Annual Environmental Management Report - Banksmeadow Transfer Terminal 2019 - 2020

Quality Information

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Status: **FINAL**

Document Revision Register:

Rev	Revision Details	Issued to	Date
1	Draft for internal review	• Veolia NSW Resource Recovery Team • Veolia NSW SHEQ Team	June 2020
1	Final	• NSW Department of Planning, Industry and Environment	June 2020

Contents

Executive Summary

This Annual Environmental Management Report (AEMR) 2019 - 2020 is the 5th report prepared to detail the environmental performance of the Banksmeadow Transfer Terminal (the Terminal), owned and operated by Veolia Australia and New Zealand (Veolia). This AEMR covers the period of 29 April 2019 to 28 April 2020 (2019 - 2020 reporting period).

Veolia has prepared this AEMR in accordance with Schedule 4, Condition 8 of the Development Consent SSD 5585 (the Consent) for the Terminal, as well as relevant legislative requirements and industry best practices.

This AEMR provides a summary of environmental monitoring conducted at the Terminal, if any non-compliances or other findings have been identified against the Consent during the 2019-2020 reporting period, and the corrective actions assigned.

No non-compliances were identified against the Conditions of Consent (Consent Conditions) during this reporting period. Further details are provided in Section 3 of this AEMR.

Section 1 - Introduction

1.1 Site Background

The Terminal is located at 14 Beauchamp Road and 34-36 McPherson Street, Banksmeadow and is identified as Lots: A & B, DP 366725 and Lot 1, DP 435497 owned by Keith Engineering (34-36 McPherson Street); and part of Lot 2, DP 100686 (14 Beauchamp Road) owned by Asciano (Pacific National). A site layout and location plan is provided in **Appendix A**.

The Terminal was granted approval under Section 89E of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 28 April 2015 as a State Significant Development (SSD), and is approved under the Consent to receive up to 500,000 tonnes per annum (TPA) of waste from the Sydney Metropolitan Area.

The Terminal commenced operations in September 2016, accepting putrescible waste from the Sydney Metropolitan Area, which is containerised and loaded onto rail wagons for transportation to the Woodlawn Eco Project Site (owned and operated by Veolia) in the Southern Tablelands (approximately 250 kilometres southwest of Sydney) for treatment, recycling and energy recovery. During this reporting period, the Terminal received a total of 312,078 tonnes per annum (TPA) of General Solid Waste (Putrescible) and General Solid Waste (Non Putrescible) as classified in the *Waste Classification Guidelines Part 1: Classifying Waste* (NSW Environment Protection Authority, November 2015). This equated to approximately 156 waste collection vehicle movements per day.

1.2 Legislative Requirements

The key legal legislation governing the environmental performance and activities undertaken at the Terminal include the *EP&A Act*, regulated by the NSW Department of Planning, Industry and Environment (DPIE), and the *Protection of the Environment Operations Act 1997* (POEO Act) regulated by the NSW Environment Protection Authority (EPA), as well as their respective associated regulations.

Consent conditions stipulate the requirements that need to be addressed to maintain compliance at the Terminal as detailed in **Appendix B**. This AEMR has been prepared in accordance with the requirements of Schedule 4, Condition 8, as shown in Table 1.1.

In addition to the Consent, the Terminal also operates under the requirement of Environment Protection Licence (EPL) 20581, issued by the EPA under the POEO Act.

Table 1.1 - Consent Condition for the preparation of the AEMR

Relevant Condition	Requirement
SCHEDULE 4 - ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	
Annual Review	
8	Within one (1) year of the date of this consent, and every year thereafter, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) Describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year; (b) Include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against; • The relevant statutory requirements, limits or performance measures/criteria • The monitoring results of previous years; and • The relevant predictions in the EIS; (c) Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; (d) Identify any trends in the monitoring data over the life of the development (e) Identify any discrepancies between predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (f) Describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.

1.3 Responsibilities

- Environmental monitoring during the operational stage of the Terminal was undertaken and/or supervised by NSW Solid Waste Treatment technical support personnel - Mary Wong (Graduate Environmental Engineer) and Sara Maddison (Operations Project Manager).
- Analyses of samples were performed at a NATA accredited laboratory, Australian Laboratory Services PTY LTD (ALS).
- The Odour Unit PTY LTD (TOU) was appointed to conduct odour audits for the Terminal.

Section 2 - Environmental Monitoring & Management

2.1 Terminal Monitoring Requirements

The following sections detail the monitoring undertaken throughout the reporting period in accordance with the Environmental Monitoring Program as detailed within the *Operational Environmental Management Plan* (OEMP, 2016) for the Terminal.

The Environmental Monitoring Program provides details on all monitoring requirements of the Consent and other appropriate regulations to measure and assess the continuing suitability, adequacy and effectiveness of on-site environmental management measures.

Table 2.1 summarises the environmental monitoring conducted at the Terminal as per the Environmental Monitoring Program.

Table 2.1 - Operational Monitoring Requirements

Reference	Type of Monitoring	Frequency	Commentary
Schedule 3 Conditions 36, 38, 40, 41	Meteorological Monitoring	Continuous	Ongoing basis
Air Quality Management Plan (AQMP)	Meteorological Monitoring - Wind	Continuous	Ongoing basis
Schedule 3 Condition 36	Visual Dust Monitoring	Daily or as required	Ongoing basis
AQMP	Odour - Site Inspections	Daily or as required	Ongoing basis
Schedule 3 Condition 34	Odour Audits	Six monthly	Audits completed on: 19 November 2019 6 May 2020
Soil, Water and Leachate	Stormwater Discharge Monitoring	Daily during any discharge	Ongoing

Management Plan (SWLMP)			
Schedule 3 Condition 10	Groundwater Monitoring	Six monthly	Monitoring completed on: 29 October 2019 1 May 2020
Schedule 3 Condition 10	Leachate Monitoring	As required	Leachate monitoring is to ensure requirements of the disposal facility are met. Not triggered as it was not required by the disposal facility
Schedule 3 Condition 27	Waste Volume Monitoring	Daily	Ongoing basis
Schedule 3 Condition 27	Traffic Monitoring (Traffic flow and congestions)	As required	Ongoing basis
Schedule 3 Condition 27	Traffic Spot Monitoring (On-site truck routes and driver management)	Weekly	Ongoing basis
Schedule 3 Condition 38	Visual Site Inspection and Housekeeping	Weekly	Ongoing basis
Schedule 3 Condition 21	Pest and Vermin Inspections and Placement of bait stations	Quarterly	Ongoing basis

2.1.1 Meteorology

Monitoring meteorological data during this reporting period provided an understanding of the ambient air (such as dust and odour) and rainfall conditions at the Terminal, which was utilised

to manage environmental performance, as well as investigate potential impact to nearby sensitive receivers.

Meteorological data is downloaded from the public weather station situated at the Bureau of Meteorology (BoM) Sydney Airport site (Station ID:066037), provided in 15 minute intervals. During this reporting period, meteorological conditions such as wind speed, wind direction and rainfall were monitored on an ongoing basis and/or when any odour complaints were received.

A summary of daily wind speeds and wind directions at 9AM and 3PM at the nearby BoM weather station is presented in Figures 2.1 and 2.2.

