Osflo Fertiliser Ltd
Monitoring Programme
Annual Report
2015-2016

Technical Report 2016-81

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Executive summary

Osflo Fertiliser Ltd (Osflo) operates a facility for storage, blending and distribution of poultry waste fertiliser located on Hursthouse Road, Lepperton, in the Waiongana catchment. This report for the period July 2015 to June 2016 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess Osflo's environmental performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of their activities.

Osflo holds two resource consents, which included a total of 18 conditions setting out the requirements that they must satisfy. Osflo holds one consent to allow it to discharge stormwater and treated waste water from the poultry litter storage area into land in the vicinity of the Awai Stream, and one consent to discharge emissions into the air from the use and storage of the used chicken litter. This represents the twenty second report on the environmental performance of Osflo.

During the monitoring period, Osflo demonstrated an overall High level of environmental performance.

The Council's monitoring programme for the year under review included four inspections, four water samples collected for physicochemical analysis, and odour assessments.

The monitoring showed that that the activities were having a less than minor impact on the surrounding environment, while the potential for odour generation is the primary issue with this facility historically, this period only received one odour related complaint, though it was not attributed to the facility, overall it has been a strong performance by the Company this monitoring period when compared to the previous monitoring periods.

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

For reference, in the 2015-2016 year, 71% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 24% demonstrated a good level of environmental performance and compliance with their consents.

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 is improving at a high level in the year under review.

This report includes recommendations for the 2016-2017 year

Table of contents

List of tables

List of figures

List of photos

1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This annual report is for the period July 2015-June 2016 by the Taranaki Regional Council on the monitoring programme associated with resource consents held by Osflo Fertiliser Limited (Osflo), formerly Osflo Spreading Industries Limited. The Company operates a used chicken litter storage and distribution facility located on Hursthouse Road, Lepperton, in the Waiongana Catchment.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Osflo that relate to discharge of stormwater within the Waiongana Catchment, and the air discharge permit held by Osflo 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 Osflo's use of water, and air, and is the twenty second annual report by the Council for this consent holder.

1.1.2 Structure of this report

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

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites though annual programmes;
- the resource consents held by Osflo in the Waingona catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted in Osflo'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 2016-2017 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 Osflo, 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 Osflo'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 2015-2016 year, 71% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 24% demonstrated a good level of environmental performance and compliance with their consents

1.2 Process description

Osflo operates 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). The poultry waste is collected from farms around the Taranaki region, and sold as a registered fertiliser to be spread on pasture. The depot is the administration centre 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 occurs at the depot. A total of 17 persons are employed in the operation, utilising seven trucks.

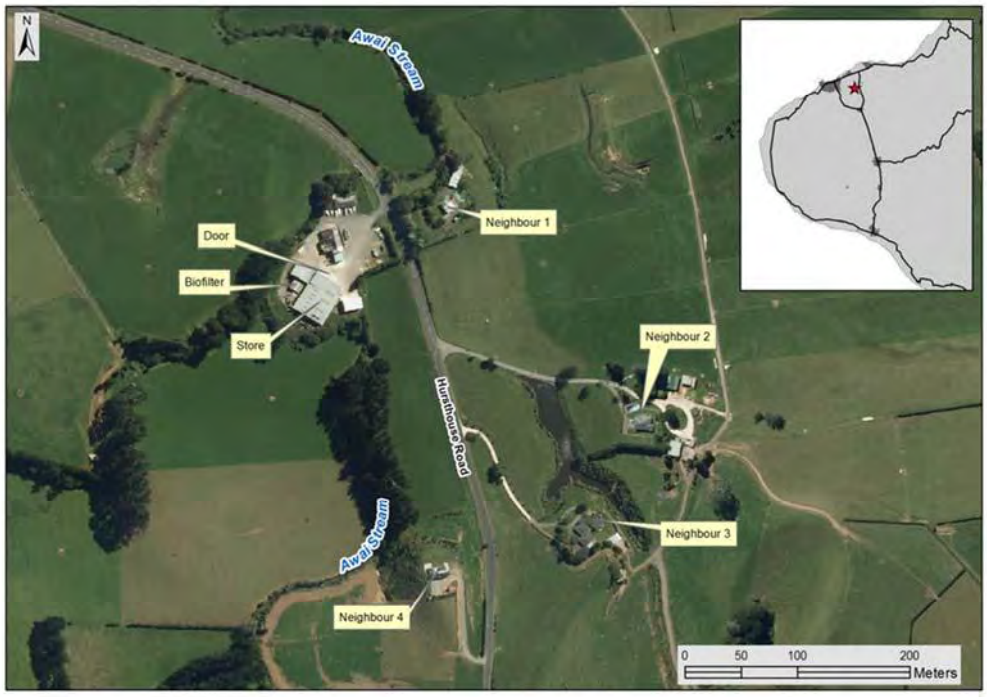

Figure 1 Osflo site on Hursthouse Road

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, 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 Hursthouse Road depot is 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 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.
The storage shed is designed so that the fugitive emissions of gas from the storage of poultry wastes will not escape the building. Emissions are 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 closed facility has the added benefit of maintaining slight negative pressure inside the building, which reduces the egress of untreated gaseous emissions. The ventilation rate is increased during loading out, when the door is left open to allow clearer viewing by operators in the dusty conditions. An odour-neutralising agent is pumped into the air from a manifold around the door while it is open.

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

Additional components are mixed into the chicken litter, either on the ground outside the store with a front-end loader (solids), or by injection with a lance into loaded trucks (liquids).

