

Osflo Fertiliser Limited
Monitoring Programme
Annual Report
2018-2019

Technical Report 2019-15

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Executive summary

Osflo Fertiliser Limited (the Company) operated a facility for the storage, blending and distribution of poultry waste fertiliser. The site was located on 70 Hursthouse Road, Tarurutangi, in the Wainogana catchment. The Company stored, blended and distributed agricultural fertiliser based on poultry litter from this facility. In this monitoring period the Company ceased operations at the Hursthouse Road facility and began operations at a new purpose built facility, located at 1319 Mountain Road, Inglewood, also in the Waiongana catchment. The poultry waste is collected from farms around the Taranaki region and is sold as a registered fertiliser.

This report for the period July 2018 to June 2019 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.

The Company holds five resource consents, which include a total of 41 conditions setting out the requirements that the Company must satisfy. The Company holds two consents to discharge effluent into the ground via land soakage, one consent to discharge stormwater to surface water and two consents to discharge emissions into the air at two sites in Taranaki.

During the monitoring period, the Company demonstrated an overall high level of environmental performance.

The Council's monitoring programme for the year under review included four inspections, nine water samples collected for physicochemical analysis, and odour air quality surveys undertaken during inspections.

The monitoring showed that the discharge to land by soakage at the Hursthouse Road facility had a minimal effect. One surface water monitoring round indicated elevated e-coli in surface water, both above and below the facility. However a follow up sample indicated the likely source was coming from upstream and not attributed to the Company activities. This elevation was most likely caused by farm runoff and surface water discharge of dairy shed effluent.

No complaints were received with respect to operations at the Hursthouse Road facility this period. Operations were ceased at the Hursthouse Road site mid-way through the monitoring period. The Company began operations from their new purpose built facility on February 2019.

The new site, located at 1319 Mountain Road, Inglewood was purpose built for the Company operations. Now all mixing and blending of material is undertaken in a dry, sealed, storage depot. There are two discharges from the facility. One, a wastewater discharge, which is to land via land soakage, the other, a stormwater discharge, is also to land. In extreme rainfall the Company may discharge to the unnamed tributary of the Waiongana, a surface water monitoring site has been established to monitor such a discharge.

There were zero unauthorised incidents recording non-compliance in respect of this consent holder during the period under review.

During the year, the Company demonstrated a high level of environmental and administrative performance with the resource consents.

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

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance has improved in the year under review.

This report includes recommendations for the 2019-2020 year.

Table of contents

	Page	
1	Introduction	1
1.1	Compliance monitoring programme reports and the Resource Management Act 1991	1
1.1.1	Introduction	1
1.1.2	Structure of this report	1
1.1.3	The Resource Management Act 1991 and monitoring	1
1.1.4	Evaluation of environmental and administrative performance	2
1.3	Process description	4
1.4	Resource consents	7
1.5	Monitoring programme	7
1.5.1	Introduction	7
1.5.2	Programme liaison and management	8
1.5.3	Site inspections	8
1.5.4	Chemical sampling	8
2	Results	10
2.1	Inspections	10
2.2	Results of discharge monitoring	12
2.2.1	Awai Stream - Hursthouse Road surface water results	12
2.2.2	Unnamed tributary of Waiongana Stream – Mountain Road surface water results	15
2.3	Incidents, investigations, and interventions	16
3	Discussion	17
3.1	Discussion of site performance	17
3.2	Environmental effects of exercise of consents	17
3.3	Evaluation of performance	18
3.4	Recommendations from the 2017-2018 Annual Report	23
3.5	Alterations to monitoring programmes for 2019-2020	23
3.6	Exercise of optional review of consent	24
4	Recommendations	25
	Glossary of common terms and abbreviations	26
	Bibliography and references	28
	Appendix I Resource consents held by Osflo Fertiliser Ltd	

List of tables

Table 1	Resource consents held by the Company	7
Table 2	Osflo (former site) surface water monitoring 2018-2019 period Awai Stream	14
Table 3	Surface water monitoring Mountain Road May 2019	16
Table 4	Summary of performance for consent 4333-3.0 (2018-2019)	18
Table 5	Summary of performance for consent 5918-2 (2018-2019)	19
Table 6	Summary of performance for consent 10578-1.0 (2018-2019)	20
Table 7	Summary of performance for consent 10579-1.0 (2018-2019)	20
Table 8	Summary of performance for consent 10580-1.0 (2018-2019)	21
Table 9	Evaluation of environmental performance over time	22

List of figures

Figure 1	Osflo Fertiliser Ltd (former) site on the Hursthouse Road	4
Figure 2	Osflo Fertiliser Ltd (current) site on Mountain Road	5
Figure 3	Osflo new site facility storage area 1319 Mountain Road	6
Figure 4	Aerial view of the former Osflo site on Hursthouse Road with sample locations denoted	13
Figure 5	Aerial view of New Osflo site with associated labelling	15

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 2018 to June 2019 by the Taranaki Regional Council (the Council) on the monitoring programme associated with resource consents held by Osflo Fertiliser Ltd (the Company). The Company operates a chicken litter storage and distribution facility which use to be situated on Hursthouse Road, Tarurutangi. This facility was decommissioned in this monitoring period, and a new purpose built facility, located 1319 Mountain Road, Inglewood in the Waiongana Catchment began operations (February 2019).

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 Awai (formerly) and Waiongana (current) catchment, and the air discharge permit held by the Company 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 25th annual report by the Council for the Company.

1.1.2 Structure of this report

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

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by the Company in the Waiongana 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 2019-2020 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' inasmuch as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the 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 significant 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 in response to unauthorised incident reports, 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 in response to unauthorised incident reports. 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 in response to unauthorised incident reports. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

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

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

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

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

For reference, in the 2018-2019 year, consent holders were found to achieve a high level of environmental performance and compliance for 83% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 13% of the consents, a good level of environmental performance and compliance was achieved.¹

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

1.3 Process description

The Company historically operated a storage, blending and distribution facility for agricultural fertiliser based on poultry litter at the site of the old Tarurutangi dairy factory on Hursthouse Road, near Lepperton (Figure 1).



Figure 1 Osflo Fertiliser Ltd (former) site on the Hursthouse Road

In this current monitoring period the Company withdrew from operations at the Hursthouse Road facility (Figure 1) and begun operations at their new purpose built facility, located at 1319 Mountain Road, Inglewood (Figure 2).

The poultry waste is collected from farms around the Taranaki region, and sold as a registered fertiliser which is spread on pasture. The depot was the administration center for collection and distribution of the used litter, with the majority of the product being taken directly from the poultry farm to the general farming customer. Some blending in of additional ingredients occurred at the depot. A total of 17 persons are employed in the operation, utilising seven trucks.

Litter is stored at the depot when conditions are unsuitable for spreading on land, and to accumulate a reserve for periods of peak demand. Additives, such as lime, sulphur, chelated cobalt, and or selenium may be blended into the litter according to customer requirements, and are stored in a separate building.

Up to about 35,000 tonnes per annum of litter is generated on farms within the Inglewood/Okato/Waitara area, mostly near Lepperton and Bell Block. This amount is forecast to increase owing to expansion of the poultry industry. The amount stored at the depot ranges from about 100 to 3,000 tonnes. Peak seasonal activity is in spring, for cropping, and in autumn, for dairy farming.

The now former Hursthouse Road depot was on an area of about one hectare in the bottom of a valley, bounded on the north and west by the Awai Stream, on the east by Hursthouse Road, and on the south by a fence and tree shelter belt. The site is surrounded by farm grazing land, with four dwellings nearby beyond the site boundary, one 100 metres to the east, two within 300 metres to the southeast, and a new dwelling 250 metres to the south on a hill. The predominant winds in the area are westerly and south-easterly.

The current Mountain Road depot is a purpose built facility, the active site land area is just over three hectares. However the overall site area is much larger at 46 hectares. The site is located within its own valley in close proximity to an unnamed tributary of the Waiongana Stream. It is situated on the eastern side of Mountain Road. The site is surrounded by grazing farm land. The nearest neighbour is located some 400 meters to the west of the facility. The predominant wind direction is from the south east and the lesser from the south west.