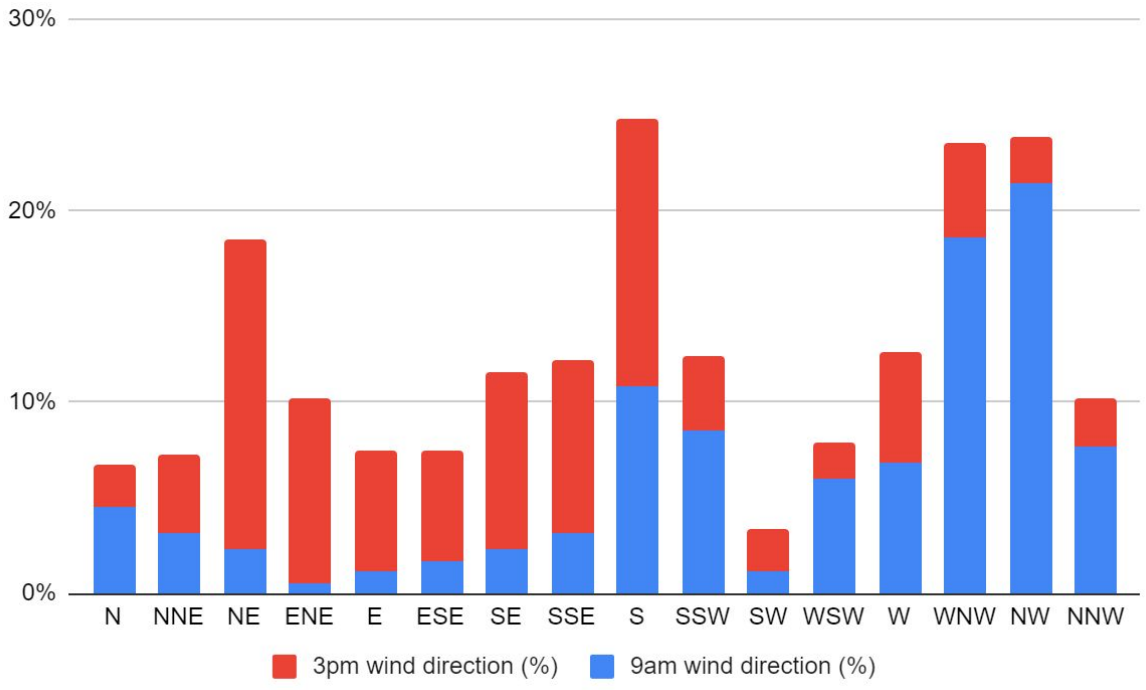

Figure 2.1 - Wind direction data for 9AM & 3PM for this reporting period

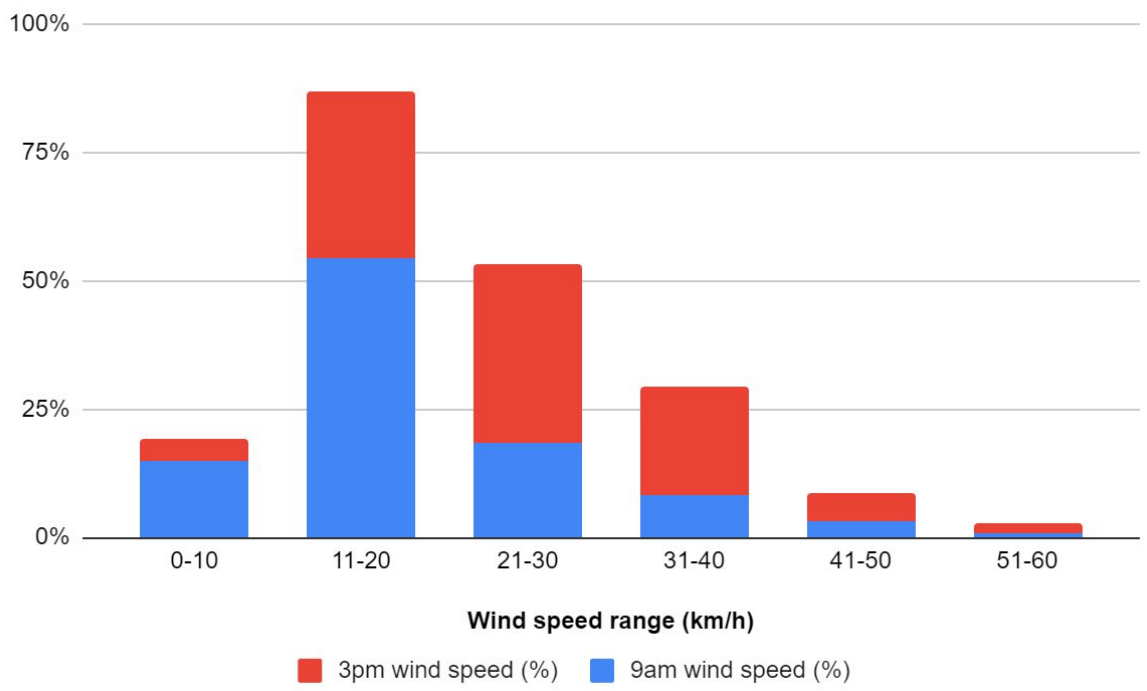

Figure 2.2 - Wind speed data at 9AM & 3PM for this reporting period

During this reporting period, between 9AM and 3PM the prevailing wind directions were north-westerly and north-easterly. Wind speeds at 9AM were most frequently (approximately 55%) within the 11-20 km/hr range, whereas wind speeds at 3PM were most frequently (approximately 35%) within the 21-30 km/hr range.

Wind speed and wind direction data was used to investigate and respond to odour complaints in this reporting period (refer to Section 2.8) by determining the source and spread of potential odours travelling off-site, if generated from the Terminal.

Ongoing rainfall data was monitored to supplement stormwater system operation and collection of samples from the discharge point, as well as for general housekeeping management such as inspection and maintenance for stormwater pits. This is to ensure the operation of the Terminal is not generating any off-site impacts.

A summary of rainfall data at the Terminal during the reporting period is presented in Figure 2.3 Overall, the average rainfall for the Terminal during the reporting was approximately 75.7 mm per month.

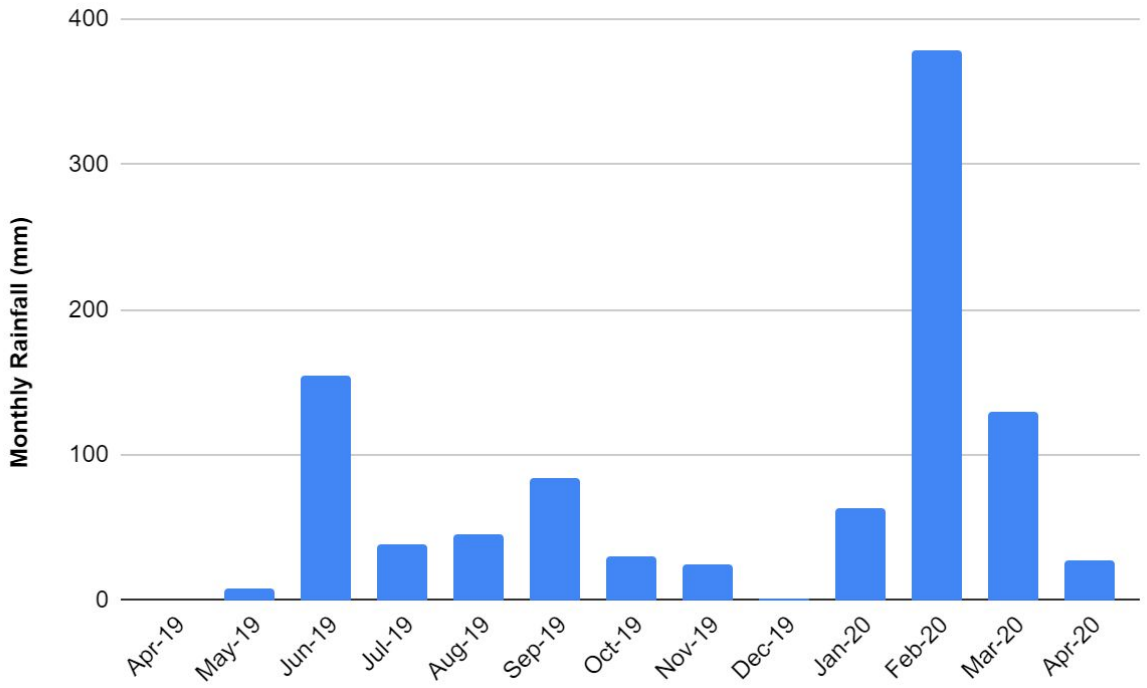

Figure 2.3 - Monthly rainfall data during the reporting period 2019/2020

2.2 Air Quality

In accordance with the Consent, the Terminal has adopted performance criteria pertaining to dust and odour emissions which are summarised in Section 2.2.1 and Section 2.2.2 respectively.

Air quality monitoring was carried out as required to determine whether activities conducted at the Terminal impacted ambient air quality. Further details regarding air quality monitoring and management practices undertaken at the Terminal are provided in the following sections.

2.2.1 Dust

Potential dust impacts arising from operations at the Terminal were assessed against the EPA air quality dust emissions criteria which were identified in the *Banksmeadow Transfer Terminal Environmental Impact Statement* (EIS) prepared by Hyder Consulting Environmental (Hyder, 2014).