Wastewater from washing down the trucks (with quaternary ammonia sanitiser) and yard, and stormwater from this area, is directed to a concrete settling pond which then overflows to two soakage pits in series that are situated beside and discharge to the Awai Stream. A screen is 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 with less potential to be contaminated, from other areas of the premises, soaks to ground or is directed to the second soakage pit.

1.2.1 Odour mitigation devices

Odour neutralising spray
Odour neutralising spray is used along the site boundary, just east of the storage shed. This will help neutralise any potential odorous discharges emanating offsite.
The odour neutralising spray system will be operational when trucks are loading and blending product. The frequency and volume of the spray can be adjusted to mitigate potential odour impact.

Road boundary hedge
The south-eastern road boundary will be planted to help trap any potential odorous materials emanating offsite as well as screen site activities from neighbouring dwellings.
The wind direction will be assessed by checking the windsock position. This will determine if further odour mitigation steps are required.

Bio-filter
A Bio-filter fan will be set at minimum power setting during normal operation and set at maximum power when odour mitigation is required.

Store doors
Osflo will be vigilant in ensuring that the store doors will remain shut unless loading and unloading activities are occurring.

1.2.2 Site improvements

It is the intention of the company to move all blending/mixing and loading/unloading activities indoors by 2019, this is proposed in four stages which are as follows (Figure 2).

- Stage 1 (Earthworks and hedge planting) shall be completed no later than 6 months from the grant of this consent 5918-2.

Within the first 6 months of the granted consent this task is on track, the hedge planting has been successful with a wall of Japanese Cedars erected on the south east corner of the site, around the new laydown yard. A second line of cedars is planned.

- Stage 2 (New workshop construction) shall be completed no later than 18 months from the grant of this consent.

- Stage 3 (Demolition of the old storage building) shall be completed no later than 30 months from the grant of this consent.

- Stage 4 (New building and filtration/deodorising system) shall be completed no later than 48 months from the grant of this consent.

Figure 2 Staging of site development

1.3 Resource consents

1.3.1 Water discharge permit

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Osflo held one permit to discharge to water during the 2015-2016 review period, discharge permit 4333-3.

Discharge permit **4333-3**, 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, was issued by the Council on 30 June 2015 under Section 87(e) of the RMA. It is due to expire on 1 June 2026.

There are 16 conditions attached to this permit.

Condition 1 requires adoption of the best practicable option to prevent or minimise effects.

Conditions 2 and 3 apply to discharge to water, before 1 June 2019, placing limits on significant potential contaminants beyond a mixing zone, and standards on the effluent itself.
Conditions 4 to 10 apply to discharge to land, after 1 June 2019. Condition 4 prohibits direct discharge of wastewater to Awai Stream. Conditions 5 to 7 relate to operation of

the disposal system. Conditions 8 to 10 relate to the design and construction of the disposal system.

Condition 11 limits the size of the washwater catchment.

Condition 12 requires all stormwater to be treated.

Conditions 13 and 14 require the production of spill contingency plan and a management plan.

Condition 15 deals with changes in processes or operations, and condition 16 provides for review of consent.

A copy of permit 4333-3 is attached to this report in Appendix I.

1.3.2 Air discharge pemit

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.

Osflo holds air discharge permit **5918-2** to discharge emissions into the air from the storage and distribution of used poultry litter fertiliser. This consent was issued by the Council on 30 June 2015 under Section 87(e) of the RMA. It is due to expire on 1 June 2026.

There are eight conditions attached to this permit.

Condition 1 requires adoption of the best practicable option to prevent or minimise effects.

Condition 2 requires the containment of all potentially odorous material for treatment of emissions by 1 June 2019.

Condition 3 prohibits offensive or objectionable odour beyond the site boundary.

Condition 4 deals with change in process.

Conditions 5 requires the door of the store to be kept shut except during entry and exit.

Condition 6 addresses dust.

Condition 7 requires the site to be operated in accordance with an approved odour management plan.

Condition 8 is a review provision.

A copy of the permit **5918-2** is attached to this report in Appendix I.

1.3.3 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.

Until 2009, Osflo held discharge permit **3923-1** to cover the placement of up to 12 tonnes per hectare of the Ministry of Agriculture and Fisheries-registered organic fertiliser onto land in the Taranaki region. This consent expired on 1 June 2009 and was not replaced, as, under Rule 31 of the Regional Freshwater Plan for Taranaki (RFWP), which had become operative in October 2001, the activity was now a permitted activity.

Certificate of compliance **7463-0** was issued to Osflo, pursuant to Section 139 of the RMA, in respect of the discharge of fertiliser onto and into land at various locations throughout the Taranaki region, on 26 March 2009. The activity is permitted provided there is compliance with four conditions that are intended to avoid adverse effect on soil and water.
A copy of the certificate with conditions is attached in Appendix I.

There is no scheduled compliance monitoring associated with a permitted activity, though breach of any of the conditions may be the subject of enforcement action.

1.4 Monitoring programme

1.4.1 Introduction

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

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

The monitoring programme for the Osflo site consisted of three primary components.

1.4.2 Programme liaison and management

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

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- in discussion over monitoring requirements;
- preparation for any reviews;
- renewals;
- new consents;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The Osflo site was visited three times 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 consent holder were identified and accessed if required, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

1.4.4 Chemical sampling

The Council undertook sampling of the water quality upstream and downstream of the soakage point and potential mixing zone on the Awai Stream on three separate occasions.

