

Annual Environmental Management Report - Clyde Transfer Terminal 2019



Quality Information

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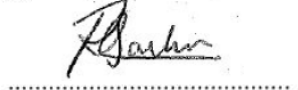
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Executive Summary

This Annual Environmental Management Report (AEMR) is the 16th report prepared to detail the environmental performance of the Clyde Transfer Terminal (The Terminal), owned and operated by Veolia Australia and New Zealand (Veolia). This AEMR covers the period of 15 January 2019 to 14 January 2020 (the reporting period).

Veolia has prepared this AEMR in accordance with Consent Condition 58 and 59 of the Development Consent DA 205-08-01 (the Consent) and subsequent modifications, as well as relevant legislative requirements and industry best practices.

This AEMR provides a summary of environmental monitoring conducted at the Terminal and any non-compliances identified against the Consent during the reporting period, as well as the corrective actions, where implemented, to address such non-compliances.

An Independent Environmental Audit (IEA), undertaken in accordance with Condition 60 of the Consent, identified one non-compliance against the Conditions of the Consent (hereby referred to as Consent Conditions) during this reporting period which was as follows:

- Condition 119 - No vehicle entering the development shall turn right off Parramatta Road.

To address this historical non-compliance, in March 2017 Veolia applied to delete Condition 119 however approval was only granted by the Department of Planning, Industry and Environment (DPIE) in April 2019 to amend this condition to allow vehicles to turn right into the Terminal following the completion of road upgrade works on Parramatta Road. Veolia has since been liaising with Roads and Maritime Services and Cumberland Council to progress these works. Compliance with the remaining Consent Conditions was demonstrated during the IEA and presented in a Conditions of Consent compliance table. Details have been communicated to DPIE and are provided further in this AEMR.

1. Introduction

1.1 Site Background

The Terminal is located within a portion of the Clyde Rail Yard at 322 Parramatta Road and forms part of Lot 21 of DP10076683 in the Cumberland Council area. A site layout and location plan is provided in **Appendix A**.

The Terminal was granted ministerial approval in 2003 to operate under the Clyde Waste Transfer Terminal (Special Provisions) Act 2003 (assented 8 December 2003). The Consent was modified (29 April 2019) to permit the Terminal to receive up to 600,000 tonnes per annum (TPA) of mixed waste.

Clyde Waste Transfer Terminal commenced operations in 2004, accepting putrescible waste from the Sydney metropolitan area, which is containerised and loaded onto rail wagons for transportation in the Southern Tablelands (approximately 250 kilometres southwest of Sydney) for treatment, recycling and energy recovery.

1.2 Legislative Requirements

The key environmental legislation for the Terminal includes the Environmental Planning and Assessment Act 1979 (EP&A) regulated by the 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.

Legislative instruments governing the environmental performance for the Terminal include the Consent, under the Clyde Waste Transfer Terminal (Special Provisions) Act 2003 and an Environment Protection Licence (EPL) 11763 issued by the EPA, under the POEO Act. These permits regulate the operational activities conducted at the Terminal.

The table provided in **Appendix B** addresses the compliance against all Consent Conditions. Those relevant to the preparation of this AEMR are provided in Table 1.1 below.

Table 1.1 Consent Conditions for the preparation of this AEMR

Relevant Condition	Requirement
GENERAL ENVIRONMENTAL MANAGEMENT	
<i>Environmental Monitoring Program</i>	
58	The Applicant shall include a report on the Environmental Monitoring Program in the Annual Environmental Management Report. The report must: <ul style="list-style-type: none"> (a) Summarise the results from the Environmental Monitoring Program over

	<p>the previous year</p> <ul style="list-style-type: none"> (b) Analyse the results in relation to both past performance, and the relevant standards and performance measures of the development (c) Identify any emerging trends in the data over the life of the development (d) Include a copy of the detailed monitoring results as an attachment.
Annual Environmental Management Report	
59	<p>Between twelve and fourteen months after the issue date of an environmental protection licence for the development; and annually thereafter for the duration of the development, the Applicant shall submit an Annual Environmental Management Report to the Secretary, the EPA and the Community Consultative Committee. The report shall be made available to the public on request to the Application. The report combined with the Annual Return required by the environment protection licence to be submitted to the EPA. The report must:</p> <ul style="list-style-type: none"> (a) Identify all the standards, performance measures, and statutory requirements the development is required to comply with (b) Review the environmental performance of the development to determine whether it is complying with the standards, performance measures and statutory requirements (c) Identify each occasion during the previous year when the standards, performance measures, or statutory requirements have not been complied with (d) where any non-conformance is identified, describe the actions or measures taken to ensure compliance, who is responsible for carrying out the actions, and when the actions were (or will be) implemented (e) include a summary of any complaints made about the development, and indicate the actions taken to address the complaints (f) include a report on the Environmental Monitoring Program as specified in this Consent.
Independent Environmental Audits	
60	<p>Every year following the date of this consent or at periods otherwise agreed to by the Planning Secretary, and until such time as agreed to by the Planning Secretary, the Applicant shall arrange for an independent audit of the environmental performance of the development. The audits shall:</p> <ul style="list-style-type: none"> (a) be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing, ISO 14011 – Procedures for Environmental Monitoring and any specifications of the Planning Secretary; (b) be conducted by a suitably qualified independent person approved by the Planning Secretary; (c) assess compliance with the requirements of this consent; (d) assess the implementation of the EMP (Construction) and EMP (Operation) and review the effectiveness of the environmental management of the development; and (e) be carried out at the Applicants' expense. <p>The audits shall be submitted to the Planning Secretary.</p>

	The Applicant shall comply with all reasonable requirements of the Planning Secretary in respect of any measures arising from or recommended by the audits and within such time as agreed to by the Planning Secretary.
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1.3 Responsibilities

The Environmental Management Representative (EMR) for this reporting period was Sara Maddison (Operations Project Manager) as per Consent Condition 55.

Environmental monitoring was undertaken by the NSW Resource Recovery technical support personnel - Sara Maddison (Operations Project Manager) and Mary Wong (Graduate Environmental Engineer).

The Odour Unit PTY LTD (TOU) was appointed to conduct biannual odour audits.

Hydrometric Consulting Services completed quarterly calibrations of the weather station.

Expert Judgement Pest Management Pty Ltd was appointed for pest and vermin control throughout this reporting period and inspections are undertaken on a routine basis. In addition to this, there are routine inspections undertaken by the Terminal's operators, as part of general housekeeping and recorded on relevant Housekeeping and Inspection Checklists.

Jackson Environment and Planning conducted an Independent Environmental Audit (IEA) in November 2019. The audit team associated with this IEA included Dr Mark Jackson, Rylan Loemker and Alan Parsons (Lead Auditor), approved by the DPIE, in accordance with Consent Condition 60.

2. Environmental Monitoring and Management

2.1 Monitoring Requirements

The following sections detail the monitoring undertaken throughout the reporting period in accordance with the Environmental Monitoring Program proposed within the Operational Environmental Management Plan (OEMP).

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 program for the Terminal and a monitoring location plan is provided in **Appendix C**.

Table 2.1 - Summary of the environmental monitoring program for the Terminal

Consent Condition	Type of Monitoring	Frequency	Commentary
48 (f)	Odour Audits	Biannually	Condition satisfied, monitoring conducted on 23 May and 27 November 2019
49	Dust monitoring	Following receipt of dust complaint, as required	Not triggered
50	Traffic Monitoring	Monthly	Ongoing basis
60	Independent Environmental Audit	Annually	Condition satisfied audit conducted on November 2019
91	Meteorological monitoring	Continuous (15 minute intervals)	Ongoing basis

117	Pest and Vermin Inspections	Quarterly	Ongoing basis
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2.1.1 Meteorology

Veolia operates an automated onsite weather station (Campbell Scientific Model CR800) to continuously log meteorological data, in accordance with Consent Condition 91. This allows sampling and analysis of the parameters specified in **Table 2.2** below, along with standards and statutory requirements to collect and record this data.

Table 2.2 - Meteorological data parameters and performance measures

Parameter	Performance Measure	Standards	Statutory Requirement
Wind Speed	Data correlated with other environmental monitoring results for Terminal operations and complaint resolution	AM-2 & AM-4	Consent Condition 91
Wind Direction		AM-2 & AM-4	
Sigma Theta		AM-2 & AM-4	
Temperature		AM-4	
Rainfall		AM-4	
Solar Radiation		AM-4	
Evaporation		Penman-Monteith method	

Captured meteorological data provides a general understanding of the ambient air conditions at the Terminal, which in turn allows us to use this data within investigations of potential odour and dust complaints as well as other environmental incidents. Justification for the collection of specific meteorological data is provided below.

Wind Speed, Wind Direction and Sigma Theta

Wind speed, direction and sigma theta (which are used to calibrate turbulence) are logged at 15-minute intervals, the data from which is used to respond to odour and noise complaints, on receipt.

Temperature and Solar Radiation

In combination with wind speed, temperature and sunlight (solar radiation) play an important role in odour and dust emission modelling to predict airflow patterns and atmospheric stability. In the event that a complaint is received, these parameters would be used to conduct

assessments to identify whether adverse air quality impacts can be attributed to operations at the Terminal.

Evaporation

Evaporation measures the extent of vaporisation of a liquid into gaseous phase. Water molecules are small and highly polar, and so can bind to many substances including odorous gases and dust particles. Therefore, evaporation can be used to conduct dispersion modelling in the event of an odour/or dust complaint.

Rainfall

Rainfall data is measured and recorded at 15-minute intervals at the Terminal to provide an understanding of rainfall patterns and to highlight significant rainfall events. Rainfall generally affects the emissions of dust and odours, as it is able to wash particulate matter and dissolves gaseous pollutants out of the atmosphere. Given this, rainfall data is utilised within responses to odour and/or dust complaints.

In addition, the intensity and duration of stormwater events at the Terminal can be used to assess the performance of the stormwater management system.

A summary of monthly rainfall and evaporation rates, as well as minimum and maximum monthly temperatures at the Terminal during this reporting period is presented below in **Figures 2.1** and **2.2** respectively.

Overall, the average rainfall for the Terminal during this reporting period was recorded at 54.58mm per month.

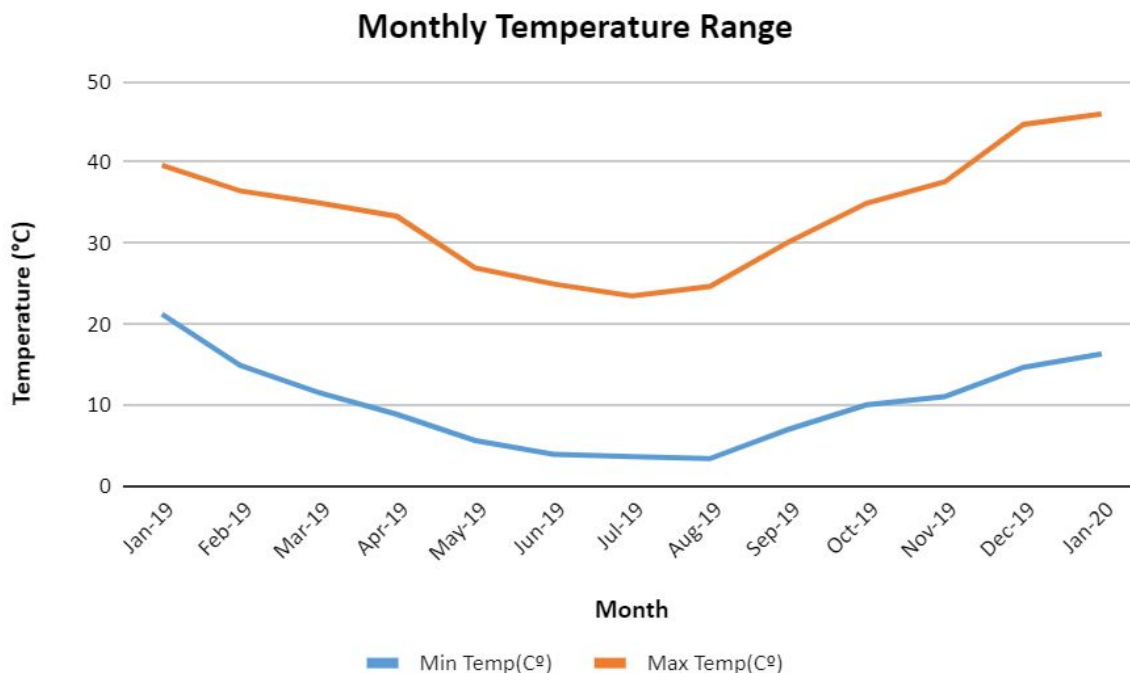


Figure 2.1 - Average Monthly Temperature rates at the Terminal

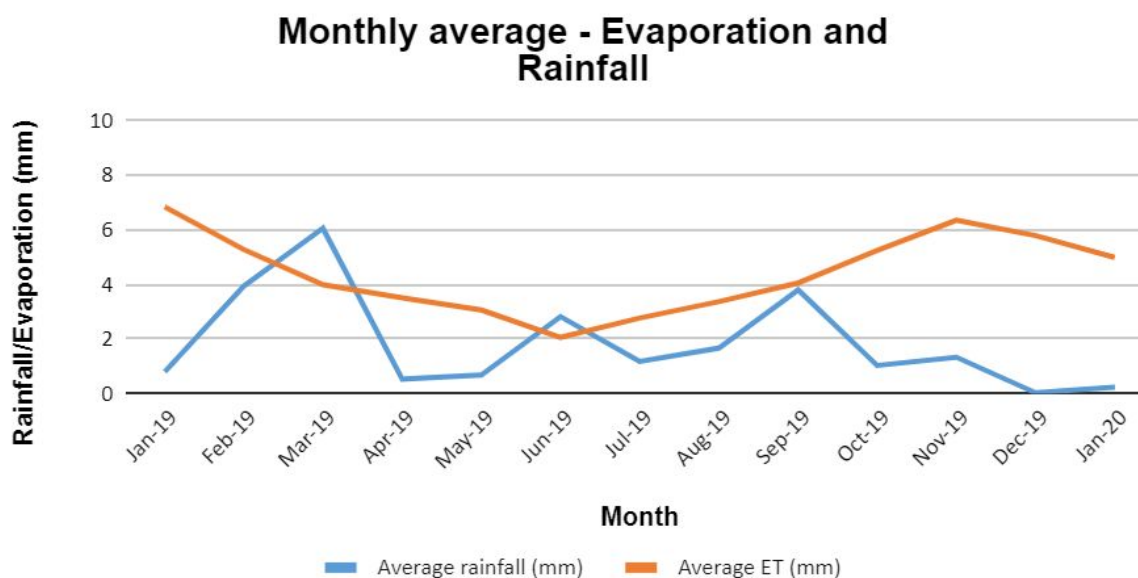


Figure 2.2 - Average Evaporation and Rainfall rates at the Terminal

During the reporting period, no non-compliances relating to the collection of meteorological data occurred.

Servicing and calibration of the meteorological station was successfully carried out quarterly by Hydrometric Consulting Services (HCS). Calibration records for the months of February, May, August and November 2019 can be found in **Appendix D1**.

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

To manage dust, Veolia utilises and maintains a dust suppression system in the waste shed. Further controls for areas within close proximity of the waste shed are regularly maintained with the use of the road sweeper and general housekeeping.

In accordance with Consent Condition 49, following the receipt of any dust related complaints, investigations would be undertaken to monitor or implement additional measures aimed to mitigate identified dust impacts on residential or commercial areas, associated with the operation of the Terminal. The air quality parameters that would be measured to determine dust emissions, are provided in **Table 2.3**.

Table 2.3 - Dust Emissions Performance Criteria

Parameters	Performance Measure	Standards	Statutory Requirement
Total Suspended Particulates (TSP) - Annual Average	90µg/m ³	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW	Consent Condition 49
Deposited Dust (DD) - Residential Areas	4 g/m ² /month		
Deposited Dust (DD) - Commercial and Industrial Areas	5 g/m ² /month		

No dust complaints were received during this reporting period therefore monitoring requirements were not triggered.

2.2.2 Odour

The requirements of Consent Conditions 48(e) and 77 are to ensure site operations meet the EPA's odour goal of less than 2 odour units (OU) at the nearest sensitive receiver (Refer to **Table 2.4**).

Table 2.4 - Odour Emission Performance Criteria

Parameter	Performance Measure	Standards	Statutory Requirement
Odour Emissions	2 OU	German Standard VDI 3940 "Determination of Odorants in Ambient Air by Field Inspections"	Consent Condition 48E

To achieve this goal, the Terminal operates an air extraction system within the Terminal's 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.

In accordance with Consent Condition 48, the performance of odour control and ventilation equipment is assessed in biannual odour audits which were conducted by the Odour Unit PTY LTD. Records of the May and November 2019 odour audits are provided in **Appendix D2. Table 2.5** below provides a summary of the odour audit results.

The odour audits were conducted using the ranking scale stipulated within the German Standard VDI 3940 "Determination of Odorants in Ambient Air by Field Inspections". The standard ranking system is based on the following seven-point intensity scale, as follows:

VDI 3940	Intensity Scale
0	Not Detectable
1	Very Weak
2	Weak
3	Distinct
4	Strong
5	Very Strong
6	Extremely Strong

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Table 2.5 - Summary of Odour Audit Results 2019/2020

Assessment Location	Wind Direction	23/05/19	Assessment Location	Wind Direction	27/11/19
1 - Offsite (Auburn Residential)	N	0	1 - Onsite (North-West)	E - ESE	1
2 - Offsite (Auburn Residential)	N	0	2 - Offsite (North-Driveaway Entrance)	SE - ESE	0
3 - Offsite (Auburn Residential)	N	0	3 - Offsite (Clyde/Granville Residential)	N- NW	0
4 - Offsite (Auburn Residential)	N	0	4 - Offsite (Clyde/Granville Residential)	NE -WNW	0
5 - Offsite (Auburn Residential)	N	0	5 - Offsite (Clyde/Granville Residential)	NW-NE	0
6 - Offsite (Auburn Residential)	N	0	6 - Offsite (Clyde/Granville Residential)	NE-WNW	0
7 - Offsite (Auburn Residential)	N	0	7 - Offsite (Clyde/Auburn Residential)	N-NNW	0
8 - Offsite (Granville Residential)	N	0	8 - Offsite (Clyde/Auburn Residential)	N -NNW	0
9 - Offsite (Granville Residential)	N	0	9 - Offsite (Clyde/Auburn Residential)	N - NNE	0
			10 - Offsite (Clyde/Granville Residential)	NE - WNW	0

During the 23rd of May odour audit, all readings detected 0 odorants in the Field Ambient Odour-Assessment. The odour audit on the 27th of November detected 1 odorant, a reading of 1 (Very Weak) was detected in the Field Ambient Odour Assessment part of the audit.

The results of the two odour audits indicate the Terminal complies with Consent Condition 48(e) which states that odour at the Terminal shall not exceed 20U at the nearest receiver.

The Terminal continues to meet the requirements of the *Technical framework: assessment and management of odour from stationary sources in NSW (DEC, November 2006)*. Veolia also maintains

a thorough housekeeping regime, combined with odour management controls, which help to minimise the likelihood of odour impacts on surrounding neighbours/receivers.

No odour complaints were received during this reporting period.

2.3 Noise Monitoring

Table 2.6 lists the parameters, respective performance measures, standards and statutory requirements for background noise levels and vehicle emissions limits.

Table 2.6 - Noise Monitoring Requirements

Parameter	Performance Measure (dB(A))	Standards	Statutory Requirement
Day - LAeq (15 minute)	44,40,41	Noise Management	EPL Condition L3.1
Evening - LAeq (15 minute)	38,38,39		
Night - LAeq (15 minute)	39,38,39		
Night - LA1 (15 minute)	56,54,52		
Vehicle Emissions	89	Australian Design Rule (ADR) 28/01	Consent Condition 112

Noise monitoring was undertaken at the Terminal to ensure that waste vehicles entering the Terminal are not emitting nuisance noise emissions.

2.3.1 Truck Noise Monitoring

One round of truck noise monitoring was undertaken on the 22nd of October 2019 in accordance with Consent Condition 112 for this reporting period. Noise levels of 119 truck movements out of a daily total of 307 truck movements were measured, equivalent to 38.76% of truck movements. A summary of the results is illustrated in **Figure 2.3**. Further details regarding truck movements at the site is discussed in **Section 2.4.1**.

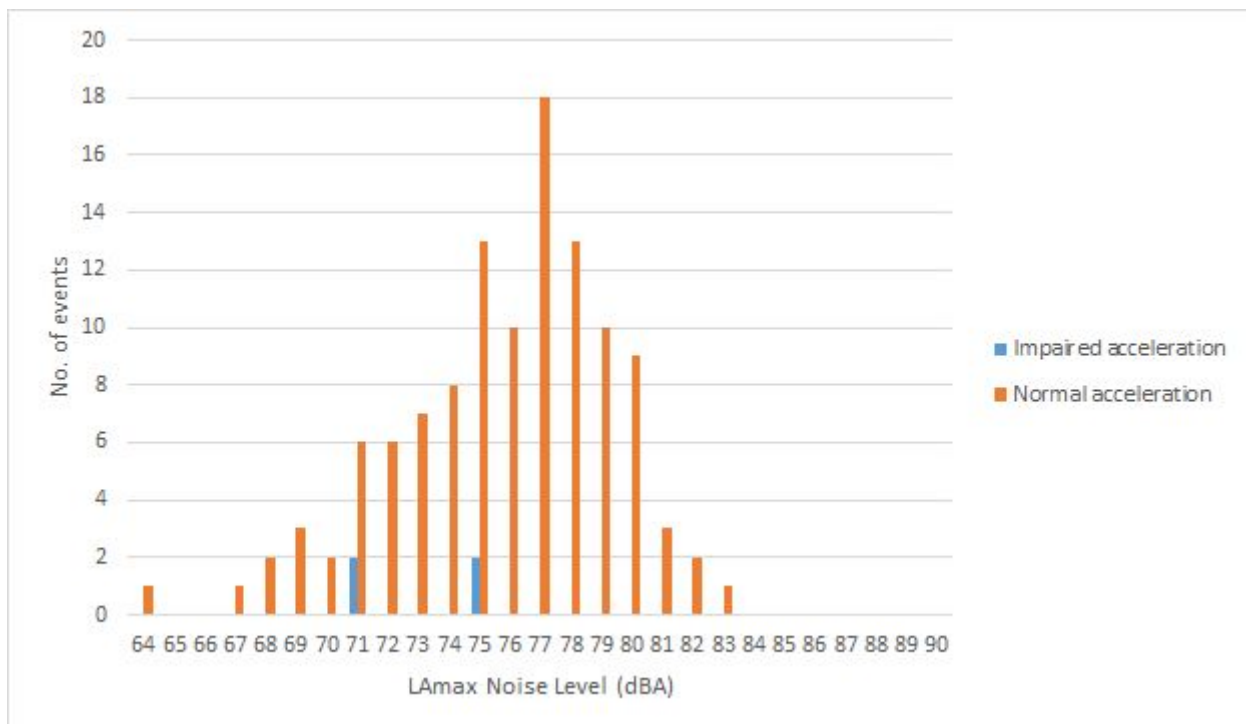


Figure 2.3 -Noise level distribution from Truck Noise Monitoring – 22 October 2019

All trucks monitoring were between 64dBA to 83dBA, and fell within or below the thresholds of 81dBA to 87dBA for Heavy Goods Vehicles with a GVM > 12 tonne in accordance with the Australian Design Rules (ADR) 28/01

There were no registered noise complaints from either industrial or residential neighbours throughout this reporting period.

2.4 Traffic Monitoring

2.4.1 Traffic Movements

Vehicle movements at the Terminal during this reporting period totalled at 86,750 as summarized in **Table 2.8** below.

Table 2.8 - Traffic movements per month for 2018/2019 & 2019/2020 reporting periods

Monitoring Period	2018/2019 Truck Movements	2019/2020 Truck Movements
15 to 31 January 2019	3,953	4,201
February	6,629	6,902
March	6,961	7,180
April	6,607	7,243
May	7,007	7,486

June	6,206	6,657
July	6,887	7,741
August	7,048	7,395
September	6,396	6,933
October	7,170	7,525
November	7,016	7,077
December	7,228	7,317
1 to 14 January 2020	3,197	3,093
TOTAL	82,305	86,750

No noise or odour complaints were received during this reporting period which demonstrates that the movements of trucks at the Terminal did not contribute to any significant noise/odour impacts to the surrounding environment.