Figure 2 Osflo Fertiliser Ltd (current) site on Mountain Road

The litter comprises poultry manure and wood shavings. Upon storage the litter undergoes decomposition by microbial organisms, a natural process which generates gases and heat. The majority of the gas is carbon dioxide and methane, which are odourless. Some odorous gases, both organic (aldehydes, ketones, organic acids, amines and organic sulphur compounds) and inorganic (ammonia, nitrogen oxides and hydrogen sulphide), are produced. The rate of heat generation depends on the amount of moisture and oxygen available, and may lead to spontaneous combustion of the wood shavings and generation of smoke if not controlled.

Odour control

The former storage shed was designed so that the fugitive emissions of gas from the storage of poultry wastes would not escape the building. Emissions were extracted by a fan and forced through a biofilter. Biofilters decompose odorous compounds, using micro-organisms such as bacteria. The use of an extraction fan within the former facility had the added benefit of maintaining a slight negative pressure inside the building, which reduced the egress of untreated gaseous emissions. The ventilation rate was increased during loading out, when the door was left open to allow clearer viewing by operators in the dusty conditions. An odour-neutralising agent was pumped into the air from a manifold around the door while it was open.

The store remained closed and inoperative for about 30% of days in the year. Filling would take place for about 50% of days in a year, and emptying for 20%.

The new fully covered storage depot comprises two large, stockpiling areas. The fresh litter is deposited on one side of the storage area, where it is composted in this area with sawdust. Older more mature litter is stockpiled on the other side. In this area the more mature litter can be mixed with additional components as required, prior to being loaded for customers.

Odours at the facility are controlled with good air flow through the specially designed roof of the facility (Figure 3), this actively dries the material. A separate odour assessment of the project was undertaken by the consultant's Golder Associates to confirm this prior to the granting of the consents.



Figure 3 Osflo new site facility storage area 1319 Mountain Road

Wastewater/stormwater

Wastewater from the former site was made up of truck wash water containing ammonia sanitiser and water from the yard. Stormwater from the yard, was directed to a concrete settling pond, which was then overflowed into a series of soakage pits situated beside the Awai Stream. A screen was placed between the holding pond and the first soakage pit to prevent solids from entering the pit. A third soakage pit was excavated in November 2014.

Stormwater from other areas of the premises, soaked to ground or was directed to the second soakage pit.

Council compliance samples at the former site focussed on assessing the quality of the Awai Stream. The Awai Stream flows around the soakage area, and samples were collected upstream and downstream of where it could be potentially impacted.

In comparison, the wastewater from the new facility is strictly limited to the truck wash down area. This is a purpose built wash down bay which is partially enclosed to prevent spray drift. This wastewater from the bay is treated in a series of soakage ponds through discharge to land.

Clean stormwater from the roof of the storage facility and the associated workshop and office area is collected in onsite storage tanks and reused on site when required. Once these have been filled, the system discharges the remaining stormwater to land, via a cut stormwater channel, in extreme weather events this may discharge into an unnamed tributary of the Waiongana Stream. This discharge point, after a set mixing zone, is where the main surface water monitoring location at the new site is located.

1.4 Resource consents

The Company holds five resource consents and a certificate of compliance, 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 are included Appendix I, as are copies of all permits held by the Company during the period under review.

Table 1 Resource consents held by the Company

Consent number	Purpose	Granted	Review	Expires
<i>Air discharge permit</i>				
5918-2.0	To discharge emissions into the air from the storage and distribution of used poultry litter fertiliser. (Former site).	June 2015	June 2020	June 2032
10578-1.0	To discharge emissions to air from the storage, blending and distribution of fertiliser. (Current site).	August 2018	June 2020	June 2032
<i>Discharges of waste to land</i>				
4333-3.0	To discharge treated wastewater and stormwater from poultry litter storage yard washings into land via soakage, in circumstances where it may enter ground and surface water. (Former site).	June 2015	June 2020	June 2032
10579-1.0	To discharge washwater from truck wash facilities into land via soakage pits. (Current site).	August 2018	June 2020	June 2032
10580-1.0	To discharge stormwater from a fertiliser storage facility and associated yard to land where it may enter an unnamed tributary of the Waiongana Stream. (Current site).	August 2018	June 2020	June 2032
<i>Certificate of compliance</i>				
7463-0	To spread various organic and inorganic fertiliser onto and into land at various locations throughout the Taranaki region.	Transferred at Stratford January 2012		

1.5 Monitoring programme

1.5.1 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 site consisted of three primary components.

1.5.2 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;
- in 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.

1.5.3 Site inspections

The Osflo site on the Hursthouse Road was inspected on three occasions this monitoring period. The new facility on Mountain Road was visited on two occasions during the monitoring period. 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 identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

1.5.4 Chemical sampling

In relation to the now former facility at Hursthouse Road, the Council undertook sampling of the water quality upstream and downstream of the soakage pond and potential mixing zone on the Awai Stream on three separate occasions. The final round was not possible as the Company had moved site.

The water samples were analysed for the following:

- Bio-chemical oxygen demand
- Conductivity
- Dissolved reactive phosphorus
- E-coli
- Ammoniacal nitrogen
- pH
- Temperature
- Turbidity

Originally discharge samples were proposed. However, as the discharges soak into land through a soakage pond. To ascertain whether the soakage pond and/or the facility may or may not be adversely affecting the Awai Stream in this locality, surface water samples were collected from both up and down stream of the site soakage pond area.

In relation to the new facility, it was proposed to collect a sample of the stormwater discharge, however this appears to only discharge during periods of extreme rainfall. One surface monitoring round was undertaken. As per the discharge consent 10580-1.0, the surface water monitoring location is required some 25 meters downstream of the discharge. This location is monitored for the following parameters in surface water:

- Ammoniacal nitrogen
- Un-ionised ammonia
- Turbidity
- pH
- Temperature
- Dissolved carbonaceous bio-chemical oxygen demand
- E-coli
- Conductivity

2 Results

2.1 Inspections

19 September 2018 (Old site)

An inspection was undertaken of the Osflo facility at 70 Hursthouse Road. An odour survey was undertaken on arrival. The weather at the time was fine, with five eighths cloud cover and light south-east wind of 5 knots. Normal country side odours were observed at the time. The wind direction meant that the downwind trajectory would be across the paddocks, where there are no perceived receptors. The site manager met with the officer on arrival and accompanied the officer for the duration of the site visit. The ambient level of odour on site was low to barely noticeable by the site office.

At the time the facility was in the process of loading up material for a customer, as such the odour in the mixing and blending area was defined as noticeable, though not objectionable. Some surficial material was present on the floor of the blending pad, however this is not uncommon during loading operations, and is swept up by site staff after loading operations cease for a period.

The soakage ponds were observed and the site manager remarked that the initial pond had been recently de-sludged. The second and third ponds are also planned to be de-sludged. However, recent extreme weather had brought down a tree which had partially blocked some of the area and lay half across the Awai Stream. The staff were intending to remove the tree, however due to the wet nature of the surrounding paddocks this had not been possible. The operation would require a crane or long reach digger which would likely be bogged during the operation in the current conditions. As such it was proposed to be undertaken when ground conditions firm up in the coming weeks.

The biofilter was then observed and normal barky odours were noticed, as is common for this device. The rear of the stores were viewed and recently this storage area had been reorganised. Some sawdust stored in this location had been moved. It was discussed that some additional management may be required in this area to make sure that no sawdust were to blow into the Awai Stream and the site manager committed to look into it.

The storage shed was then observed. The doors were open as loading operations were just finishing and material was about to be loaded back into the storage shed, post the yard and mixing pad being scrapped down by a front end loader. The storage shed was about three quarters full. The site manager remarked that they will look to continue loading out from this shed until they had emptied the whole thing, with no plans at present to further stock this shed. The plan will be to begin stockpiling at the new facility in the next few months when site construction has finalised. The mineral storage areas were then observed and found to be well maintained. The normal stream samples of the Awai Stream were then collected, analysis pending. At the time of inspection the facility was operating within its consent conditions. At present Osflo remain on course to move all mixing and blending of material inside by the 1 June 2019.