The water samples were analysed for the following:

- Bio-chemical Oxygen demand 5 day
- Conductivity
- Dissolved reactive phosphorus
- Faecal coliforms
- Ammoniacal Nitrogen
- pH
- Temperature
- Turbidity

Originally discharge samples were proposed; however the site is non discharge location as the discharges now soak into a soakage pond. The aim of the upstream and downstream sampling is to ascertain whether the soakage pond and/or the facility may or may not be adversely affecting the Awai Stream in this locality.

2. Results

2.1 Inspections

17 September 2015
The site was inspected prior to midday. It was noted that the wind was blowing in a westerly direction at 3.3m/s. An odour survey was undertaken prior to arriving onsite. Intermittent pungent odours were detected immediately down wind of the facility at the entrance of Street's Farm, described as noticeable and intermittent.

An onsite meeting was held with Osflo management and Regional Council staff. The following was discussed: The new odour management plan, including the outside mixing procedure, and associated mitigation measures (due for delivery to the Council by the end of September 2015). Osflo detailed that the plan is with the consultant.

The suitability of the original plan for the expansion of the Hursthouse Road facility in relation to the expected growth required by 2019 was discussed. Also heritage issues with the newly established facility in Normanby which had limited the expansion.

At the meeting it was noted that issues still exist with the quality of the chicken litter which is provided to the facility and that it is dealt with on a case by case basis. Following the meeting the site was inspected. The diesel tank was bunded, however the petrol tank was not. No discharges were noted around the surface ponds. The wash down pit was full. The bio filter was observed in good order with little in the way of odours permeating from it. The store's door was 7/8 closed with a slight odour present on the site, although negligible. The store was assumed to be 4/5 full. At the time of inspection, a truck was observed to be receiving material for offsite delivery, this truck was filled outside the shed and a noticeable odour as well as fine particulates were observed conveying in the breeze. The outside odour control system was operational and Osflo staff remarked that they had received good feedback from one of there neighbours with regard to application rate of the odour control system.

Excavations were occurring at the location proposed for the soakage to land, on the south eastern portion of the site. The Cryptomeria and walled bank were observed to be in good order. Anton remarked that they may install a second row of trees, which should aid the potential to mitigate offsite odours.

Sampling locations were discussed and viewed, as the facility will be subject to water quality analysis of the Awai Stream in relation to ammonia and BOD.

5 April 2016
A routine air and water inspection was undertaken of the Osflo facility at 70 Hursthouse Road. The inspection was undertaken around midday. A South Easterly wind at 8-12m/s was observed at the time of inspection. An odour survey was undertaken prior to entering the facility. No odour noted on the up wind odour monitoring location on the east side of Hursthouse Road, located South East of the facility. At the downwind location on the North West of the facility, odour was noticeable yet intermittent. The noticeable odour was detectable when the trucks were being loaded, as was visible from the down wind location.

A discussion was held pertaining to the implication of the odour risk management plan. It was reported that the flow chart process was effective in liaising with neighbours at times of potential odour generation. Osflo staff discussed that there had been little in the way of complaints from the neighbors. Odour mitigation appeared to be effective when engaged. Anton remarked that all his staff had been trained and understood the odour management plan and this has led to a successful application of the plan.

The quality of the chicken litter, as was discussed in the previous inspection (Sept 2015) is understood to be improving. The supplier was reportedly moving away from the method of brood and move also known as multi batching to the preferred method known as 'day old till death', it is proposed that this technique change will improve the quality of the litter supplied to the facility and thus reduce the likelihood of odorous product which is dealt with by the facility.

A site walk over was conducted. The site appeared clean and well managed; the wash down pit was full at the time of the inspection. The soakage ponds were observed and appeared in good order. The biofilter was inspected and appeared moist with no odour. A truck was in the process of being loaded while the inspection was conducted. The storage room's doors were open and the store was two thirds full.

The new laydown area was inspected, as was the walled bank, the Japanese Cedar was growing well on the brow of the bank. Upstream and downstream water sampling locations were determined and samples collected.

16 June 2016
The final Osflo inspection of the 2015-16 monitoring year was carried out around mid afternoon. The weather was calm, overcast with 5/8 cloud cover. The wind was variable westerly, 1-3 m/s. An odour survey was conducted on Hursthouse Road, directly down wind of the facility. A slight noticeable odour was distinguishable, however intermittent. A site inspection was conducted with the Osflo Site Manager.

A discussion was held pertaining to whether any issues have arisen from odour with respect to the neighbors and none have been received. There is good communication between the facility and its neighbors.

The site appeared well managed at the time of inspection with one truck in the process of being washed down, with another being loaded. The washings from the truck were being decanted into the stormwater system, as it is designed to do, before goose necking into the soakage pond. The site manager remarked that the first soakage pond had been recently cleaned out and the contents spread on a neighbor's property (Photo 1).

Photo 1 The third settling pond

The soakage ponds were viewed and appeared in good order. The bio-filter was also inspected and found to be moist with little odour. The store room doors were open as the site was in loadout mode at the time of the inspection (Photo 2). It was estimated the store was 1/3 full at the time. The mineral store was also viewed and appeared in good order. The laydown yard was inspected and found to be working well with a few spreading vehicles drying their trays, post wash down.

The cedars which were planted on the East fringe of the facility were growing well, as were the cedar on the opposite side of the Awai Stream. The odour mitigation was observed and found to be in good order and functional.