The EIS concluded that the key potential impact from dust associated with operations at the Terminal would likely be due to the emissions of small diameter particulate matter (PM10). Despite this, the EIS found that there would be negligible impact of PM10 particulates (i.e dust) at any off-site receivers, provided that reasonable dust controls are implemented.

To facilitate this, the Terminal operates a dust suppression system within the transfer building to minimise the emissions of dust. Dust is also controlled through the operation of a street sweeper on hardstand areas around the site. In addition, visual inspections of dust generating activities at the Terminal are also carried out on a regular basis, augmented by monitoring of weather conditions.

No dust complaints or issues noted in this reporting period.

Long Term Trends

- This result is consistent with findings in previous years
- Dust emissions continue to be adequately managed on-site and off-site, no impacts have been detected since the commencement of operations in 2016

2.2.2 Odour

The potential for odour emissions from the Terminal were also assessed in the EIS (Hyder, 2014). Results of the EIS indicated that when the implemented odour mitigation and management measures were in operation, odour emissions from the Terminal's operation would be below the odour emission criteria presented in Table 2.2. It was also found that odour impacts would likely not exceed these levels at any residential receptor.

Table 2.2 - Odour Emission Criteria

Pollutant	Receptor	Criterion
Odour	Residential Receptors	2 Odour Units

To achieve the odour emission criteria, the Terminal operates an air extraction system within the terminal building which was designed to both ventilate the building, and capture and disperse odour emissions from within the building. In addition, containers used for the transportation of waste are fitted with activated carbon filtration systems on air exhaust vents.

Routine odour monitoring is carried out in the form of weekly odour assessments along the Terminal's site boundaries which are conducted by on-site personnel, the results of which are recorded on weekly housekeeping checklists.

During previous AEMR reporting periods, the following improvement actions were achieved and continue to meet standards :

- An increase in airflow extraction and optimisation of system performance to achieve a stack exit velocity of greater than 20 metres per second (m/s);
- Improvements to the airflow dynamics in the waste shed building via the construction of a wall interface between the waste shed floor and compactor pit area, allowing an

enhanced level of airflow extraction control whilst minimising undesirable building wind effects against the waste shed building.

During this reporting period, two (2) odour investigations/audits were completed at the Terminal, refer to **Appendix C** for odour reports:

1. Banksmeadow Waste Transfer Terminal Facility Odour Audit October 2019
2. Banksmeadow Waste Transfer Terminal Facility Odour Audit May 2020

TOU's odour audit reports found the roof discharge stack to be operating at a favourable odour performance level. The Terminal continues to implement an active service and maintenance program for waste containers and continues to follow odour mitigation and management practices.

Localised odour within the Terminal detected during the Field Ambient Odour Assessment survey is not expected to be problematic at nearby, off-site downwind locations. This is consistent with the near absence of odour complaints since the previous October 2019 Report.

Based on the positive results and findings documented in the recent odour audit reports, TOU is of the view that the Terminal is operating in a manner that is very unlikely to adversely impact the local amenity from an odour viewpoint under the current operating and maintenance practices.

Long Term Trends

The odour performance of the Terminal has significantly improved in this reporting period compared to previous reporting periods.

- Results of odour sampling collected during this reporting period indicate the odour emission rate compared to the results from the previous reporting period.
- Smoke testing results conducted throughout this reporting period have consistently indicated that there are no other potential fugitive emission release pathways from the waste shed area, apart from the entrance doorway.
- The number of odour complaints received at the Terminal has continued to reduce significantly since improvement actions were completed during the previous reporting period (refer to Section 2.8 for further details). This positive result further validates the effectiveness of these actions and that improvements continue to be maintained.

2.3 Water Monitoring

2.3.1 Groundwater Monitoring

Following the commencement of the Terminal's operations, the groundwater quality was tested in April 2017. These results are referred to as baseline levels which are provided in Table 2.3. In accordance with the Consent, biannual groundwater monitoring is conducted to assess potential impacts of operations on the groundwater quality.

Table 2.3 - Groundwater Monitoring Program

Monitoring Locations	Parameters	Range of Baseline levels	Frequency	Sampling Method
GW1, GW2, GW3	Electrical Conductivity (EC)	578 - 1150 µS/cm	Six monthly	Grab sampler
	pH	7.27 - 7.31pH		
	Total Dissolved Solids (TDS)	424 - 800 mg/L		
	Nitrogen (Ammonia)	0.33 - 1.37 mg/L		
	Biochemical Oxygen Demand (BOD)	<2 - 8 mg/L		
	Water Levels (Depth to Water & Depth to Base)	Metres (m)		

Groundwater monitoring was conducted at three wells (GW1, GW2, GW3) in October 2019 and May 2020, this data was compared to baseline levels from GW1, GW2, and GW3, please refer to Figures 2.4-2.9 below for monitoring results.