2.4.2 Traffic Infringements

A monitoring and recording program for transport routes in accordance with Consent Conditions 50(b), 50(d) is described in the OEMP for the Terminal. The measures implemented to monitor and record the movement of vehicles that access the site include:

- Ongoing spot monitoring of vehicle movements by Site Manager or site nominee;
- Annual right hand turn audit of vehicle movement
- Recording of audits and/or repeat breaches and corrective action through Veolia's Incident and Audit Management System, Rivo Safeguard; and,
- Reviewing any complaints related to transport routes.

One non-compliance has been observed, relating to the restriction on waste vehicles turning right from Parramatta Road into the Terminal access road, during this reporting period. As part of Development Modification 5, Condition 119 was modified to enable waste vehicles to turn right from Parramatta Road following the completion of intersection upgrade works. Veolia has been liaising with Roads and Maritime Services and Cumberland Council to progress these works.

2.5 Waste Monitoring

The Waste Management Plan (WMP), which forms part of the OEMP, was prepared for the Terminal in accordance with Consent Condition 47, and 62–69, and details the procedures for the acceptance and management of waste at the Terminal.

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All waste received at the Terminal is recorded and maintained in the Systems, Applications and Products in Data Processing (SAP) software. The program records the vehicles registration, date and time of entry and exit, the gross and tare weight of the vehicle, as well as the nature and origin of waste received by each contractor.

Procedures are in place to reject or separate non-conforming waste upon arrival at the site. These procedures include visual assessments of incoming wastes by weighbridge operators assisted by closed circuit television (CCTV), as well as inspecting the waste as it is unloaded onto the tip floor. No records of non-conforming waste were reported during this reporting period.

Furthermore, data is recorded and tracked for the containers and includes container status, container weight comparisons and carbon filter replacement. This information is maintained daily by Terminal personnel.

2.5.1 Waste Volume Monitoring

The amount of waste accepted at the Terminal in the 2019 calendar year totalled 458,053 tonnes as summarised in **Table 2.9** below.

Table 2.9 - Summary tonnage per month during 2018 & 2019

Monitoring Period	Incoming Waste Volumes 2018 (tonnes)	Incoming Waste Volumes 2019 (tonnes)
January	37,884	39,668
February	35,658	36,855
March	35,325	38,080
April	35,325	37,755
May	36,792	38,567
June	32,900	33,895
July	35,489	40,999
August	36,221	38,314
September	33,545	37,426
October	39,840	40,287
November	38,863	37,496
December	39,659	38,710
TOTAL	437,501	458,053

Table 2.9 indicates that during the 2019 calendar year there was an increase in waste of 20,552 tonnes compared to the 2018 calendar year. However, the Terminal continued to operate within the annual waste limit as stipulated within Consent Condition 10.

2.6 Pests and Vermin

Pests and vermin management is undertaken at the Terminal to ensure that the control measures implemented minimise the potential for birds, rodents, flies and other pests, remain effective. The primary means of controlling pest and vermin activity is through good housekeeping measures, daily inspections, and quarterly pest control services. **Table 2.10** below identifies the housekeeping undertaken at the Terminal to manage pest and vermin.

Table 2.10 - Pest and Vermin Management

Parameter	Performance Measure	Standard	Statutory Requirement
Litter and Odour Control	Visual Inspection and housekeeping	Veolia Business Management System	Vermin and Pest Control Plan- Consent Conditions 51, 115-117
Vermin Habitat			

Pest control was undertaken by an external contractor (Expert Judgement Pest Management Pty Ltd) throughout this reporting period. In addition, inspections are undertaken on a routine basis by the Terminal's operators, as part of general housekeeping and recorded on relevant housekeeping and inspection checklists.

The checklists provides a record of the visual monitoring undertaken at the Terminal and provides opportunity to identify where additional corrective actions may need to be applied.

During the quarterly pest and vermin inspections conducted in this reporting period, the external contractor had noted light rodent activity inside the shed area. And the exterior of the waste shed was routinely controlled for cockroaches, ants, spiders and rodents. These areas were treated with Roban rodent bait and Cislin 25 spray respectively. The reports can be found in **Appendix D4**.

During the 2018 Independent Environmental Audit (IEA), a number of Ibis and cats were identified as pests, therefore a non-compliance against Consent Condition 117 was found (refer to **Table 3.2**). Observations made during the 2019 IEA found that enhanced pest management controls, including nets and an Electric Bird Deterrent System (Avishock) installed early in 2019 were effective in reducing the presence of birds (particularly Ibis) in the Terminal. The auditors found that Veolia has taken all practicable measures to prevent the attraction and infestation on the premises with vermin and pests.

2.7 Community Consultation

Under Condition 134 the Terminal is required to establish and maintain a Community Consultative Committee (CCC). This is to ensure the Committee may make comments and recommendations about the Terminal's development, management and environmental plans.

In 2017 and 2018 reporting periods, Veolia attempted to gain interest for the CCC by door knocking and distributing letters. In addition, public notices regarding the community meeting were published in local newspapers in 2018, however only one person attended the meeting held in 2018.

In 2018 and 2019 Independent Environmental Audit reports, the auditors recognised Veolia's issues in establishing a CCC due to the lack of community interest. Veolia requested Condition 134 be deleted due to unsuccessful attempts. DPIE modified Condition 134, whereby Veolia is required to make reasonable attempts in establishing and maintaining a Committee.

Veolia continues to attempt establishing a CCC by publishing advertisements inviting Expressions of interest to join the Terminal's CCC in the *Auburn Review* and *Parramatta Advertiser Review* newspapers, which commenced in early March 2020 will run for 4 consecutive weeks.

In addition to this, an update of the Terminal's activity will be published on Veolia's corporate website, under Clyde Waste Transfer Terminal page (<https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station>) as an alternative method of engaging effectively with the community.

3. Environmental Performance

The environmental performance of the Terminal is assessed through the results of environmental monitoring, internal inspections, as well as external environmental audits.

An Independent Environmental Audit (IEA) of the Terminal's environmental performance was carried out in November 2019 by Jackson Environment and Planning. The objective of this IEA was to assess the environmental performance of the Terminal and identify any non-compliances against environmental approval issued to the Terminal, as required by Condition 6 of the Consent, the status of each condition of the consent can be found in the table provided in **Appendix B**.

A discussion of the non-compliances identified by the IEA, as well as the corrective actions, where implemented, is provided within this section. A comparison is also made to the non-compliances/regulatory actions and corrective actions implemented in the previous reporting period to present the changes to the environmental performance of the Terminal.

3.1 Previous Non-Compliances in 2018

Non-compliances identified during the 2018-2019 reporting period are detailed in **Table 3.1** below to show that corrective actions to resolve/manage these non-compliances were implemented and completed by this reporting period.

Table 3.1 - Non-compliances and observations against the Consent in the 2018 reporting period

Consent Condition	Non-compliance/ Observations	Corrective action and evidence	Status and date completed	Person/Team responsible
98	Recommended by The Odour Unit consultant to measure the stack discharge velocity at least once within a 6-month period as part of a routine service visit remained outstanding from previous Audit Action	The Odour Consultant (The Odour Unit Pty Ltd) provided a statement of clarification surrounding the interpretation of a recommendation for the measurement of the stack discharge velocity reported in the Clyde Waste Transfer Terminal – Odour Audit XXXII dated December 2018 (the Clyde Audit Report). The statement indicated that “recommendation is to be viewed as a non-mandatory recommendation given the overall positive findings in the Clyde Audit Report and	Compliant since 27 March 2019	Facility Manager - NSW Resource Recovery

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		<p>the regular preventative maintenance being undertaken on the odour extraction system".</p> <p>Discharge velocity check was completed, the Auditors sighted the Odour Audit Report - May 2019</p>		
117	<p>A large number of Ibis's and a small number of cats were present during the Independent Environmental Audit site visit.</p>	<p>Bird netting and electric shock system were installed in June 2019. The Vermin and Pest Control Plan was revised in June 2019 which includes new pest mitigation measures to prevent the attraction and infestation of vermin and pests on the premises</p> <p>.</p>	<p>Compliant since June 2019</p>	<p>Operations Project Manager - NSW Resource Recovery</p>
119	<p>Non-compliance relating to the restriction on waste vehicles turning right from Parramatta Road into the Site.</p>	<p>Ongoing measures include a new driver's induction program to educate drivers on correct procedures for entering the site, which commenced in May 2018. Along with a traffic survey to assess compliance.</p>	<p>Completed since March 2019</p> <p>Part of Development Modification 5 approved by the DPIE, this modified condition will enable vehicles to turn right off Parramatta Road into the Site following the completion of road intersection upgrade works. Veolia has been liaising with Roads and Maritime Services and Cumberland Council to progress these works.</p>	<p>Facility Manager - NSW Resource Recovery</p>

3.2 Current Non-Compliances in 2019

A non-compliance identified during the reporting period is detailed in **Table 3.2** below., the status of corrective actions to resolve/manage the non-compliance is also provided.

Table 3.2 Non-compliances against the Consent in the 2019 reporting period

Consent Condition	Non-compliance	Corrective action and evidence	Status and date completed	Person/Team responsible
Condition 119	Non-compliance relating to the restriction on waste vehicles turning right from Parramatta Road into the Site. Two trucks were observed turning right during the onsite audit.	Ongoing measures include a new driver's induction program which commenced in May 2018, along with a traffic survey to assess compliance.	Completed since March 2019 Part of Development Modification 5 approved by the DPIE, this modified condition will enable vehicles to turn right off Parramatta Road into the Site following the completion of road intersection upgrade works. Veolia has been liaising with Roads and Maritime Services and Cumberland Council to progress these works.	Facility Manager - NSW Resource Recovery

3.3 Other Regulatory Non-Compliances

No other regulatory non-compliances occurred in this reporting period.

3.4 Complaints

Veolia operates a website which contains contact details for the NSW General Enquiries Line whereby a complaint can be lodged to a specific site. These contact details are also provided onsite via signage.

Complaints (either written or verbal) are documented to record the following:

- Nature and extent of the complaint;
- Method by which the complaint was made;
- Name and address of the person lodging the complaint (the complainant);

- Details of all related factors including location, dates, frequency, duration, site conditions and effects of the complaint; and
- Action taken to address the complaint including follow up contact with the complainant.

No complaints were received during this reporting period.

Details of nominated personnel relevant to the complaints handling process for the Terminal are provided in **Table 3.3** below.

Table 3.3 - Details of the Terminal's nominated personnel

Contacts Name	Position
Steve Lawrence	Sydney Facilities Operations Manager
Rod Jones	Clyde Facility Manager
Sara Maddison	Operations Project Manager / Environmental Management Representative
Sioi Matele	Site Leading Hand

3.5 Conclusion

A review of the non-compliances between the 2018 and 2019 reporting periods demonstrates that traffic movements (right turn off Parramatta road) remains an issue for the Terminal. However, it should be noted that the non-compliance against Consent Condition 119 is generally influenced by external factors, for instance; traffic infringements carried out by site visitors/clients. Veolia will continue to track its performance against the Consent, as well as follow measures to better manage traffic infringements by visitors/clients

In addition, as part of Development Modification 5 which has been approved by the DPIE, condition 119 has been modified to enable vehicles to turn right off Parramatta Road into the Site following the completion of road intersection upgrade works. Veolia has been liaising with Roads and Maritime Services and Cumberland Council to progress these works.

Terms and Definitions

Term	Definition
AEMR	Annual Environmental Management Report
ALS	Australian Laboratory Services PTY LTD
BMS	Veolia's document management system
CTT	Clyde Transfer Terminal
DA	Development Application
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
BMS	Business Management System
OEMP	Operational Environmental Management Plan
OU	Odour unit
PIN	Penalty Infringement Notice
The Consent	Development Consent DA 205-08-01
TOU	The Odour Unit PTY LTD
The Terminal	Clyde Transfer Terminal
The Vault	Veolia's incident and compliance management system
TPA	Tonnes per annum
Veolia	Veolia Australia and New Zealand
WMP	Waste Management Plan

Reference and Related Documents

Document Name
DEC (2006). <i>Technical framework: assessment and management of odour from stationary sources in NSW</i> , Department of Environment and Conservation. November 2006
EPA (2014). <i>NSW Waste Classification Guidelines</i> , NSW Environmental Protection Agency. January 1996.
EPA (2000). <i>NSW Industrial Noise Policy (2000)</i> , NSW Environmental Protection Agency. January 2000.
Jackson Environment and Planning (2018). <i>Clyde Transfer Terminal Independent Environmental Audit 2018 (DRAFT)</i> . Jackson Environ. February 2019
Veolia (2018-2019). <i>Clyde Transfer Terminal Annual Environmental Monitoring Report</i> . Veolia. March 2019.

Appendix A - Site Location Plan



Appendix B - Conditions of Consent compliance table

Conditions of Development Consent – DA 205-08-01 (incorporating MOD 1, 2, 3 and 4)				
Consent Condition	Requirement	Evidence collected	Independent Findings Recommendations	Audit and Compliance Status
	GENERAL CONDITIONS			
	<i>Adherence to Terms of DA, EIS and SEIS</i>			
1	<p>Development shall be carried out in accordance with:</p> <ul style="list-style-type: none"> (a) DA No. 205-08-01; (b) the EIS prepared for the “Clyde Transfer Terminal” by Maunsell McIntyre Pty Ltd, dated 14 August 2001; (c) the Supplementary EIS prepared for the “Clyde Transfer Terminal” by Maunsell McIntyre Pty Ltd, dated 18 December 2001; (d) all additional information supplied by the Applicant or the Applicant’s consultants or subconsultants to the Department or integrated approval bodies pertaining to the development, including the documents listed (refer to consent); (e) modification application MOD-133-11-2006, accompanied by <i>Statement of Environmental Effects Modification to the Terminal Building Forced Ventilation System Clyde Waste Transfer Station</i>, prepared by Environ and dated October 2006, <i>the Odour Mitigation Study Clyde Waste Transfer Terminal Addendum to Final Report</i>, prepared by the Odour Unit and dated July 2006, and Veolia Environmental Services’ letter (and attachments) to the Department of Planning dated 15 February 2007; (f) modification application DA-205-08-01-MOD-2; and (g) modification application DA-205-08-01-MOD-3 and accompanying letter dated 14 December 2009; and (h) modification application DA-205-08-01 MOD 4 and accompanying Environmental Assessment letter prepared by Veolia Environmental Services (Australia) Pty Ltd and dated 20 January 2014; <p>except as modified by the following conditions.</p>	The findings of this audit	None	Compliant
2	<p>In the event of any inconsistency between:</p> <ul style="list-style-type: none"> (a) the conditions of this consent and any document listed from condition 1(a) to 1(g) inclusive, the conditions of this consent shall prevail to the extent of the inconsistency; and (b) any document listed from condition 1(a) to 1(g) inclusive, the most recent document shall prevail to the extent of the inconsistency. 	The findings of this audit	None	Not Triggered
2A	<p>The Proponent shall comply with any reasonable requirements of the Planning Secretary arising from the Department’s assessment of:</p> <ul style="list-style-type: none"> (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with the conditions of this approval; and 	The findings of this audit	None	Not Triggered

	(b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.			
2B	The Proponent shall prepare revisions of any strategies, plans or programs required under this approval if directed to do so by the Planning Secretary. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Planning Secretary.	The findings of this audit	None	Not Triggered
	Compliance			
3	It shall be the ultimate responsibility of the Applicant to ensure compliance with these Conditions.	The findings of this audit	None	Not Triggered
4	These Conditions do not relieve the Applicant of the obligation to obtain all other approvals and licences from all relevant authorities required under any other Act.	The findings of this audit	None	Not Triggered
5	The Applicant shall comply or ensure compliance with all the requirements of the Planning Secretary in respect of the implementation of any measures arising from these Conditions.	The findings of this audit	None	Not Triggered
6	The Applicant must bring to the attention of the Planning Secretary any matter that may require further investigation, or the issuing of instructions from the Planning Secretary, to enable compliance with these Conditions. The Applicant shall comply or ensure compliance with any instruction issued by the Planning Secretary to enable compliance with these Conditions.	The findings of this audit	None	Not Triggered
7	Where the results of any monitoring demonstrate an exceedance of a limit in this consent, the Applicant shall provide, within 30 days of the monitoring, the monitoring results to the Planning Secretary and Auburn Council stating: <ul style="list-style-type: none"> (a) The reason for the exceedance; (b) Action taken to ensure the limit is not exceeded in the future; (c) Proposed action to ensure the limit is not exceeded in the future; (d) Timetable for implementing the proposed action in (c); and (e) Results of additional monitoring which has been conducted within 7 days of the action taken in (b) and (c) above, to demonstrate compliance with the limit. 	May 2018 odour audit (Odour Audit XXXI dated 14.08.2018) and December 2018 odour audit (Odour Audit XXXII dated 24.01.2019).	The Odour Audit found that the operation and maintenance of the odour management system at the Site was satisfactory. There was no evidence to suggest that significant fugitive odour emission release from the Site is occurring.	Not Triggered
	Waste Volumes			
8	No waste shall be received at the development except waste to be transported by rail from Clyde to the Crisps Creek Intermodal Facility for disposal or treatment at Woodlawn.	None	None	Not Triggered
9	Deleted			
10	The Proponent must ensure that no more than 500,000 tonnes per annum of waste is received at the development in any calendar year.	Weighbridge Transactions	The amount of waste accepted at the Terminal in the 2018 calendar year totaled 437,501 tonnes.	Compliant
	Fit and Proper Person			

11	The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the <i>Protection of the Environment Operations Act 1997</i> , having regard to the matters in s.83 of that Act.	NSW EPA Licence	The EPA has issued an Environment Protection Licence thereby deeming the Licensee a fit and proper person to hold a licence	Compliant
	<i>Obligation to Prevent and Minimise Harm to the Environment</i>			
12	The Applicant is to take all practicable measures to prevent and minimise harm to the environment as a result of the Development.	The findings from this audit	None	Compliant
13	If at any time the Planning Secretary is made aware of the occurrence of any impact from the project that poses serious environmental or amenity concerns and is due to the failure of measures required by these Conditions or those measures identified in the documentation referred to in Condition 1 to ameliorate the impact, the Planning Secretary may request the Applicant to cease the activities causing the impact.	None	None	Not Triggered
14	The Applicant may recommence the activities that were ceased, upon written advice by the Planning Secretary that those concerns have been satisfactorily addressed.	None	None	Not Triggered
	<i>Date of Commencement</i>			
15	The date of commencement shall be the date that the Applicant determines to proceed with the development. The Applicant must provide the date of commencement in writing to the Planning Secretary before commencement of the development.	None	This condition is not relevant to the current Audit period.	Not Triggered
	<i>Pre-Construction Compliance Report</i>			
16	At least two weeks prior to commencement of construction (or within such period as otherwise agreed in writing by the Planning Secretary), the Applicant shall submit to the Planning Secretary a report detailing the level of compliance with each Condition of this Consent that relates to pre-construction activities. The report shall include, but not necessarily be limited to: (a) the identification of each relevant Condition (b) the details of any study or report required by the relevant Conditions (c) the level of compliance with each relevant Condition (d) the reasons for any non-compliance (e) any action taken or proposed to make good any non-compliance, and (f) any action taken or proposed to implement the recommendations made in any study or report required by the relevant Conditions	None	This condition is not relevant to the current Audit period.	Not Triggered
	<i>Pre-Operation Compliance Report</i>			
17	At least one month prior to the receipt of uncontainerised waste at the premises (or within such period as otherwise agreed in writing by the Planning Secretary), the	None	This condition is not relevant to the current	Not Triggered

	<p>Applicant shall submit to the Planning Secretary a report detailing the level of compliance with each Condition of this Consent that relates to pre-operation activities.</p> <p>The report shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) identification of each relevant Condition (b) the details of any study or report required by the relevant Conditions (c) the level of compliance with each relevant Condition (d) the reasons for any non-compliance (e) any action taken or proposed to make good any non-compliance, and (f) any action taken or proposed to implement the recommendations made in any study or report required by the relevant Conditions 		Audit period.	
	Dispute Resolution			
18	The Applicant shall endeavor to resolve any dispute arising out of the implementation of these Conditions.	None	This condition is not relevant to the current Audit period.	Not Triggered
19	For any unresolved dispute arising out of the implementation of these Conditions between the Applicant and a public authority, company or person (but excluding any dispute between the Applicant and its contractors and/or subcontractors engaged in the construction or operation of the development), in the first instance either party can refer the matter to the Planning Secretary for resolution and, if not resolved, to the Minister. The Minister's determination of the disagreement shall be final and binding on all parties.	None	This condition is not relevant to the current Audit period.	Not Triggered
	Monitoring Records			
20	<p>The results of any monitoring required to be conducted by the Conditions of this Consent or a licence under the <i>Protection of the Environment Operations Act 1997</i>, in relation to the development, must be recorded and retained as specified in this Consent.</p>	<p>May 2018 odour audit (Odour Audit XXXI dated 14.08.2018) and December 2018 odour audit (Odour Audit XXXII dated 24.01.2019).</p> <p>Heavy Vehicle Noise Monitoring Management Program Report dated August 2018 (report ref: CTT_TRUCK_0817).</p>	None	Compliant
21	<p>All records required to be kept by this Consent or an environment protection licence must be:</p> <ul style="list-style-type: none"> (a) in a legible form, or in a form that can readily be reduced to a legible form; (b) kept for at least 4 years after the monitoring or event to which they relate took place; and (c) provided in a legible form to the Planning Secretary or any authorised officer of the EPA as soon as practicable after request. 	<p>May 2018 odour audit (Odour Audit XXXI dated 14.08.2018) and December 2018 odour audit (Odour Audit XXXII dated 24.01.2019).</p> <p>Heavy Vehicle Noise Monitoring</p>	One truck noise measurement exceeded noise criteria of ADR 28/01, with reading of 88.1dBA, though the noise level was less than the condition of consent.	Compliant

		Management Program Report dated August 2018 (report ref: CTT_TRUCK_0817).	The customer was contacted and the offending vehicle was placed on a register.	
22	The following records must be kept in respect of any samples required to be collected: (a) the date(s) on which the sample was taken; (b) the time(s) at which the sample was collected; (c) the point at which the sample was taken; and (d) the name of the person who collected the sample.	None	None	Not Triggered
	GENERAL ENVIRONMENTAL MANAGEMENT			
	<i>Site Contamination</i>			
23	The applicant shall obtain an environmental report prepared by a site auditor accredited under the <i>Contaminated Land Management Act 1997</i> to determine the nature and extent of contamination at the site and any investigation and/or remediation necessary before the land is suitable for commercial/industrial use. Prior to construction the Applicant shall obtain written endorsement from the site auditor for the following aspects of the Site Contamination Management Plan: (a) A plan to manage the disturbance of contaminated soil in a manner that protects sub-surface waters from contamination (b) A plan to manage dust during the construction and operational stages in a manner that protects the health of on-site and off-site personnel.	None	This condition is not relevant to the current Audit period.	Not Triggered
24	Prior to completion of construction, any amelioration measures required to enable a site audit statement to be issued shall be implemented.	None	This condition is not relevant to the current Audit period.	Not Triggered
	<i>Environmental Management Plan (EMP) (Construction Stage)</i>			
25	The Applicant shall prepare an EMP (Construction Stage) which is specific to the development.	None	This condition is not relevant to the current Audit period.	Not Triggered
25A	Prior to commencement of construction of the odour control system subject to MOD- 133-11-2006, the Applicant shall prepare and obtain approval from the Planning Secretary for a Construction Environmental Management Plan (CEMP) specific to such works. The CEMP, to be submitted to the Planning Secretary and the EPA, shall include (but not necessarily be limited to) measures to be undertaken to minimise environmental impacts during construction with particular emphasis on measures for mitigating odour, dust, noise and traffic impacts on surrounding land uses. The CEMP shall provide details of how the environmental performance of the remediation works will be monitored, what actions will be taken to address identified adverse environmental impacts, and how the relevant requirements of conditions 26 to 38 shall be addressed. The CEMP shall reflect restrictions to	None	This condition is not relevant to the current Audit period.	Not Triggered

	construction hours as follows: Monday to Friday from 7am to 6pm, and Saturdays from 8am to 5pm, with no construction work on Sundays and Public Holidays. The CEMP shall be implemented during construction.			
26	The EMP (Construction Stage) shall be prepared in accordance with the Conditions of this Consent, all relevant Acts and Regulations and accepted best practice management procedures.	None	This condition is not relevant to the current Audit period.	Not Triggered
27	The Applicant must not commence any works until the EMP (Construction Stage) has been completed and submitted to the Planning Secretary.	None	This condition is not relevant to the current Audit period.	Not Triggered
28	The Applicant shall certify the EMP (Construction Stage) as being in accordance with the Conditions of Consent prior to submitting it to the Planning Secretary.	None	This condition is not relevant to the current Audit period.	Not Triggered
29	The EMP (Construction Stage) shall be made publicly available.	None	This condition is not relevant to the current Audit period.	Not Triggered
30	The EMP (Construction Stage) shall include, but is not necessarily limited to, the following plans: (a) Soil and Water Management Plan (b) Construction Noise Management Plan (c) Dust Management Plan (d) Construction Waste Management Plan (e) Site Contamination Management Plan (f) Landscaping Plan	None	This condition is not relevant to the current Audit period.	Not Triggered
31	The Applicant shall address the elements outlined in Attachment 1 of this Consent when preparing the EMP (Construction Stage).	None	This condition is not relevant to the current Audit period.	Not Triggered
32	All site personnel (including contractors and subcontractors) during the construction stage must be inducted and trained to ensure compliance with the EMP (Construction Stage).	None	This condition is not relevant to the current Audit period.	Not Triggered
33	The <i>Soil and Water Management Plan</i> (SWMP) must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities. The SWMP must be prepared in accordance with the requirements for such plans outlined in <i>Managing Urban Stormwater: Soils and Construction</i> (available from the Department of Housing).	None	This condition is not relevant to the current Audit period.	Not Triggered
34	The <i>Construction Noise Management Plan</i> must address, but is not necessarily limited to, the following issues: (a) compliance standards (b) community consultation (c) complaints handling monitoring/system (d) site contact person to follow up complaints (e) mitigation measures, including details of any noise attenuation measures	None	This condition is not relevant to the current Audit period.	Not Triggered