15 January 2019 (Old site)

An inspection was undertaken of the Osflo chicken litter storage and blending facility located at 70 Hursthouse Road. At the time of the inspection the weather was overcast, seven eighth cloud cover with a strong southerly breeze, rain had fallen the previous day. An odour survey was undertaken downwind from the facility. Typical Osflo type odours of dry chicken litter were noticeable, though not objectionable. This was in a narrow band from the facility and considering the wind direction, no receptors were likely to be affected by these light noticeable odours. No upwind survey was undertaken as there was no access from the southern side of the site. The site manager met and escorted the officer for the duration of the inspection. Previous, compliant surface water samples from the 19 September 2018 were discussed. The site was then inspected. The fuel storage areas were observed and found to be in good order. Some light

tracking of chicken litter on the floor was noted in this area, possibly a process of windblown or tracked by truck upon exiting the facility. The main blending area was then observed and found to be well managed with good housekeeping prevalent. The mixing pad was clean and the washings were being directed to the first soakage pond. The level of the pond was high, indicating that a cleanout operation would be required in the coming weeks.

The biofilter was then observed and found to be functioning as normal, light bark odours were noticeable which is standard for the operation of this device. The storage room was observed and the doors were closed as is normal procedure when the facility is not loading or blending. The storage room was full, though negative pressure was observed upon opening the storage room door. The mineral stalls were observed and found to be well managed with material contained within the stalls. Some light ponding was noted in the truck lay down area, however this was a result of the preceding day's rainfall. The wall of cedar trees were found to be growing well on the laydown area wall.

Overall, the level of ambient odour was low on site. At the time of the inspection the facility was operating within its consent conditions, however, surface water sample results will need to be analysed to detail the level of compliance. The site manager was confident that all operational blending, loading and unloading exercises will be undertaken indoors by the due date of 1 June 2019, albeit at the new proposed facility. This was a requirement for the current consents.

16 April 2019 (Old site)

A final inspection was undertaken of the former Osflo facility, located at 70 Hursthouse Road. Osflo have now officially begun operating from their new purpose built facility, at 1319 Mountain Road. All material and operations have shifted to the new site, which has been operational since 20 February 2019. The inspection, which was the third inspection for the 2018-2019 monitoring period, at the Hursthouse Road site, was undertaken with the Osflo Manager.

The site was observed to be relatively clear of material. The site office had been vacated and removed from the site. The electrics had been setup up for the incoming site owners whom have taken ownership of the site. The fueling station, where the diesel bowser was located had been removed. The mixing yard was relatively clear of surficial material, and the wash water/wastewater drain appeared relatively clear of material. The soakage ponds had been filled in and the scrap metal at the rear of the building had been removed.

The biofilter and associated venting, including the filter pump were still attached to the building. The main storage room doors were found open, which would have been a non-compliance had the facility been actively storing material, however the inside was completely empty of chicken litter material. Some surficial material was observed attached to the walls. The mineral bins were observed and also found suitably cleaned of material.

The level of odour was found to be noticeable, however not objectionable within the storage room. The laydown area was observed to be clear of material, with the only remaining material found to be a front end loader and an associated bucket. These will be removed in due course. The Awai was in low to medium flow, clear, with little turbidity. One large eel was observed. No surface water samples were collected as operations have ceased at this location.

16 April 2019 (New site)

A notification was provided to the Council by the consent holder to advise that the new site had become operational on 20 February 2019 and to activate the consents 10579-1.0 (discharge wastewater to land via soakage) and 10578-1.0 (air discharge).

No notification was received with respect to the 10580-1.0 (discharge of stormwater) presently. A site inspection was undertaken at the new Osflo facility located at 1319 Mountain Road, Inglewood. This marked

the first inspection of the new facility which became operational on the 20 February 2019. This consent (10580-1.0) requires a Contingency Plan and an associated Management Plan to be provided. Consent 10578-1.0 also requires an Odour Risk Management Plan to be developed for the site. These plans are currently under development and will be provided in due course, once finalised. The site inspection was undertaken with the Osflo site manager.

The main storage areas were observed. Two large covered areas are utilised by the consent holder for storing chicken litter. On the eastern side, fresher chicken litter is brought into the site for storage. The western side holds more mature chicken litter, which is where this material is blended (if required) and loaded into trucks, which are then covered. Mineral bins are situated on the eastern side of the storage areas and these appeared to be dry with minimal material tracking across the dry storage room floor. In the central portions between both large areas, storage shelves are planned to be constructed. The whole process of unloading, loading, mixing and blending is undertaken under a covered roof, which keeps the whole operation dry. The degree of odour in this locality was described as noticeable, however, not objectionable or offensive.

At the time of inspection construction was not fully completed for the site. Proposed was a north facing wall, which was scheduled for construction. This wall will limit the amount of through flow wind, and as a result will limit the potential for dust and fine particulates from re-suspending and egressing from the storage areas. The wall will also suppress any dust which may be mobilised as part of vehicle movements.

The fuel storage system was observed, the tank is held within a bunded system, should the system leak it will be held within the bowser. The ring drains and the associated truck wash down area was also observed. The wash down area had recently been enclosed, to prevent wash water from egressing away from the drainage sump. The drainage sump is to be regularly cleaned out to prevent solids from entering the land soakage ponds. The soakage ponds are located just past the workshop, to the North, and is comprised of three soakage ponds to allow truck washing water to soak to land. This is the only wastewater discharge on site.

The associated clean stormwater system, which captures rainwater from the roof of the main storage area, transfers the stormwater to two large holding tanks, which when full, will overflow into the stormwater channel and eventuate in the unnamed tributary of the Waiongana Stream. The unnamed tributary of the Waiongana Stream was observed and found to be in low flow and very clear. Some iron oxide was observed. Two new monitoring locations will be established at this location as required by consent 10580-1.0. This consent requires analysis of the discharge to the unnamed tributary of the Waiongana Stream as well as at a newly proposed monitoring location some 25 downstream of the discharge location. It was noted that there was no discharge occurring at the time of the inspection, actual discharge samples will likely be weather dependent. The facility will be fully operational once the north facing wall has been constructed. This is scheduled to occur in the next month and will be reported in subsequent inspections. At the time of the inspection the facility was operating within its consent conditions, pending the plans, as required by the consents.

2.2 Results of discharge monitoring

2.2.1 Awai Stream - Hursthouse Road surface water results

This period marked the third year of site specific water quality monitoring programme with respect to the Awai Stream which flows around the (former) Osflo facility; clockwise from the south and passing the facility to the north east (Figure 4). The main aim of the stream monitoring was to ascertain if the exercise of this consent resulted in any surface water effects.

Washings from the yard and from the cleaning of the trucks were directed to the first soakage pond, which then goose necked through to a second and third pond when required.

Sample locations AWY000223 and AWY000226 were set up as monitoring locations on the Awai Stream (Figure 4). AWY000223 is the upstream location, to determine the quality of the preceding stream conditions, whilst AWY000226 is the downstream location which will assess for any potential additional inputs to the stream as it flows around the Osflo facility.

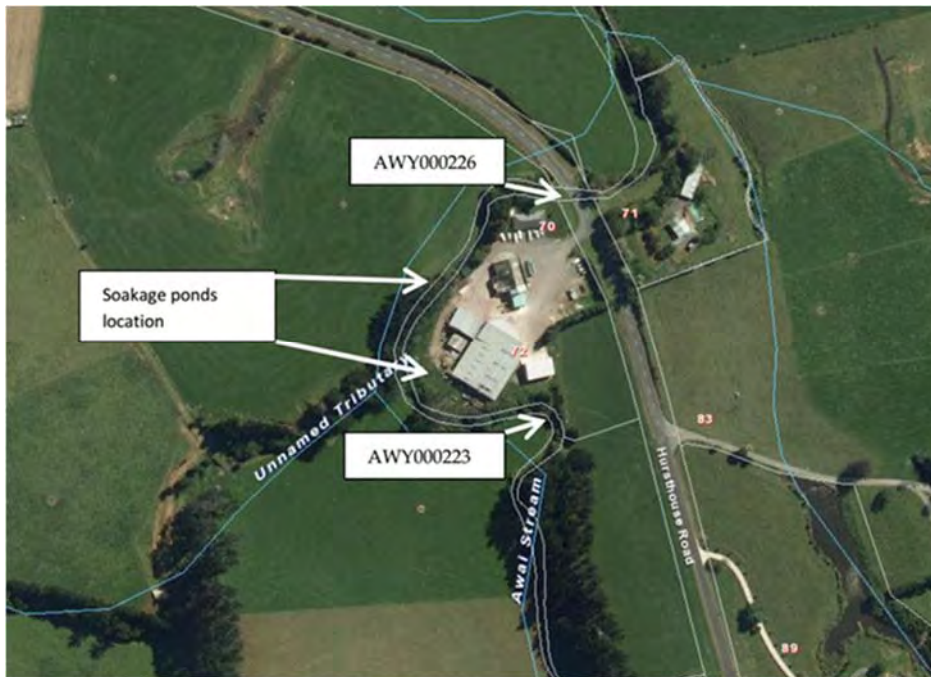


Figure 4 Aerial view of the former Osflo site on Hursthouse Road with sample locations denoted

In this monitoring period the Council undertook three rounds of surface water monitoring. The fourth planned round was not undertaken as the Company had moved site locations to a new facility on Mountain Road. As such, the fourth planned monitoring round was undertaken at the new facility, which is discussed in the following section.