Samples were collected, as in the previous inspection, one set was collected upstream of the facility, while the other was collected just before the culvert, downstream of the facility.

Photo 2 Blending and loading at the Osflo site

2.1.1 Results of receiving environment monitoring

2.1.1.1 Awai Stream sample

This period marked the inception of site specific water quality monitoring programme with respect to the Awai Stream which flows around the Osflo facility; clockwise from the south and passing the facility to the north east (Figure 3). The main aim of the stream monitoring is to ascertain for any potential effects which may occur as a direct result of the exercise of this consent.

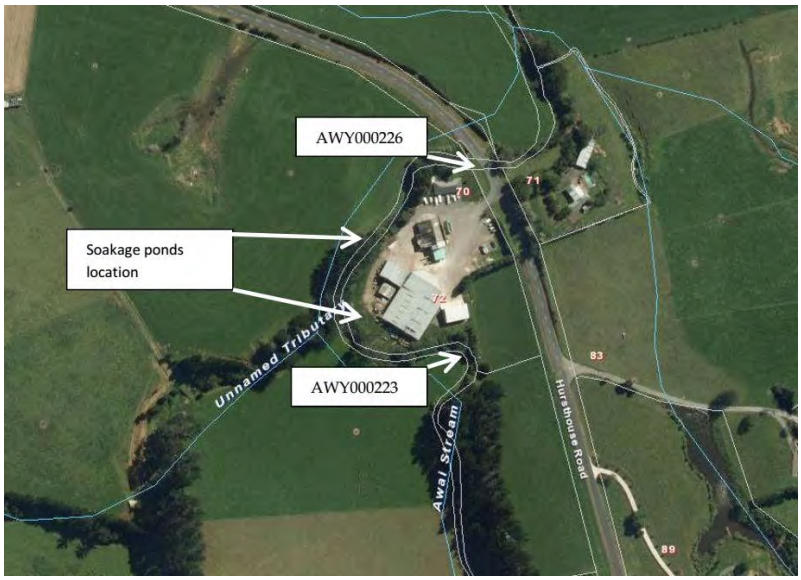

Figure 3 Aerial view of Osflo site

Washings from the yard and from cleaning of the trucks is directed to the first soakage pond, which then goose necks through to a second and third pond when required (Figure 3).

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.

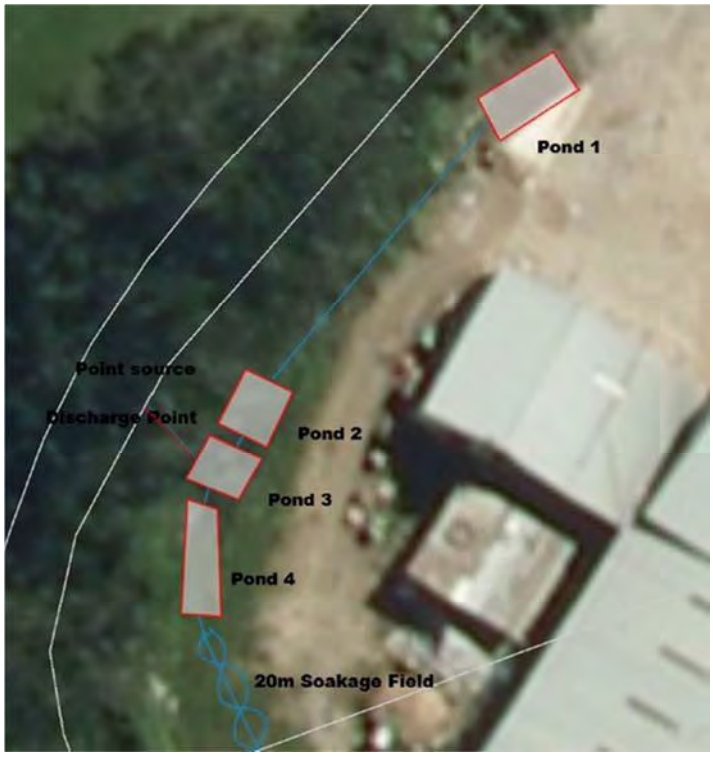

Figure 4 Example of the soakage ponds at the Osflo facility

2.1.2 Results

In this monitoring period two stream samples were collected on two occasions, 5 April 2016 and 16 June 2016. The analysis of the results is provided in the following Table 1. The results detail nothing adverse when comparing the upstream to the downstream sample sites. Interestingly the concentration of the faecal coliforms was higher on the upstream sample in the April round of sampling, than the downstream concentration on the same day. Conversely this trend was reversed in the second monitoring round, undertaken in June 2016, however the concentrations were lower in the June sample.

pH remained stable in both sample rounds at 7.4 pH at each sample site, as did the temperature, varying between survey dates, however not changing down the water course.

Table 1 Awai Stream analysis results

Monitoring location	Parameter	BODCF	Conductivity	Dissolved Reactive Phosphorous	Faecal Coliforms	Ammoniacal Nitrogen	pH	Temperature	Turbidity
	Date	g/m^3	mS/m@20°C	g/m^3 P	/100ml	g/m^3 N	pH	°C	NTU
AWY000223	05-Apr-16	<0.5	10.6	0.005	930	0.045	7.4	12.8	2.7
AWY000226	05-Apr-16	<0.5	10.6	0.006	900	0.047	7.4	12.8	4.4
AWY000223	16-Jun-16	<0.5	10.5	<0.003	160	0.028	7.4	12.6	2.9
AWY000226	16-Jun-16	<0.5	10.6	0.0007	200	0.054	7.4	12.6	2.5

Conductivity was low as would be expected in a fresh water stream and this also linked with the low concentrations of ammoniacal nitrogen. Interestingly there was a slight increase in the concentration of ammoniacal nitrogen between the sites in both

sample rounds; however the increase was 0.002 g/m^{3}N in the April round and slightly more marked in the second June round with a difference of 0.026 g/m^{3}N.