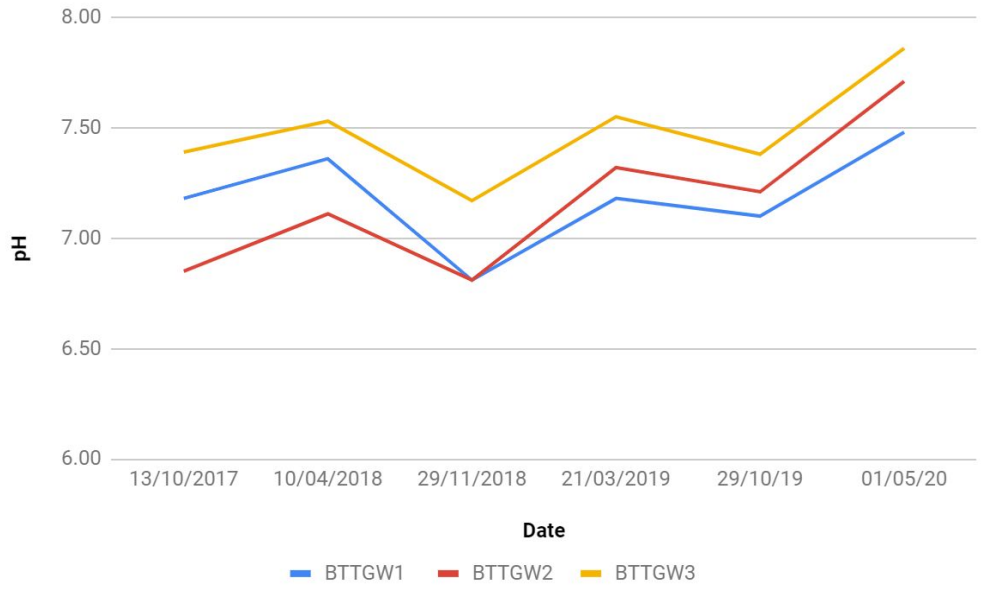

Figure 2.4 - pH trends in groundwater

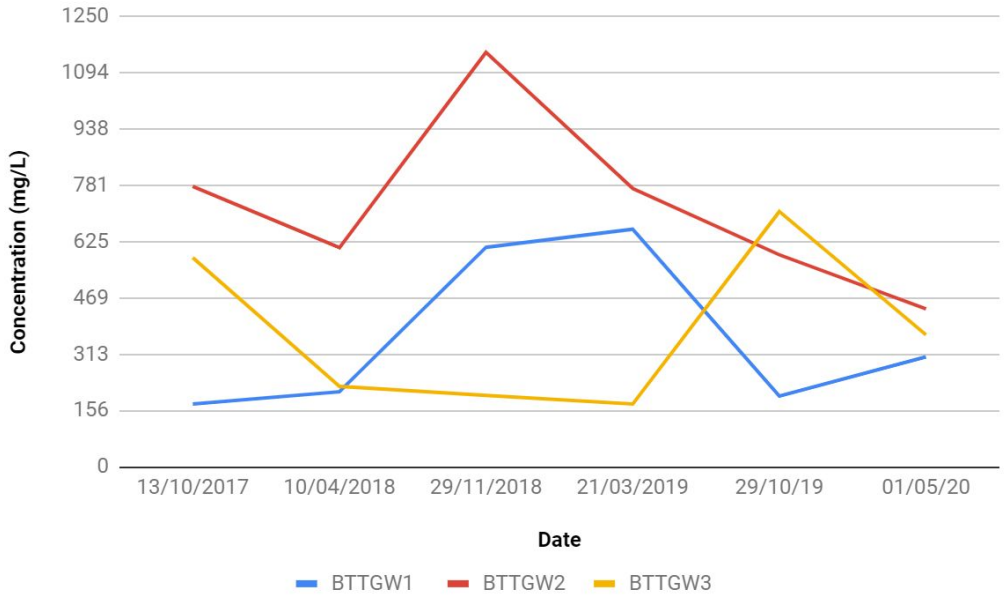

Figure 2.5 - TDS trends in groundwater

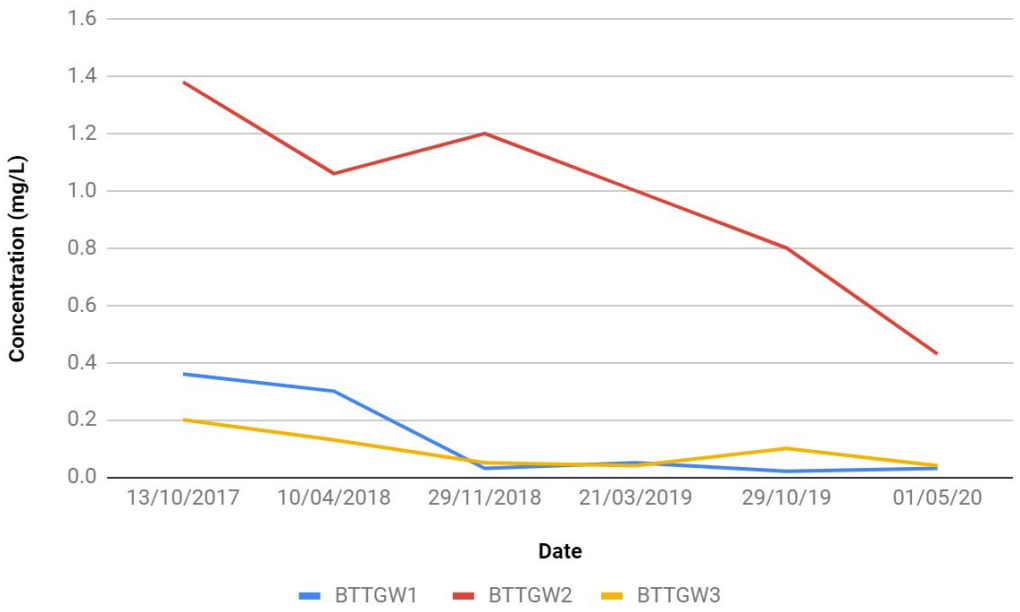

Figure 2.6 - Ammonia trends in groundwater

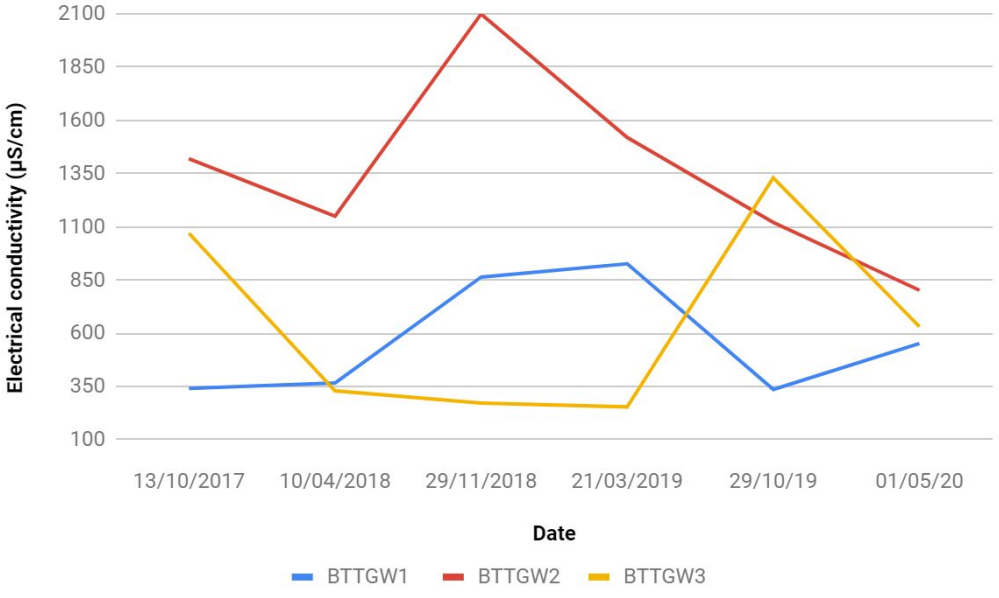

Figure 2.7 - EC trends in groundwater

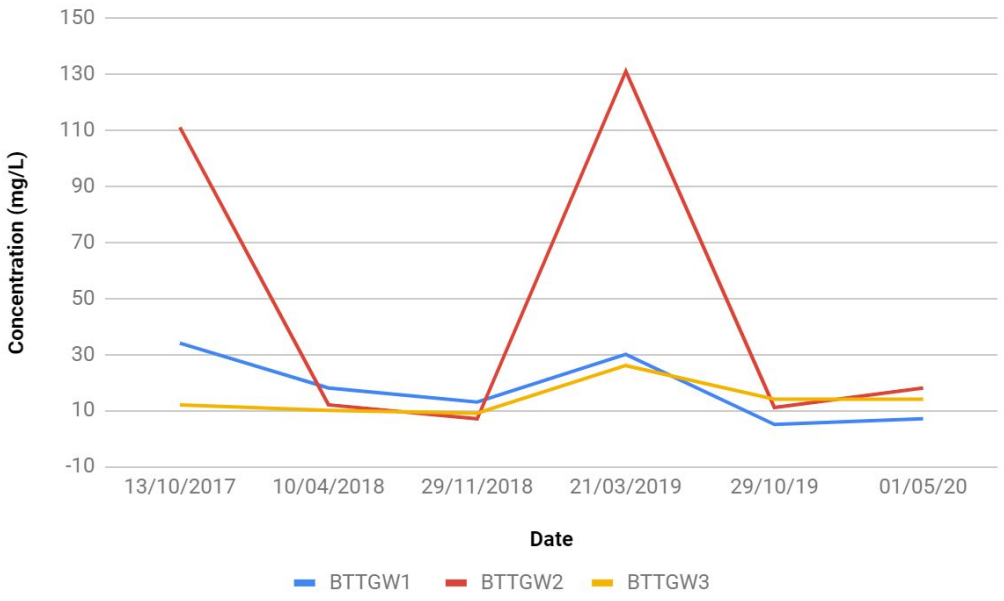

Figure 2.8 -TOC trends in groundwater

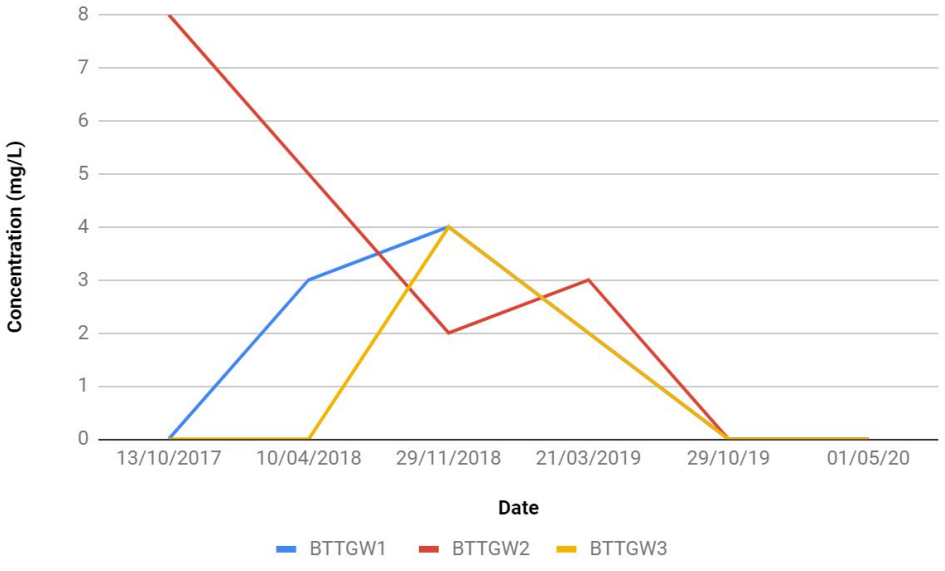

Figure 2.9 -BOD trends in groundwater

Groundwater levels were between 1.22 m and 2.80 m (depth to water) indicative of the shallow water table at the site. Ammonia and BOD concentrations were relatively low and within baseline levels in all wells this reporting period and ranged between 0.02 to 0.80 mg/L and < 2 mg/L, respectively.

pH in all three wells (GW1, GW2, GW3) have slightly increased above baseline levels but will continue to be monitored in the next reporting period. Alkaline pH levels are not consistent with leachate quality tested onsite (pH= 4-5), therefore this trend does not indicate the migration of leachate on site.