Condition 2 of consent 4333-3 relates to the former site, it requires that the downstream sample location (AWY000226) to meet specific criteria in terms of un-ionised ammonia and filtered carbonaceous biological oxygen deficit.

The maximum concentration post the discharge (in this specific case, post the soakage ponds) and mixing zone is limited at 0.025 g/m^3 un-ionised ammonia (NH_3) and 2.0 g/m^3 filtered carbonaceous biological oxygen deficit (FCBOD).

Surface water results – Former facility Hursthouse Road Awai Stream

The resultant analysis indicated that the facility was operating within its consent conditions with respect to the impacts observed in the surface water in the three monitoring rounds undertaken this period. The second monitoring round however, 15 January 2019, identified elevated e-coli in surface water, both upstream and downstream of the facility.

A follow up survey was undertaken on the 18 February 2019, and while the resultant analysis indicated a slight elevation when compared to previous sample results, the upstream site was more elevated than the downstream site. This indicated the elevation was coming from above the facility and not linked to the facility. The February 2019 sample was also conducted in duplicate at the downstream site. The results are presented in Table 2.

Of note, total ammoniacal nitrogen indicated an increase, though minimal, between the two sites across all three monitoring rounds, however the largest increase was minimal ($<0.010 - 0.049 \text{ g/m}^3$).

Table 2 Osflo (former site) surface water monitoring 2018-2019 period Awai Stream

Osflo Hursthouse Road	Awai Stream surface water samples	Parameters	Dissolved C-Biochemical Oxygen Demand (CBOD5)	Dissolved Reactive Phosphorus	Electrical Conductivity (EC)	Escherichia coli	Free Ammonia as N	pH	Sample Temp	Total Ammoniacal-N	Turbidity
Site	Collected	Time	g O2/m ³	g/m ³	mS/m	cfu / 100mL	g/m ³	pH Units	°C	g/m ³	NTU
Surface water 1											
AWY000223 (u/s)	19 Sep 2018	14:22	< 1.0	0.049	12.6	350	0.00014	7.3	15	0.025	1.5
AWY000226 (d/s)	19 Sep 2018	14:15	< 1.0	0.015	12.8	530	0.00029	7.4	14.8	0.046	1.38
Surface water 2											
AWY000223 (u/s)	15 Jan 2019	10:33	< 1.0	0.005	13.7	7,000	0.00019	7.4	15.8	0.027	3.6
AWY000226 (d/s)	15 Jan 2019	10:15	< 1.0	0.006	13.8	11,000	0.00059	7.5	15.9	0.061	3
Surface water 3											
AWY000223 (u/s)	18 Feb 2019	10:20	< 1.0	< 0.004	14.7	6,400	< 0.00009	7.5	16.3	< 0.010	1.57
AWY000226 (d/s)	18 Feb 2019	10:35	< 1.0	< 0.004	14.8	1,700	0.00052	7.6	16.3	0.049	1.5
AWY000226 (d/s)	18 Feb 2019	10:35	<1.0	<0.004	14.8	1,800	0.00056	7.6	16.3	0.044	1.56

2.2.2 Unnamed tributary of Waiongana Stream – Mountain Road surface water results

One surface water monitoring round was undertaken at the new company facility located on Mountain Road. This marked the inception of surface water monitoring at the new company facility. As previously discussed, the facilities' only discharge to surface water is stormwater which is composed of the roof surfaces only at the facility. The only wastewater discharge is through ground soakage as defined in the following Figure 5.



Figure 5 Aerial view of New Osflo site with associated labelling

The discharge of stormwater is a consented activity and this discharge must meet condition 3 of consent 10580-1.0 which stipulates that the quality of the discharge must meet the following standards:

- pH within the range of 6.0-9.0
- Total recoverable oil and grease no greater than 15 g/m³.
- Carbonaceous biochemical oxygen demand greater than 10 g/m³.
- Dissolved reactive phosphorous no greater than 5 g/m³.
- Suspended solids no greater than 100 g/m³.
- Ammoniacal nitrogen no greater than 5 g/m³.

Further to condition 3, post the discharge and a mixing zone of 25 meters within the Waiongana Stream is condition 4. This details the following effects which should not occur as process of the discharge on the receiving waters.

- the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- any conspicuous change in the colour or visual clarity;
- any emission of objectionable odour;
- the rendering of fresh water unsuitable for consumption by farm animals;
- any significant adverse effects on aquatic life;

- a rise in dissolved carbonaceous biochemical oxygen of greater than 2.0 g/m³; and
- un-ionised ammonia exceeding 0.025 g/m³.

The below Table 3 details the results of the singular sample collected at sampling location WGA000210. This sample was collected in duplicate, as is normal procedure when collecting samples from a location for the first time. The results, when compared to consent 10580-1.0, condition 4, detail no exceedance with respect to dissolved carbonaceous biochemical oxygen demand (DcBOD) or un-ionised ammonia (free ammonia). Good agreement was also observed between both samples.

Table 3 Surface water monitoring Mountain Road May 2019

Osflo Mountain Road	Trib of the Waingona Stream	Parameters	Dissolved C-Biochemical Oxygen Demand (CBOD5)	Electrical Conductivity (EC)	E-Coli	Free Ammonia	pH	Sample Temp	Total Ammoniacal-N	Turbidity
Site	Collected	Time	g O ₂ /m ³	mS/m	MPN/100mL	g/m ³ at Client Temperature	pH Units	°C	g/m ³	NTU
WGA000210	28 May 2019	11:00	< 1.0	11.3	172	0.00032	6.8	13.8	0.159	2.7
WGA000210	28 May 2019	11:00	< 1.0	11.4	214	0.00022	6.7	13.8	0.157	2.6

2.3 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).

In the 2018-2019 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

3 Discussion

3.1 Discussion of site performance

Old site – Hursthouse Road

The main performance item this period was the closure of the old Hursthouse Road facility. For background the Company was under a consented obligation to move all mixing and blending of material from outside of the facility to inside by 1 June 2019. This was achieved. The former site had been vacated by February 2019, the site office had been removed and the land slightly contoured. The mineral bins had been cleaned out and in the case of the soakage ponds, filled in. The site has since been sold. The associated consents held in respect to this facility will be surrendered in the upcoming monitoring period.

New site – Mountain Road

In relation to the new facility, the Company purchased and developed an area of land in close proximity to the Mountain Road, North of Inglewood. The new site was purpose built for the Company's requirements. This also included the ability for all operations to be undertaken under cover in dry sealed areas.

The Company defines that dry, composted chicken litter contains limited odour, opposed to fresh, wet chicken litter. Thus the new facility for comparison to the old facility, is not fitted with a biofilter, as such it relies on natural ventilation. The facility is also located further away from potential receptors ($\geq 400\text{m}$) when compared to the old facility ($\geq 60\text{m}$).

At the end of this monitoring period the facility was close to finalising the final construction activities. This included a new North facing wall, which will full enclose the facility storage / loading area and tarmac in the parking area in close proximity to the site office.