Filtered carbonaceous Bio-chemical Oxygen Demand (BODCF) remained low, as did the concentration of dissolved reactive phosphorous (DRP), which detailed a slight increase between the upstream and downstream sites.

As these results are the initial samples of the monitoring programme, not to much emphasis is put on these results unless they warranted follow up, which they do not. The aim will be to encapsulate trends which may or may not be an effect of the facility over time, these will be measureable between the upstream and downstream sample locations.

2.1.3 Other ambient monitoring

An odour survey is conducted by the inspecting officer, where by a downwind and upwind location is chosen upon arrival to the facility and the officer will maintain a position for ten minutes to assess for odour potential. When assessing, the odour will be noticeable or non-noticeable. If the odour is noticeable, the odour will then be classified as consistent or intermittent over that ten minute period at which point the officer will determine if the odour intensity is objectionable or merely noticeable.

The facility is fitted with odour mitigation devices which are formed by aerosols positioned at certain locations around the facility, they also have an odour management plan which will determine how potentially odorous material may be mitigated. If this is the case and the material is required to be brought to site, the operators will check the meteorological conditions and inform notified parties if required.

2.2 Investigations, interventions, and incidents

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 consent holder 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 courses of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The incident register includes events where the Company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

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

In the 2015-2016 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with Osflo's conditions in resource consents or provisions in Regional Plans.

There was however one complaint which was not attributed to the actual Osflo site.

12 April 2016
An inspection was undertaken in response to a complaint from a member of the public regarding Osflo type odours at their dwelling. The inspection found that a moderate north-westerly wind was blowing at the time of the inspection. The yard appeared to be clean and tidy and the deodorizers were in operation. The doors were closed to the store and only a slight intermittent odour could be detected at the boundary of the site.

Staff were spoken to on site and advised of the complaint. It was revealed that Osflo fertiliser had been applied the previous day to pasture situated between the complainant's address and the Osflo store. This appears to match the complainant's account of when the odours were strongest. The complainant was advised of the recent application of fertiliser near his property.

3. Discussion

3.1 Discussion of site performance

Noticeable odour was present beyond the boundary of the facility on three of the four inspections undertaken by the Council in respect of the Osflo facility, it was described as noticeable yet intermittent, primarily related to when the trucks were loading and unloading in the mixing yard.

The site was clean and appeared well managed during inspections. Discussions were held which detailed that the facility keeps in close contact with their neighbours whom have helped the facility calibrate their odourises when required. Quality of chicken litter has been cited as an issue with respect to odour generation and the communication chain amongst the employees allows greater understanding of product brought and unloaded on site, or product sent straight to the customer.

The site is subject to planned developments which will occur prior to 1 June 2019 (Figure 2).

The first stage included the purchase of land alongside the road east of the depot, and the landscaping and planting with dense vegetation of that land to establish a visual and odour buffer. The land was purchased, and planting began, in June 2015. As an interim measure, to treat odour during litter transfer while the shelter belt matures, an extension of the neutralising odour system, together with a shelter cloth barrier, had already been put in place along the adjacent (former) site boundary.

The second stage involves: the construction of a new workshop, partly on the recently purchased land; upgrade of the water drainage system, to separate clean and contaminated water; and the construction of a new contaminated water treatment and land-disposal system.

The third stage[1] is demolition of the old dairy (storage/workshop) building, and renovation/extension of the existing storage facility to accommodate mixing and unloading/loading activities within a contained area, with appropriate treatment of air emissions.

The Council intends to monitor the development of this facility so that it meets its consented duties.

[1] Note stage three and four are now combined

3.2 Environmental effects of exercise of consents

No significant adverse environmental effects were found in this monitoring period. Odour mitigation measures were also inspected, and these appear to have been effective at times, although there still exists the potential for odour to be generated.

The Council collected samples from the upstream and downstream sample collection locations, whereby a minimal difference existed between the samples. These sample collection locations are located either side of the soakage area, thus any potential nutrient leaching effect on the stream may be monitored. As previously discussed there was minimal effect from the exercise of this consent with respect to water quality in the Awai Stream and the monitoring will continue to detect any trends over time.

The generation of odour at this facility has led to complaints over time, however in this period there was only one complaint which was not related to the facility processes, only the application of said product in close proximity to the site, on a neighbour's farm.

Overall, the site on Hursthouse Road has been managed well with minimal effect on the surrounding environment recorded in this monitoring period.

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 2 and 3.