	(f) the design and operation of the proposed mitigation methods demonstrating best practice (g) construction times (h) contingency measures where noise complaints are received (i) monitoring methods and programs.			
35	The <i>Dust Management Plan</i> must include, but not necessarily be limited to, control strategies to achieve compliance with dust emission limits in this Consent and any environment protection licence.	None	This condition is not relevant to the current Audit period.	Not Triggered
36	The <i>Construction Waste Management Plan</i> must include, but not necessarily be limited to, strategies to ensure any waste generated during the construction stage is recycled, reused or disposed of in a lawful manner.	None	This condition is not relevant to the current Audit period.	Not Triggered
37	The <i>Site Contamination Management Plan</i> must include, but not necessarily be limited to, the following issues that apply to construction stage activities: (a) A plan to manage the disturbance of contaminated soil in a manner that protects sub-surface waters from contamination (b) A plan to manage dust in a manner that protects the health of on-site and off-site personnel.	None	This condition is not relevant to the current Audit period.	Not Triggered
38	The <i>Landscaping Plan</i> must include, but not necessarily be limited to: (a) the recommendations of the Visual Assessment Study in the EIS for landscaping and planting of native species, and (b) commitments by the Applicant for an appropriate financial or in-kind contribution towards landscaping the Parramatta Road frontage to soften and screen the access point as viewed from Parramatta Road.	None	This condition is not relevant to the current Audit period.	Not Triggered
	<i>Environmental Management Plan (EMP) (Operation Stage)</i>			
39	The Applicant shall prepare an EMP (Operation Stage) which is specific to the development.	The Auditors sighted the revised Operational Environmental Management Plan (dated September 2019)	None	Compliant
40	The EMP (Operation Stage) shall be prepared in accordance with the Conditions of this Consent, all relevant Acts and Regulations and accepted best practice management procedures.	The Auditors sighted the revised Operational Environmental Management Plan (dated September 2019)	None	Compliant
41	The EMP (Operation Stage) shall include, but is not necessarily limited to, the following plans: (a) Waste Management Plan (b) Odour Management Plan (c) Dust Management Plan (d) Traffic Management Plan (includes monitoring and enforcement of "left turn only") (e) Vermin and Pest Control Plan (includes housekeeping measures) (f) Stormwater Management Plan	The Auditors sighted EMP (Operational Stage) contains a number of supporting management plans including: <ul style="list-style-type: none"> • Waste Management Plan • Odour Management Plan • Dust Management Plan • Traffic Management Plan • Vermin and Pest Control 	None	Compliant

	<p>(g) Site Contamination Management Plan (h) Incident Response Plan (i) Noise Management Plan</p> <p>Prior to commencement of operation of the odour control system subject to MOD-133- 11-2006, the Applicant shall review the EMP (Operation) in order to update procedures, measures and monitoring requirements applicable to the modified odour control system. The revision of the EMP shall cover the relevant plans (a)-(i) outlined above, including (but not necessarily limited to) the Odour Management Plan, the Dust Management Plan and the Noise Management Plan. The revised EMP (Operation) shall be submitted to the EPA and the Planning Secretary. The Planning Secretary's approval of the revised EMP (Operation) shall be obtained prior to commencement of operation of the odour control system.</p>	<p>Plan</p> <ul style="list-style-type: none"> • Stormwater Management Plan • Site Contamination Management Plan • Incident Response Plan • Noise Management Plan 		
42	The Applicant shall address the elements outlined in Attachment 1 of this Consent when preparing the EMP (Operation Stage).	The Auditors sighted the revised Operational Environmental Management Plan (dated September 2019)	None	Compliant
43	The Applicant must not accept any uncontainerised waste at the premises until the EMP (Operation Stage) has been approved by the Planning Secretary.	None	This condition is not relevant to the current Audit period.	Not Triggered
44	The Applicant shall certify the EMP (Operation Stage) as being in accordance with the Conditions of Consent prior to seeking approval of the Planning Secretary	None	This condition is not relevant to the current Audit period.	Not Triggered
45	All site personnel (including contractors and subcontractors) during the operational stage must be inducted and trained to ensure compliance with the approved EMP (Operation Stage).	The induction training package and training records were sighted by the Auditors.	None	Compliant
46	The approved EMP (Operation Stage) shall be made publicly available on request to the Applicant.	The EMP (Operation Stage) is publicly available here: https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station	None	Compliant
47	<p>The <i>Waste Management Plan</i> must address, but is not necessarily limited to, the following issues:</p> <p>(a) Procedures for inspecting and recording each load of uncontainerised waste received at the terminal and for separating and disposing of any component of the waste that is not permitted to be accepted</p> <p>(b) Priority waste handling given to the most offensive wastes, otherwise "first in/first out" waste handling</p> <p>(c) Procedures for cleaning vehicles before they leave the premises in a manner that prevents the tracking of waste from the premises</p> <p>(d) An education program for all drivers of waste vehicles using the site, about</p>	Waste Management Plan (dated February 2010)	The Waste Management Plan complies with the conditions of consent.	Compliant

	<p>waste types permitted to be received at the premises and the need to ensure their vehicle does not track waste from the premises</p> <ul style="list-style-type: none"> (e) The inclusion of conditions in contracts with waste transporters addressing acceptable waste types and punitive measures for non-compliances (f) An enforcement program to be maintained for the duration of the development which includes the imposition of punitive measures for delivering unacceptable waste types (g) Procedures for minimising wind-blown litter from leaving the premises and for regular patrols of surrounding areas to collect any litter that has been carried from the premises (h) Procedures for preventing washdown waters and any other liquid that has been in contact with waste from entering the stormwater system (i) An operational contingency plan to be implemented in the event of equipment failure, industrial action or other situation that prevents the containerisation of waste that has been in the terminal building in excess of 18 hours (j) Fire management procedures including the management of fire water in a manner that will not pollute waters. 			
48	<p>The <i>Odour Management Plan</i> shall address, but is not necessarily limited to, the following issues:</p> <ul style="list-style-type: none"> (a) detailed description of the odour control system subject to MOD-133-11-2006, including (but not necessarily limited to) scaled drawings of the system and its location, technical specifications and operational methods; (b) procedures for the management of waste at the premises at all times to minimise the generation of odours; (c) protocols for the operation of the odour control mechanisms for the terminal building, including the forced air extraction system, to minimise the risk of any adverse impact on surrounding commercial and residential areas; (e) procedures for the maintenance and repair of the forced air extraction system on the terminal building; (f) an emission monitoring program designed to determine compliance with the EPA's odour goal of less than 2OU at the nearest sensitive receiver and to establish the efficiency of the forced air extraction system and appropriate equipment maintenance schedules. The program is to include odour emission monitoring using dynamic olfactometry in such a way as to allow determination of the performance of the odour control system; (g) an odour audit program which provides for a comprehensive odour audit of the premises and nearby commercial and residential areas, by an independent, appropriately qualified and experienced person, to be conducted 3-monthly for the initial 24 months of receiving uncontainerised waste at the terminal, 3-monthly for the 12 months following commissioning the odour control system subject to MOD- 133-11-2006, and 6-monthly 	Odour Management Plan (dated February 2010)	<p>The Odour Management Plan complies with the conditions of consent.</p> <p>No odour complaints were received during the audit period.</p>	Compliant

	<p>thereafter, unless otherwise approved in writing by the Planning Secretary.</p> <p>(h) an operational contingency plan to be initiated in the event of equipment failure, industrial action or any other situation that prevents the containerisation of any waste that has been in the terminal building in excess of 18 hours. Such a plan shall include suspending the acceptance of further uncontainerised waste at the premises;</p> <p>(i) a testing program designed to determine appropriate maintenance schedules for replacement of odour adsorption material in the pressure relief vents of the waste containers;</p> <p>(j) procedures for the maintenance and repair of the odour adsorption and pressure relief vents of the waste containers, including the replacement of the odour adsorption material; and</p> <p>(k) a community consultation program on odour. The community consultation program may include a community survey, to be developed in conjunction with the community consultative committee</p>			
49	<p>The <i>Dust Management Plan</i> shall include, but not necessarily limited to, control strategies to achieve compliance with dust emission limits in this Consent and any environment protection licence. The Dust Management Plan shall adopt the recommendations made by Turnkey Environmental Services Pty Ltd (dated 13 Feb 2006) and provided in Appendix D of the <i>Statement of Environmental Effects Modification to the Terminal Building Forced Ventilation System Clyde Waste Transfer Station</i> (Environ, Oct 2006) in relation to the dust suppression spray system at the terminal. The Dust Management Plan shall provide for the monitoring of the performance of the dust suppression system and for improving its performance as it may be necessary. Following the receipt of any dust related complaints, the Planning Secretary may require the Applicant to undertake further investigations, monitoring or implement measures aimed to mitigate identified dust impacts on residential areas associated with the operation of the terminal.</p>	<p>Dust Management Plan (dated February 2010)</p> <p>Complaints Register</p>	<p>The Dust Management Plan complies with the conditions of consent.</p> <p>No complaints were received during the Audit period</p>	Compliant
50	<p>The <i>Traffic Management Plan</i> must address, but is not necessarily limited to, the following issues:</p> <p>(a) An education program for all drivers and owners of waste vehicles using the site, about the “left turn only” restrictions on entering and leaving the premises via Parramatta Road</p> <p>(b) A monitoring and recording program to identify and record any waste vehicle and its driver that breaches the “left turn only” restriction upon entering or leaving the premises via Parramatta Road.</p> <p>(c) An education program for all drivers and owners of waste vehicles using the site, about the waste transport routes permitted to be used in the vicinity of the development</p> <p>(d) A monitoring and recording program to identify and record any waste vehicle and its driver that breaches the permitted transport routes</p> <p>(e) An enforcement program including the imposition of identified punitive</p>	<p>Traffic Management Plan (dated September 2019)</p> <p>Site Inspection</p>	<p>The Traffic Management Plan complies with the conditions of consent.</p>	Compliant

	<p>measures against any driver or vehicle owner whenever the above restrictions are breached</p> <p>(f) Contracts with waste transporters to include conditions addressing entry and exit restrictions and permissible waste transport routes and punitive measures for non-compliances.</p> <p>(g) Measures to minimise trucks and other heavy vehicles from entering or exiting the premises between the following hours: 10pm and 5am Mondays to Saturdays; 10pm and 7am Sundays and public holidays.</p>			
51	<p>The <i>Vermin and Pest Control Plan</i> must address, but is not necessarily limited to, the following issues:</p> <p>(a) Removing all waste from the tipping areas at the end of each day</p> <p>(b) Cleaning up all waste tipping and handling areas at the end of each day</p> <p>(c) Regular cleaning of catch drains and drainage sumps</p> <p>(d) Minimising onsite waste storage and handling</p> <p>(e) Maintaining any bird deterrent measures such as hanging wires</p> <p>(f) Routine inspection and action for potential vector habitats</p> <p>(g) Using commercial vector control specialists</p> <p>(h) Conducting routine litter patrols to collect trash on site, around the perimeter, on immediately adjacent properties and on approach roads.</p>	The Vermin and Pest Control Plan (dated July 2019)	The Vermin and Pest Control Plan complies with the conditions of consent.	Complaint
52	The <i>Stormwater Management Plan</i> must describe the post construction measures to be employed to operate and maintain the stormwater controls at the premises in a manner that minimises the pollution of waters.	<p>Stormwater Management Plan (dated February 2010)</p> <p>Site inspection</p>	The Stormwater Management Plan complies with the conditions of consent.	Complaint
53	The <i>Site Contamination Management Plan</i> must include any actions recommended in the environmental report by the site auditor that apply to operation stage activities.	Site Contamination Management Plan (dated February 2010)	The Site Contamination Management Plan complies with the conditions of consent.	Compliant
54	<p>The <i>Noise Management Plan</i> shall be drafted in consultation with the rail operator for operation of the rail siding adjacent to the waste packaging terminal for the rail haulage services for Collex. The plan is to be submitted to Auburn Council. The plan must address the objective of mitigating operational rail noise from operations directly attributable to the loading and unloading of containers and associated rail operation on the siding adjacent to the Collex terminal, relating to the movement of containers from the Collex packing terminal. The plan must also identify reasonable noise mitigation strategies:</p> <p>(a) Upgrade to hardstand areas utilised for loading and unloading of trains and rail track upgrade where feasible;</p> <p>(b) Resurfacing of hardstand area with appropriate noise mitigation materials;</p> <p>(c) Track repair and realignment where feasible and appropriate to minimise forklift travel having regard for other rail operations and heritage issues;</p> <p>(d) Container management protocols to minimise movement and handling of</p>	Noise Management Plan (dated February 2010)	The Noise Management Plan complies with the conditions of consent.	Compliant

	<p>containers with an emphasis on noise mitigation;</p> <p>(e) Identification and utilisation of forklifts to minimise noise impacts and implement measures to minimise use of reversing alarms at night;</p> <p>(f) Establishment of a noise complaints procedure;</p> <p>(g) Investigating the scheduling of trains outside critical hours subject to metropolitan curfew, Rail Infrastructure Corporation slot management and rail operational considerations;</p> <p>(h) Ongoing community consultation; and</p> <p>(i) Employee education in noise mitigation practices.</p>			
	Environmental Management Representative (EMR)			
55	<p>The Applicant shall employ or contract a suitably qualified Environmental Management Representative (EMR) throughout the duration of the development. The EMR shall:</p> <p>(a) be the principle person responsible for overseeing environmental management of the development and supervision of environmental services</p> <p>(b) have the authority to stop work if an adverse impact on the environment has occurred or is likely to occur</p> <p>(c) be responsible for the certification of all environmental management plans and procedures</p> <p>(d) be responsible for considering and advising on matters specified in the Conditions of Consent and compliance with such matters</p> <p>(e) oversee the receipt of, and response to, complaints about the environmental performance of the development</p> <p>(f) be present on-site during any critical construction or operational activity as defined in the relevant Environmental Management Plan</p> <p>(g) be a member of the Community Consultative Committee for the development.</p>	Audit interview	<p>Sara Maddison, Operations Project Manager is listed as the Environmental Management Representative.</p> <p>A Community Consultative Committee is currently not in place.</p>	Compliant
	Environmental Monitoring Program			
56	<p>The Applicant shall prepare and implement a detailed Environmental Monitoring Program for the proposed development. The program shall include, but is not necessarily limited to, all the monitoring required by this Consent, the environment protection licence, the EMP (Construction Stage) and the EMP (Operation Stage) for the development. The program must:</p> <p>(a) Identify the environmental issues to be monitored</p> <p>(b) For each issue, indicate whether its monitoring is required by this Consent, the environment protection licence, the EMP (Construction Stage), the EMP (Operation Stage), or by another instrument</p> <p>(c) Set standards and performance measures for each issue</p> <p>(d) Describe in detail how each issue is to be monitored, who will conduct the monitoring, how often the monitoring will be conducted, and how the results of the monitoring will be recorded and reported to the Planning Secretary</p>	EMP (Operation Stage)	Environmental Monitoring Program in Section 3.3 of the OEMP.	Compliant

	and other relevant authorities (e) Indicate the actions taken and procedures to be followed if any non-compliance is detected.			
57	All monitoring required by this Consent must be: (a) conducted by suitably qualified persons approved by the Planning Secretary (b) conducted in accordance with established standards and protocols (c) reported annually in the Annual Environmental Management Report.	None	None	Compliant
58	The Applicant shall include a report on the Environmental Monitoring Program in the Annual Environmental Management Report. The report must: (a) summarise the results from the Environmental Monitoring Program over the previous year (b) analyse the results in relation to both past performance, and the relevant standards and performance (c) measures of the development (d) identify any emerging trends in the data over the life of the development (e) include a copy of the detailed monitoring results as an attachment.	Annual Environmental Management Report for the period 15 January 2018 to 14 January 2019 (report dated 15 March 2019). https://www.veolia.com/anz/sites/g/files/dvc2011/files/document/2019/04/Clyde%20AEMR%202018-2019.pdf	None	Compliant
	Annual Environmental Management Report			
59	Between twelve and fourteen months after the issue date of an environment protection licence for the development, and annually thereafter for the duration of the development, the Applicant shall submit an Annual Environmental Management Report to the Planning Secretary, the EPA and the Community Consultative Committee. The report shall be made available to the public on request to the Applicant. The report may be combined with the Annual Return required by the environment protection licence to be submitted to the EPA. The report must: (a) identify all the standards, performance measures, and statutory requirements the development is required to comply with (b) review the environmental performance of the development to determine whether it is complying with the standards, performance measures, and statutory requirements (c) identify each occasion during the previous year when the standards, performance measures, or statutory requirements have not been complied with (d) where any non-compliance is identified, describe the actions or measures taken to ensure compliance, who is responsible for carrying out the actions, and when the actions were (or will be) implemented (e) include a summary of any complaints made about the development, and indicate the actions taken to address the complaints (f) include a report on the Environmental Monitoring Program as specified in this Consent.	Annual Environmental Management Report for the period 15 January 2018 to 14 January 2019 (report dated 15 March 2019)	The Annual Environmental Management Report is publicly available here: https://www.veolia.com/anz/sites/g/files/dvc2011/files/document/2019/07/Clyde%20AEMR%202018-2019.pdf	Compliant
	Independent Environmental Audits			

60	<p>Every year following the date of this consent, or at periods otherwise agreed to by the Planning Secretary, and until such time as agreed to by the Planning Secretary, the Applicant shall arrange for an independent audit of the environmental performance of the development. The audits shall:</p> <ul style="list-style-type: none"> (a) be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing, ISO 14011 – Procedures for Environmental Monitoring and any specifications of the Planning Secretary; (b) be conducted by a suitably qualified independent person approved by the Planning Secretary; (c) assess compliance with the requirements of this consent; (d) assess the implementation of the EMP (Construction) and EMP (Operation) and review the effectiveness of the environmental management of the development; and (e) be carried out at the Applicants' expense. (f) The audits shall be submitted to the Planning Secretary. The Applicant shall comply with all reasonable requirements of the Planning Secretary in respect of any measures arising from or recommended by the audits and within such time as agreed to by the Planning Secretary. 	Independent Audit Report (report dated 14 February 2019).	<p>An independent audit of the environmental performance of the development audit was conducted on 13th December 2018 and covered the period between January 2017 and January 2018 (report dated 14 February 2019).</p> <p>The current audit, conducted on 26 November 2019 covers the period between January 2018 and January 2019.</p>	Compliant
	Monitoring and audit results to be publicly available			
61	The results of all monitoring and auditing required by this Consent must be made publicly available at the same time they are submitted to the Planning Secretary.	Website	<p>Monitoring and auditing are publicly available here:</p> <p>https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station</p>	Compliant
	WASTE MANAGEMENT			
	Waste receipt and removal			
62	The Applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises unless permitted to do so by an environment protection licence.	Site inspection and audit interview	A large proportion of waste is delivered to the site in sealed front lift or rear lift trucks that cannot be inspected prior to unloading. Procedures are in place to reject or separate non-conforming waste.	Compliant
63	The Applicant must ensure that waste received at the premises is restricted to inert and solid waste as defined in Schedule 1, Part 3 of the <i>Protection of the Environment</i>	None	The waste classifications referred to in this	Not Triggered

	<i>Operations Act 1997</i> or is assessed as inert waste or solid waste following the technical assessment procedure outlined in Technical Appendix 1 of the <i>Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes</i> (EPA, 1999).		condition are no longer in use. The facility's EPL permits it to accept general solid waste (putrescible) and general solid waste (non-putrescible).	
64	<p>No waste shall be removed from the premises except:</p> <ul style="list-style-type: none"> (a) construction waste arising from activities during the construction stage of the development (b) waste in sealed shipping containers to be transported by rail for disposal at the Woodlawn Bioreactor (c) small quantities of waste not permitted by the EPL to be received at the terminal, that have been separated out from the incoming waste stream through a documented operational procedure of regular waste inspections and associated control measures: these wastes are to be disposed of to a lawful waste facility (d) waste generated from onsite activities such as plant maintenance and repairs, that is not suitable for acceptance at the Woodlawn Bioreactor: these wastes are to be disposed of to a lawful waste facility (e) wastewater generated onsite: these wastes are to be disposed of to sewer (f) leachate generated from the onsite management of waste: these wastes are to be disposed of to sewer or a lawful liquid waste treatment plant (g) recyclable materials generated from the onsite office: these wastes are to be directed to a suitable recycling facility. 	Site inspection and audit interview	The site is not connected to sewer. Liquid wastes other than leachate, including waste from amenities, is removed by a waste contractor. Leachate is either removed by a waste contractor or transferred by rail iso-tanker to the Woodlawn Bio Reactor. Condition O6.6 of EPL 11436 permits the Woodlawn Bio Reactor to receive leachate from the CTT.	Compliant
65	The Applicant shall implement the approved <i>Waste Management Plan</i> to the satisfaction of the Planning Secretary.	Waste Management Plan (dated February 2010)	The approved Waste Management Plan has been implemented.	Compliant
	Asbestos Waste			
66	The Applicant will not accept asbestos waste at the premise. The Waste Management Plan must make provision for identification of asbestos in waste not knowingly received at the premise and for the proper and safe disposal of any asbestos so identified.	Rejected load register	No asbestos was accepted at the Site	Compliant
	Waste Management Record Keeping			
67	Records shall be made and maintained of each load of waste entering the premises, including the identification of the vehicle, weight, nature and origin of the waste received, and whether the waste was received in prepackaged shipping containers or for on-site containerisation.	Weighbridge records	Veolia maintains records of each load of waste entering the premises, including the identification of the vehicle, weight and nature and origin of the	Compliant

			waste received.															
68	Records shall be made and maintained of any waste leaving the premises by motor vehicle, including the identification of the vehicle, and the weight, classification and destination of the waste.	Weighbridge records	Veolia maintains records of each load of waste leaving the premises, including the identification of the vehicle and weight.	Compliant														
69	Records shall be made and maintained of all events involving the removal of any waste received at the premises which is not permitted to be accepted at the premises.	Rejected load register	None	Compliant														
	ODOUR MANAGEMENT																	
70	<p>The Applicant shall install a forced ventilation system in the Terminal Building in accordance with MOD-133-11-2006, the design specified in the report <i>Addendum to Final Report – Odour Mitigation Study – Clyde Waste Transfer Terminal – Collex Pty Ltd</i> prepared by the Odour Unit Ltd and dated July 2006, and drawing N3630/100 titled <i>Clyde Transfer Terminal Roof and Gallery Level Proposed Ducting Layout Details</i> prepared by Turnkey Environmental Systems Pty Ltd. The system shall include a single air exhaust stack to discharge all air from the waste receiveal and compaction/loading building, in accordance with the following specifications:</p> <table><tr><td>Minimum Stack Height (metres above existing ground level)</td><td>Minimum Stack Height above the top of the roof (metres)</td><td>Minimum Stack Diameter (metres)</td><td>Minimum Stack Exit Velocity (m/s)</td><td>Minimum Stack Exit Volumetric Flowrate (m³/s)</td><td>Location (X coordinate)</td><td>Location (Y coordinate)</td></tr><tr><td>21</td><td>4</td><td>2.64</td><td>20</td><td>109.48</td><td>317145</td><td>6254129</td></tr></table> <p>The six original fans drawing air from the building through the odour control system shall be replaced with six fans of at least 18kW capacity (each) as per MOD-133-11-2006. The forced air extraction system installed under MOD-133-11-2006 shall be capable of operating in a proper and efficient manner under continuous duty.</p> <p>Any variations of the design and specifications indicated above resulting from the detailed design of the odour control system shall be approved by the Planning Secretary, in consultation with the EPA, prior to the commencement of construction. As part of such approval, the Planning Secretary may require the Applicant to provide information demonstrating that the final design will not result in increased impacts as those predicted in the documents referred to under condition 1(e).</p>	Minimum Stack Height (metres above existing ground level)	Minimum Stack Height above the top of the roof (metres)	Minimum Stack Diameter (metres)	Minimum Stack Exit Velocity (m/s)	Minimum Stack Exit Volumetric Flowrate (m³/s)	Location (X coordinate)	Location (Y coordinate)	21	4	2.64	20	109.48	317145	6254129	None	This condition is not relevant to the current Audit period.	Not Triggered
Minimum Stack Height (metres above existing ground level)	Minimum Stack Height above the top of the roof (metres)	Minimum Stack Diameter (metres)	Minimum Stack Exit Velocity (m/s)	Minimum Stack Exit Volumetric Flowrate (m³/s)	Location (X coordinate)	Location (Y coordinate)												
21	4	2.64	20	109.48	317145	6254129												