3.2 Environmental effects of exercise of consents

Old site – Hursthouse Road

Minimal environmental effects were noted as a process of the exercise of the consents at the former company site on Hursthouse Road this monitoring period. One surface water monitoring round did require an additional follow up as both the upstream (above the site) and downstream sites indicated significantly elevated e-coli. The follow up sample result indicated that the likely cause of the original elevation of the e-coli was from further upstream and not strictly associated with the company site.

The initial elevated reading was collected post heavy rainfall, as such run off from dairy farming and surface water discharge of dairy shed effluent was the most likely cause of the elevated e-coli levels within the Awai Stream.

No complaints were received by the Council this period with respect to impacts to air from the former facility. The final inspection observed the site office location to have been removed, with the associated electrical box constructed for the future owners. On observation of the Awai Stream, one large eel was cited.

New site – Mountain Road

The new facility located on Mountain Road, as previously discussed, was purpose built for the Company. This is a direct learning from the companies experience in undertaking their process within the Taranaki Region. Odour assessment of the facility identified noticeable odour when stood inside the storage shed, in close vicinity to composting dry chicken litter. This odour quickly relented once outside of the main storage area. It is also noteworthy to mention that at the time of the assessment the north facing door was not constructed.

It is proposed that the facility will have minimal odour impacts. Prior to the granting of the new consents and specifically the air consent, the company were requested to have an assessment undertaken by an independent third party, suitably qualified consultant, which allowed for confidence in the proposed site developments. This included the assessment of predominant wind directions (south-east and west). The south-east wind direction was not likely to impact the nearest receptors which are within a 700 meter radius of the site. Despite this, the company has planted out vegetation on the west facing ridge, which is the direction of their nearest neighbour some 400 m to the west. Their aim is to develop a vegetative environmental buffer (VEB).

Surface water samples were collected in duplicate at the newly established surface water monitoring location, they did not indicate anything of an adverse nature. The associated stormwater discharge is only likely to discharge in periods of intense rainfall, thus specific discharge samples will be rainfall dependent. The main wastewater discharge is through land soakage, thus impacts to surface water are unlikely, however monitoring will recommence in the upcoming monitoring period 2019-2020. The northern facing wall will be completed by this time. The facility also collects rainwater for site processes such as truck wash down.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 4-8.

Table 4 Summary of performance for consent 4333-3.0 (2018-2019)

Purpose: To discharge treated wastewater and stormwater from poultry litter storage yard washings into land via soakage, in circumstances where it may enter ground and surface water		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Site inspection and surface water monitoring.	Yes
2. Limits on ammonia and BOD in Awai Stream	Sampling and testing of stream as necessary by Council staff, before 1 June 2019.	Yes
3. Limits on potential contaminants in discharge	No direct discharge.	Yes
4. No direct discharge into the stream	Site closed, no direct discharge.	Yes
5. Control of ponding	Site closed. No ponding noted during inspections	N/A
6. Even application of effluent	Site closed.	N/A
7. Provision for effluent storage	Site closed.	N/A
8. Completion of site works	Site closed.	N/A
9. Works to be as proposed	Site closed.	N/A
10. Provision of updated stormwater and wastewater plan	Not required as site now closed.	Yes
11. Limit on washdown catchment area	Not required as site now closed.	N/A
12. Treat prior to stormwater discharge	Not required as site now closed.	N/A

Purpose: To discharge treated wastewater and stormwater from poultry litter storage yard washings into land via soakage, in circumstances where it may enter ground and surface water		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
13. Maintenance of and adherence to a spill contingency plan	Not required as site closed and operations moved to Mountain Road.	N/A
14. Maintenance of and adherence to a Management Plan	Not required as site closed and operations moved to Mountain Road.	N/A
15. Written notification of changes	Site inspection indicated the site has been closed and the land sold. This had been communicated to the Council throughout the monitoring period.	N/A
16. Optional review provision re environmental effects	N/A.	N/A
Overall assessment of consent compliance and environmental performance in respect of the consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 5 Summary of performance for consent 5918-2 (2018-2019)

Purpose: To discharge emissions into the air from the storage and distribution of used poultry litter fertiliser		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspections and odour surveys	Yes
2. Containment of odorous material and treatment of emissions	Site inspection indicated that the site had closed and moved operations to Mountain Road	N/A
3. No objectionable odour beyond boundary	Inspections	No
4. Written notification of changes	Communicated that	Yes
5. Door to store kept closed	Site inspection.	Yes
6. Dust control	Not assessed this period	N/A
7. Maintenance of and adherence to a Management Plan	Odour management plan received and put to effect when site in operation. Site now closed and sold.	Yes
8. Optional review provision re environmental effects	Not required	N/A
Overall assessment of consent compliance and environmental performance in respect of the consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 6 Summary of performance for consent 10578-1.0 (2018-2019)

Purpose: To discharge emissions to air from the storage, blending and distribution of fertiliser		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Display best practicable option to minimise adverse effects on the environment	Inspections.	These indicated that the final construction of a north facing wall was to be undertaken by consent holder. Site practices developing at new site. Yes.
2. The discharges authorised by this consent shall not give rise to any odour that is offensive or objectionable at or beyond the boundary of the site	Inspections and odour surveys.	Yes
3. The consent holder shall advise the Chief Executive, Taranaki Regional Council, prior to making any change in the processes undertaken at the site, which could alter the nature of the discharge	Inspections of treatment system and discharge point.	N/A
4. The site shall be operated in accordance with an 'Odour Management Plan' (OMP).	Provided.	Receipt of draft received 07 June 2019 and revised 08 July 2019 Yes
5. Optional review provision re environmental effects	Not scheduled for consideration during year under review. Next consideration June 2014	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 7 Summary of performance for consent 10579-1.0 (2018-2019)

Purpose: To discharge washwater from truck wash facilities into land via soakage		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The exercise of this consent shall be undertaken in general accordance with the information provided in support of the application for this consent.	Inspections	Yes

Purpose: To discharge washwater from truck wash facilities into land via soakage		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
2. The consent holder shall at all times adopt the best practicable option.	Inspections	Yes
3. This consent shall lapse on 30 September 2023, unless the consent is given effect to before the end of that period.	Effect given	Yes
4. 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 8 Summary of performance for consent 10580-1.0 (2018-2019)

Purpose: To discharge stormwater from a fertiliser storage facility and associated yard to land where it may enter an unnamed tributary of the Waiongana Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder shall at all times adopt the best practicable option.	Inspections.	Yes
2. The stormwater discharged shall only be from the area shown on the plan attached as 'Appendix 2'.	Inspections.	Yes
3. Constituents of any discharges to the unnamed tributary of the Waiongana Stream that arise as a result of the exercise of this consent shall meet the standards: <ul style="list-style-type: none"> - pH (6-9) - Oil and grease (<15 g/m³) - CBOD (10 g/m³) - DRP (5 g/m³) - Suspended solids (100 g/m³) - Ammoniacal nitrogen (5 g/m³) 	Sampling of discharge when possible.	No discharge occurring during singular sampling round. N/A
4. The discharge post a 25 meters mixing zone shall not cause the following effects in surface water	Inspection and sampling.	Yes

Purpose: To discharge stormwater from a fertiliser storage facility and associated yard to land where it may enter an unnamed tributary of the Waiongana Stream		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
5. Within 3 months of the consent being granted the consent holder shall submit and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent.		Plan under development with site management, this has been communicated to the Council. N/A
6. Within 3 months of the consent being granted the site shall be operated in accordance with a 'Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.		Plan under development with site management, this has been communicated to the Council. N/A
7. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge.	Council notifications	N/A
8. Optional review of consent	No review sought by Council	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 9 Evaluation of environmental performance over time

Year	Consent no	High	Good	Improvement req	Poor
2004-2005	4333-2	-	1	-	-
	5918-1	-	1	-	-
2005-2006	4333-2	-	1	-	-
	5918-1	-	1	-	-
2006-2007	4333-2	-	1	-	-

Year	Consent no	High	Good	Improvement req	Poor
	5918-1	-	1	-	-
2007-2008	4333-2	1	-	-	-
	5918-1	1	-	-	-
2008-2009	4333-2	1	-	-	-
	5918-1	1	-	-	-
2009-2010	4333-2	1	-	-	-
	5918-1	1	-	-	-
2010-2013	4333-2	1	-	-	-
	5918-1	-	1	-	-
2013-2015	4333-2/3	1	-	-	-
	5918-1	-	-	-	1
2015-2016	4333-3	1	-	-	-
	5918-2	-	1	-	-
2016-2017	4333-3	1	-	-	-
	5918-2	-	1	-	-
2017-2018	4333-3	1	-	-	-
	5918-2	-	-	1	-
Totals		11	9	1	1

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

3.4 Recommendations from the 2017-2018 Annual Report

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

1. THAT in the first instance, monitoring of consented activities at the Osflo fertiliser facility in the 2018-2019 year continue at the same level as in 2017-2018. Undertaken.
2. THAT should there be issues with environmental or administrative performance in 2018-2019, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary. Not required.

