewater discharge spray zone	Inspections	Yes
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 compliance and environmental performance in respect of this consent Overall assessment of administrative performance in respect of this consent		**Improvement required** **Poor**

N/A = not applicable

Table 12 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	**Means of monitoring during period under review**	**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 Overall assessment of administrative performance in respect of this consent		**Good** **Good**

N/A = not applicable

Table 13 Summary of performance for consent 4055-3.

Purpose: *To discharge emissions to air, in association with meat processing, rendering and associated activities*		
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	Yes

Purpose: *To discharge emissions to air, in association with meat processing, rendering and associated activities*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
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
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

N/A = not applicable

Table 14 Summary of performance for consent 5176-2

Purpose: *To take water from the Kahouri Stream for stock and yard washing purposes*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Best practicable option	Data review	N/A
2. Abstraction rates	Data review	N/A
3. Water meter and datalogger installed and maintained	Council notified, inspections	No
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	No
6. Accessible and retrievable records	Inspections	No
7. Abstraction records	Data review	No
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

Purpose: *To take water from the Kahouri Stream for stock and yard washing purposes*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
Overall assessment of consent compliance and environmental performance in respect of this consent		**Improvement required**
Overall assessment of administrative performance in respect of this consent		**Poor**

N/A = not applicable

During the year, the Company demonstrated a level of environmental and administrative performance that overall was poor, as defined in Section 1.1.4. During the year under review there were five incidents recorded that related to the Company's activities. The previous monitoring report indicated that the consent holder needed to give a higher priority to administrative performance and consent compliance. The results of the monitoring undertaken in the 2020-2021 period indicates that improvement is still needed. An improvement in the Company's environmental performance is also required.

Table 15 Evaluation of environmental performance over time

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

Year	Consent no	High	Good	Improvement required	Poor
	5176-2	1	-	-	-
	5221-1	-	1	-	-
	6570-1	-	1	-	-
	7660-1	1	-	-	-
	7662-1		1	-	-
2015	4055-3	1	-	-	-
	5176-2	1	-	-	-
	5221-1	-	1	-	-
	6570-1	-	1	-	-
	7660-1	1	-	-	-
	7662-1		1	-	-
2016	4055-3	1	-	-	-
	5176-2	1	-	-	-
	5221-1	-	1	-	-
	6570-1	1	-	-	-
	7660-1	1	-	-	-
	7662-1	-	1	-	-
2017	4055-3	1	-	-	-
	5176-2	-	-	1	
	5221-2	-	1	-	-
	6570-1	-	1	-	-
	7660-1	-	1	-	-
	7662-1	-	1	-	-
2018	4055-3	1		-	-
	5176-2	-	1	-	-
	5221-2	-	1	-	-
	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	1	-	-
2019	4055-3	1	-	-	-
	5176-2	-	1	-	-
	5221-2	-	-	1	-
	6570-1	1	-	-	-
	7660-1	-	1	-	-

Year	Consent no	High	Good	Improvement required	Poor
	7662-1	-	-	1	-
2020	4055-3	1	-	-	-
	5176-2	-	-	-	1
	5221-2	-	-	-	1
	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	-	-	1
2021	4055-3	1	-	-	-
	5176-2	-	-	-	1
	5221-2	-	-	-	1
	6570-1	1	-	-	-
	7660-1	-	1	-	-
	7662-1	-	-	-	1
Totals		21	37	5	6

3.4 Recommendations from the 2019-2020 Annual Report

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

1. THAT monitoring of consented activities at Ample Group Ltd in the 2020-2021 year continue at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the Company in the 2020-2021 monitoring year prioritise administrative performance, particularly in regard to recording hydrological and wastewater data.
4. THAT the Company in the 2020-2021 monitoring year prioritise environmental performance, particularly in regard to wastewater discharge volumes to the Kahouri Stream and paddocks.
5. THAT the option for a review of resource consents in June 2021, as provided for by conditions of consents 5221-2, 7662-1 and 4055-3, not be exercised, on the grounds that the consents are adequate to deal with the activities currently undertaken.

3.5 Alterations to monitoring programmes for 2021-2022

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

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

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

It 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 2021-2022.

3.6 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. Resource consent 7660-1 provides for an optional review of the consent in June of 2016 and/or June 2022. Condition 5176-2 1 provides for an optional review of the consent in June of 2019 and at 3 yearly intervals thereafter. Conditions of these consents allow the Council to review 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 to be pursued or grounds to exercise the review option.

4 Recommendations

1. THAT monitoring of consented activities at Ample Group Ltd in the 2021-2022 year continue at the same level as in 2020-2021.
2. THAT should there be issues with environmental or administrative performance in 2021-2022, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the Company in the 2021-2022 monitoring year prioritise administrative performance, particularly in regard to recording hydrological and wastewater data.
4. THAT the Company in the 2021-2022 monitoring year prioritise environmental performance, particularly in regard to wastewater discharge volumes to the Kahouri Stream and paddocks.
5. THAT the option for a review of resource consents in June 2022, as provided for by conditions of consents 5221-2, 7662-1, 4055-3, 7660-1 and 5176-1 not be exercised, on the grounds that the consents are adequate to deal with the activities currently undertaken.