71	Construction of the Terminal Building forced ventilation system in accordance with MOD-133-11-2006 shall be undertaken under continuous operation of the original forced ventilation system (as per design approved by the Planning Secretary in correspondence to Collex dated 5 January 2003). Forced ventilation in the Terminal Building, by the operation of the original system or the new system subject to MOD-133-11-2006, shall not be interrupted at any time during the period of transferring odour control systems, unless otherwise approved by the Planning Secretary following a written application for temporary stoppage of the ventilation system during that period. Such application shall provide details of stoppage time required, impacts predicted, and proposed mitigation measures and notification requirements. This condition does not apply at times when waste is not contained within the building.	None	This condition is not relevant to the current Audit period.	Not Triggered
72	Prior to commencement of construction of the works required under MOD-133-11-2006, the Applicant shall notify the Planning Secretary, Auburn Council, the EPA and the Community Consultative Committee in writing of the date of commencement of construction, details of the main construction activities and anticipated duration of construction and times of the main construction activities.	None	This condition is not relevant to the current Audit period.	Not Triggered
73	The Applicant shall implement the approved <i>Odour Management Plan</i> to the satisfaction of the Planning Secretary.	Odour Management Plan	The approved Odour Management Plan has been implemented	Compliant
74	The Applicant must not cause or permit the emission of offensive odours from the premises, as defined under section 129 of the <i>Protection of the Environment Operations Act 1997</i> .	None	No odour complaints were received during the Audit period.	Compliant
75	The Applicant is not permitted to use deodorisers for odour control at the premises, unless otherwise approved by the Planning Secretary.	Site inspection	None	Compliant
76	The Applicant shall continuously operate the forced ventilation system subject to MOD-133-11-2006 (and the original forced ventilation system until the system subject to MOD-133-11-2006 becomes operational) whenever waste is contained within the building, unless otherwise approved by the Planning Secretary. As part of such approval, the Planning Secretary may require the Applicant to carry out additional investigations and implement additional measures to mitigate any off-site impacts that may be anticipated or identified from such investigations.	Audit interview	The forced ventilation system operates continuously. A new exhaust fan operational warning display and alarm was fitted to the western side of the processing shed opposite the office to provide staff with instant feedback as to when the ventilation system was not functioning	Compliant
77	Within three months of the commissioning of the forced ventilation system subject to MOD-133-11-2006, the Applicant shall conduct: (a) odour emission rate sampling and analysis from the single stack (conducted in	None	This condition is not relevant to the current Audit period.	Not Triggered

	<p>accordance with the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> (EPA, January 2007); and</p> <p>(b) odour dispersion modelling for the stack odour discharge conducted in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (EPA, August 2005) and the <i>Technical Framework – Assessment and Management of Odour from Stationary Sources in NSW</i> (EPA, November 2006) to confirm whether the operation of the modified stack design meets the EPA's odour goal of less than 2 OU at the nearest sensitive receiver.</p>			
78	The results of any odour performance testing and modelling conducted in accordance with the conditions of this consent, including those required under condition 77, shall be submitted to the Community Consultative Committee, the EPA, the Planning Secretary and shall be made publicly available, within eight weeks of the testing and modelling having been completed.	None	None	Not triggered
79	Following the review of the investigations required under condition 77, or any other odour related investigations and documentation required under this consent, the Planning Secretary in consultation with the EPA may require the Applicant to carry out additional investigations and implement additional measures to mitigate any identified off-site odour impacts.	None	None	Not triggered
80	All odour monitoring and management plans shall be made available to the public on request to the Applicant.	Website	Monitoring and management plans are publicly available here: https://www.veolia.com/anz/our-services/our-facilities/transfer-stations/clyde-transfer-station	Compliant
81	Any containerised waste shall not be exposed to the atmosphere at the site, except via a pressure release mechanism and odour filtration system on a container maintained and operated in accordance with the Conditions of this Consent	Site inspection	None	Compliant
82	The design of the pressure release mechanism and odour filtration system on the waste containers shall be approved by the Planning Secretary prior to the acceptance of any uncontainerised waste at the premises.	Site inspection	None	Compliant
83	Any waste that has been packed into containers on the site, shall not be re-exposed to the atmosphere at the site, except via a pressure release mechanism and odour filtration system on a container maintained and operated in accordance with the Conditions of this Consent.	Site inspection	None	Compliant
84	Deleted			
85	Deleted			
86	Deleted			

87	The Applicant shall carry out monitoring of the forced ventilation system subject to MOD-133-11-2006 (including air emissions monitoring or other) as may be required under any Environment Protection Licence. The monitoring results shall be reported in the Annual Environmental Management report required under condition 59.	None	The EPL does not require monitoring of the forced ventilation system	Not Triggered															
88	<p>Monitoring for the concentration of a pollutant emitted to the air must be done in accordance with:</p> <p>(a) any methodology which is required by or under the <i>Protection of the Environment Operations Act 1997</i> to be used for the testing of the concentration of the pollutant; or</p> <p>(b) if no such requirement is imposed by or under the <i>Protection of the Environment Operations Act 1997</i>, any methodology which the general terms of approval or a condition of the licence (as the case may be) requires to be used for that testing; or</p> <p>(c) if no such requirement is imposed by or under the <i>Protection of the Environment Operations Act 1997</i> or by the general terms of approval or a condition of the licence (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</p> <p>(d) Note: <i>The Clean Air (Plant and Equipment) Regulation 1997</i> requires testing for certain purposes to be conducted in accordance with test methods contained in the publication “Approved Methods for the Sampling and Analysis of Air Pollutants in NSW”.</p>	None	None	Not triggered															
89	Deleted																		
90	Prior to the installation of the forced ventilation system subject to MOD-133-11-2006, the Applicant shall provide to the EPA, manufacturer’s performance guarantees, demonstrating to the satisfaction of the EPA that the equipment will comply with the design parameters specified in this consent and/or the Environmental Protection Licence	None	This condition is not relevant to the current Audit period.	Not Triggered															
91	<p>A meteorological station must be sited and operated at the premises in accordance with the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i>. The Applicant shall undertake the sampling and analysis of the meteorological parameters specified in table below. Sampling and analysis of meteorological parameters shall be carried out strictly in accordance with the methods and references specified in the table.</p> <table border="1"> <thead> <tr> <th>Parameter</th><th>Units of measure</th><th>Averaging Period</th><th>Method</th><th>Frequency</th></tr> </thead> <tbody> <tr> <td>Wind Speed @ 10 m</td><td>m/s</td><td>1 hour</td><td>AM-2 & AM-4</td><td>Continuous</td></tr> <tr> <td>Wind Direction @ 10 m</td><td>Deg</td><td>1 hour</td><td>AM-2 & AM-4</td><td>Continuous</td></tr> </tbody> </table>	Parameter	Units of measure	Averaging Period	Method	Frequency	Wind Speed @ 10 m	m/s	1 hour	AM-2 & AM-4	Continuous	Wind Direction @ 10 m	Deg	1 hour	AM-2 & AM-4	Continuous	Audit interview	The onsite meteorological station was operated continuously for the audit period.	Compliant
Parameter	Units of measure	Averaging Period	Method	Frequency															
Wind Speed @ 10 m	m/s	1 hour	AM-2 & AM-4	Continuous															
Wind Direction @ 10 m	Deg	1 hour	AM-2 & AM-4	Continuous															

	Sigma Theta @ 10 m	Deg	1 hour	AM-2 & AM-4	Continuous			
	Temperature @ 10 m	K	1 hour	AM-4	Continuous			
	Temperature @ 2 m	K	1 hour	AM-4	Continuous			
	Solar Radiation	W/m2	1 hour	AM-4	Continuous			
	Rainfall	mm	24 hour	AM-4	Continuous			
	Evaporation	mm	24 hour	Note 2	Continuous			
	Additional Requirements		Additional Requirements					
	Siting		AM-1 & AM-4					
	Measurement		AM-2 & AM-4					
	Note: 1 All methods are specified in the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> .							
	Note: 2 Method approved by the EPA in writing.							
	DUST MANAGEMENT							
92	The Applicant shall implement the <i>Dust Management Plan (Construction Stage)</i> and the approved <i>Dust Management Plan (Operation Stage)</i> to the satisfaction of the Planning Secretary.					Dust management Plan (Operation Stage)	The approved Dust Management Plan (Operation Stage) has been implemented	Compliant
93	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.					Site inspection	None	Compliant
94	All trafficable areas and vehicle manoeuvring areas in or on the premises shall be maintained at all times in a condition that will minimise the generation or emission from the premises, of wind-blown or traffic generated dust.					Site inspection	None	Compliant
95	Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading. (EPA)					Site inspection	None	Compliant
96	The Applicant must prepare and implement an <i>Ambient Air Quality Monitoring Plan</i> . The Plan must address, but not necessarily be limited to, the following: (a) Monitoring methodologies and standards (sampling and analysis); (b) Monitoring for concentrations of total suspended particulates (TSP) and dust deposition rates; (c) Locations where monitoring will be carried out; (d) Detailed monitoring cycle and the duration of each monitoring cycle; and (e) Reporting.					Ambient Air Quality Monitoring Plan	The Ambient Air Quality Monitoring Plan is contained in the Dust Management Plan. Ambient air quality monitoring is only required on receipt of dust complaints. No dust complaints were received.	Compliant
97	Deleted							
	AIR MONITORING							
98	Detailed records of operating conditions inside the waste terminal building shall be made coincident with any monitoring for odour or dust required by Conditions of this Consent.					Odour Audit Report	Operating conditions inside the waste terminal building are recorded as	Compliant

			part of the bi-annual odour audits. Odour Extraction System Service Reports are contained in the appendix of the Odour Audit Report. It is noted that a previous Audit Action “The stack discharge velocity should be measured at least once within a 6-month period as part of a routine service visit” has been completed.									
	WATER MANAGEMENT											
99	Except as may be expressly provided by a licence under the <i>Protection of the Environment Operations Act 1997</i> in relation of the development, section 120 of the <i>Protection of the Environment Operations Act 1997</i> must be complied with and in connection with the carrying out of the development.	The findings of this audit	None	Compliant								
100	Any water that comes into contact with waste at the premises must be directed to the leachate collection system.	Site inspection	Water from within the waste terminal building and the compactor pit area is collected as leachate.	Compliant								
101	The approved <i>Soil and Water Management Plan</i> must be implemented prior to and for the duration of the construction stage of the development.	None	This condition is not relevant to the current Audit period.	Not Triggered								
102	Stormwater pollution controls must be implemented prior to and for the duration of the operation of the development. The controls shall be consistent with the Stormwater Management Plan for the catchment. Where a Stormwater Management Plan has not yet been prepared the Scheme shall be consistent with the guidance contained in <i>Managing Urban Stormwater: Council Handbook</i> (available from the EPA). The controls shall incorporate minimum levels of treatment in the following table:	Site inspection	None	Compliant								
	<table><tr><th>Development component</th><th>Minimum level of stormwater treatment</th></tr><tr><td>Undeveloped sections of access road</td><td>Existing overland flow to Duck River</td></tr><tr><td>Roof water</td><td>On-site detention</td></tr><tr><td>Gatehouse and weighbridge area, carpark, access road and container loading area adjacent to the compaction units</td><td>First flush system, GPT, oil and grease separation, on-site detention</td></tr></table>				Development component	Minimum level of stormwater treatment	Undeveloped sections of access road	Existing overland flow to Duck River	Roof water	On-site detention	Gatehouse and weighbridge area, carpark, access road and container loading area adjacent to the compaction units	First flush system, GPT, oil and grease separation, on-site detention
	Development component				Minimum level of stormwater treatment							
	Undeveloped sections of access road				Existing overland flow to Duck River							
	Roof water				On-site detention							
Gatehouse and weighbridge area, carpark, access road and container loading area adjacent to the compaction units	First flush system, GPT, oil and grease separation, on-site detention											

	SITE CONTAMINATION			
103	The <i>Site Contamination Management Plan</i> must be implemented to the satisfaction of the Planning Secretary, prior to and for the duration of the development.	Site Contamination Management Plan (Operation Stage)	The approved Site Contamination Management Plan (Operation Stage) has been implemented.	Compliant
	NOISE MANAGEMENT			
104	The Applicant shall implement the approved <i>Construction Noise Management Plan</i> , to the satisfaction of the Planning Secretary.	None	This condition is not relevant to the current Audit period.	Not Triggered
105	The Applicant shall implement the <i>Noise Management Plan</i> , to the satisfaction of the Planning Secretary	Noise Management Plan (Operation Stage)	The approved Noise Management Plan (Operation Stage) has been implemented.	Compliant
106	Except as permitted under condition 25A, all construction work at the premises that creates audible noise at residential premises shall only be conducted between 7:00am and 5:00pm on Mondays to Fridays and between the hours of 8:00am and 5:00pm on Saturdays. There shall be no construction activities on Sundays or public holidays. The allowable construction times may be varied by an environmental protection licence.	None	This condition is not relevant to the current Audit period.	Not Triggered
107	The delivery of construction material outside the hours of construction permitted by this Consent is not permitted except when required by police or other authorities for safety reasons; and/or because the operation, personnel or equipment are endangered. In such circumstances, notification is to be provided to the EPA and affected residents at least 24 hours prior to the delivery, or within a reasonable period in the case of an emergency.	None	This condition is not relevant to the current Audit period.	Not Triggered
108	Deleted			
108A	Deleted			
109	Deleted			
110	Deleted			
111	Deleted			
112	The Applicant shall implement a Heavy Vehicle Noise Monitoring Management Program for the development to the satisfaction of the Planning Secretary. This program must: (a) monitor heavy vehicle noise on the site, in accordance with the methods outlined in the "Truck Noise Monitoring – Proposed Test and Management Plan" prepared by Heggies and dated 26 May 2008; (b) be undertaken quarterly for the first year starting in October 2008, and	Heavy Vehicle Noise Monitoring Management Program Report dated August 2018 (report ref: CTT_TRUCK_0818).	The Auditors sighted the Heavy Vehicle Noise Monitoring Management Program Report dated August 2018 (report ref: CTT_TRUCK_0818).	Compliant

	<p>annually thereafter, unless otherwise agreed by the Planning Secretary;</p> <p>(c) measure at least 25% of the heavy vehicles visiting the site;</p> <p>(d) identify heavy vehicles exceeding the relevant noise criteria specified in Australian Design Rule 28/01, or its successor, and ensure that the owners of these subsequently comply with the relevant noise criteria;</p> <p>(e) report the number of non-compliant heavy vehicles identified and the actions undertaken to address these non-compliances in the Annual Environmental Monitoring Report; and</p> <p>(f) be amended, should the monitoring activities not achieve the aim of the program, to the satisfaction of the Planning Secretary.</p>			
113	The Applicant shall implement an induction program for all drivers of trucks that deliver waste to the waste terminal with the objective of mitigating noise impacts of trucks entering and leaving the waste terminal, including driving procedures and throttle management. The program is to be designed in consultation with Auburn Council and is to emphasise the importance of noise emission control, driving and operating practices and procedures for night time activities.	Driver training program and training records	The Auditors sighted the driver training program and training records.	Compliant
114	The Applicant shall, in conjunction with the rail operator, implement an induction program for all train drivers and other rail staff dedicated to transporting containers to and from the Collex terminal area by train to Woodlawn. The program is to emphasise noise mitigation measures through "Good Neighbour" rail techniques such as notch control, idling practices, shunting speeds and engine control and shall form an integral part of the operational noise management plan.	Safety Interface Agreement Rail Transport Operator between Pacific National Pty Ltd and Veolia Environmental Services (Australia) Pty Ltd	The Auditors sighted the Safety Interface Agreement Rail Transport Operator between Pacific National Pty Ltd and Veolia Environmental Services (Australia) Pty Ltd.	Compliant
	VERMIN AND PEST MANAGEMENT			
115	<p>The design of the terminal building and associated waste handling facilities shall incorporate such reasonable measures to eliminate or minimise the potential for birds, rodents, flies and other pests to congregate at the development. Consideration shall be given to incorporating the following measures</p> <p>(a) sealing surfaces to prevent moisture and odour absorption</p> <p>(b) elimination of crevices where waste, moisture and vermin can accumulate</p> <p>(c) providing screening of the ventilation openings in the building</p> <p>(d) eliminating horizontal surfaces where birds can congregate</p> <p>(e) minimising horizontal ledges where dust and litter can accumulate</p> <p>(f) using fencing and netting to prevent wind-blown litter from escaping.</p>	None	This condition is not relevant to the current Audit period.	Not Triggered
116	The <i>Vermin and Pest Management Plan</i> must be implemented for the duration of the operation of the development, to the satisfaction of the Planning Secretary.	Approved Vermin and Pest Management Plan	The approved Vermin and Pest Management Plan has been implemented.	Compliant
117	The Applicant must take all practicable measures to prevent the attraction and infestation of the premises with vermin and pests.	Site inspection	The approved Vermin and Pest Management Plan has been implemented.	Compliant

	TRAFFIC MANAGEMENT			
118	All access to the development shall be via a sealed access road from Parramatta Road. No vehicle shall enter or exit the development via the internal road connecting the Clyde Marshalling Yards to Rawson Street.	Site inspection	No vehicles were observed entering or exiting the development via the internal road connecting the Clyde Marshalling Yards to Rawson Street.	Compliant
119	No vehicle entering the development shall turn right off Parramatta Road.	Site inspection, audit interview, traffic survey and education pamphlet	A driver education program commenced in May 2018 and a pamphlet was cited to try and address this issue. Traffic survey on 11 and 12 March 2019 was done outside the audit period. Though over two days, 160 vehicles were observed turning right into the development. It is considered probable this non-compliance also occurred in 2018.	Non-compliant
120	No vehicle exiting the development shall turn right onto Parramatta Road.	Site inspection	No vehicles were observed exiting the development turning right onto Parramatta Rd.	Compliant
121	The <i>Traffic Management Plan</i> must be implemented for the duration of the operation of the development, to the satisfaction of the Planning Secretary.	Traffic Management Plan	The approved Traffic Management Plan has been implemented.	Compliant
122	Prior to the commencement of construction activities, the Applicant shall demonstrate to the satisfaction of the Planning Secretary, it has reasonable arrangements in place in respect of its use of the right of carriageway, concerning traffic sharing, protection of underground and above-ground services in the vicinity of the carriageway and the potential impacts on the existing weighbridge.	None	This condition is not relevant to the current Audit period.	Not Triggered
123	The Applicant must ensure no trucks or other heavy vehicles enter or exit the premises between the hours 10pm to 5am Mondays to Saturdays and 10pm to 7am Sundays and public holidays, unless otherwise provided in the Traffic Management Plan approved by the Secretary	Audit interview and visual inspection	None	Compliant
124	The Applicant shall fund a traffic study, to be conducted by an independent, suitably qualified person. The study is to be completed and submitted to the Planning	None	This condition is not relevant to the current	Not Triggered

	Secretary within 14 months from commencement of operations, review the operation of the access road in the first 12 months of the development and recommend any future actions to ensure sufficient future capacity of the access road. The Applicant shall provide a reasonable financial contribution towards any upgrade of the access road recommended by the study.		Audit period.	
	EMERGENCY MANAGEMENT			
	<i>Emergency Management Plan</i>			
125	<p>In relation to activities, which in the event of a disruption to operations may result in significant pollution being emitted, the Applicant must:</p> <ul style="list-style-type: none"> (a) conduct an assessment to determine the potential internal and external causes of disruption of operations at the premises; (b) determine how these disruptions would impact on operations; and (c) identify the pollution that would result due to the disruption of operations and what impact the pollution would have on the health of the community and the environment. 	Site inspection	None	Compliant
126	<p>In relation to matters identified in the previous condition, the Applicant must prepare an Emergency Management Plan. The Plan shall address, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) identification of threats to the environment and/or public health that could arise in relation to the construction and operation of development. These threats may include fire, overflow, power or other utility failure, natural disaster etc; (b) identification of strategies to minimise and ameliorate the effects of any water pollution identified from the groundwater and surface water monitoring programs; (c) an estimate of the cost of implementation; (d) actions to effectively respond to the disruption of operations so the risk of pollution is minimised; (e) a communications strategy for alerting relevant agencies and the potentially affected community in the event of the disruption to operations leading to significant pollution; and (f) ensuring that all relevant employees are familiar with the emergency management plan. <p>The Applicant should regularly review the adequacy of the plan obtaining expert advice as required.</p> <p><i>Note: When developing this emergency plan, consideration should be given to the possible integration with current emergency management plans for the entire site.</i></p>	Emergency Management Plan (including the Pollution Incident Response Management Plan)	The Auditors sighted the Emergency Management Plan (including the Pollution Incident Response Management Plan). Appropriate training and drills have been conducted.	Compliant
127	The Applicant shall consult with the NSW Fire Brigades and install a fire main and hydrants as required by the Fire Brigades. The system shall comply with AS 2419.	None	This condition is not relevant to the current	Not Triggered