In GW1 and GW3 ammonia, TOC, and BOD are relatively consistent with baselines levels. EC and TDS were fluctuating in both wells this reporting period, however this is consistent with historical trends. Overall, these results indicate there was no leachate migration from the site.

During this reporting period GW2 has shown a decreasing trend for the majority of parameters (TDS, Ammonia, EC, TOC, and BOD).

Groundwater results indicate that there have been no on-site impacts from site operations, which indicates that ongoing housekeeping and maintenance of the Terminal are effective.

Long Term Trends

- Groundwater quality in GW1 and GW3 wells remains fairly consistent with historical trends and baseline levels. .
- Groundwater quality in GW2 has shown a continuously decreasing trend in ammonia and BOD since monitoring commenced in 2017. However the remaining parameters are fairly consistent with historical trends and baseline levels

Groundwater results are made publicly available and can be accessed via Veolia's website in the following link: https://www.veolia.com/anz/media/media/reports?publication_type=36

2.3.2 Surface Water Monitoring

Stormwater discharge monitoring is conducted at the Terminal to monitor the effectiveness of all environmental measures to manage stormwater quality and infrastructure on-site. Stormwater monitoring is also undertaken to assess the performance of the on-site stormwater treatment system and whether stormwater flowing off-site could be contaminated as a result of operations at the Terminal.

The results of stormwater monitoring are assessed against discharge limits stipulated within the EPL 20581 which are described in Table 2.4 below.

Table 2.4 - Stormwater Discharge Limits

Parameter	Concentration Limit (100 percentile limit)	Frequency	Sampling method
pH	6-8.5 units	Daily, during any discharge event	Grab sampler
TSS (Total Suspended Solids)	50 mg/L		
Ammonia as N	1 mg/L		
BOD (Biochemical Oxygen Demand)	10 mg/L		
Oil & Grease	10 mg/L		

There were a number of rainfall events during the reporting period, which triggered the requirement to conduct stormwater monitoring, the results of which are summarised in Figures 2.10-2.14.

All stormwater sampling results collected during the reporting period are provided in Figures 2.10- 2.14.