Table 2 Summary of performance for Consent 4333-3

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 inspections	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	Sampling and testing of discharge as necessary by Council staff, before 1 June 2019	Yes
4. No direct discharge into the stream	Site inspection, after 1 June 2019	Yes
5. Control of ponding	Site inspection, after 1 June 2019	N/A
6. Even application of effluent	Site inspection, after 1 June 2019	N/A
7. Provision for effluent storage	Site inspection, after 1 June 2019	N/A
8. Completion of site works	Site inspection, after 1 June 2019	N/A
9. Works to be as proposed	Site inspection, after 1 June 2019	N/A
10. Provision of updated stormwater and wastewater plan	Receipt of as-built plan, and inspection	N/A
11. Limit on washdown catchment area	Site inspection, after 1 June 2019	N/A
12. Treat prior to stormwater discharge	Site inspection	N/A
13. Maintenance of and adherence to a spill contingency plan	Receipt of Plan	N/A
14. Maintenance of and adherence to a Management Plan	Receipt and certification of Plan, site inspection	N/A
15. Written notification of changes	Site inspection	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 3 Summary of performance for Consent 5918-2

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	Site inspections	Yes
2. Containment of odorous material and treatment of emissions	Site inspection, after June 2019	N/A
3. No objectionable odour beyond boundary	Site inspection	Yes, though noticeable
4. Written notification of changes	Site inspection	Yes
5. Door to store kept closed	Site inspection	Yes, though open while loading
6. Dust control	Site inspection	Yes
7. Maintenance of and adherence to a Management Plan	Receipt and certification of Plan, site inspection	Yes
8. Optional review provision re environmental effects	N/A	N/A
Overall assessment of consent compliance and environmental performance in respect of the consent		**Good**
Overall assessment of administrative performance in respect of this consent		**Good**

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

3.4 Recommendations from the 2013-2015 Biennial Report

In the previous biennial report, it was recommended:

1. THAT monitoring of air emissions from Osflo Fertiliser Ltd in the 2015-2016 year continue at the same level as in 2014-2015. *Undertaken.*

2. THAT monitoring of wastewater and stormwater discharges from Osflo Fertiliser Ltd in the 2015-2016 year continue at the same level as in 2014-2015, with the addition of sampling and testing of the effluent and Awai Stream to determine compliance with new consent conditions. *Undertaken.*

3.5 Alterations to monitoring programmes for 2016-2017

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

- the extent of information made available by previous authorities;
- its relevance under the RMA;

- its obligations to monitor emissions/discharges and effects under the RMA; and
- to report 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 emitting to the atmosphere/discharging to the environment.

It is proposed that for 2016-2017 that the monitoring of the facility is maintained at the same level as in the 2015-2016 period.

4. Recommendations

1. THAT monitoring of consented activities at Osflo fertiliser Ltd facility on Hursthouse Road in the 2016-2017 year continue at the same level as in 2015-2016.

Glossary of common terms and abbreviations

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

Al*	Aluminium.
As*	Arsenic.
Biomonitoring	Assessing the health of the environment using aquatic organisms.
BOD	Biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate.
BODF	Biochemical oxygen demand of a filtered sample.
Bund	A wall around a tank to contain its contents in the case of a leak.
CBOD	Carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate.
cfu	Colony forming units. A measure of the concentration of bacteria usually expressed as per 100 millilitre sample.
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.
DO	Dissolved oxygen.
DRP	Dissolved reactive phosphorus.
F	Fluoride.
FC	Faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample.
Fresh	Elevated flow in a stream, such as after heavy rainfall.
$g/m^2/day$	Grams/metre^2/day.
g/m^3	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
Incident register	The incident register contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.

L/s	Litres per second.
m^2	Square Metres.
mS/m	Millisiemens per metre.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NH_4	Ammonium, normally expressed in terms of the mass of nitrogen (N).
NH_3	Unionised ammonia, normally expressed in terms of the mass of nitrogen (N).
NO_3	Nitrate, normally expressed in terms of the mass of nitrogen (N).
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
O&G	Oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons).
Pb*	Lead.
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	Measurement of both physical properties (e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	Resource Management Act 1991 and including all subsequent amendments.
SS	Suspended solids.
Temp	Temperature, measured in °C (degrees Celsius).
Turb	Turbidity, expressed in NTU.
UI	Unauthorised Incident.
Zn*	Zinc.

*an abbreviation for a metal or other analyte may be followed by the letters 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form.

For further information on analytical methods, contact the Council's laboratory.

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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)

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 m^2.

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.

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 m^2.

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.