			Audit period.	
	LANDSCAPING			
128	The Applicant shall implement the Landscaping Plan in consultation with Auburn Council and to the satisfaction of the Planning Secretary.	Landscaping Plan dated December 2008	A Landscaping Plan dated December 2008 was sighted by the Auditors.	Compliant
	DEVELOPMENT SETBACK			
129	The Applicant shall not construct any new buildings, hardstand, storage areas or vehicle manoeuvring areas within 30 metres of the Duck River Mean High Water Mark (as measured horizontally), to allow for the establishment of a viable riparian zone and multi-purpose recreation path.	None	This condition is not relevant to the current Audit period.	Not Triggered
	RIPARIAN RESTORATION			
130	The Applicant shall prepare at its own expense a site-specific Riparian Zone Management Plan to address the issues contained in Auburn's draft Duck River Riparian Management Plan. The Plan shall be submitted to Auburn Council's Director Service Planning prior to the issue of the Occupation Certificate, or as otherwise agreed to by Auburn Council. Any riparian restoration activities undertaken by the Applicant shall, where appropriate, be consistent with but not necessarily limited to the activities listed in Attachment 3.	None	This condition is not relevant to the current Audit period.	Not Triggered
	DUCK RIVER ACCESSWAY			
131	The Applicant shall facilitate as appropriate and as required by the Planning Secretary, the provision of a 3.0-metre-wide reinforced concrete multi-purpose recreation path along the landward side of a 30 metre riparian/public open space dedication zone between the proposed development and Duck River, extending from Parramatta Road to the base of the Clyde railway bridge, along the edge of the development.	None	This condition is not relevant to the current Audit period.	Not Triggered
	LAND DEDICATION			
132	The Applicant shall facilitate as appropriate and as required by the Planning Secretary and/or contribute to the dedication to Auburn Council of land incorporating the riparian restoration zone and multi-purpose recreation path between the proposed development and Duck River, extending from Parramatta Road to the base of the Clyde railway bridge, along the edge of the development.	None	This condition is not relevant to the current Audit period.	Not Triggered
	HERITAGE			
133	The Applicant shall contribute to the development and installation of heritage interpretation signage in consultation with Auburn Council, regarding the heritage significance of the Clyde Marshalling Yards and in particular Track 22 and associated pre-use of the area occupied by the development. The heritage signage is to be approved by Auburn Council and installed within 6 months of commencement of the	None	This condition is not relevant to the current Audit period.	Not Triggered

	approved use or as otherwise agreed to by Auburn Council.			
	COMMUNITY LIAISON			
	Community Consultative Committee			
134	<p>The Applicant shall establish and maintain a Community Consultative Committee for the whole duration of the development and take all reasonable steps to ensure that the first meeting is held prior to commencement of construction. Selection of representatives shall be agreed by the Secretary and the appointment of an independent Chairperson shall be to the satisfaction of the Secretary in consultation with the Applicant, Parramatta City Council and Auburn Council. The Committee shall include two representatives from the Applicant (including the Environmental Officer), four community representatives and a representative from each Council. Representatives from relevant government agencies (including Planning NSW) may be invited to attend meetings of the Committee as required. The Committee may make comments and recommendations about the implementation of the development and draft management plans, environmental plans and/or studies. The Applicant shall ensure that the Committee has access to the necessary plans and/or studies for such purposes. The Applicant shall consider the recommendations and comments of the Committee and provide a response to the Committee and the Secretary.</p>	Audit Interview	<p>Veolia was not successful in facilitating a Community Consultative Committee (CCC) meetings within the Audit period, however, all reasonable steps have been taken to re-establish the committee. An Independent Chair has been appointed by the Department.</p>	Compliant
135	<p>The Applicant shall, at its own expense:</p> <ul style="list-style-type: none"> (a) provide appropriate facilities for meetings of the Committee; (b) nominate a representative to attend all meetings of the Committee; (c) provide to the Committee regular information on the progress of the work and monitoring results; (d) promptly provide to the Committee such other information as the Chairperson of the Committee may reasonably request concerning the environmental performance of the development; and (e) provide reasonable access for site inspections by the Committee. 	Audit Interview	<p>Veolia was not successful in facilitating a Community Consultative Committee (CCC) meetings within the Audit period, however, all reasonable steps have been taken to re-establish the committee. An Independent Chair has been appointed by the Department</p>	Compliant
136	<p>The Applicant shall establish a trust fund to be managed by the Chairperson of the Committee to facilitate functioning of the Committee and pay \$2000 per annum to the fund for the duration of the development. The payment shall be indexed according to the Consumer Price Index (CPI) at the time of payment. The first payment shall be made by the date of the first Committee meeting. The Applicant shall also contribute reasonable funds for payment of the independent Chairperson, to the satisfaction of the Planning Secretary.</p>	Audit Interview	<p>Veolia was not successful in facilitating a Community Consultative Committee (CCC) meetings within the Audit period, however, all reasonable steps have been taken to re-establish the committee. An</p>	Compliant

			Independent Chair has been appointed by the Department	
	COMMUNITY ENHANCEMENT PROGRAM			
137	<p>Prior to the commencement of construction, or as otherwise approved by the Planning Secretary in consultation with Auburn Council, the Applicant shall take all reasonable steps to negotiate an agreed outcome with Auburn Council for an appropriate level of contribution (financial or in-kind) towards mitigating the social and community impacts resulting from the construction and operation of the development. The contribution shall provide, but not necessarily be limited to, the following:</p> <ul style="list-style-type: none"> (a) the payment of \$50,000 (unless otherwise agreed to by the Planning Secretary) to Auburn Council as a contribution to the drafting of a masterplan for the entire Clyde Marshalling Yards (b) appropriate monetary lump sum contributions to be negotiated with Auburn Council for the purposes of: <ul style="list-style-type: none"> • the widening of the Western Overbridge; • establishing a vegetated riparian restoration zone along the eastern bank of Duck River from Parramatta Road to the Clyde railway bridge; • establishing a multi-purpose recreation path adjacent to the riparian zone from Parramatta Road to the Clyde railway bridge; and • the development and installation of heritage interpretation signage along the multi-purpose recreation path regarding the heritage significance of the Clyde Marshalling Yards and in particular Track 22 and associated pre-use of the area occupied by the development. (c) ongoing or as otherwise agreed to financial contributions proportional to the tonnage throughput of the terminal for the purpose of local community enhancement projects and/or activities in accordance with a community enhancement plan to be prepared by Auburn Council to reflect community priorities and needs. <p>Should such a negotiated outcome not be reached, the Applicant shall abide by the requirements of the Planning Secretary concerning community enhancement contribution in light of an independent investigation to establish such contribution. Such investigation is to be carried out by an independent person(s) to be appointed by the Planning Secretary in consultation with the Applicant and Auburn Council. The commencement of any construction on-site shall not proceed unless the above outcomes have been agreed or otherwise approved by the Planning Secretary in consultation with Auburn Council.</p>	None	This condition is not relevant to the current Audit period.	Not Triggered

Appendix C - Environmental Monitoring Locations Plan

Appendix D Monitoring Data: D1 - Meteorological Data

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

26 November 2019

Mary Wong
Veolia Environmental Services (Australia) Pty Ltd

Re – Quarterly service of weather stations

Dear Mary,

As per our service agreement, on the 20/11/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

Horsley Park 20/11/19

Sensor	Actual (field)	Logger
Temperature – 10m*	19.0	17.5
2m*	19.0	18.1
Relative Humidity*	62.6	62.55
Wind Speed	1.6 m/s at ground	2.1 m/s at 10 metres
Wind Direction	120	120
Solar Radiation	83	78
TBRG	10mm	20 tips
Battery/Solar	13.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0630 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.
4. Replaced bearings and shafts in wind speed and direction sensors.
5. Replaced cups on wind speed sensor.

Clyde 20/11/19

Sensor	Actual (field)	Logger
Temperature – 10m*	25.8	22.8
2m*	25.8	25.1
Relative Humidity*	45	44.0
Wind Speed	1.0 m/s at ground (poor exposure at ground)	2.3 m/s at 10 metres
Wind Direction	180	180
Solar Radiation	650	660
TBRG	10mm	20 tips
Battery/Solar	13.4	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1130 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

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Email glenmurf@ozemail.com.au

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Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

24 May 2019

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 22/05/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

[Horsley Park 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	15.0	15.1
2m*	15.0	13.9 Cleaned then 14.9
Relative Humidity*	75	82
Wind Speed	0.9 m/s at ground	1.1 m/s at 10 metres
Wind Direction	270	270
Solar Radiation	168	150
TBRG	10mm	20 tips
Battery/Solar	14.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0740 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

[Clyde 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	24.7	22.8
2m*	24.7	25.3
Relative Humidity*	45.7	44.9 Cleaned
Wind Speed	1.2 m/s at ground (poor exposure at ground)	3.27 m/s at 10 metres
Wind Direction	100 to 180	156 fluctuating
Solar Radiation	300	303
TBRG	10mm	20 tips
Battery/Solar	13.6/20.0	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1435 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.



Glen Murphy

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Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

14 February 2019

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 13/02/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

Horsley Park 13/02/19

Sensor	Actual (field)	Logger
Temperature – 10m*	20.1	19.5
2m*	20.1	19.6
Relative Humidity*	67.5	67.2
Wind Speed	1.2 m/s at ground	1.5 m/s at 10 metres
Wind Direction	170	168
Solar Radiation	90	80
TBRG	10mm	20 tips
Battery/Solar	13.6	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0630 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

Clyde 13/02/19

Sensor	Actual (field)	Logger
Temperature – 10m*	25	23.7
2m*	25	24.4
Relative Humidity*	38	35 Cleaned
Wind Speed	2 m/s at ground (poor exposure at ground)	3.8 m/s at 10 metres
Wind Direction	170	170 fluctuating
Solar Radiation	750	820
TBRG	10mm	21 tips
Battery/Solar	13.3/20.4	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0930 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

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Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

30 August 2019

Sara Maddison
Operations Project Manager
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Sara,

As per our service agreement, on the 28/08/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

Horsley Park 28/08/19

Sensor	Actual (field)	Logger
Temperature – 10m*	18.0	17.1
2m*	18.0	18.0
Relative Humidity*	49	51
Wind Speed	2.4 m/s at ground	3.2 m/s at 10 metres
Wind Direction	236	230
Solar Radiation	580	420
TBRG	10mm	20 tips
Battery/Solar	14.0	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0850 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.
4. Data Logger replaced. Out: CR10X In: CR300.

Clyde 28/08/19

Sensor	Actual (field)	Logger
Temperature – 10m*	20.0	19.3
2m*	20.0	19.4
Relative Humidity*	45	44.4
Wind Speed	1.0 m/s at ground (poor exposure at ground)	1.47 m/s at 10 metres
Wind Direction	200	200
Solar Radiation	750	750
TBRG	10mm	20 tips
Battery/Solar	13.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1130 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

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Appendix D2 - Odour Monitoring Data



VEOLIA (AUSTRALIA) PTY LTD

Clyde Waste Transfer Terminal

Odour Audit XXXIV

Final Report

January 2020

THE ODOUR UNIT PTY LTD


ABN 53 09 116 5061
ACN 091 165 061

Level 3, 12/56 Church Avenue
MASCOT NSW 2020

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Project Number: N1473L

Report Revision		
Revision Number	Date	Description
Draft report	04.11.2019	Issued for internal review
Final report Rev 1	31.01.2019	Final report issued to client
Report Preparation		
Report Prepared By: J. Schulz & M. Assal		Approved By: M. Assal 
Report Title: Veolia (Australia) Pty Ltd Clyde Waste Transfer Terminal – Odour Audit XXXIV		

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1 INTRODUCTION

The Odour Unit Pty Ltd (**TOU**) was commissioned by Veolia (Australia) Pty Ltd (**Veolia**) to undertake the thirty-fourth (**XXXIV**) Odour Audit at the Clyde Transfer Terminal (**the Site**) on 27 November 2019. The visit for this Odour Audit was undertaken by a TOU Senior Engineer & Consultant and is the twenty-fourth (24th) to be carried out since the commissioning of the forced air extraction system within the waste transfer terminal.

1.1 ODOUR AUDIT PERIOD

Odour Audit XXXIV covers the six months from 23 May 2019 to 27 November 2019 (**the Odour Audit**).

1.2 ODOUR AUDIT REQUIREMENTS

The Odour Audit requirements originate from the *Conditions of Consent – 48(f)* and are outlined below:

“48. The Odour Management Plan must address, but is not necessarily limited to, the following issues:

(f) An odour audit program which provides for a comprehensive odour audit of the premises and nearby commercial and residential areas, by an independent, appropriately qualified and experienced person, to be conducted 3-monthly for the initial 24 months of receiving un-containerised waste at the terminal, 3-monthly for the 12 months following commissioning the odour control system subject to MOD-133-11-2006, and 6-monthly thereafter, unless otherwise approved in writing by the Director-General.”

As with previous Odour Audits, Odour Audit XXXIV focused on issues relating to general housekeeping, fugitive odour emissions from the transfer building, ground level odour impacts, meteorological monitoring, complaints handling, and actions on past odour audit recommendations. Specifically, the Odour Audit approach included:

- A general inspection and smoke testing of the transfer building;
- The inspection of the container packing area and site access roads;
- The examination of the complaint register;
- The review of the on-site meteorological data log and equipment maintenance/calibration;
- The analysis of relevant documentation relating to odour management; and
- The undertaking of an off-site downwind Field Ambient Odour Assessment (**FAOA**) survey.

1.3 PREVAILING WEATHER CONDITIONS DURING THE ODOUR AUDIT VISIT

At the time of the Odour Audit visit, it was light to moderate (0.5 metres per second (**m/s**) to 3 m/s) wind speeds with the local wind direction blowing predominately from the north-east. The skies were clear and the ambient temperature during the Odour Audit visit was approximately 27 degrees Celsius (**°C**).

No rainfall was observed during the Odour Audit visit.

2 ODOUR AUDIT FINDINGS

2.1 ASSESSMENT OF GENERAL HOUSEKEEPING

2.1.1 Transfer Terminal Building

During the Odour Audit visit, there were approximately 250 to 300 tonnes of waste on the floor. This tonnage is considered to be within the normal operating range of the Transfer Terminal Building (TTB). The TTB floor area not covered by waste material was observed to be reasonably clean, with little evidence of leachate or aged material. General housekeeping procedures of the TTB were good, as found during several truck-unloading sequences. It was also observed that the TTB's front-end loaders cleared the floor area of waste on a regular basis, minimising the exposed area of waste.

As with previous audits, and consistent with TOU's experience at other waste transfer stations, there was a weak to distinct level of odour observed within the TTB. A photo of the waste on the floor as found during the Odour Audit visit is shown in **Photo 2.1**.

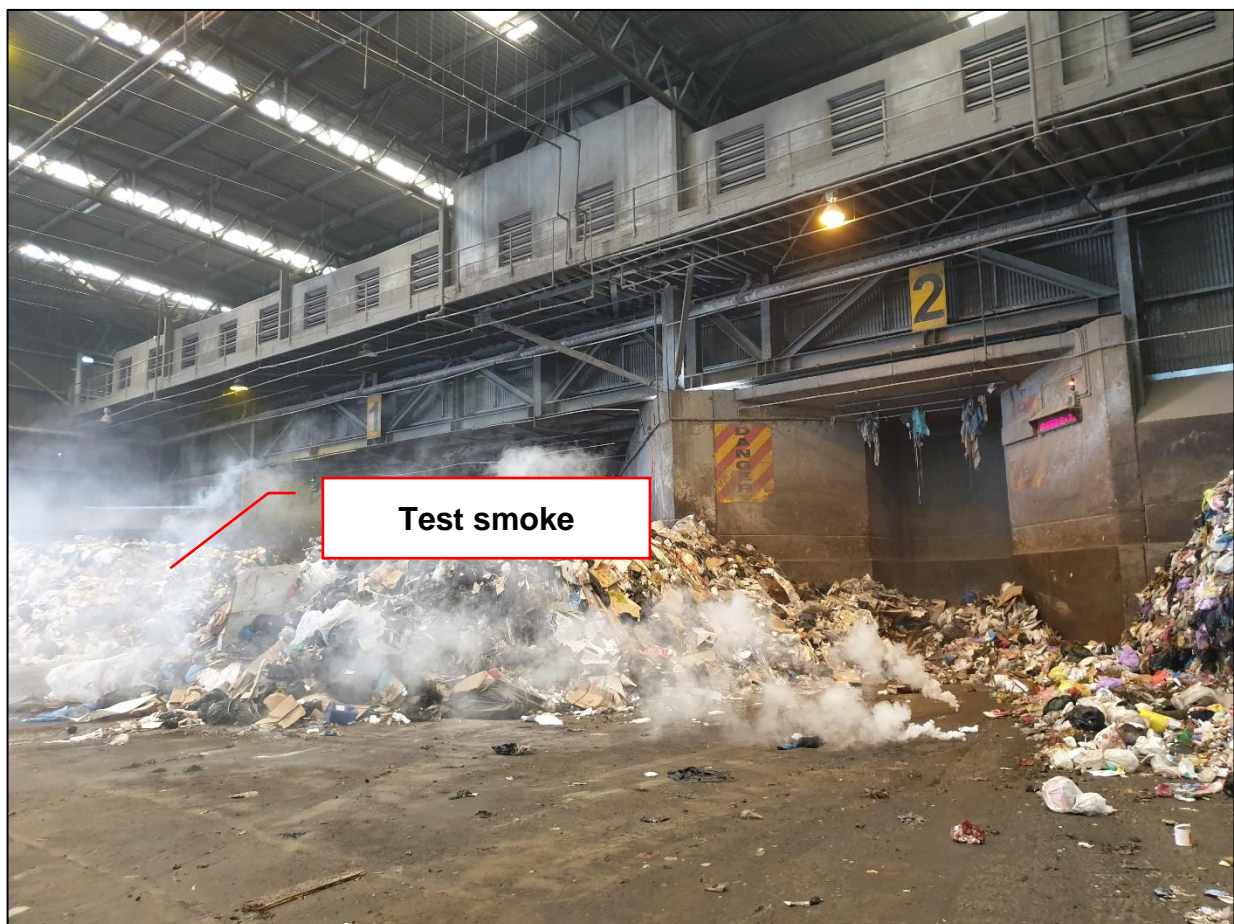


Photo 2.1 – TTB waste on-floor as found on 27 November 2019

2.1.2 Container Packing Area and Site Roadways

The container packing area and site roadways were found to be clean and well managed with no evidence of waste or exposed leachate. Like previous odour audits, the container compacting/train packing area had a weak to distinct odour that was intermittently detectable but was confined to this area only (see **Appendix C** for Field Ambient Odour Assessment Survey results). It appeared during the Odour Audit visit that both compactors were in operation. The general housekeeping around this area was observed to be of high quality, with no evidence to suggest otherwise.

As with previous Odour Audits, the containers are cleaned off-site at Veolia's Woodlawn Bioreactor Facility before being returned to the Site. The weight of each container is monitored to determine if there is any waste that has not been removed completely from each container, which in turn reduces the likelihood of the containers contributing to the Site's odour levels.

2.1.2.1 Container Management and Maintenance

Based on previous verbal discussions with the Veolia team and observations made during the Odour Audit visit, the Audit finds that Veolia continues to implement the policies and procedures as outlined in the following documents:

- The container management and maintenance procedures titled *NSW Resource Recovery – Container Maintenance* dated 15 September 2017 (**the September 2017 NSW RR Container Document**), which details the following:
 - The design of the containers;
 - The maintenance and management of the activated carbon filter retrofitted to the containers;
 - The container management procedure; and
 - The container maintenance procedure.
- The waste container preparation requirements for the Site (**the September 2017 Container Preparation Document**), which details the following:
 - The inspections and actions to be undertaken by operators to enable containers to be prepared to an acceptable standard;
 - The steps to be undertaken should a damaged container be identified; and
 - The steps to be undertaken should a leaking container be identified.

2.1.3 Odour Management Plan

As per the Odour Management Plan dated February 2010 (**the February 2010 OMP**) for the Site, following the compaction of waste, all filled containers are entirely sealed

and remain so while at the Site. All containers used are required to be in good condition, and unused/returned containers adequately clean. A view of the condition of the compactor area as found on 27 November 2019 is shown in **Photo 2.2**.

The Audit finds that this continues to be current practice at the Site.



Photo 2.2 – A view of the compactor area as found on 27 November 2019

2.1.4 Odour Extraction System Maintenance

Service documentation for the maintenance of the odour extraction system was supplied and reviewed as part of the Odour Audit (refer **Appendix A**). Service logs were provided covering the period between 23 May 2019 to 27 November 2019.

Each service log provided to the Audit indicated that the required inspection and maintenance works were taking place by a suitable service contractor, and the odour extraction system overall was operating efficiently. The service logs during this period noted that all the necessary support works such as checking the fan belts and unit operations, greasing bearings, and other routine preventative maintenance works were being inspected and undertaken (see **Section 2.1.4.1** for more details).

2.1.4.1 Status of Odour Extraction System Maintenance Items

During the previous odour audit, the following outstanding items were raised in the service logs:

- **Item 1** - *The inlet exhaust plenum contained heavy dust/debris build-up resulting in a restriction to airflow;*
- **Item 2** - *The Exhaust Fan 1 and Exhaust Fan 2 hub intakes also have heavy dust/debris build-up resulting in a restriction to airflow;*
- **Item 3** - *The heavy dust/debris on the motor may cause it to overheat, resulting in the exhaust fans to be temporarily inoperable; and*
- **Item 4** - *Large amounts of dust/debris accumulated on discharge ductwork*

Since that time, the service logs between 23 May 2019 to 27 November 2019 indicated that Items 1 to 4 were completed in subsequent visits. The October service log indicated that airflow readings and balancing of the dampers were undertaken to achieve optimal extraction airflow, but no data was provided in the service log. As such, subsequent service logs should include this data.

In view of the above and based on the positive results obtained for the smoke testing, odour complaints register, and the FAOA survey conducted as part of the Odour Audit visit, it appears that the current operation of the odour extraction system is satisfactory. However, it is recommended that the discharge stack velocity is regularly reported in future service logs.

2.1.5 Odour Management Procedures/Plan

The Odour Management Procedures (formerly known as the Odour Minimising Procedures) continue to be regularly reviewed at toolbox meetings, and contemporary issues/recommendations are raised with all staff members at these meetings.

Veolia has advised the Odour Audit that the February 2010 OMP is still in the process of being reviewed and updated.

2.1.6 Transfer Terminal Building

The Odour Audit inspected the fixed metal plates retrofitted along the TTB breezeways in December 2013. All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected offsite. The louvres on the end walls of the TTB were observed to be permanently shut.

2.1.7 Truck Entrance Plastic Strips

The truck entrance plastic strips of the TTB, used to reduce odour escaping through the opening, were found to be intact and in good condition.



Photo 2.3 – A view of the truck entrance plastic strips as found on 27 November 2019

2.1.8 Smoke Testing

As per previous audits, smoke testing was carried out within the TTB to assist in determining the effectiveness of the forced air extraction system, as well as the extent to which the TTB has been sealed from leaks. As per previous audits, smoke was released from within the TTB at three points within the TTB. **Figure 2.1** shows the three points where the smoke was released within the TTB. **Photo 2.4** shows smoke testing at one of the test locations (Smoke Testing Point #3) as occurred on 27 November 2019. **Photo 2.5** shows smoke testing at the truck entrance of the TTB, an additional test location to the normal smoke testing release points conducted in previous odour audits.

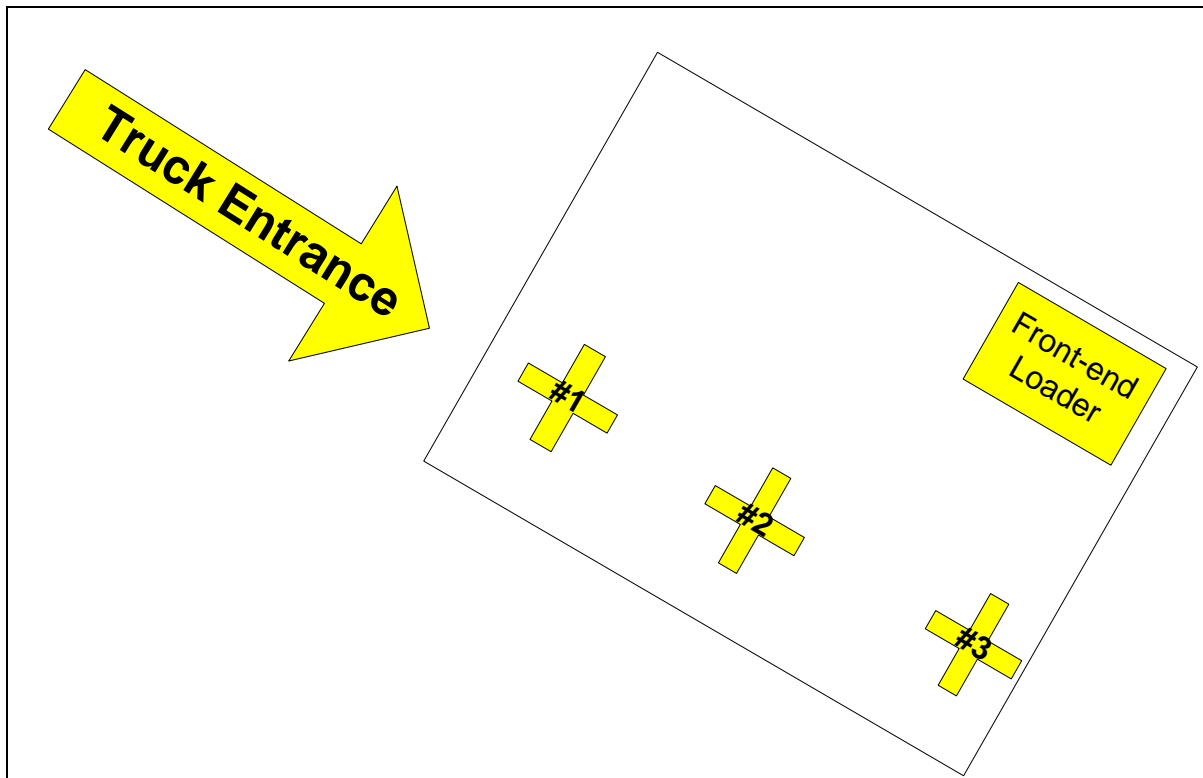


Figure 2.1 - Smoke testing release points within the TTB on 27 November 2019



Photo 2.4 – Smoke testing within the TTB on 27 November 2019



Photo 2.5 – Smoke testing at the truck entrance of the TTB on 27 November 2019

2.1.8.1 Smoke Testing Results

Smoke Testing Point #1

The smoke released at this point initially rose gradually moving towards the truck entrance before rising to the roof and moving slowly towards the extraction system. Visible smoke extraction at the overhead capture points was evident during the smoke testing at this point. Any smoke that continued towards the truck entrance was promptly blown back into the building.