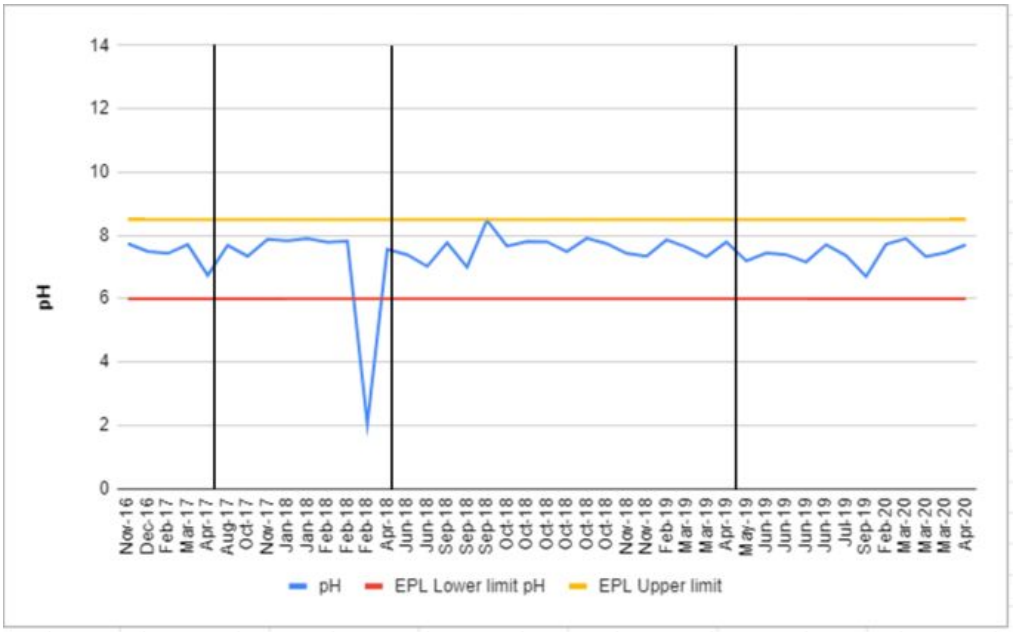

Figure 2.10 -pH trends in stormwater discharge

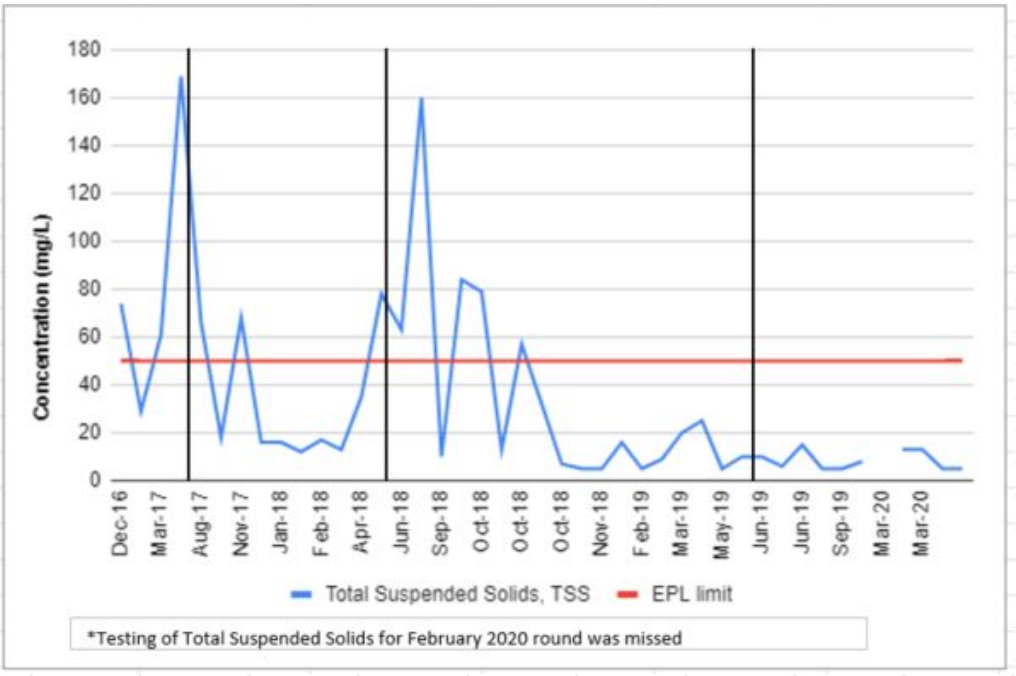

Figure 2.11 -TSS trends in stormwater discharge

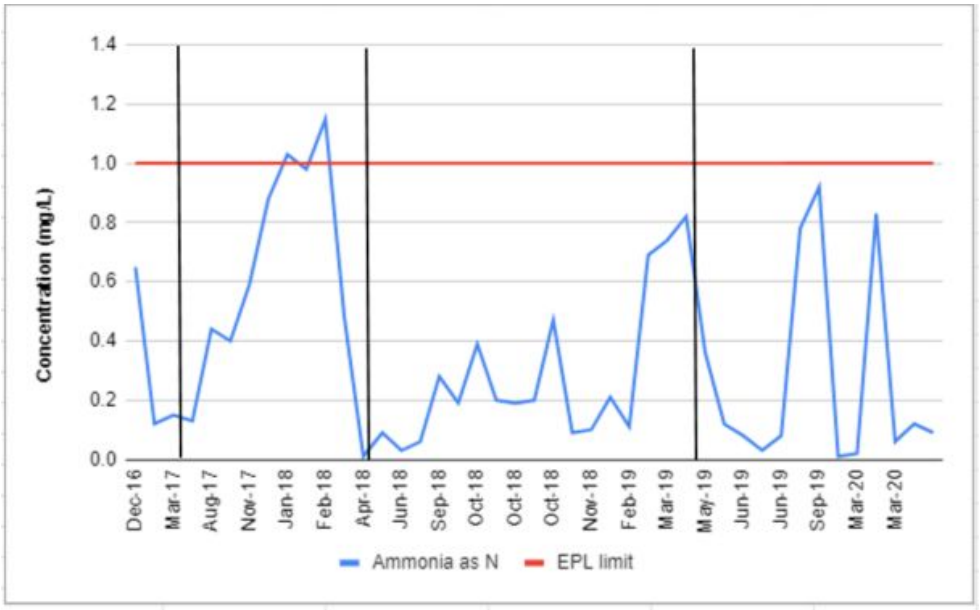

Figure 2.12 - Ammonia trends in stormwater discharge

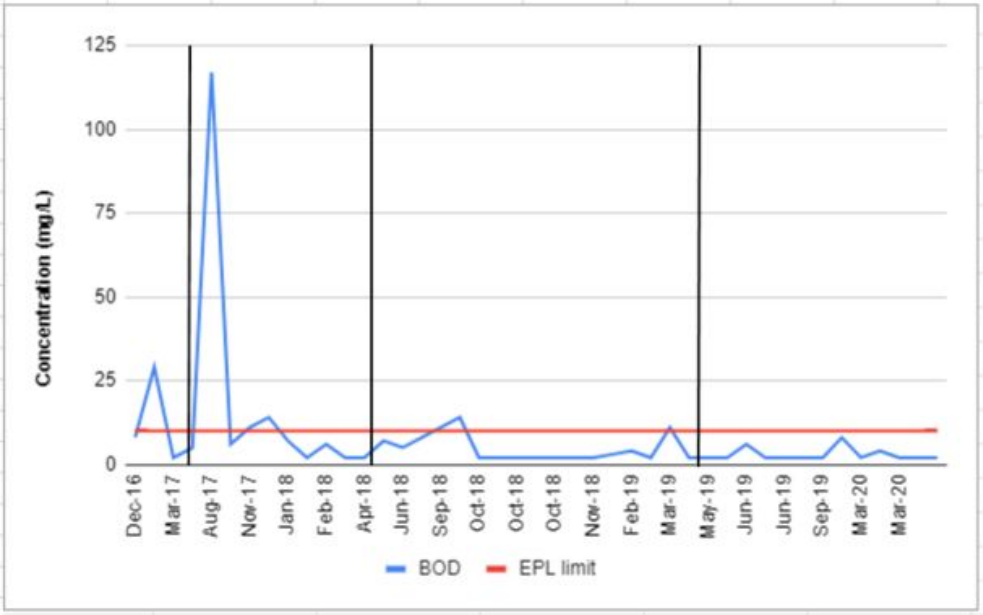

Figure 2.13 - BOD trends in stormwater discharge

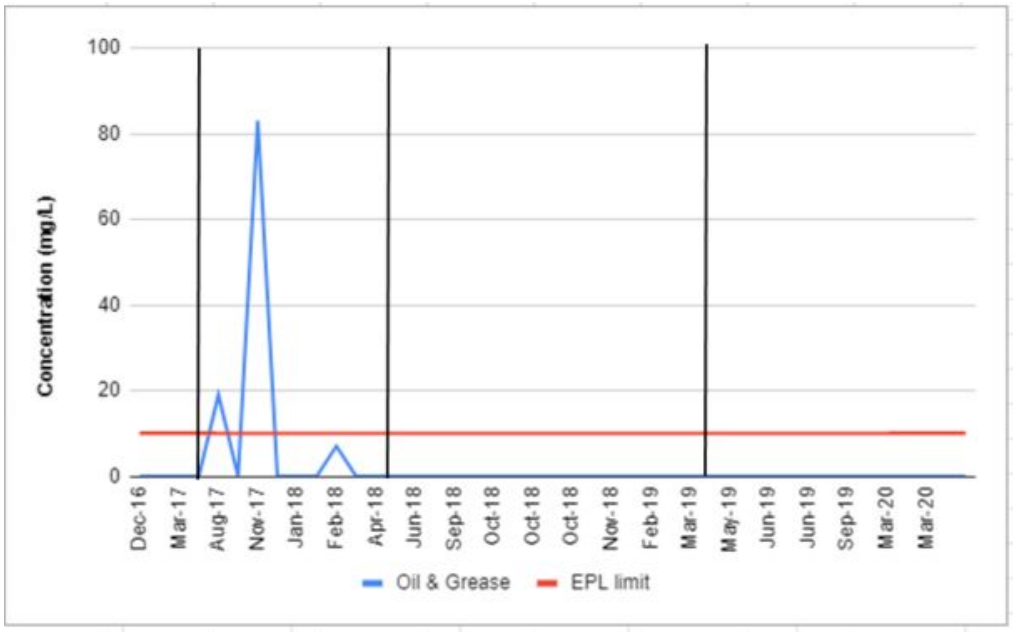

Figure 2.14 - Oils & Grease trends in stormwater discharge

During the reporting period, stormwater discharge quality from the EPL Monitoring Point 1 has vastly improved in all parameters compared to the last two reporting periods based on corrective actions implemented to rectify off-site cross contamination issues at Monitoring Point 1. The rectification works included modification of the stormwater discharge pit to prevent backflow of stormwater from the downstream council drain into Monitoring Point 1. During this reporting period the stormwater discharge quality was within the concentration limits stipulated in the EPL 20581.

This result indicates the operation and ongoing maintenance of the on-site stormwater treatment system remains effective in managing stormwater quality generated on site.

Long Term Trends

- Following the recommencement of sampling from EPL Monitoring Point 1 after rectification in the discharge pit last reporting period, stormwater quality results have significantly improved in all parameters (pH, BOD, ammonia, oils and grease and TSS) since rectification. Sampling results have remained within the EPL limits.

Surface water results are made publicly available and can be accessed via Veolia's website in the following link: https://www.veolia.com/anz/media/media/reports?publication_type=36

2.3.3 Leachate Monitoring

Leachate is defined as any water which comes into contact with waste or waste processing areas. Through the management of waste, leachate is released within the waste shed when waste is delivered to the Terminal. All leachate from the tipping floor and compactor areas, as well as wash down water are collected into two 32 kilolitre (kL) leachate storage tanks for off-site disposal.

Leachate levels within the storage tanks are monitored by using a reference point on the containers, this determines when it is required to be pumped out and disposed of.

During this reporting period the off-site disposal facility did not require leachate quality data to be provided, therefore this monitoring requirement was not triggered as mentioned in Table 2.1.

2.4 Noise and Vibration

2.4.1 Noise and Vibration Monitoring

Operational activities such as truck operations, plant and equipment at the Terminal act as potential sources of noise emissions which may impact nearby receivers. Noise modelling was undertaken as part of the EIS (Hyder, 2014) which predicted that the operational noise emissions from the Terminal would not generate noise emissions which would impact local amenities.

Despite this, a number of noise and vibration mitigation controls were implemented at the Terminal to manage potential impacts, such as: low speed limits on-site, scheduling of trains, minimising container movements, use of quiet/minimal noise plant and equipment, and driver induction program, these are further detailed in the Noise and Vibration Management Plan (NVMP).

Based on the noise modelling by the EIS, the following operational noise goals were adopted for the Terminal which are provided in Table 2.5.

Table 2.5 Operational Amenity Noise Goals

Receptor Location	Amenity Criterion (LAeq, 15 min, dB(A)		
	Day	Evening	Night
Residential Receivers	50	40	37
Industrial Receivers	65	65	65
Commercial Receivers	70	70	70

An ambient noise assessment was conducted in August 2017 which indicated off-site noise emissions comply with the noise criteria.

In the event a noise complaint is received at the Terminal, the site will carry out noise monitoring if required, and liaise with the complainant until resolved. No noise complaints were received in this reporting period, therefore the Consent Condition for monitoring was not triggered.