3.5 Alterations to monitoring programmes for 2019-2020

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

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

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

It is proposed that for 2019-2020 the monitoring programme instigated for the new Company facility be put to effect.

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

3.6 Exercise of optional review of consent

Resource consents 10578-1.0, 10579-1.0 and 10580-1.0 provide for an optional review of the consent in June 2020. Conditions' 4, 8 and 5 respectively allow the Council to review the consents, if there are grounds that require a review.

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 in the first instance, monitoring of consented activities at Company facility on the Mountain Road in the 2019-2020 year continue at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.
3. THAT the option for a review of resource consent 10578-1.0 in June 2020, as set out in condition 5 of the consent, not be exercised, on the grounds that they are fit for purpose.
4. THAT the option for a review of resource consent 10579-1.0 in June 2020, as set out in condition 4 of the consent, not be exercised, on the grounds that they are fit for purpose.
5. THAT the option for a review of resource consent 10580-1.0 in June 2020, as set out in condition 8 of the consent, not be exercised, on the grounds that they are fit for purpose.

Glossary of common terms and abbreviations

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

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 20°C and expressed in mS/m.
Cu*	Copper.
Cumec	A volumetric measure of flow- 1 cubic metre per second (1 m ³ s ⁻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.
F	Fluoride.
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.
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.
MPN	Most Probable Number. A method used to estimate the concentration of viable microorganisms in a sample.
mS/m	Millisiemens per metre.
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	<i>Resource Management Act 1991</i> 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.

*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 Osflo Fertiliser Ltd

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

Consent number	Purpose	Granted	Review	Expires
<i>Air discharge permit</i>				
5918-2.0	To discharge emissions into the air from the storage and distribution of used poultry litter fertiliser. (Former site)	June 2015	June 2020	June 2032
10578-1.0	To discharge emissions to air from the storage, blending and distribution of fertiliser. (Current site).	August 2018	June 2020	June 2032
<i>Discharges of waste to land</i>				
4333-3.0	To discharge treated wastewater and stormwater from poultry litter storage yard washings into land via soakage, in circumstances where it may enter ground and surface water. (Former site)	June 2015	June 2020	June 2032
10579-1.0	To discharge washwater from truck wash facilities into land via soakage pits. (Current site)	August 2018	June 2020	June 2032
10580-1.0	To discharge stormwater from a fertiliser storage facility and associated yard to land where it may enter an unnamed tributary of the Waiongana Stream. (Current site)	August 2018	June 2020	June 2032
<i>Certificate of compliance</i>				
7463-0	To spread various organic and inorganic fertiliser onto and into land at various locations throughout the Taranaki region.	Transferred at Stratford January 2012		

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.

Certificate of compliance

A consent authority issues a certificate of compliance under section 139 of the Resource Management Act 1991 ("RMA") to confirm that an activity can be undertaken lawfully without a resource consent (i.e. as a permitted activity). In this case it is permitted under Rule 31 of the Regional Freshwater Plan (RFP).

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

Name of
Consent Holder: Osflo Fertiliser Limited
PO Box 761
New Plymouth 4340

Decision Date: 30 June 2015

Commencement Date: 30 June 2015

Conditions of Consent

Consent Granted: To discharge treated wastewater and stormwater from poultry litter storage yard washings into land via soakage, in circumstances where it may enter ground and surface water

Expiry Date: 01 June 2032

Review Date(s): June 2020, June 2026

Site Location: 70 Hursthouse Road, Tarurutangi

Legal Description: Lot 1 DP 4905 Lot 1 DP 8670 Blk VII Paritutu SD

Grid Reference (NZTM) 1702115E-5673767N

Catchment: Waiongana

Tributary: Mangaoraka
Awai

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

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

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

Discharge to water (Before 1 June 2019)

2. The wastewater discharge shall not cause the maximum concentration of any constituent shown in the following table to be exceeded in the receiving water more than 25 metres downstream of the discharge to the receiving water.

Constituent	Maximum Concentration
Unionised ammonia	0.025 gm ⁻³
Filtered carbonaceous BOD ₅	2.0 gm ⁻³

3. Constituents of the discharge shall meet the standards shown in the following table.

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

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

Discharge to land (After 1 June 2019)

4. There shall be no direct discharge wastewater to the Awai Stream after 1 June 2019.
5. Discharges to land shall not result in wastewater ponding on the surface that remains for more than 30 minutes.
6. The effluent shall be applied as evenly as practicable over an area of no less than 40 m².
7. The consent holder shall ensure that at all times, while complying with the other requirements of this consent, there is sufficient storage available in the effluent treatment system for any reasonably likely inflow, so that there is no unauthorised discharge to land or water.

Consent 4333-3.0

8. The consent holder shall complete the proposed site expansion by 1 June 2019, in accordance with the details submitted with the application and as shown in the plans prepared by BTW Company Limited and in Attachments 1 – 5.
9. The upgraded stormwater and wastewater treatment system shall be installed in accordance with the details provided as part of the additional information provided to the Council (Council Document Reference 1458593) prepared by BTW Company Limited.
10. Within a month of completion of the site expansion required in condition 8 above, the consent holder shall provide the as-built on-site stormwater and wastewater management plan to the Chief Executive, Taranaki Regional Council.
11. The treated washdown water discharged shall be from a catchment area not exceeding 250 m².
12. All stormwater shall be directed for treatment through the stormwater treatment system for discharge in accordance with the special conditions of this permit.
13. The consent holder shall maintain and regularly update a 'Spill Contingency Plan' (SCP) that details measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity.
14. The site shall be operated in accordance with a 'Management Plan' (MP) prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
15. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.

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

Consent 4333-3.0

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 2020 and/or June 2026, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 30 June 2015