Smoke Testing Point #2

The smoke released at this point revealed a similar result to smoke testing point #1.

Smoke Testing Point #3

The smoke released at this point revealed a similar result to smoke testing point #1.

Additional Testing Location

The smoke released at this point indicated that smoke tended to be drawn into the TTB, suggesting that the odour extraction system was performing well during the Odour Audit visit.

2.1.9 Stormwater Retention Pond

The auditor observed that there was no effluent in this pond at the time of the Odour Audit visit. **Photo 2.6** shows the state of the pond as found on 27 November 2019.



Photo 2.6 – Stormwater retention pond as seen on 27 November 2019

2.2 ODOUR COMPLAINTS HANDLING AND METEOROLOGICAL DATA

2.2.1 Odour Complaints Handling

As advised by Veolia personnel, there have been no complaints recorded in the Site's complaints register since March 2012.

2.2.2 Meteorological Data

The meteorological data provided to the Odour Audit for the period 31 May 2019 and 27 November 2019 was inspected and found to be in good order. As found in previous

Odour Audits, the observations were provided in daily intervals and included all parameters necessary to develop a meteorological dataset for odour dispersion modelling. It is recommended that future datasets be provided in 15-minute increments, as with previous odour audits.

As indicated via service records completed by Hydrometric Consulting Services (**HCS**) supplied by Veolia to the Odour Audit, the weather station continues to remain located in an accessible area with the solar panel and components regularly cleaned, and installation sprayed periodically for insects and trimming of nearby vegetation as required to ensure no overgrowth immediately around the weather station pole. Overall, HCS indicated that the weather stations were operating well, and any identified issues were rectified.

The weather data calibration and service reports by HCS are appended as **Appendix B**.

2.3 FIELD AMBIENT ODOUR ASSESSMENT METHODOLOGY

At present, no Australian Standard exists for field-based ambient odour assessment surveys. Consequently, TOU utilises a method for assessing the ground-level impacts of odour emissions using a modified version of the German Standard VDI 3940 (1993) – *‘Determination of Odorants in Ambient Air by Field Inspections’*.

Field-based ambient odour surveys are considered a valuable odour impact assessment tool as previous experience with ambient odour sampling and subsequent olfactometry testing suggests that accurate and useful ambient odour concentration data is difficult to obtain. Therefore, TOU has adopted a more practical approach based on the field measurement of odour intensity. With this method, calibrated and experienced odour specialists traverse the downwind surrounds of odour sources in a strategically mapped pattern, assessing the presence, character and intensity of any odours encountered and recording these observations along with wind speed and direction.

An ambient odour assessment was performed on 27 November 2019 between 1508 hrs and 1638 hrs. The FAOA survey was undertaken at strategic locations, both on-site and off-site. The ambient odour assessment focus was off-site, as required by the Conditions of Consent on “.....*nearby commercial and residential areas*.....” (Section 48 (f)). The TOU assessor firstly determined the wind direction using a Kestrel 4500 Pocket Weather Tracker Anemometer and then assessed locations of the TTB downwind.

The assessors spent approximately five minutes at each assessment location to gauge the effects of any odour impact. If an odour was detected at a location, the assessors attempted to characterise it. The general aim was to determine the extent of the impact of odours off-site and rank their intensity. The ranking scale for the German Standard VDI 3940 *‘Determination of Odorants in Ambient Air by Field Inspections’* was used for the intensity assessments. The standard’s ranking system is based on the following seven-point intensity scale, as shown in **Table 2.1** below.

Table 2.1 - VDI 3882 Odour Intensity Categories

Odour Strength	Intensity Rank (code)	TOU Interpretation (meaning)
Not detectable	0	No odour detected
Very weak	1	Odour detected but not strong enough to be characterised
Weak	2	Odour is weak but just able to be characterised
Distinct	3	Odour is distinct and easily characterised
Strong	4	Strong odour detectable
Very Strong	5	If offensive, the observer may consider moving from the area
Extremely Strong	6	Odour is sufficiently over-powering that assessor moves from the area

2.3.1 Field Ambient Odour Assessment - Results

The results of the FAOA survey conducted during the Odour Audit found that whilst intermittent odours were detected onsite, no odours were detectable off-site that could be linked back to the Site and its activities.

The field log sheets and visual survey plot are appended as **Appendix C**.

3 RECOMMENDATIONS/FOLLOW-UP ACTIONS

3.1 PREVIOUS AUDIT ACTIONS

The following list provides an outline of the last May 2019 odour audit actions and status as of the Odour Audit:

- **Previous Audit Action 1:** *Action 1 – Complete the outstanding maintenance items as required by the fan maintenance service provider as documented in March 2019.*

Status: Complete (see **Section 2.1.4.1** for more details).

- **Previous Audit Action 2:** *Veolia to continue its review and update of the OMP for the Site*

Status: Outstanding (see **Section 3.7**).

3.2 TRANSFER TERMINAL BUILDING

All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected offsite. The louvres on the end walls of the TTB were observed to be permanently shut. Overall, the TTB was found to be well managed.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

3.3 COMPACTOR AREA

The general housekeeping around the compactor area was observed to be of high quality, with no evidence to suggest otherwise. As with previous Odour Audits, the container compacting/train packing area had a weak to distinct odour that was intermittently detectable but was found to be confined to this area only.

Based on the findings in this Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

3.4 ODOUR EXTRACTION SYSTEM

The service logs indicate that all required maintenance works on the odour extraction system since the previous May 2019 odour audit have been adequately undertaken, and the odour extraction system is operating in a satisfactory condition. However, it is recommended that the discharge stack velocity is regularly reported in future service logs.

Based on the findings in the Odour Audit, the following action is recommended:

- **Action 1 – All stack discharge velocity and airflow measurements collected during a service visit should be reported in future service logs.**

3.5 WEATHER STATION

The calibration and service reports from HCS indicate that all maintenance to the weather station and required calibrations were carried out as needed.

Based on the findings in the Odour Audit, the following action is recommended:

- **Action 2 - Future datasets should be provided in 15-minute increments, as with previous odour audits.**

3.6 FIELD AMBIENT ODOUR ASSESSMENT SURVEY

The results of the FAOA survey conducted during the Odour Audit found that no odours were detectable off-site that could be linked back to the Site and its activities.

3.7 ODOUR MANAGEMENT PROCEDURES/PLAN

At the timing of the writing of the Odour Audit, the February 2010 OMP was last updated over seven years ago. Given the previous update, it is suggested that as part of good practice that Veolia reviews and update the February 2010 OMP to ensure it continues to reflect the odour management procedures implemented and followed at the Site. Veolia has advised the Odour Audit that the February 2010 OMP is in the process of being reviewed and updated.

Based on the findings in this Odour Audit, the following action/s is recommended:

- **Action 3 – Veolia to continue its review and update of the OMP for the Site.**

3.8 CONCLUDING REMARK

Overall, this Odour Audit found that the operation and maintenance of the odour management system at the Site was satisfactory. There was no evidence to suggest that significant fugitive odour emission release from the Site is occurring.

The next Odour Audit is due in **May 2020**.



VEOLIA (AUSTRALIA) PTY LTD

Clyde Waste Transfer Terminal

Odour Audit XXXIV

Appendices

January 2020





Appendix A –

Odour Extraction System Service Report

(23 May 2019 – 27 November 2019)


Triple M - NSW - Service Docket

Record: 212150

Time Start	Wed Jul 31 2019 13:25:39 GMT+1000 (AEST)
Client Details	CLYDE WASTE
Address	322 Parramatta Rd Clyde NSW 2142
Site Contact Name	Ash Turner
Site Contact Telephone Number 2	02 8868 7401
Customer Ref Number	7100156359
Type of Service	Preventative Maintenance - PM
Job / Service Call Number	1204738
Fault Description	CLYDE WASTE - PM June L1 - MONTHLY
Asset List	EQUIP-M_Whole of Site - Mech_MONTHLY_Qty:1
Job Safety Analysis Completed	YES
Description of Work Done	Arrived on site and signed in. Went u to the plant room and isolated the fans and the fan alarm and locked out and tagged. Proceeded to clean all dampers on dust and all VSD, isolators, fans and lights. Checked the pulleys belts and found all to be okay. Removed tag and turned the fans back on and the alarm.
Parts, Materials?	No
Refrigerant Used?	No
Job Status	Completed
Technician's Signature	
Client Signature	
Forwarding Email	rod.jones@veolia.com
Normal Hours	0
Time and a Half	0
Double Time	0
User ID	TMS-ZBN
Technician Name	ZACHARY JAMES BROWN
Iforms Record ID	212150
Record Location	Latitude:-33.775590, Longitude:150.916987, Altitude:61.937168, Speed:-1.000000, Horizontal Accuracy:65.000000, Vertical Accuracy:10.000000, Time:08/01/2019 09:31:17 AEST
Total Hrs	0
Time Completed	2019-07-31 13:25:39

Mobile Data Capture Report

Job Safety Analysis

Are you an Apprentice?	Yes
Is this an Electrical task or are you using Refrigerants?	No
Job/Service Call Number	1204738
Work to be done.	CLYDE WASTE - PM June L1 - MONTHLY
Protective Equipment to be Used During Works	Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Electrical Test Equipment, Safety Boots/Shoes
Is there clear access to the work area equipment & free from trips, slips & fall hazards?	Yes
Are weather conditions appropriate for the commencement of works?	Yes
Is there a potential risk of disturbing asbestos during the works you are undertaking today?	No
Does your task involve working on the roof?	No
Will your task involve Manual Handling?	Yes
Change the work process so that the loads do not have to be lifted or moved by hand.	1
Use and maintain correct posture.	1
Minimize distance the load is to be moved/lifted.	1
Will your work impact general public/vehicle control?	No
Does your task involve Electrical works?	No
Does your work involve Mechanical works?	Yes
All isolations complete: electrical, refrigeration, air, water, gas.	1
No work until all moving parts have stopped.	1
Does your task involve working from heights (not including roof work) & are there adequate fall prevention controls in place?	No
Working from a step ladder?	Yes
Ladder secured.	1
Barrier(s) installed around work area.	1
Electrical tools & equipment being used?	No
Will you be using chemicals during your task?	No
Will you be working in area's that produce excessive noise?	Yes
Hearing protection for equipment & plant noisier than 85dB(A).	1
Using HazMat?	No
Will you be welding or oxy cutting.	No
Will you be working in or near Cooling towers?	No
Handling refrigerant?	No
Are you working by yourself?	Yes
Sign in & out of your worksite.	1
Keep in regular contact with your supervisor/coordinator (arriving/leaving site).	1
Is it safe for you to proceed with your job.	Yes
Technician's Signature	
PPE Title	Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Electrical Test Equipment, Safety Boots/Shoes
TMP Work Order No	

Post Photos?

Job Number

1204738

Photo



Location Description

Indoor Location

Location Title

Indoor Location

Post Photos?

Job Number

1204738

Photo

YES OPTUS 4G 9:27 am 21%
Done 20190731_150228.jpg

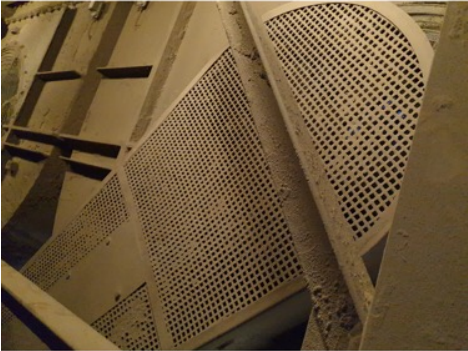


Location Description



Indoor Location

Location Title

Indoor Location

Post Photos?	
Job Number	1204738
Photo	<div><div>Done</div><div>20190731_150152.jpg</div><div><div>9:27 am</div><div>21%</div></div></div>  <div><div>Location Description</div><div>Indoor Location</div></div> <div><div>Location Title</div><div>Indoor Location</div></div>

Triple M - NSW - Service Docket

ID	212150
Time Start	Wed Jul 31 2019 13:25:39 GMT+1000 (AEST)
Client Details	CLYDE WASTE
Address	322 Parramatta Rd Clyde NSW 2142
Site Contact Name	Ash Turner
Site Contact Telephone Number 2	02 8868 7401
Customer Ref Number	7100156359
Type of Service	Preventative Maintenance - PM
Job / Service Call Number	1204738
Fault Description	CLYDE WASTE - PM June L1 - MONTHLY
Asset List	EQUIP-M_Whole of Site - Mech_MONTHLY_Qty:1
Job Safety Analysis Completed	YES
	Arrived on site and signed in.
Description of Work Done	Went u to the plant room and isolated the fans and the fan alarm and locked out and tagged. Proceeded to clean all dampers on dust and all VSD, isolators, fans and lights. Checked the pulleys belts and found all to be okay. Removed tag and turned the fans back on and the alarm.
Parts, Materials?	No
Refrigerant Used?	No
Job Status	Completed
Technician's Signature	
Client Signature	
Forwarding Email	rod.jones@veolia.com
Normal Hours	0
Time and a Half	0
Double Time	0
User ID	TMS-ZBN
Technician Name	ZACHARY JAMES BROWN
Forms Record ID	212150
Record Location	Latitude:-33.775590, Longitude:150.916987, Altitude:61.937168, Speed:-1.000000, Horizontal Accuracy:65.000000, Vertical Accuracy:10.000000, Time:08/01/2019 09:31:17 AEST
Total Hrs	0
Time Completed	2019-07-31 13:25:39

ID.	S212150
Are you an Apprentice?	Yes
Is this an Electrical task or are you using Refrigerants?	No
Job/Service Call Number	1204738
Work to be done.	CLYDE WASTE - PM June L1 - MONTHLY
Protective Equipment to be Used During Works	Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Electrical Test Equipment, Safety Boots/Shoes
Is there clear access to the work area equipment & free from trips, slips & fall hazards?	Yes
Are weather conditions appropriate for the commencement of works?	Yes
Is there a potential risk of disturbing asbestos during the works you are undertaking today?	No
Does your task involve working on the roof?	No
Will your task involve Manual Handling?	Yes
Change the work process so that the loads do not have to be lifted or moved by hand.	1
Use and maintain correct posture.	1
Minimize distance the load is to be moved/lifted.	1
Will your work impact general public/vehicle control?	No
Does your task involve Electrical works?	No
Does your work involve Mechanical works?	Yes
All isolations complete: electrical, refrigeration, air, water, gas.	1
No work until all moving parts have stopped.	1
Does your task involve working from heights (not including roof work) & are there adequate fall prevention controls in place?	No
Working from a step ladder?	Yes
Ladder secured.	1
Barrier(s) installed around work area.	1
Electrical tools & equipment being used?	No
Will you be using chemicals during your task?	No
Will you be working in area's that produce excessive noise?	Yes
Hearing protection for equipment & plant noisier than 85dB(A).	1
Using HazMat?	No
Will you be welding or oxy cutting.	No
Will you be working in or near Cooling towers?	No
Handling refrigerant?	No
Are you working by yourself?	Yes
Sign in & out of your worksite.	1
Keep in regular contact with your supervisor/coordinator (arriving/leaving site).	1
Is it safe for you to proceed with your job.	Yes

Technician's Signature



PPE Title

Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Electrical Test Equipment, Safety Boots/Shoes

ID
TMP Work Order No

S212150

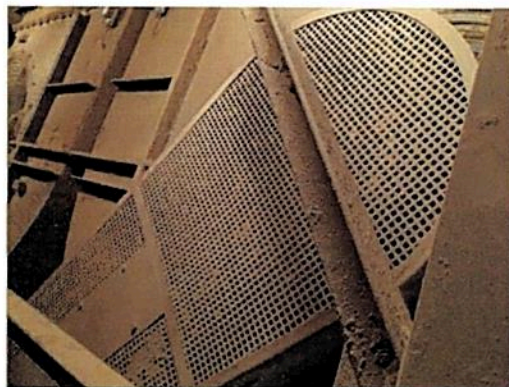
Post Photos?

ID
Job Number

S212150
1204738

Done 9:27 am 20190731_150152.jpg

Photo



Location Description

Indoor Location

Location Title

Indoor Location

ID
Job Number

S212150
1204738

Done 9:27 am 20190731_150228.jpg

Photo



Location Description

Indoor Location

Location Title

Indoor Location

ID
Job Number

S212150
1204738

Photo



Location Description

Indoor Location

Location Title



Indoor Location

Email Report

BSA Mobile Business Technologies, a Division of BSA Ltd


Triple M - NSW - Service Docket

Record: 213407

Time Start	Tue Sep 03 2019 08:58:14 GMT+1000 (AEST)
Client Details	CLYDE WASTE
Address	322 Parramatta Rd Clyde NSW 2142
Site Contact Name	Ash Turner
Site Contact Telephone Number 2	02 8868 7401
Customer Ref Number	7100156359
Type of Service	Preventative Maintenance - PM
Job / Service Call Number	1218104
Fault Description	CLYDE WASTE - PM August L1 - MONTHLY
Asset List	EQUIP-M_Whole of Site - Mech_MONTHLY_ Qty:1
Job Safety Analysis Completed	YES
Description of Work Done	Carried out maintenance as scheduled, cleaned up all dampers and lights, checked pulleys and belts. Cleaned out vsds of any dust. Signed out of site.
Parts, Materials?	No
Refrigerant Used?	No
Job Status	Completed
Technician's Signature	
Client Signature	
Signature Name	Rod
Forwarding Email	rod.jones@veolia.com
Normal Hours	0
Time and a Half	0
Double Time	0
User ID	TMS-ZBN
Technician Name	ZACHARY JAMES BROWN
Iforms Record ID	213407
Record Location	Latitude:-33.671023, Longitude:150.931187, Altitude:58.232882, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:4.000000, Time:09/05/2019 16:56:52 AEST
Total Hrs	0
Time Completed	2019-09-03 08:58:14



Mobile Data Capture Report

Job Safety Analysis


Are you an Apprentice?	Yes
Is this an Electrical task or are you using Refrigerants?	No
Job/Service Call Number	1218104
Work to be done.	CLYDE WASTE - PM August L1 - MONTHLY
Protective Equipment to be Used During Works	Gloves, Long Pants, Safety Glasses, High Visibility Garments, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
Is there clear access to the work area equipment & free from trips, slips & fall hazards?	Yes
Are weather conditions appropriate for the commencement of works?	Yes
Is there a potential risk of disturbing asbestos during the works you are undertaking today?	No
Does your task involve working on the roof?	No
Will your task involve Manual Handling?	Yes
Change the work process so that the loads do not have to be lifted or moved by hand.	1
Use and maintain correct posture.	1
Minimize distance the load is to be moved/lifted.	1
Will your work impact general public/vehicle control?	No
Does your task involve Electrical works?	No
Does your work involve Mechanical works?	Yes
All isolations complete: electrical, refrigeration, air, water, gas.	1
No work until all moving parts have stopped.	1
Does your task involve working from heights (not including roof work) & are there adequate fall prevention controls in place?	No
Working from a step ladder?	Yes
Ladder secured.	1
Barrier(s) installed around work area.	1
Electrical tools & equipment being used?	No
Will you be using chemicals during your task?	No
Will you be working in area's that produce excessive noise?	No
Using HazMat?	No
Will you be welding or oxy cutting.	No
Will you be working in or near Cooling towers?	No
Handling refrigerant?	No
Are you working by yourself?	Yes
Sign in & out of your worksite.	1
Keep in regular contact with your supervisor/coordinator (arriving/leaving site).	1
Is it safe for you to proceed with your job.	Yes
Technician's Signature	
PPE Title	Gloves, Long Pants, Safety Glasses, High Visibility Garments, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
TMP Work Order No	

Triple M - NSW - Service Docket

Record: 213407

Time Start	Tue Sep 03 2019 08:58:14 GMT+1000 (AEST)
Client Details	CLYDE WASTE
Address	322 Parramatta Rd Clyde NSW 2142
Site Contact Name	Ash Turner
Site Contact Telephone Number 2	02 8868 7401
Customer Ref Number	7100156359
Type of Service	Preventative Maintenance - PM
Job / Service Call Number	1218104
Fault Description	CLYDE WASTE - PM August L1 - MONTHLY
Asset List	EQUIP-M_Whole of Site - Mech_MONTHLY_Qty:1
Job Safety Analysis Completed	YES
Description of Work Done	Carried out maintenance as scheduled, cleaned up all dampers and lights, checked pulleys and belts. Cleaned out vsds of any dust.
Parts, Materials?	Signed out of site.
Refrigerant Used?	No
Job Status	Completed
Technician's Signature	
Client Signature	
Signature Name	Rod
Forwarding Email	rod.jones@@veolia.com
Normal Hours	0
Time and a Half	0
Double Time	0
User ID	TMS-ZBN
Technician Name	ZACHARY JAMES BROWN
Iforms Record ID	213407
Record Location	Latitude:-33.671023, Longitude:150.931187, Altitude:58.232882, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:4.000000, Time:09/05/2019 16:56:52 AEST
Total Hrs	0
Time Completed	2019-09-03 08:58:14

Job Safety Analysis

Are you an Apprentice?	Yes
Is this an Electrical task or are you using Refrigerants?	No
Job/Service Call Number	1218104
Work to be done.	CLYDE WASTE - PM August L1 - MONTHLY
Protective Equipment to be Used During Works	Gloves, Long Pants, Safety Glasses, High Visibility Garments, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
Is there clear access to the work area equipment & free from trips, slips & fall hazards?	Yes
Are weather conditions appropriate for the commencement of works?	Yes
Is there a potential risk of disturbing asbestos during the works you are undertaking today?	No
Does your task involve working on the roof?	No
Will your task involve Manual Handling?	Yes
Change the work process so that the loads do not have to be lifted or moved by hand.	1
Use and maintain correct posture.	1
Minimize distance the load is to be moved/lifted.	1
Will your work impact general public/vehicle control?	No
Does your task involve Electrical works?	No
Does your work involve Mechanical works?	Yes
All Isolations complete: electrical, refrigeration, air, water, gas.	1
No work until all moving parts have stopped.	1
Does your task involve working from heights (not including roof work) & are there adequate fall prevention controls in place?	No
Working from a step ladder?	Yes
Ladder secured.	1
Barrier(s) installed around work area.	1
Electrical tools & equipment being used?	No
Will you be using chemicals during your task?	No
Will you be working in area's that produce excessive noise?	No
Using HazMat?	No
Will you be welding or oxy cutting.	No
Will you be working in or near Cooling towers?	No
Handling refrigerant?	No
Are you working by yourself?	Yes
Sign in & out of your worksite.	1
Keep in regular contact with your supervisor/coordinator (arriving/leaving site).	1
Is it safe for you to proceed with your job.	Yes
Technician's Signature	
PPE Title	Gloves, Long Pants, Safety Glasses, High Visibility Garments, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
TMP Work Order No	

Equilibrium Air Conditioning Services Pty Ltd

ABN 51 844 035 531

Telephone: (02) 9439 4822

service@eqac.com.au

PO Box 7996

Norwest NSW 2153



CUSTOMER JOB NO. 30340 - 417 - Joerg Viefhaus Quoted Works

Salesperson Timothy Caunt

Date Created 30/09/2019

Project October Bi-Annual

Name Velocity Testing

Site Details

Name Veolia Clyde
Address Clyde Transfer Terminal
322 Parramatta road
Clyde NSW 2142
Contact Rod Jones
Telephone
Mobile 0437 167 211
Email rod.jones@veolia.com

Customer Details

Name Veolia Environmental Services P/L
Address Level 4, 65 Pirrama Road
Pymont NSW 2009
Contact Rod Jones
Telephone
Mobile 0437 167 211
Email rod.jones@veolia.com

Work Requested

Bi-Annual airflow testing/balancing

The Scope of Works include:

- Attend site, sign in and submit SWMS
- Access fan chamber and take air flow readings of intake grilles and fan velocity
- Balance any dampers as required
- Provide report on findings
- It is recommended that these tests are performed after fan chamber cleans to ensure maximum airflow readings are recorded

Raymond Hupton (23/10/2019) - Work Note

Attended site.

Assisting sub contractors in getting readings for flows.

Report sheet and recommendations and results are being done by sub contractor and getting sent through.

Customer:

Rod Jones

Print Name

A handwritten signature in black ink, appearing to read "Rod Jones".