Long Term Trends

- Noise emissions has not caused off-site impacts, this has remained consistent since the commencement of operations in 2016
- Noise emissions continue to be adequately managed on-site through the implementation of mitigation controls outlined in the NVMP

2.4.2 Vibration Monitoring

Vibration impacts during operation of the Terminal were assessed in the EIS to be negligible and to pose no potential impact on sensitive receivers, buildings or the environment.

A vibration assessment was conducted in August 2017 which indicated vibration levels at residential receivers comply with the vibration criteria.

Noise and vibration mitigation measures have been discussed in Section 2.4.1. No vibration complaints were received for the Terminal during this reporting period therefore not triggering the requirements for additional vibration monitoring.

Long Term Trends

- Vibration emissions has not caused offsite impacts, this has remained consistent since the commencement of operations in 2016
- Similarly to noise emissions, vibration emissions continue to be adequately managed on-site through the implementation of mitigation controls outlined in the NVMP

2.5 Traffic

A Traffic Impact Assessment (TIA) was undertaken as part of the EIS (Hyder, 2014) to assess the potential impact of the Terminal on traffic and transport during its operation.

The TIA found that the Terminal would see up to 355 trucks per day for the delivery of mixed waste, and that there was a potential for nearby roads to be affected due to these truck movements. A number of mitigation measures were implemented at the Terminal to manage these potential impacts as detailed in the Traffic Management Plan and are provided below in Table 2.6.

Table 2.6 Traffic Control Measures

Traffic issue	Control	Monitoring	Effective
Traffic Congestion	-Site has adequate room for queuing on-site - If above control fails then vehicles will be directed away from the site. Facility Manager will then advise to cease further deliveries to the site until problem has been resolved	Traffic Spot Monitoring (Onsite truck routes and Driver management)	Yes, no complaints have been made of trucks obstructing traffic movements of neighbouring businesses
On-site Truck routes	-Abide to speed limit onsite -No turns to/from Perry street at any time -No right turn from Beauchamp Rd between 6AM-8PM	Traffic Monitoring (Traffic flow and Congestions)	Yes, no complaints from surrounding businesses or residents
Driver management	- The induction informs customers of the site rules, weighbridge usage and site transport management procedures. Furthermore, clients must adhere to Veolia's standards of: professional conduct, workplace safety, drivers licence requirements, drug and alcohol policy.	Traffic Spot Monitoring (Onsite truck routes and Driver management)	Yes, there have not been any major incidents since the program has been implemented

Monitoring activities conducted at the Terminal assist in measuring the effectiveness of these traffic control measures. No vehicles were observed using any unauthorised roads as stipulated within Schedule 3, Condition 29 of the Consent.

A total of 57,688 (truck) movements occurred during the operation reporting period which is equivalent to 158 trucks per day. This is in line with the predicted truck movements of 355 trucks per day as described in the EIS. A breakdown of truck movements per month is provided in Table 2.7.

Table 2.7 Truck Movements during the 2018/2019 and 2019/2020 reporting periods

Monitoring Period	Truck Movements 2018/2019	Truck Movements 2019/2020
29 to 30 April 2019	280	382
May	4925	4956
June	4661	4411
July	4800	4946
August	4936	4700
September	4492	4803
October	4964	4999
November	4784	4927
December	4785	5153
January	4734	5131
February	4378	4843
March	4693	4966
1 to 28 April 2020	4385	3471
Total	**56,817**	**57,688**

Long Term Trends

- Truck movements have not been found to have resulted in off-site or on-site impacts since the commencement of operations in 2016.
- Potential traffic impacts have continued to be adequately managed on-site through the implementation of traffic control measures outlined in Table 2.8 and Traffic Management Plan.

2.6 Waste

A Waste Management Plan (WMP) was prepared which details the control strategies and mechanisms for the effective monitoring and recording of waste at the Terminal as shown in Table 2.8.

Table 2.8 - Waste Monitoring Schedule

Waste Monitoring	Type of Monitoring	Frequency
Waste volume processing • Storage on site	Waste on floor	Daily
Waste volume processing • Annual limit	Tonnage data review	Ongoing
Waste Recording	Incoming Waste Processing	Ongoing

2.6.1 Waste Monitoring

All waste received at the Terminal was recorded in the Paperless Weighbridge System (PWS) and the Systems, Applications and Products in Data Processing (SAP) software. SAP records vehicle registrations, the date and time of delivery, the gross and tare weight of the vehicle, as well as the nature and origin of the waste delivered by each contractor.

Visual assessments of incoming waste are conducted by weighbridge operators and assisted by close circuit television. These visual assessments were conducted to identify, reject and/or separate non-conforming waste upon its arrival to the Terminal. Waste is also inspected as it is tipped/unloaded onto the tipping floor.

Schedule 2, Condition 5 of the Consent stipulates that the Terminal must not receive or process more than 400,000 tonnes per annum (TPA) of putrescible waste and 100,000 TPA of non-putrescible waste. Veolia utilises the data provided by SAP to track and monitor the amount of incoming waste in accordance with the limits of the Consent. Refer to Table 2.9 for a breakdown of the classification of waste material received and processed at the Terminal during this reporting period and the previous reporting period. As noted in the table, all waste received at the Terminal is containerised for transfer to the Woodlawn Eco-Precinct.

Table 2.9 - Received and processed waste for 2018 and 2019 calendar years

Waste classification	Approved Limit (tonnes per annum)	Waste tonnes (2018)	Waste tonnes (2019)
General Solid Waste (Putrescible)	400,000	311,489	313,514
General Solid Waste (Non Putrescible)	100,000	589	1,673

As shown in Table 2.9, The Terminal did not receive or process more than 400,000 tonnes per annum (TPA) of putrescible waste and 100,000 TPA of non-putrescible waste. No incoming non-conforming waste was recorded during this period.

Long Term Trends

- Since the commencement of operations the Terminal has continued to operate within annual waste limits.

2.7 Pests and Vermin

The management of pest and vermin at the Terminal was maintained through preventative and responsive mitigation measures as per the Landscape and Vegetation Management Plan appended to the Terminal's OEMP. Such measures included;

- Routine inspections of site by a registered pest controller
- Weekly Site Inspection Checklist completed to record site conditions such as evidence of vermin and pests
- Placement of rodent bait stations at various locations around the site

Pest control was undertaken by an external contractor (Expert Judgement Pest Management PTY LTD) during this reporting period. In total five (5) pest control service reports were completed during the reporting period. Routine pest control service usually involves an initial inspection of the Terminal buildings (site office, weighbridge office and waste shed), followed by any necessary treatment for rodents, cockroaches and spiders.

No pest and/or vermin complaints or management issues were reported during the operation of the Terminal during the reporting period.

Long Term Trends

- This result is consistent with findings in previous years
- Vermin and pests continue to be adequately managed on site since the commencement of operations in 2016.

2.8 Complaints

A total of three complaints as shown in Figure 2.15 were issued to the Terminal during this reporting period, all of which related to odour emissions. Two of the odour complaints were received directly from IXOM who are located north-east of the Terminal. The remaining one complaint was made anonymously to Bayside Council and then reported to the EPA. There has been a significant reduction of odour complaints compared to last reporting year with a total of 18.