For and on behalf of
Taranaki Regional Council



A D McLay
Director - Resource Management

Advice Note

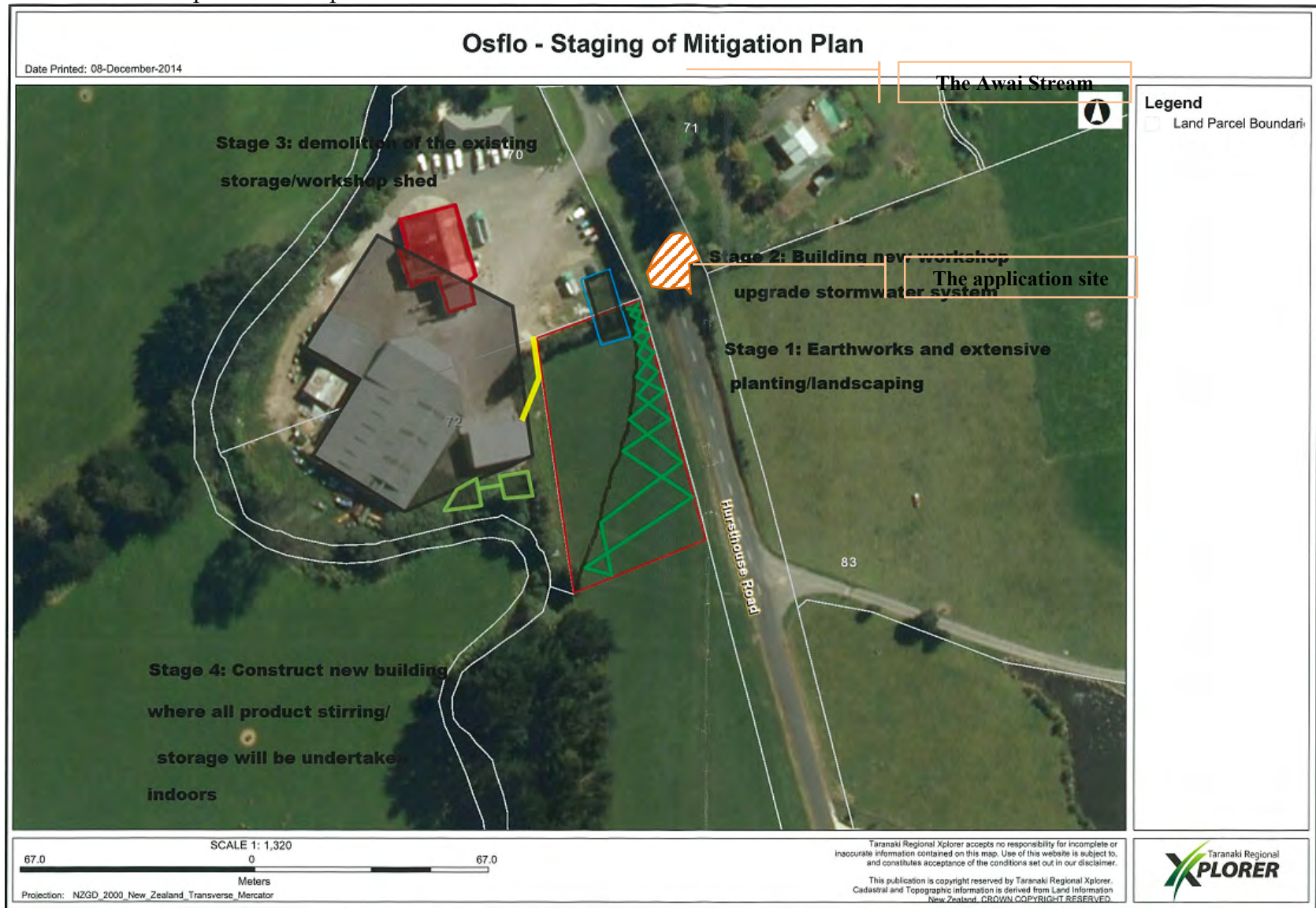
The consent holder's attention is drawn to MPI's "New Zealand Code of Practice for the Design and Operation of Farm Dairies (NZCP1) which restricts:

- *the discharge of specified wastes to land used for grazing of milking animals; and*
- *the use of feed from land which has had specified wastes applied to it.*

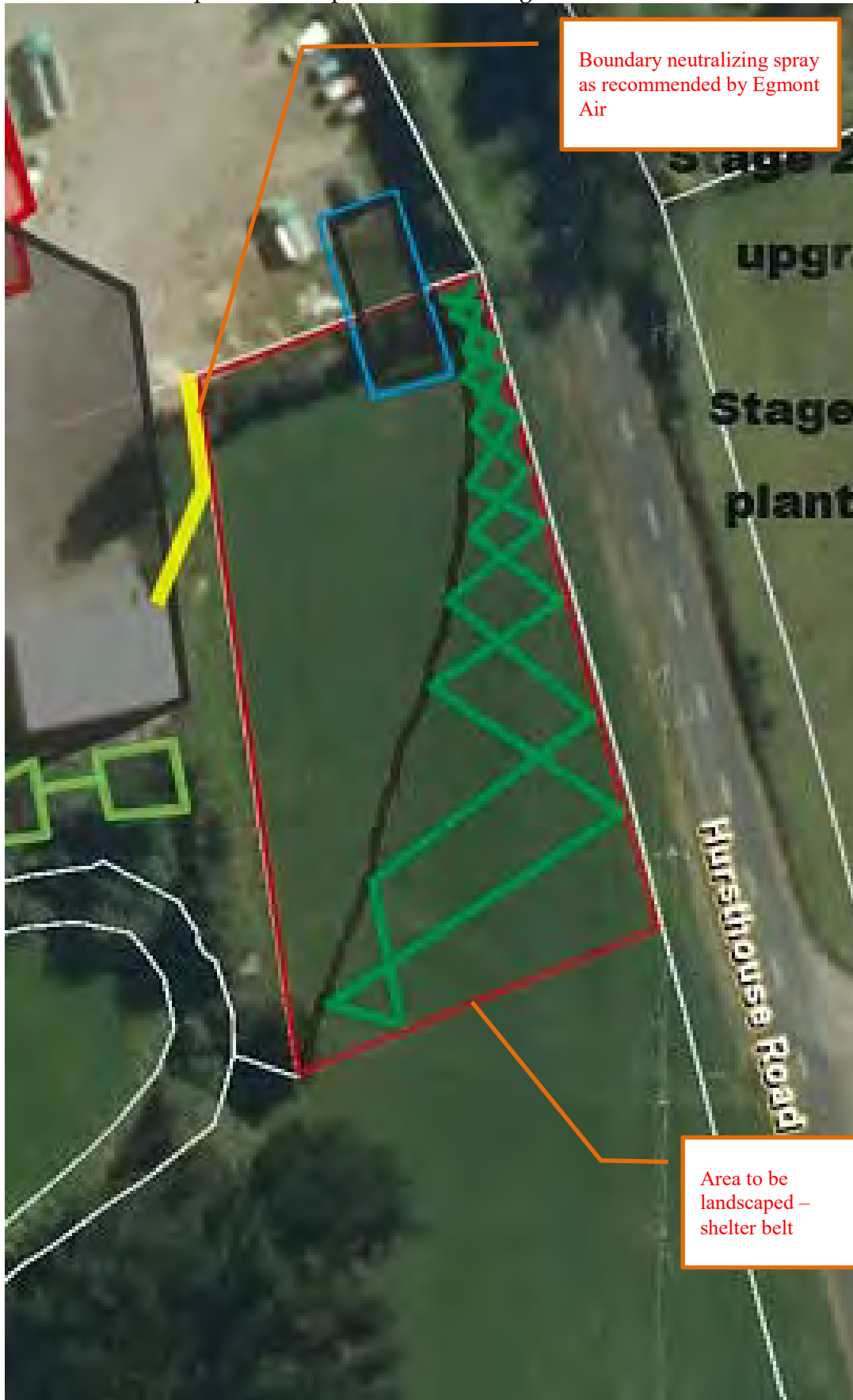
Should you require further information, please contact a Dairy Industry Technical Advisory Group (DITAG) representative or visit <http://www.foodsafety.govt.nz/elibrary/industry/dairy-nzcp1-design-code-of-practice/amdt-2.pdf> (specifically section 6.4 Disposal of effluent and other wastes and section 7.8 Purchased Stock Food) or contact an operating dairy processing company regarding conditions of supply.

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

Attachment 1: Proposed Site Expansion Plan - Overall Plan



Attachment 2: Proposed Site Expansion Plan – Stage 1



Attachment 3: Proposed Site Expansion Plan – Stage 2



Attachment 4: Proposed Odour Mitigation Plan – Stage 3



Attachment 5: Proposed stormwater / wastewater plan



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

Name of
Consent Holder: Osflo Fertiliser Limited
PO Box 761
New Plymouth 4340

Decision Date: 30 June 2015

Commencement Date: 30 June 2015

Conditions of Consent

Consent Granted: To discharge emissions into the air from the storage and distribution of used poultry litter fertiliser

Expiry Date: 01 June 2032

Review Date(s): June 2020, June 2026

Site Location: 70 Hursthouse Road, Tarurutangi

Legal Description: Lot 1 DP 4905 Lot 1 DP 8670 Blk VII Paritutu SD

Grid Reference (NZTM) 1702071E-5673797N

*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 (as defined in section 2 of the Resource Management Act 1991) to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants into the air from the site.
2. After 1 June 2019, all potentially odorous material shall be contained to prevent the escape of odour directly to air, and any emissions from the material shall first be treated in a bio-filter being discharged to air.
3. The discharges authorised by this consent shall not give rise to any odour that is offensive or objectionable at or beyond the boundary of the site.
4. The consent holder shall advise the Chief Executive, Taranaki Regional Council, prior to making any change in the processes undertaken at the site, which could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
5. The door of the storage facility where stockpiling of poultry litter is to be carried out shall remain closed at all times, except during entry or exit of trucks and personnel.
6. The discharge of particulate matter from any duct, vent or other emission source shall not exceed 125 milligrams of particulate matter per cubic metre of air corrected to 0 degrees Celsius, 101.3 kPa (kilopascals), on a dry gas basis.
7. The site shall be operated in accordance with an updated ‘ Odour Management Plan’ (OMP) prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity, no later than three months after the granting of this consent. The plan shall demonstrate the ability to comply with consent conditions and shall address the following matters:
 - a) minimising use of the storage facility;
 - b) operation and maintenance procedures;
 - c) prevention of off-site odour emissions;
 - d) staff training;
 - e) records of product storage and transfer; and
 - f) contingency procedures.