Signature

Technician:

Joerg Viefhaus


Print Name

A handwritten signature in black ink, appearing to read "Joerg Viefhaus".

Signature


Triple M - NSW - Service Docket

Record: 222530

Time Start	Tue Nov 19 2019 13:24:20 GMT+1100 (AEDT)
Client Details	CLYDE WASTE
Address	322 Parramatta Rd Clyde NSW 2142
Site Contact Name	Ash Turner
Site Contact Telephone Number 2	02 8868 7401
Customer Ref Number	7100156359
Type of Service	Preventative Maintenance - PM
Job / Service Call Number	1228983
Fault Description	CLYDE WASTE - PM October L1 - MONTHLY
Asset List	EQUIP-M_Whole of Site - Mech_MONTHLY_Qty:1
Job Safety Analysis Completed	YES
Description of Work Done	Carried out maintenance as scheduled. Checked extraction fan alarm to make sure it is working fine. Dusted down all lights and the motors on the extraction fans and checked the belts.
	Duplicate docket.
Parts, Materials?	No
Refrigerant Used?	No
Job Status	Completed
Technician's Signature	
Normal Hours	0
Time and a Half	0
Double Time	0
User ID	TMS-ZBN
Technician Name	ZACHARY JAMES BROWN
Iforms Record ID	222530
Record Location	Latitude:-33.671031, Longitude:150.931261, Altitude:53.476412, Speed:0.000000, Horizontal Accuracy:10.000000, Vertical Accuracy:4.000000, Time:11/19/2019 13:26:45 AEDT
Total Hrs	0
Time Completed	2019-11-19 13:24:20

Mobile Data Capture Report

Job Safety Analysis

Are you an Apprentice?	Yes
Is this an Electrical task or are you using Refrigerants?	No
Job/Service Call Number	1228983
Work to be done.	CLYDE WASTE - PM October L1 - MONTHLY
Protective Equipment to be Used During Works	Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
Is there clear access to the work area equipment & free from trips, slips & fall hazards?	Yes
Are weather conditions appropriate for the commencement of works?	Yes
Is there a potential risk of disturbing asbestos during the works you are undertaking today?	No
Does your task involve working on the roof?	No
Will your task involve Manual Handling?	Yes
Change the work process so that the loads do not have to be lifted or moved by hand.	1
Use and maintain correct posture.	1
Minimize distance the load is to be moved/lifted.	1
Will your work impact general public/vehicle control?	No
Does your task involve Electrical works?	No
Does your work involve Mechanical works?	Yes
All isolations complete: electrical, refrigeration, air, water, gas.	1
No work until all moving parts have stopped.	1
Does your task involve working from heights (not including roof work) & are there adequate fall prevention controls in place?	No
Working from a step ladder?	No
Electrical tools & equipment being used?	No
Will you be using chemicals during your task?	No
Will you be working in area's that produce excessive noise?	No
Using HazMat?	No
Will you be welding or oxy cutting.	No
Will you be working in or near Cooling towers?	No
Handling refrigerant?	No
Are you working by yourself?	No
Is it safe for you to proceed with your job.	Yes
Technician's Signature	
PPE Title	Gloves, Long Pants, Safety Glasses, Long Sleeve Shirt, Face/Dust mask, Electrical Test Equipment, Safety Boots/Shoes
TMP Work Order No	



APPENDIX B –

WEATHER DATA CALIBRATION REPORTS

(31 MAY 2019 – 27 NOVEMBER 2019)

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

24 May 2019

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 22/05/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

[Horsley Park 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	15.0	15.1
2m*	15.0	13.9 Cleaned then 14.9
Relative Humidity*	75	82
Wind Speed	0.9 m/s at ground	1.1 m/s at 10 metres
Wind Direction	270	270
Solar Radiation	168	150
TBRG	10mm	20 tips
Battery/Solar	14.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0740 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

[Clyde 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	24.7	22.8
2m*	24.7	25.3
Relative Humidity*	45.7	44.9 Cleaned
Wind Speed	1.2 m/s at ground (poor exposure at ground)	3.27 m/s at 10 metres
Wind Direction	100 to 180	156 fluctuating
Solar Radiation	300	303
TBRG	10mm	20 tips
Battery/Solar	13.6/20.0	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1435 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.



Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

Mob 0402 134 092

Email glenmurf@ozemail.com.au

www.hydrometric.com.au

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

30 August 2019

Sara Maddison
Operations Project Manager
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Sara,

As per our service agreement, on the 28/08/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

Horsley Park 28/08/19

Sensor	Actual (field)	Logger
Temperature – 10m*	18.0	17.1
2m*	18.0	18.0
Relative Humidity*	49	51
Wind Speed	2.4 m/s at ground	3.2 m/s at 10 metres
Wind Direction	236	230
Solar Radiation	580	420
TBRG	10mm	20 tips
Battery/Solar	14.0	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0850 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.
4. Data Logger replaced. Out: CR10X In: CR300.

Clyde 28/08/19

Sensor	Actual (field)	Logger
Temperature – 10m*	20.0	19.3
2m*	20.0	19.4
Relative Humidity*	45	44.4
Wind Speed	1.0 m/s at ground (poor exposure at ground)	1.47 m/s at 10 metres
Wind Direction	200	200
Solar Radiation	750	750
TBRG	10mm	20 tips
Battery/Solar	13.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1130 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

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PO Box 3332

Putney NSW 2112

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Email glenmurf@ozemail.com.au

www.hydrometric.com.au

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

26 November 2019

Mary Wong
Veolia Environmental Services (Australia) Pty Ltd

Re – Quarterly service of weather stations

Dear Mary,

As per our service agreement, on the 20/11/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

[Horsley Park 20/11/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	19.0	17.5
2m*	19.0	18.1
Relative Humidity*	62.6	62.55
Wind Speed	1.6 m/s at ground	2.1 m/s at 10 metres
Wind Direction	120	120
Solar Radiation	83	78
TBRG	10mm	20 tips
Battery/Solar	13.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0630 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.
4. Replaced bearings and shafts in wind speed and direction sensors.
5. Replaced cups on wind speed sensor.

[Clyde 20/11/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	25.8	22.8
2m*	25.8	25.1
Relative Humidity*	45	44.0
Wind Speed	1.0 m/s at ground (poor exposure at ground)	2.3 m/s at 10 metres
Wind Direction	180	180
Solar Radiation	650	660
TBRG	10mm	20 tips
Battery/Solar	13.4	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1130 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

Mob 0402 134 092




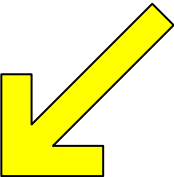
Email glenmurf@ozemail.com.au

www.hydrometric.com.au



APPENDIX C –
FIELD AMBIENT ODOUR ASSESSMENT PLOT
AND FIELD LOG SHEETS
(27 NOVEMBER 2019)



DESCRIPTION Field Ambient Odour Assessment Survey Modified German Standard VDI 3940		LEGEND German Intensity Scale VDI3882 ○ 0 Not detectable ● 1 Very weak ● 2 Weak ● 3 Distinct ● 4 Strong ● 5 Very strong ● 6 Extremely strong		 Veolia (Australia) Pty Ltd Clyde Transfer Terminal, Clyde, NSW Field Ambient Odour Assessment Survey Survey Date: 27 November 2019 Survey Time Period: 1508 hrs to 1638 hrs		
	THE ODOUR UNIT PTY LTD Level 3, 12/56 Church Avenue MASCOT, NSW 2020 Phone: (02) 9209 4420 – Fax: (02) 9209 4421 www.odourunit.com.au		DRAWN BY	J.SCHULZ 04/12/2019	<u>Odour Audit XXXII</u> Field Ambient Odour Assessment Survey	Plot No. N1473-XXXIV
			CHECKED	M.ASSAL 04/12/2019		Job No. N1473L
			APPROVED	M.ASSAL 04/12/2019		
		Local wind direction 		Local wind conditions Light to moderate (0.5 m/s – 3 m/s), with winds blowing from the north-east. No rainfall observed. Refer to FAOA Logsheet N1473L-XXXIV for details on recorded odour detections		



THE ODOUR UNIT PTY LTD

Level 3, 12/56 Church Avenue
MASCOT NSW 2020

Phone: +61 2 9209 4420
Facsimile: +61 2 9209 4421
Email: info@odourunit.com.au
Internet: www.odourunit.com.au
ABN: 53 091 165 061

Field Ambient Odour Assessment Log Sheet

Date: 27 November 2019

Assessor: M. Assal

Weather Conditions: Light to moderate (0.5 m/s to 3 m/s) wind speeds blowing from the north-east. No rainfall observed.

Survey Reference Plot No: N1473L-XXXIV

GRIF REF. POSITION	MEASUREMENT TIME PERIOD (hrs)	WIND DIRECTION	WIND SPEED (m/s)	ODOUR PRESNT (Y/N)	ODOUR CHARACTER	VDI 3940 INTENSITY SCALE 0-6	COMMENTS
1	1508 – 1513	E - ESE	0.5 – 3	Y	bin juice, fermented	1	▪ intermittent detection
2	1517 – 1522	SE – ESE	0.5 – 3	N	--	0	--
3	1605 – 1610	N – NW	0.5 – 2.5	N	--	0	--
4	1612 – 1617	NE – WNW	0.5 – 2.5	N	--	0	--
5	1619 – 1624	NW – NE	0.5 – 2.5	N	--	0	--
6	1626 – 1631	NE – WNW	0.5 – 2.5	N	--	0	--
7	1545 – 1550	N – NNW	0.5 – 2.5	N	--	0	--
8	1538 – 1543	N – NNW	0.5 – 2.5	N	--	0	--
9	1531 – 1536	N – NNE	0.5 – 3	N	--	0	--
10	1633 – 1638	NE – WNW	0.5 – 2.5	N	--	0	--



VEOLIA (AUSTRALIA) PTY LTD

Clyde Waste Transfer Terminal

Odour Audit XXXIII

Final Report

May 2019

THE ODOUR UNIT PTY LTD

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Project Number: N1473L**Report Revision**

Revision Number	Date	Description
Draft report	08.07.2019	Issued for internal review
Final report Rev 1	09.09.2019	Final report issued to client
Final report Rev 2	09.09.2019	Minor edit. Final report reissued

Report Preparation**Report Prepared By:**

J. Schulz & M. Assal

Approved By: M. Assal**Report Title:** Veolia (Australia) Pty Ltd Clyde Waste Transfer Terminal – Odour Audit XXXIII

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APPENDIX C: Field Ambient Odour Assessment Plot and Field Sheets (23 May 2019)

1 INTRODUCTION

The Odour Unit Pty Ltd (**TOU**) was commissioned by Veolia (Australia) Pty Ltd (**Veolia**) to undertake the thirty-third (**XXXIII**) Odour Audit at the Clyde Transfer Terminal (**the Site**) on 23 May 2019. The visit for this Odour Audit was undertaken by a TOU Consultant, James Schulz, and is the twenty-third (23rd) to be carried out since the commissioning of the forced air extraction system within the waste transfer terminal.

1.1 ODOUR AUDIT PERIOD

Odour Audit XXXIII covers the six months from 18 December 2018 to 23 May 2019 (**the Odour Audit**).

1.2 ODOUR AUDIT REQUIREMENTS

The Odour Audit requirements originate from the *Conditions of Consent – 48(f)* and are outlined below:

48. The Odour Management Plan must address, but is not necessarily limited to, the following issues:

(f) An odour audit program which provides for a comprehensive odour audit of the premises and nearby commercial and residential areas, by an independent, appropriately qualified and experienced person, to be conducted 3-monthly for the initial 24 months of receiving un-containerised waste at the terminal, 3-monthly for the 12 months following commissioning the odour control system subject to MOD-133-11-2006, and 6-monthly thereafter, unless otherwise approved in writing by the Director-General.

As with previous Odour Audits, Odour Audit XXXIII focused on issues relating to general housekeeping, fugitive odour emissions from the transfer building, ground level odour impacts, meteorological monitoring, complaints handling, and actions on past odour audit recommendations. Specifically, the Odour Audit approach included:

- A general inspection and smoke testing of the transfer building;
- The inspection of the container packing area and site access roads;
- The examination of the complaint register;
- The review of the on-site meteorological data log and equipment maintenance/calibration;
- The analysis of relevant documentation relating to odour management; and

- The undertaking of an off-site downwind Field Ambient Odour Assessment (**FAOA**) survey.

1.3 PREVAILING WEATHER CONDITIONS DURING THE ODOUR AUDIT VISIT

At the time of the Odour Audit visit, it was predominately light (0.5 metres per second (**m/s**) to 2 m/s) wind speeds with the local wind direction blowing predominately from the north. The skies were partly cloudy and the ambient temperature during the Odour Audit visit was approximately 16 degrees Celsius (**°C**).

No rainfall was observed during the Odour Audit visit.

2 ODOUR AUDIT FINDINGS

2.1 ASSESSMENT OF GENERAL HOUSEKEEPING

2.1.1 Transfer Terminal Building

During the Odour Audit visit, there were approximately 350 to 450 tonnes of waste on the floor. This tonnage is considered to be within the normal operating range of the Transfer Terminal Building (TTB). The TTB floor area not covered by waste material was observed to be reasonably clean, with little evidence of leachate or aged material. General housekeeping procedures of the TTB were good, as found during several truck-unloading sequences. It was also observed that the TTB's front-end loaders cleared the floor area of waste on a regular basis, minimising the exposed area of waste.

As with previous audits, and consistent with TOU's experience at other waste transfer stations, there was a weak to distinct level of odour observed within the TTB. A photo of the waste on the floor as found during the Odour Audit visit is shown in **Photo 2.1**.



Photo 2.1 – Waste on-floor as seen on 23 May 2019

2.1.2 Container Packing Area and Site Roadways

The container packing area and site roadways were found to be clean and well managed with no evidence of waste or exposed leachate. Like previous Odour Audits, the container compacting/train packing area had a weak to distinct odour that

was intermittently detectable but was confined to this area only (see **Appendix C** for Field Ambient Odour Assessment Survey results). It appeared during the Odour Audit visit that both compactors were in operation. The general housekeeping around this area was observed to be of high quality, with no evidence to suggest otherwise. The condition of the compactor area as found on 23 May 2019 is shown in **Photo 2.2** and **Photo 2.3**.

As with previous Odour Audits, the containers are cleaned off-site at Veolia's Woodlawn Bioreactor Facility before being returned to the Site. The weight of each container is monitored to determine if there is any waste that has not been removed completely from each container, which in turn reduces the likelihood of the containers contributing to the Site's odour levels.



Photo 2.2 – Compactor area as seen on 23 May 2019 (1 of 2)



Photo 2.3 – Compactor area as seen on 23 May 2019 (2 of 2)

2.1.2.1 Container Management and Maintenance

Based on previous verbal discussions with the Veolia team and observations made during the Odour Audit visit, the Audit finds that Veolia continues to implement the policies and procedures as outlined in the following documents:

- The container management and maintenance procedures titled *NSW Resource Recovery – Container Maintenance* dated 15 September 2017 (**the September 2017 NSW RR Container Document**), which details the following:
 - The design of the containers;
 - The maintenance and management of the activated carbon filter retrofitted to the containers;
 - The container management procedure; and
 - The container maintenance procedure.
- The waste container preparation requirements for the Site (**the September 2017 Container Preparation Document**), which details the following:
 - The inspections and actions to be undertaken by operators to enable containers to be prepared to an acceptable standard;
 - The steps to be undertaken should a damaged container be identified; and
 - The steps to be undertaken should a leaking container be identified.

2.1.3 Odour Management Plan

As per the Odour Management Plan dated February 2010 (hereafter referred to as **the February 2010 OMP**) for the Site, following the compaction of waste, all filled containers are entirely sealed and remain so while at the Site. All containers used are required to be in good condition, and unused/returned containers adequately clean.

The Audit finds that this continues to be current practice at the Site.

2.1.4 Odour Extraction System Maintenance

Service documentation for the maintenance of the odour extraction system was supplied and reviewed as part of the Odour Audit (refer **Appendix A**). Service logs were provided covering the period between 18 December 2018 and 23 May 2019.

Each service log provided to the Audit indicated that the required inspection and maintenance works were taking place by a suitable service contractor, and the odour

extraction system overall was operating efficiently. The service logs during this period noted that all the necessary support works such as checking the fan belts and unit operations, greasing bearings, and other routine preventative maintenance works were being inspected and undertaken (see **Section 2.1.4.1** for more details).

2.1.4.1 Status of Odour Extraction System Maintenance Items

The service logs indicated that the stack discharge velocity was measured on 27 March 2019, reporting an average stack velocity of approximately 16 m/s. This measured discharged value is below the required 19.5 m/s. The services logs indicated the following potential reasons for this reduction:

- **Item 1** - The inlet exhaust plenum contained heavy dust/debris build-up resulting in a restriction to airflow;
- **Item 2** - The Exhaust Fan 1 and Exhaust Fan 2 hub intakes also have heavy dust/debris build-up resulting in a restriction to airflow;
- **Item 3** - The heavy dust/debris on the motor may cause it to overheat, resulting in the exhaust fans to be temporarily inoperable (although there is alarm to warn the operators if this were to occur – see **Photo 2.4**);
- **Item 4** - Large amounts of dust/debris accumulated on discharge ductwork; and
- **Item 5** - The canvass connection at the Exhaust Fan 1 discharge was found to be torn and requires repair/replacement.

The subsequent service log visit conducted on 20 May 2019 indicated that Item 5 was completed. However, it is unclear from the service logs if Items 1 to 4, as listed above, were completed in a previous or subsequent visit.

Despite the above findings and identified operating and maintenance related works, based on the positive results obtained for the smoke testing, odour complaints register, and the FAOA survey conducted as part of the Odour Audit visit, it appears that the current operation of the odour extraction system is satisfactory. However, it is highly recommended that Items 1 to 4 as listed above are rectified as a **priority** to ensure that odour risks are sustainably managed and minimised. Upon completion of these rectification works, the discharge stack velocity should be reassessed.



Photo 2.4 – The location of the odour extraction system fan alarm at the Site as seen on 23 May 2019

2.1.5 Odour Management Procedures/Plan

The Odour Management Procedures (formerly known as the Odour Minimising Procedures) continue to be regularly reviewed at toolbox meetings, and contemporary issues/recommendations are raised with all staff members at these meetings.

Veolia has advised the Odour Audit that the February 2010 OMP is still in the process of being reviewed and updated.

2.1.6 Transfer Terminal Building

The Odour Audit inspected the fixed metal plates retrofitted along the TTB breezeways in December 2013. All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected offsite. The louvres on the end walls of the TTB were observed to be permanently shut.

2.1.7 Truck Entrance Plastic Strips

The truck entrance plastic strips of the TTB, used to reduce odour escaping through the opening, were found to be intact and in good condition

2.1.8 Smoke Testing

As per previous audits, smoke testing was carried out within the TTB to assist in determining the effectiveness of the forced air extraction system, as well as the extent to which the TTB has been sealed from leaks. As per previous audits, smoke was released from within the TTB at three points within the TTB. **Figure 2.1** shows the three points where the smoke was released within the TTB. **Photo 2.5** shows smoke testing at one of the test locations (Smoke Testing Point #1) as occurred on 23 May 2019.

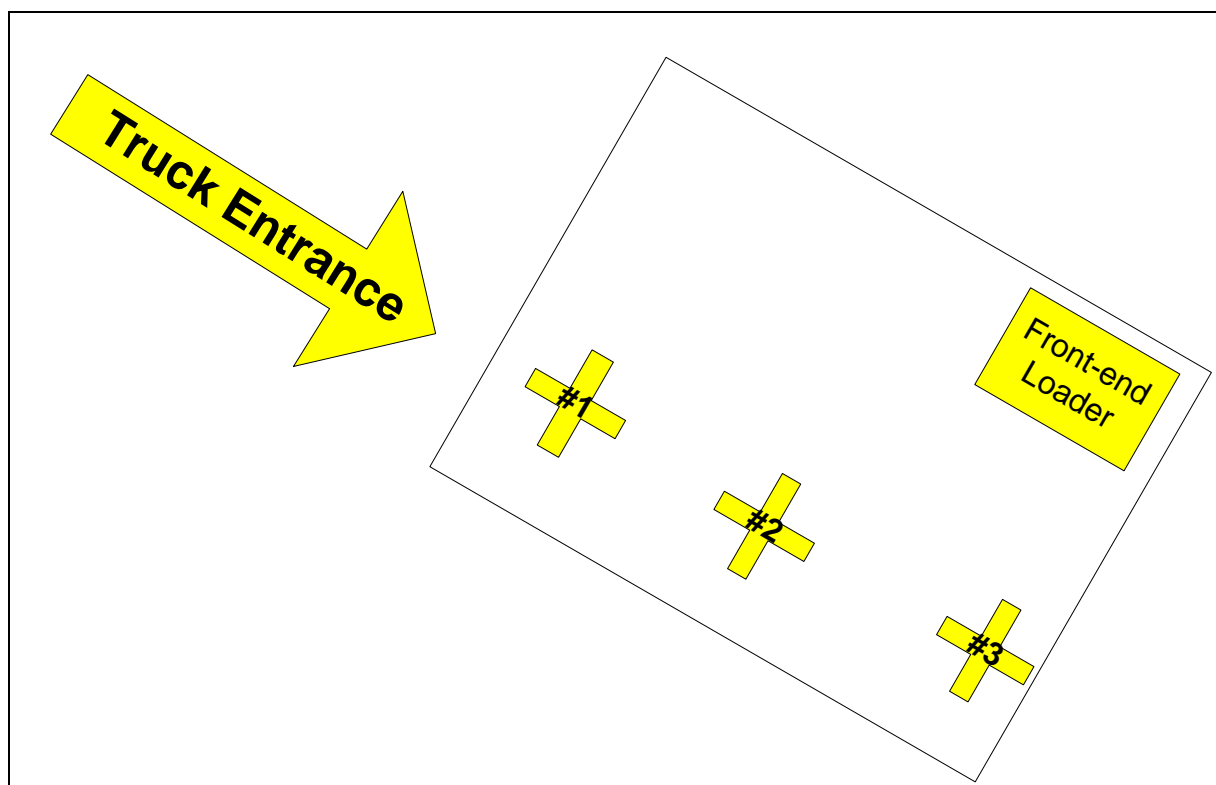


Figure 2.1 - Smoke testing release points within the TTB on 23 May 2019



Photo 2.5 – Smoke testing within the TTB on 23 May 2019

2.1.8.1 Smoke Testing Results

Smoke Testing Point #1

The smoke released at this point initially rose gradually moving towards the truck entrance before rising to the roof and moving slowly towards the extraction system. Visible smoke extraction at the overhead capture points was evident during the smoke testing at this point. Any smoke that continued towards the truck entrance was promptly blown back into the building.

Smoke Testing Point #2

The smoke released at this point revealed a similar result to smoke testing point #1.

Smoke Testing Point #3

The smoke released at this point revealed a similar result to smoke testing point #1.

2.1.9 Stormwater Retention Pond

The auditor observed that there was no effluent in this pond at the time of the Odour Audit visit. **Photo 2.6** shows the state of the pond as found on 23 May 2019.



Photo 2.6 – Stormwater retention pond as seen on 23 May 2019

2.2 ODOUR COMPLAINTS HANDLING AND METEOROLOGICAL DATA

2.2.1 Odour Complaints Handling

As advised by Veolia personnel, there have been no complaints recorded in the Site's complaints register since March 2012.

2.2.2 Meteorological Data

The meteorological data provided to the Odour Audit for the period between 16 November 2018 and 31 May 2019 was inspected and found to be in good order. As found in previous Odour Audits, the observations were recorded in 15-minute intervals and included all parameters necessary to develop a meteorological dataset for odour dispersion modelling.

As indicated via service records completed by Hydrometric Consulting Services (**HCS**) supplied by Veolia to the Odour Audit, the weather station continues to remain located in an accessible area with the solar panel and components regularly cleaned, and installation sprayed periodically for insects and trimming of nearby vegetation as required to ensure no overgrowth immediately around the weather station pole.

Overall, HCS indicated that the weather stations were operating well, and any identified issues were rectified.

The weather data calibration and service reports by HCS are appended as **Appendix B**.

2.3 FIELD AMBIENT ODOUR ASSESSMENT METHODOLOGY

At present, no Australian Standard exists for field-based ambient odour assessment surveys. Consequently, TOU utilises a method for assessing the ground-level impacts of odour emissions using a modified version of the German Standard VDI 3940 (1993) – *‘Determination of Odorants in Ambient Air by Field Inspections’*.