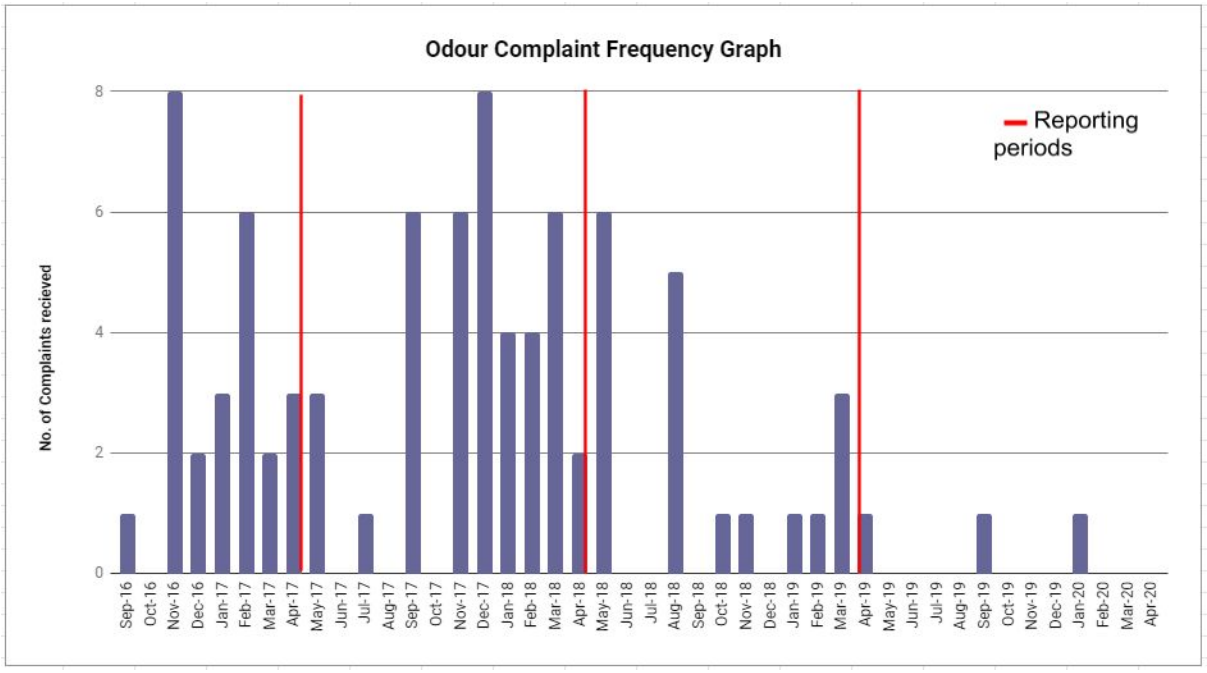

Figure 2.15 - Number of odour complaints received each month at the Terminal

Two of the odour complaints were received between the hours of 7-11am with south-west, south-south-west wind directions and upset operational conditions were occurring on-site. The other complaint was received during south-west wind conditions when extreme weather conditions were occuring. This event resulted in waste containers being stored longer onsite due to a train cancellation.

Based on meteorological data in Figure 2.1 and 2.2, prevailing winds from both south-west and south-south-west occurred approximately 10% of the year, where odour complaints are more likely to occur. Given the relatively small number of odour complaints received in this reporting period, the odour control system and other mitigation measures have been found to be effective.

Following the receipt of each odour complaint:

1. The Terminal implements corrective actions if necessary, to reduce odour emissions such as adjustment of fan extraction system speed setting;
2. The Site Manager communicates any corrective actions taken on the site with the complainant;
3. Meteorological wind data is downloaded from the BoM website;
4. Details of the complaint and wind data are logged in the BTT Complaints Register (**Appendix D**).

Section 3 - Environmental Performance

The environmental performance of the Terminal is assessed through the results of environmental monitoring, inspections and audits, both internal and external. Corrective actions are then assigned for any non-compliances or other findings identified against the conditions of Consent in this reporting period.

- Groundwater and surface water quality have remained fairly consistent and within respective limits, with the exception of seasonal fluctuations.
- Air quality has shown positive results with no dust and the lowest number of odour complaints this reporting period, this is also supported by TOU audit.
- General Solid Waste (Putrescible and Non-Putrescible) volumes have not exceeded annual waste tonnage limits.
- No complaints have been made in relation to noise and vibrations, and traffic which indicates implemented mitigation controls are effective.
- Pests and vermins are adequately controlled, no issues have been identified since the commencement of operations in 2016.

No non-compliances against monitoring or inspection requirements were identified against the Conditions of Consent during this reporting period.

An Independent Environmental Audit (IEA) of the Terminal's environmental performance was carried out in March 2019 by Jackson Environment and Planning. The objective of this IEA was to assess the compliance of the Terminal's operations against the conditions of Consent as per condition 6 and 7 (Schedule 4). The audit findings against each condition is provided in **Appendix B.**

The IEA report (Jackson, 2019) demonstrated that there were no non-compliances, however recommendations by the auditors were actioned as improvement opportunities. The progress of which are provided in Table 3.1.

In addition to the above, continual improvement is important to Veolia to ensure its business is operating effectively and efficiently. Veolia has proposed an initiative whereby compliance and monitoring requirements are currently captured in the OEMP and the Environmental Monitoring Program, this will be tracked in an automated system for compliance tracking and performance measurement.

3.1 Previous Findings

Findings identified during the 2018/2019 reporting period are detailed in Table 3.1 below to show that corrective actions were taken to resolve/manage these findings, these were implemented and completed in this reporting period.

Table 3.1 - Findings and Corrective Actions in the 2018/2019 reporting period

Relevant Condition	Observations	Corrective Actions	Person/Team Responsible	Status
Schedule 3, Condition 21	Weed management - It is recommended that weed management, in accordance with the Landscape and Vegetation Management Plan, is resumed to avoid the continued growth and potential spread of weed within, and properties adjacent to the site.	Veolia has engaged new landscape contractors for the ongoing weed management on the site in accordance with the Landscape and Vegetation Management Plan. Periodic inspections at the Terminal will be undertaken to avoid any potential spread of weeds.	Facility Manager - NSW Resource Recovery Team	Completed May 2019, Ongoing inspections
Schedule 3, Condition 9 and 10	Increase the frequency of drain cleaning in the main tipping building and include regular inspections to ensure that the leachate is not accumulating and potentially causing odour which could migrate outside of the processing shed.	Drain is inspected daily as part of the Terminal's operations. The frequency of cleaning the drains in the main tipping building is increased from once to twice per day.	Facility Manager - NSW Resource Recovery Team	Completed May 2019, Ongoing housekeeping

3.2 Conclusion

In this reporting period all environmental monitoring results and audits have demonstrated that all mitigation controls have consistently been effective in managing potential environmental impacts associated with air quality, noise and vibration, water quality, traffic, and pest and vermin.

Furthermore, in the previous reporting period there were a number of improvements and corrective actions to the stormwater and odour management at the Terminal. These improvements have continued to be maintained in this reporting period and is reflected by the significant reduction in the number of odour complaints and continuous stable stormwater quality results.

A review of the non-compliances between the 2018 and 2019 reporting periods by the IEA along with recent feedback from neighbouring businesses and monitoring quality results, indicates the Terminal has had an immense improvement in the overall environmental performance. Veolia will continue to maintain, monitor and assess the Terminal's environmental performance through to the next reporting period.

Terms and Definitions

Term	Definition
AEMR	Annual Environmental Management Report
ALS	Australian Laboratory Services PTY LTD
AQMP	Air Quality Management Plan
BMS	Veolia's Business Management Systems
BTT	Banksmeadow Transfer Terminal
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment (Act and Regulations)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
IEA	Independent Environmental Audit
NVMP	Noise and Vibration Management Plan
OEMP	Operational Environmental Management Plan
SWLMP	Soil, Water Leachate Management Plan
The Consent	Development Consent SSD 5585
TMP	Traffic Management Plan
TOU	The Odour Unit PTY LTD
The Terminal	Banksmeadow Transfer Terminal
TPA	Tonnes per annum
Veolia	Veolia Australia and New Zealand
WMP	Waste Management Plan

References

1. DEC (2006) "*Technical framework: assessment and management of odour from stationary sources in NSW*", Department of Environment and Conservation, November 2006.
2. EPA (2014), *"Waste Classification Guidelines Part 1: Classifying waste"*, NSW Environment Protection Agency, November 2014.
3. Hyder (2014), Banksmeadow Transfer Terminal Environmental Impact Statement, Hyder Consulting, July 2016.
4. Veolia (2017/2018), Banksmeadow Transfer Terminal Annual Environmental Management Report, Veolia, April 2018.
5. Veolia (2018/2019), Banksmeadow Transfer Terminal Annual Environmental Management Report, Veolia, June 2019.
6. SLR Consulting (2017), Noise and Vibration Assessment, August 2017.
7. Jackson (2019), Independent Environmental Audit Veolia Environmental Services Australia, Banksmeadow Transfer Terminal, May 2019.

Appendices

Appendix A - Site Plan

Appendix B - Conditions of Consent Compliance Table

Appendix C - Odour Audit Reports

Appendix D - Complaints Register