Consent 5918-2.0

8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2020 and/or June 2026, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 30 June 2015

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Certificate of Compliance

**Pursuant to section 139 of the Resource Management Act 1991
a certificate of compliance is hereby issued by the
Taranaki Regional Council**

Name of certificate holder	Osflo Spreading Industries Limited P O Box 761 New Plymouth
Site location	Various locations throughout the Taranaki region [legal description: Various locations throughout the Taranaki region]
Proposal/Activity	To spread organic and inorganic fertiliser onto and into land at various locations throughout the Taranaki region
Certification	<p>The Taranaki Regional Council hereby certifies that:</p> <p>the discharge of fertiliser onto and into land as outlined within the documentation supplied in support of the application is a permitted activity under Rule 31 of the RFWP at the date of receipt of the application for this certificate provided that it complies with and continues to comply with the following conditions:</p> <ul style="list-style-type: none">• <i>Fertiliser is approved for use under section 5 of the Fertilisers Act 1960 or under the Agricultural Compounds and Veterinary Medicines Act 1997;</i>• <i>Discharger shall at all times adopt the best practicable option to prevent or minimise any adverse effects of fertiliser drift beyond the boundary of the target property or on other non-target areas within the boundary of the property;</i>

- *If discharge is by any other method than aerial application, discharge shall not occur directly on or above a river, lake, wetland or other surface water body, including any drain which is discharging to a surface water body; or*
- *If discharge is by aerial application, fertiliser shall be applied in a manner which does not cause or is not likely to cause an adverse effect from deposition into a river, lake, wetland or other surface water body, including any drain which discharges to a surface water body.*

Any discharge which causes any of the above conditions to be breached is not permitted and may be the subject of enforcement action.

Signed at Stratford on 26 March 2009

For and on behalf of
Taranaki Regional Council

Director—Resource Management

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

Name of
Consent Holder: Osflo Fertiliser Limited
 PO Box 761
 New Plymouth 4340

Decision Date: 17 August 2018

Commencement Date: 17 August 2018

Conditions of Consent

Consent Granted: To discharge emissions to air from the storage, blending and
 distribution of fertiliser

Expiry Date: 1 June 2032

Review Date(s): June 2020 and at 2-yearly intervals thereafter and in
 accordance with special condition 5

Site Location: 1319 Mountain Road, Inglewood

Grid Reference (NZTM) 1705313E-5667164N

*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 (as defined in section 2 of the Resource Management Act 1991) to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge of contaminants into the air from the site.
2. The discharges authorised by this consent shall not give rise to any odour that is offensive or objectionable at or beyond the boundary of the site, as shown in 'Appendix 1'.
3. The consent holder shall advise the Chief Executive, Taranaki Regional Council, prior to making any change in the processes undertaken at the site, which could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act 1991. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
4. The site shall be operated in accordance with an 'Odour Management Plan' (OMP) prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site will be managed to achieve compliance with the consent conditions and shall address the following matters:
 - a) raw material quality check and acceptance;
 - b) washwater pond de-sludging procedure;
 - c) monitoring of stored product including records of product storage and transfer;
 - d) operation of a meteorological recording station;
 - e) site odour assessments;
 - f) operation and maintenance procedures;
 - g) prevention of off-site odour emissions;
 - h) staff training; and
 - i) contingency procedures.

Consent 10578-1.0

5. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
- a) during the month of June 2020 and at 2-yearly intervals thereafter; and/or
 - b) within 3 months of receiving a notification under special condition 3 above.

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

Signed at Stratford on 17 August 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Appendix 1: Boundary of the site.



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

Name of
Consent Holder: Osflo Fertiliser Limited
 PO Box 761
 New Plymouth 4340

Decision Date: 17 August 2018

Commencement Date: 17 August 2018

Conditions of Consent

Consent Granted: To discharge washwater from truck wash facilities into land
 via soakage pits

Expiry Date: 1 June 2032

Review Date(s): June 2020 and at 2-yearly intervals thereafter

Site Location: 1319 Mountain Road, Inglewood

Grid Reference (NZTM) 1705252E-5667255N

Catchment: Waiongana

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

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The exercise of this consent shall be undertaken in general accordance with the information provided in support of the application for this consent. Where there is conflict between the application and consent conditions, the conditions shall prevail.
2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects of the discharge on the environment, including by:
 - a) removing as much solid matter from the truck as practicable (e.g. by sweeping) before washing it; and
 - b) removing accumulated solid material from the soakage pit as necessary.
3. This consent shall lapse on 30 September 2023, 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.
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 2020 and at 2-yearly intervals thereafter for the purpose 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
 - b) requiring the installation of monitoring bores to determine effects on groundwater, and potential effects on surface water, if sampling of the discharge indicates the need for such monitoring.

Signed at Stratford on 17 August 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

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

Name of
Consent Holder: Osflo Fertiliser Limited
 PO Box 761
 New Plymouth 4340

Decision Date: 17 August 2018

Commencement Date: 17 August 2018

Conditions of Consent

Consent Granted: To discharge stormwater from a fertiliser storage facility and
 associated yard to land where it may enter an unnamed
 tributary of the Waiongana Stream

Expiry Date: 1 June 2032

Review Date(s): June 2020 and at 2-yearly intervals thereafter and in
 accordance with special condition 8

Site Location: 1319 Mountain Road, Inglewood

Grid Reference (NZTM) 1705252E-5667362N

Catchment: Waiongana

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

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall only be from the area shown on the plan attached as 'Appendix 2'.
3. Constituents of any discharges to the unnamed tributary of the Waiongana Stream that arise as a result of the exercise of this consent shall meet the standards shown in the following table.

Constituent	Standard
pH	Within the range 6.0 to 9.0
total recoverable oil and grease	Concentration not greater than 15 gm ⁻³
CBOD (carbonaceous biochemical oxygen demand)	10 gm ⁻³
dissolved reactive phosphorus	5 gm ⁻³
suspended solids	100 gm ⁻³
ammoniacal nitrogen	5 gm ⁻³

4. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life;
 - f) a rise in dissolved carbonaceous biochemical oxygen of greater than 2.0 g/m³; and
 - g) un-ionised ammonia exceeding 0.025 g/m³.
5. Within 3 months of the consent being granted the consent holder shall submit and regularly update a 'Contingency Plan' that details measures and procedures that will be undertaken to prevent, and to avoid environmental effects from, a spillage or any discharge of contaminants not authorised by this consent. The plan and any amended versions shall be provided to the Chief Executive of the Taranaki Regional Council.

Consent 10580-1.0

6. Within 3 months of the consent being granted the site shall be operated in accordance with a 'Management Plan' prepared by the consent holder and approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity. The plan shall detail how the site is to be managed to minimise the contaminants that become entrained in the stormwater and shall include as minimum:
 - a) the loading and unloading of materials;
 - b) general housekeeping; and
 - c) management of the treatment systems.

Note: A Stormwater Management Plan template is available in the Environment section of the Taranaki Regional Council's web site www.trc.govt.nz.

7. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act, 1991. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to consents@trc.govt.nz.
8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:
 - a) during the month of June 2020 and at 2-yearly intervals thereafter; and/or
 - b) within 3 months of receiving a notification under special condition 7 above;

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

Signed at Stratford on 17 August 2018

For and on behalf of
Taranaki Regional Council

A D McLay
Director - Resource Management

Appendix 2: Area of stormwater, including roof water and truck parking.