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

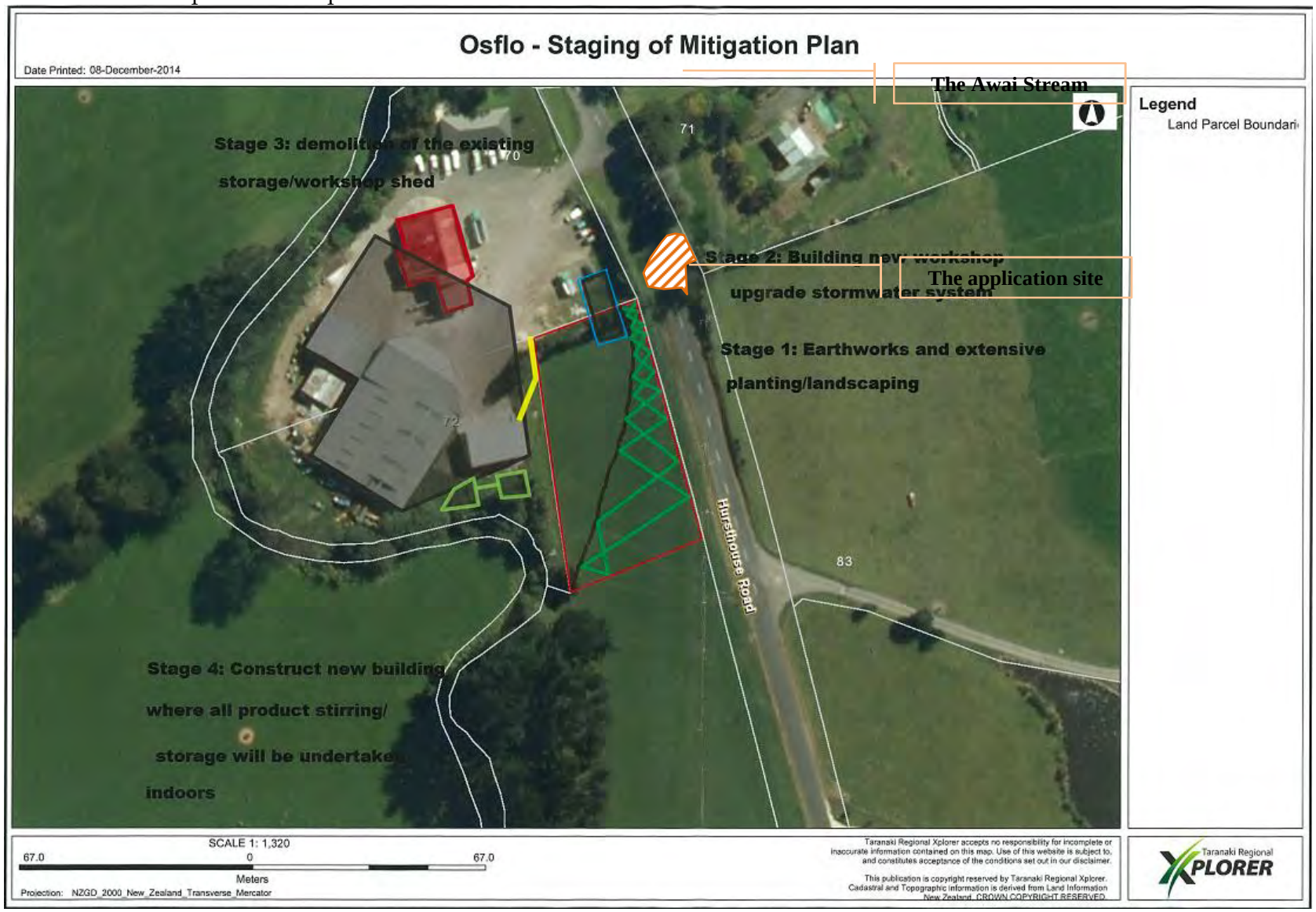
A D McLay
Director - Resource Management

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:

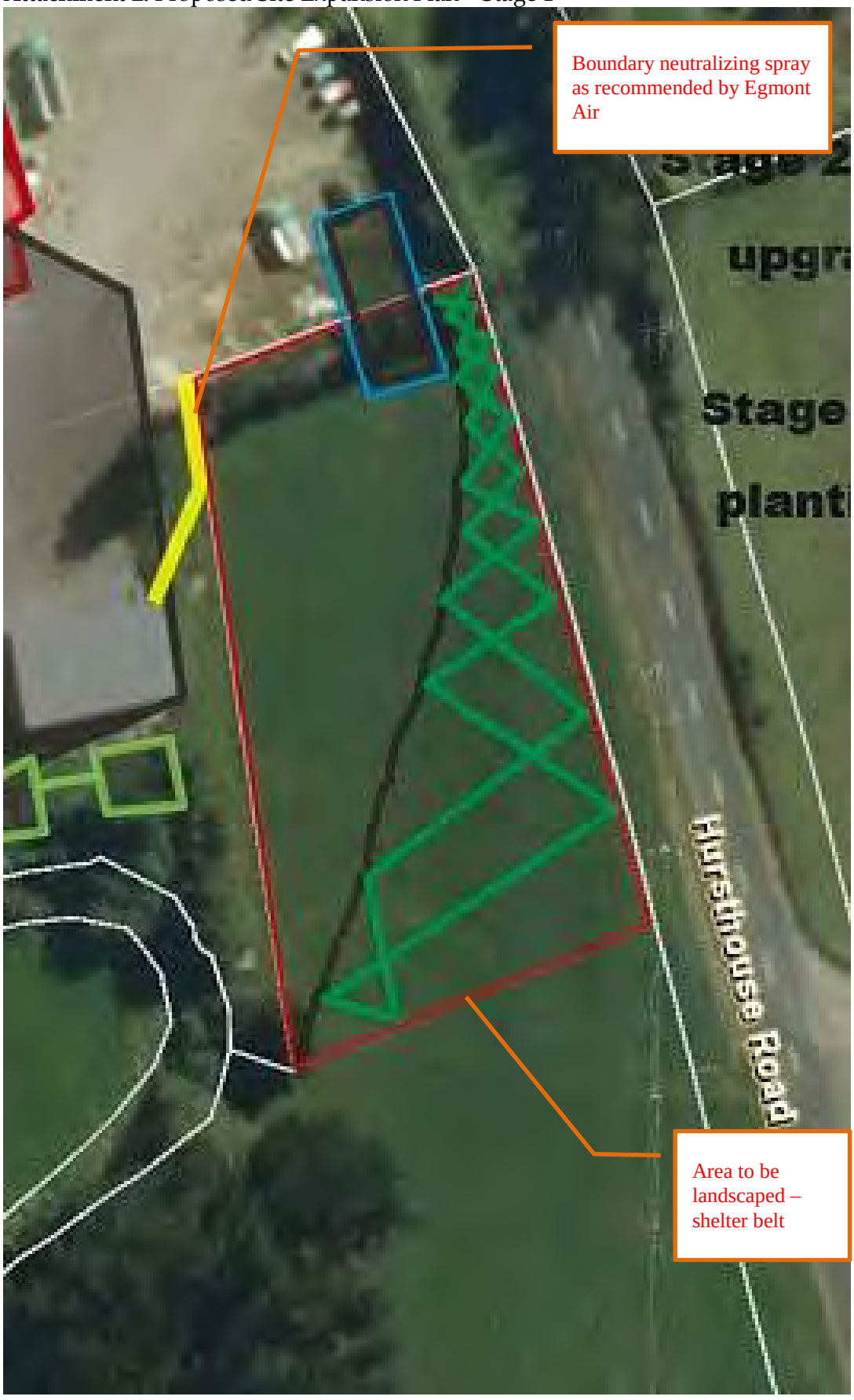
- *the discharge of specified wastes to land used for grazing of milking animals; and*
- *the use of feed from land which has had specified wastes applied to it.*