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	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^3s^{-1}).
DO	Dissolved oxygen.
DRP	Dissolved reactive phosphorus.
E.coli	*Escherichia coli*, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample.
Ent	Enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre of sample.
FC	Faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample.
Fresh	Elevated flow in a stream, such as after heavy rainfall.
$g/m^2/day$	grams/metre^2/day.
g/m^3	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
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^2	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_4	Ammonium, normally expressed in terms of the mass of nitrogen (N).
NH_3	Unionised ammonia, normally expressed in terms of the mass of nitrogen (N).
NO_3	Nitrate, normally expressed in terms of the mass of nitrogen (N).
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
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 Science Services Manager.

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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.

Land use permits

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

Coastal permits

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

Discharge Permit

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

Name of Consent Holder:	Ample Group Limited 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.

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^{o}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.*

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 $g/m^2/day$; and/or

    b) suspended dust level of 3 mg/m^3.

    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.

Transferred at Stratford on 18 January 2016

For and on behalf of
Taranaki Regional Council

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A D McLay
Director - Resource Management

Water Permit

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

Name of Consent Holder:	Ample Group Limited 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 ± 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.

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Ample Group Limited 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

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 ± 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 ± 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];
    l) 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

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A D McLay
Director - Resource Management

Consent 6570-1

Discharge Permit

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

Name of Consent Holder:	Taranaki Abattoir Company [1992] Limited P O Box 12 INGLEWOOD
Consent Granted Date:	24 March 2005

Conditions of Consent

Consent Granted:	To discharge degenerating raw product onto and into land in the vicinity of an unnamed tributary of the Kahouri Stream in the Patea catchment at or about GR: Q20:197-093
Expiry Date:	1 June 2022
Review Date(s):	June 2005, June 2006, June 2007, June 2008, June 2010, June 2016
Site Location:	3396 Mountain Road, Stratford
Legal Description:	Sec 62 Manganui Dist Blk XIII Huiroa SD
Catchment:	Patea
Tributary:	Kahouri

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

General conditions

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

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

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

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

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.

2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 3576. In the case of any contradiction between the documentation submitted in support of application 3576 and the conditions of this consent, the conditions of this consent shall prevail.

3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to the exercise of this consent.

4. The consent holder shall notify the Chief Executive, Taranaki Regional Council as soon as practicable in advance of all burials.

5. By 1 June 2005, the consent holder shall provide a waste burial management plan, to the approval of the Chief Executive, Taranaki Regional Council, outlining the management of the system, which shall demonstrate the ability of the consent holder to comply with consent conditions and shall address the following matters:

   a) nature of wastes discharged;
   b) discharge control;
   c) waste cover;
   d) addition of hydrated lime to stabilise the wastes;
   e) minimisation and control of odour effects offsite;
   f) stormwater control;
   g) site re-instatement and after care (including maintaining the integrity of the cover material);
   h) site contouring;
   i) procedures for responding to complaints;
   j) notification to the Council of non-compliance with the conditions of this consent.

6. Only raw degenerating material shall be disposed of to the burial pit(s).

7. Raw degenerating material shall only be discharged onto and into land at the site in an emergency situation and only after other options, such as diversion to an alternative site, have been pursued to the satisfaction of the Chief Executive, Taranaki Regional Council.

8. The exercise of this consent, including the design and management of the burial site and system, shall not lead to or be liable to lead to contaminants entering a surface water body.

9. No adverse effects shall occur to groundwater in the vicinity of the discharge, as a result of this consent

10. The consent holder shall keep records of quantities and types of wastes discharged, and the dates of exercising this consent and shall make such records available to the Chief Executive, Taranaki Regional Council upon request.

11. The discharged material shall be covered within a period of four hours or less so as to avoid the generation of offensive offsite odours.

12. At the completion of the disposal operation a low permeability, clean, compacted soil cover with a minimum thickness of 800 millimetres shall be placed over the discharged wastes.

13. The cover material and surrounding land shall be contoured such that all stormwater is directed away from the disposal area to the satisfaction of the Chief Executive, Taranaki Regional Council.

14. The disposal area shall be rehabilitated and pasture re-established to the satisfaction of the Chief Executive, Taranaki Regional Council.

15. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

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 2005 and/or 2006 and/or 2007 and/or 2008 and/or 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 24 March 2005

For and on behalf of
Taranaki Regional Council

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Director-Resource Management

Discharge Permit

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

Name of Consent Holder:	Ample Group Limited 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
pH	Within the range of 6.0 to 9.0
Suspended solids	Concentration not greater than 100 gm^{-3}
Total recoverable oil and grease	Concentration not greater than 15 gm^{-3}

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

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A D McLay
Director - Resource Management

Discharge Permit

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

Name of Consent Holder:	Ample Group Limited 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 ± 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 ± 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_5 of more than 2.00 gm^{-3};
    b) a level of unionised ammonia of greater than 0.025 gm^{-3};
    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^{-3}, 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 m^3) 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

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

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A D McLay
Director - Resource Management