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.*

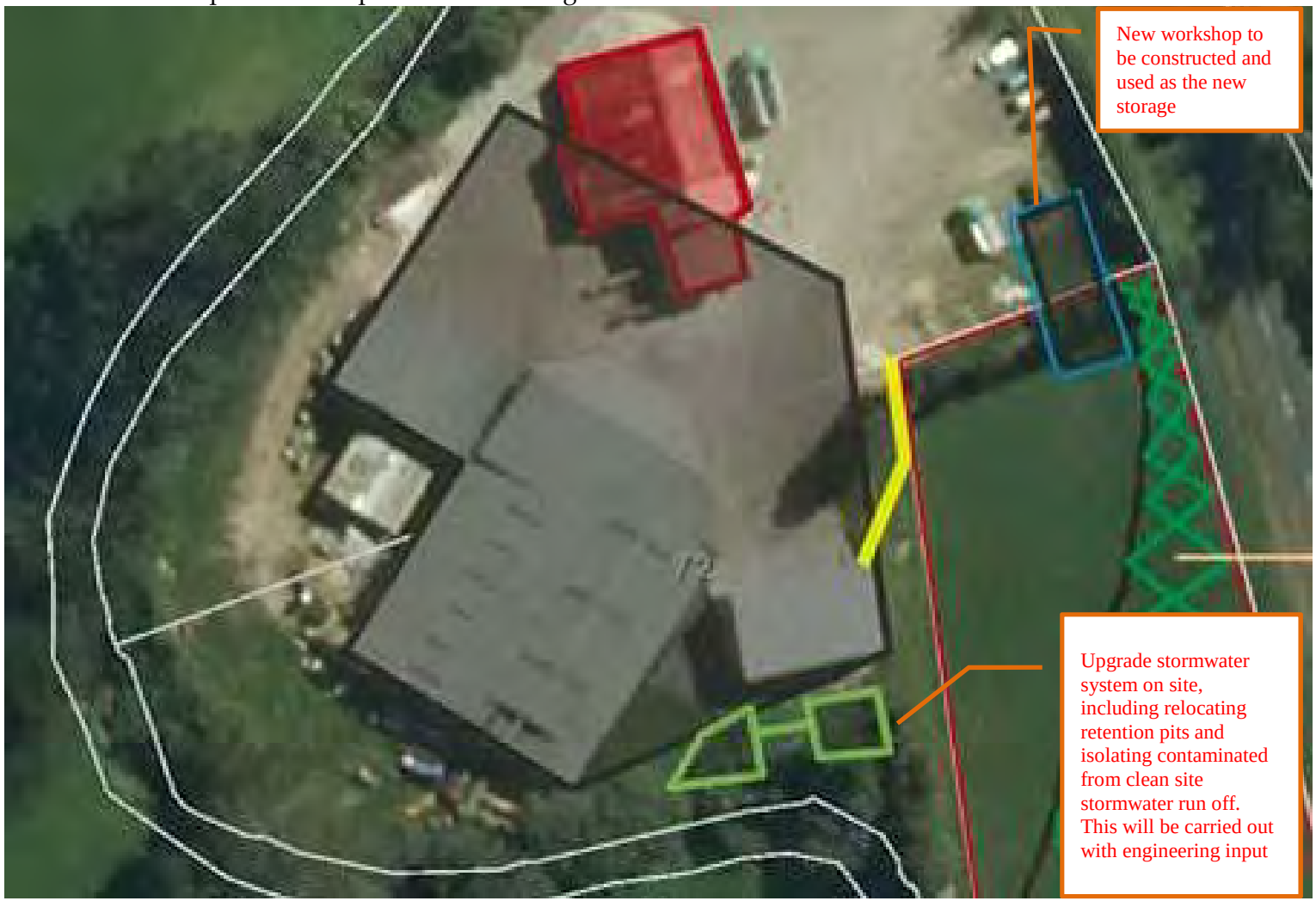
Attachment 1: Proposed Site Expansion Plan - Overall Plan



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.

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

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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 Fertiliser Limited P O Box 761 New Plymouth 4340
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

The Taranaki Regional Council hereby certifies that:

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:

- *Fertiliser is approved for use under section 5 of the Fertilisers Act 1960 or under the Agricultural Compounds and Veterinary Medicines Act 1997;*

- *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;*

- *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.

Transferred at Stratford on 17 January 2012

For and on behalf of
Taranaki Regional Council

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Director—Resource Management