Field-based ambient odour surveys are considered a valuable odour impact assessment tool as previous experience with ambient odour sampling and subsequent olfactometry testing suggests that accurate and useful ambient odour concentration data is difficult to obtain. Therefore, TOU has adopted a more practical approach based on the field measurement of odour intensity. With this method, calibrated and experienced odour specialists traverse the downwind surrounds of odour sources in a strategically mapped pattern, assessing the presence, character and intensity of any odours encountered and recording these observations along with wind speed and direction.

An ambient odour assessment was performed on 23 May 2019 between 1500 hrs and 1632 hrs. The FAOA survey was undertaken at strategic locations, both on-site and off-site. The ambient odour assessment focus was off-site, as required by the Conditions of Consent on “.....*nearby commercial and residential areas*.....” (Section 48 (f)). The TOU assessor firstly determined the wind direction using a Kestrel 4500 Pocket Weather Tracker Anemometer and then assessed locations of the TTB downwind.

The assessors spent approximately five minutes at each assessment location to gauge the effects of any odour impact. If an odour was detected at a location, the assessors attempted to characterise it. The general aim was to determine the extent of the impact of odours off-site and rank their intensity. The ranking scale for the German Standard VDI 3940 *‘Determination of Odorants in Ambient Air by Field Inspections’* was used for the intensity assessments. The standard’s ranking system is based on the following seven-point intensity scale, as shown in **Table 2.1** below.

Table 2.1 - VDI 3882 Odour Intensity Categories

Odour Strength	Intensity Rank (code)	TOU Interpretation (meaning)
Not detectable	0	No odour detected
Very weak	1	Odour detected but not strong enough to be characterised
Weak	2	Odour is weak but just able to be characterised
Distinct	3	Odour is distinct and easily characterised
Strong	4	Strong odour detectable
Very Strong	5	If offensive, the observer may consider moving from the area
Extremely Strong	6	Odour is sufficiently over-powering that assessor moves from the area

2.3.1 Field Ambient Odour Assessment - Results

The results of the FAOA survey conducted during the Odour Audit found that no odours were detectable off-site that could be linked back to the Site and its activities.

The field log sheets and visual survey plot are appended as **Appendix C**.

3 RECOMMENDATIONS/FOLLOW-UP ACTIONS

3.1 PREVIOUS AUDIT ACTIONS

The last November 2018 odour audit documented the following audit actions:

- **Previous Audit Action 1:** *Complete the outstanding maintenance works as required by the fan maintenance service provider.*

Status: Outstanding (see **Section 3.4** for more details).

- **Previous Audit Action 2:** *The stack discharge velocity should now be measured before the next audit and 6-monthly thereafter as part of a routine service visit.*

Status: Complete (see **Section 2.1.4.1**).

3.2 TRANSFER TERMINAL BUILDING

All metal plates were found to be intact and in good condition around the TTB. All doors and roller shutters of the TTB were found to be shut at the time of the Odour Audit, reducing the likelihood of odour impacts detected offsite. The louvres on the end walls of the TTB were observed to be permanently shut. Overall, the TTB was found to be well managed.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

3.3 COMPACTOR AREA

The general housekeeping around the compactor area was observed to be of high quality, with no evidence to suggest otherwise. As with previous Odour Audits, the container compacting/train packing area had a weak to distinct odour that was intermittently detectable but was found to be confined to this area only.

Based on the findings in this Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

3.4 ODOUR EXTRACTION SYSTEM

The service logs indicate that all required maintenance works on the odour extraction system since the previous November 2018 odour audit have been adequately undertaken, and the odour extraction system is operating in a satisfactory condition.

However, there are maintenance items that need to be addressed as outlined in **Section 2.1.4.1**, as these can have an impact on the odour extraction system performance efficiency if left unattended for an extended period.

Based on the findings in the Odour Audit, the following action is recommended:

- **Action 1 – Complete the outstanding maintenance items as required by the fan maintenance service provider as documented in March 2019.**

3.5 WEATHER STATION

The calibration and service reports from HCS indicate that all maintenance to the weather station and required calibrations were carried out as needed.

Based on the findings in the Odour Audit, the following action is recommended:

- **No further action is required at this stage.**

3.6 FIELD AMBIENT ODOUR ASSESSMENT SURVEY

The results of the FAOA survey conducted during the Odour Audit found that no odours were detectable off-site that could be linked back to the Site and its activities.

3.7 ODOUR MANAGEMENT PROCEDURES/PLAN

At the timing of the writing of the Odour Audit, the February 2010 OMP was last updated over seven years ago. Given the previous update, it is suggested that as part of good practice that Veolia reviews and update the February 2010 OMP to ensure it continues to reflect the odour management procedures implemented and followed at the Site. Veolia has advised the Odour Audit that the February 2010 OMP is in the process of being reviewed and updated.

Based on the findings in this Odour Audit, the following action/s is recommended:

- **Action 2 – Veolia to continue its review and update of the OMP for the Site.**

3.8 CONCLUDING REMARK

Overall, this Odour Audit found that the operation and maintenance of the odour management system at the Site was satisfactory. There was no evidence to suggest that significant fugitive odour emission release from the Site is occurring.

The next Odour Audit is due in **November 2019**.



VEOLIA (AUSTRALIA) PTY LTD

Clyde Waste Transfer Terminal

Odour Audit XXXIII

Appendices

May 2019



Appendix A –

Odour Extraction System Service Report

(18 December 2018 – 23 May 2019)

SERVICE / MAINTENANCE REPORT

CLIENT: VEOLIA CLTDE
ADDRESS: _____

REPORT NO. 21664
DATE: 20.05.19
JOB NO. 37116 - SC0002
ORDER NO. _____

Risk Assessments

Site Assessment

Has all plant + equipment required been identified as safe for use? ☒ Yes ☐ No
Has work area been inspected? ☒ Yes ☐ No
Are access ways clear? ☒ Yes ☐ No
Is lighting adequate? ☒ Yes ☐ No
Any other risks identified? ☒ Yes ☐ No
If Yes" Description of Hazard/Risk _____

Risk Score (4) Refer to Risk Score Calculator
Action Taken/Recommended: (Ways to control Hazard)

If No: Is the work area suitable to start work? ☒ Yes ☐ No

Safe Work Method Statement/Instruction Applicable: _____

Description of Work: CONDUCT REPAIRS TO CANVAS CONNECTION FOR EXHAUST FANS.
ATTEND SITE, SIGN IN AND ACCESS FANS. INSTALL REINFORCED CANVAS CONNECTION OVER EXISTING TO PREVENT AIR RECIRCULATION. SIGN OFF + HAVE FANS RE-INSTALLED.

Risk Score Calculator

Consequence	Very Likely Could happen any time	Likely Could happen some time	Unlikely Could happen any time	Very Unlikely Could but probably never will
Fatality, Loss of body function hospitalisation or serious damage	1	1	2	3
Lost time, injury or significant damage	1	2	3	4
Medical treatment - not hospitalisation or minor damage	2	3	4	5
First aid or potential damage only	3	4	5	6

Note: Damage includes environment

1 = Urgent - Immediate action required

2 = High Priority - Action required as soon as possible

3 = Medium Priority - Action required

4 = Low Priority - Hazard may not need immediate action

5-6 = Monitor Risk - If hazard increases in risk take action

Job Status ☒ Completed ☐ Further Work ☐ Quote Required
☒ Further Work Required (FWR) ☐ Yes ☒ No

Service Performed

- ☐ Service Call ☐ Planned Maintenance
☐ Quotation ☐ Monthly
☐ Warranty ☐ Bi-Monthly
☐ Commissioning ☐ Quarterly
☐ ☐ Bi-Annually
☐ ☐ Annually

Materials	Order No.	Qty	Reclaim Unit
<u>EMAX</u>			Vacuum Pump
			Oxy/Acetylene/Solder
			Cleaning Consumables
			Parking & Tolls
			Technician/s

Date	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Normal							
Overtime							
Total							

Client Signature: [Signature]
Clients Name: ROD JONES

Technicians Signature: [Signature]
Technicians Name: Tim C



EQUILIBRIUM
Air Conditioning Services Pty Limited
ABN 51 844 035 531
Telephone: (02) 9439 4822
Facsimile: (02) 9439 4699
email: service@eqac.com.au
www.equilibriumac.com.au

Unit 7,
38 Brookhollow Avenue
Norwest Business Park
Baulkham Hills NSW 2153

All correspondence
PO Box 7996
Baulkham Hills BC NSW 2153

SERVICE / MAINTENANCE REPORT

CLIENT: VEOLIA CLYDE
ADDRESS: _____

REPORT NO. 21663
DATE: 20.05.19
JOB NO. S7116 - SC0001
ORDER NO. _____

Risk Assessments

Site Assessment

Has all plant + equipment required been identified as safe for use? ☒ Yes / ☐ No
Has work area been inspected? ☒ Yes / ☐ No
Are access ways clear? ☒ Yes / ☐ No
Is lighting adequate? ☒ Yes / ☐ No
Any other risks identified? ☒ Yes / ☐ No
If Yes" Description of Hazard/Risk

Risk Score (4) Refer to Risk Score Calculator
Action Taken/Recommended: (Ways to control Hazard)

If No: Is the work area suitable to start work? ☒ Yes / ☐ No

Safe Work Method Statement/Instruction Applicable: _____

Description of Work: ATTEND SITE TO INVESTIGATE EXHAUST
SYSTEM. CONDUCT AUDIT OF EXHAUST OPERATION
AND CONDUCT AIR BALANCE.

ISSUE AIR BALANCE REPORT CARRIED OUT
ON 27TH MARCH

Job Status ☐ Completed ☒ Further Work ☐ Quote Required

Further Work Required (FWR) ☒ Yes ☐ No

DUCT CANVAS REPAIR

Service Performed

☐ Service Call ☐ Planned Maintenance
☐ Quotation ☐ Monthly
☐ Warranty ☐ Bi-Monthly
☐ Commissioning ☐ Quarterly
☐ Bi-Annually
☐ Annually

Materials	Order No.	Qty	Reclaim Unit
			Vacuum Pump
			Oxy/Acetylene/Solder
			Cleaning Consumables
			Parking & Tolls
			Technician/s

Date	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Normal							
Overtime							
Total							

Client Signature: [Signature]
Clients Name: Rob Jones

Technicians Signature: [Signature]
Technicians Name: Tim C



EA F 1 & 2

Clyde Transport Terminal [Veolia]

REV A

EAF 1 & 2

PROJECT DETAILS:

PROJECT NAME:	Clyde Transport Terminal [Veolia]
ADDRESS:	321 Parramatta Road, Auburn, NSW
CLIENT:	Equilibrium
BUILDER:	N/A
JOB NUMBER:	JC19025

SYSTEM DETAILS:

SYSTEM NAME:	EAF 1 & 2
SYSTEM TYPE:	EXHAUST SYSTEM
LOCATION:	Disposal Shed
AREA SERVED:	Disposal Shed
TEST DATE:	27 March 2019
PRINT DATE:	27 March 2019
REVISION:	A

COMMISSIONING COMPLETED BY:

COMPANY NAME:	R&R Quigley Technical Services PTY LTD			
TECHNICIAN:	Carl Schilg			
EMAIL:	rrquigley3@bigpond.com			
PHONE:	0419 669 005			
COMPANY ADDRESS:	28 Rusty Lane East Arm, Branxton, NSW 2335			
INSTRUMENTATION:	MAKE	SERIAL	CAL DATE	FACTOR
ANEMOMETER	Alnor	RVA501445002	13-Mar-19	1.0
MICRO MANOMETER	Alnor	EBT731246007	13-Mar-19	1.0

SIGN OFF REGISTER:

NAME	COMPANY	SIGNATURE	DATE

1	COVER SHEET
2	TITLE
4	EQUIPMENT SUMMARY
5	PITOT TRAVERSE [SYSTEM TOTAL]
6	EXHAUST AIRFLOW MEASUREMENTS

Clyde Transport Terminal [Veolia]

EQUIPMENT SUMMARY

EAFF 1 & 2

Project:	Clyde Transport Terminal [Veolia]
System Location:	Disposal Shed
Address:	321 Parramatta Road, Auburn, NSW
Area Served:	Disposal Shed
Client:	Equilibrium

UNIT ID	EXT. FAN 1	EXT.FAN 2
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TECHNICAL DATA

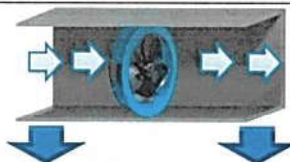
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MODEL	NO NAME PLATE VISIBLE	NO NAME PLATE VISIBLE
SERIAL NUMBER	NO NAME PLATE VISIBLE	NO NAME PLATE VISIBLE
MOTOR MAKE	HG	HG
MOTOR FRAME	Y315S-6	Y315S-6
KW	75	75
FULL LOAD AMPS	128.5	128.5
RPM	988	988
MOTOR PULLEY	Pulley & belt details to be gathered following full system clean.	
FAN PULLEY		
BELTS		
CENTRES		
ADJUSTMENT IN		
ADJUSTMENT OUT		
DESIGN L/S	TBC	TBC
TOTAL EXT. STATIC	TBC	TBC

RUNNING DETAILS

HZ	45	45
AMPS	88.2	76.2
KW	43.5	38.5
RPM	890	890

PLENUM STATIC PROFILE

SUCTION (Pa)	-117
DISCHARGE (Pa)	5.7
TOTAL (Pa)	122.7



	Plenum Suction (Pa)	Fan Discharge (Pa):	
	-117	5.7	

SYSTEM TOTAL (l/s)	86934	TBC
--------------------	-------	-----

Clyde Transport Terminal [Veolia]

PITOT TRAVERSE [SYSTEM TOTAL]

EAF 1 & 2				Project: Clyde Transport Terminal [Veolia]				
System Location: Disposal Shed				Address: 321 Parramatta Road, Auburn, NSW				
Area Served: Disposal Shed				Client: Equilibrium				
PITOT TRAVERSE LOCATION: MAIN DISCHARGE DUCT								
DUCT INTERNAL DIAMETER (MM): 2630								
				DESIGN AIRFLOW (L/S): TBC				
VELOCITY MEASUREMENT IN M/S								
				16.75				
				15.58				
				15.42				
				14.53				
18.02	17.44	17.45	16.89	13.61	13.47	12.93	13.72	13.68
				17.54				
				18.69				
				18.7				
				17.76				
<table border="1"> <tr> <td>Avg. Velocity (m/s)</td> <td>16.01</td> </tr> </table>				Avg. Velocity (m/s)	16.01			
Avg. Velocity (m/s)	16.01							
				ACTUAL AIRFLOW (L/S): 86934				
				PERCENTAGE OF DESIGN: TBC				

EXHAUST AIRFLOW MEASUREMENTS

VELOCITY MEASUREMENTS IN M/S

EAST END OF BUILDING

WEST END OF BUILDING

*Grille factor of 0.7 approximate only.



EA F 1 & 2

Clyde Transport Terminal [Veolia]

REV B

EAF 1 & 2

PROJECT DETAILS:

PROJECT NAME:	Clyde Transport Terminal [Veolia]
ADDRESS:	321 Parramatta Road, Auburn, NSW
CLIENT:	Equilibrium
BUILDER:	N/A
JOB NUMBER:	JC19025

SYSTEM DETAILS:

SYSTEM NAME:	EAF 1 & 2
SYSTEM TYPE:	EXHAUST SYSTEM
LOCATION:	Disposal Shed
AREA SERVED:	Disposal Shed
TEST DATE:	27 March 2019
PRINT DATE:	27 March 2019
REVISION:	B

COMMISSIONING COMPLETED BY:

COMPANY NAME:	R&R Quigley Technical Services PTY LTD			
TECHNICIAN:	Carl Schilg			
EMAIL:	rrquigley3@bigpond.com			
PHONE:	0419 669 005			
COMPANY ADDRESS:	28 Rusty Lane East Arm, Braxton, NSW 2335			
INSTRUMENTATION:	MAKE	SERIAL	CAL DATE	FACTOR
ANEMOMETER	Alnor	RVA501445002	13-Mar-19	1.0
MICRO MANOMETER	Alnor	EBT731246007	13-Mar-19	1.0

SIGN OFF REGISTER:

NAME	COMPANY	SIGNATURE	DATE

1	COVER SHEET
2	TITLE
4	EQUIPMENT SUMMARY
5	PITOT TRAVERSE [SYSTEM TOTAL]
6	EXHAUST AIRFLOW MEASUREMENTS
7	SYSTEM DEFECT REGISTER 1
8	SYSTEM DEFECT REGISTER 2
9	SYSTEM DEFECT REGISTER 3
10	SYSTEM DEFECT REGISTER 4

Clyde Transport Terminal [Veolia]

EQUIPMENT SUMMARY

EAFF 1 & 2

Project:	Clyde Transport Terminal [Veolia]
System Location:	Disposal Shed
Address:	321 Parramatta Road, Auburn, NSW
Area Served:	Disposal Shed
Client:	Equilibrium

UNIT ID	EXT. FAN 1	EXT.FAN 2
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TECHNICAL DATA

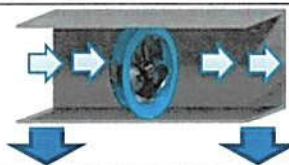
MAKE	NO NAME PLATE VISIBLE (Fan And Blower Type)	NO NAME PLATE VISIBLE (Fan And Blower Type)
MODEL	NO NAME PLATE VISIBLE	NO NAME PLATE VISIBLE
SERIAL NUMBER	NO NAME PLATE VISIBLE	NO NAME PLATE VISIBLE
MOTOR MAKE	HG	HG
MOTOR FRAME	Y315S-6	Y315S-6
KW	75	75
FULL LOAD AMPS	128.5	128.5
RPM	988	988
MOTOR PULLEY	Pulley & belt details to be gathered following full system clean.	
FAN PULLEY		
BELTS		
CENTRES		
ADJUSTMENT IN		
ADJUSTMENT OUT		
DESIGN L/S	TBC	TBC
TOTAL EXT. STATIC	TBC	TBC

RUNNING DETAILS

HZ	45	45
AMPS	88.2	76.2
KW	43.5	38.5
RPM	890	890

PLENUM STATIC PROFILE

SUCTION (Pa)	-117
DISCHARGE (Pa)	5.7
TOTAL (Pa)	122.7



	Plenum Suction (Pa)	Fan Discharge (Pa):	
	-117	5.7	

SYSTEM TOTAL (l/s)	86934	TBC
--------------------	-------	-----

Clyde Transport Terminal [Veolia]

PITOT TRAVERSE [SYSTEM TOTAL]

EAF 1 & 2				Project: Clyde Transport Terminal [Veolia]				
System Location: Disposal Shed				Address: 321 Parramatta Road, Auburn, NSW				
Area Served: Disposal Shed				Client: Equilibrium				
PITOT TRAVERSE LOCATION: MAIN DISCHARGE DUCT								
DUCT INTERNAL DIAMETER (MM): 2630								
				DESIGN AIRFLOW (L/S): TBC				
VELOCITY MEASUREMENT IN M/S								
				16.75				
				15.58				
				15.42				
				14.53				
18.02	17.44	17.45	16.89	13.61	13.47	12.93	13.72	13.68
				17.54				
				18.69				
				18.7				
				17.76				
<table border="1"> <tr> <td>Avg. Velocity (m/s)</td> <td>16.01</td> </tr> </table>				Avg. Velocity (m/s)	16.01			
Avg. Velocity (m/s)	16.01							
				ACTUAL AIRFLOW (L/S): 86934				
				PERCENTAGE OF DESIGN: TBC				

Clyde Transport Terminal [Veolia]

EXHAUST AIRFLOW MEASUREMENTS

EAFF 1 & 2

Project:	Clyde Transport Terminal [Veolia]
System Location:	Disposal Shed
Address:	321 Parramatta Road, Auburn, NSW
Area Served:	Disposal Shed
Client:	Equilibrium

VELOCITY MEASUREMENTS IN M/S

Grille	Grille Dimension		Factor	Free Area (M ²)	Design Flow (l/s)	Required Velocity (m/s)	Actual Velocity (m/s)	Actual Flow (l/s)	%
	Width (m/m)	Length (m/m)							

EAST END OF BUILDING

E-1	1200	1200	0.7	1.008	TBC	TBC	5.14	5181	N/A
E-2	1200	1200	0.7	1.008	TBC	TBC	5.22	5262	N/A
E-3	1200	1200	0.7	1.008	TBC	TBC	5.16	5201	N/A
E-4	1200	1200	0.7	1.008	TBC	TBC	4.87	4909	N/A
E-5	1200	1200	0.7	1.008	TBC	TBC	5.16	5201	N/A
E-6	1200	1200	0.7	1.008	TBC	TBC	4.89	4929	N/A
E-7	1200	1200	0.7	1.008	TBC	TBC	5.2	5242	N/A
E-8	1200	1200	0.7	1.008	TBC	TBC	5.13	5171	N/A
E-9	1200	1200	0.7	1.008	TBC	TBC	5.07	5111	N/A
E-10	1200	1200	0.7	1.008	TBC	TBC	4.94	4980	N/A
E-11	1200	1200	0.7	1.008	TBC	TBC	5.11	5151	N/A
E-12	1200	1200	0.7	1.008	TBC	TBC	5.1	5141	N/A
E-13	1200	1200	0.7	1.008	TBC	TBC	4.78	4818	N/A
E-14	1200	1200	0.7	1.008	TBC	TBC	4.66	4697	N/A
E-15	1200	1200	0.7	1.008	TBC	TBC	4.64	4677	N/A

WEST END OF BUILDING

					TBC			75671	N/A

*Grille factor of 0.7 approximate only due to broken canvass. Actual factor to be determined when canvass repaired.

Clyde Transport Terminal [Veolia]

SYSTEM DEFECT REGISTER 1

EAF 1 & 2

System Location: Disposal Shed

Area Served: Disposal Shed

Project: Clyde Transport Terminal [Veolia]

Address: 321 Parramatta Road, Auburn, NSW

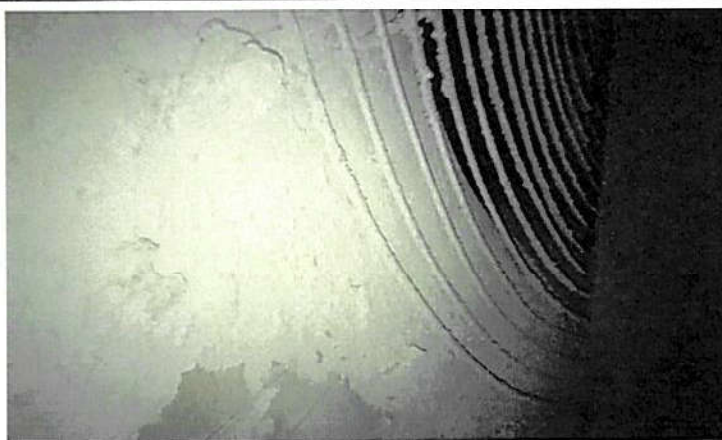
Client: Equilibrium



Internal shot of exhaust plenum
Exhaust VCD suffering heavy debris build-up
Build-up restricting airflow
Comprehensive clean required



External shot of exhaust plenum
Exhaust VCD suffering heavy debris build-up
Build-up restricting airflow
Comprehensive clean required



Extraction Fan 1 hub intake
Large amount of debris accumulated on intake mesh.
Debris restricting airflow.
Comprehensive clean required

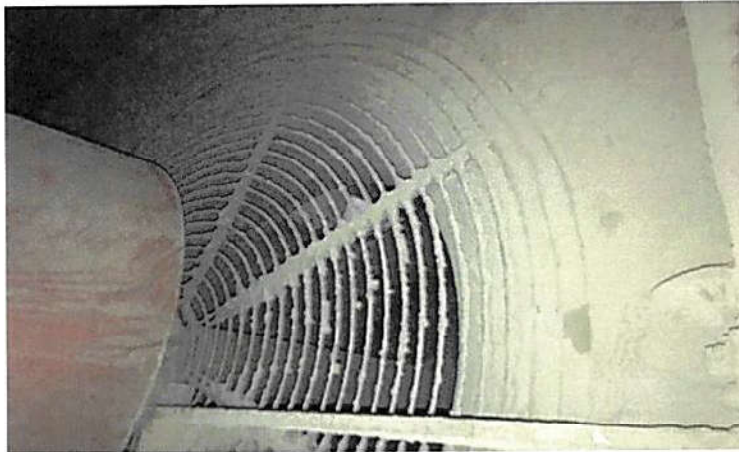
NOTES:

*Recommend full system clean be conducted 3 times annually to prevent the levels of build-up seen above.

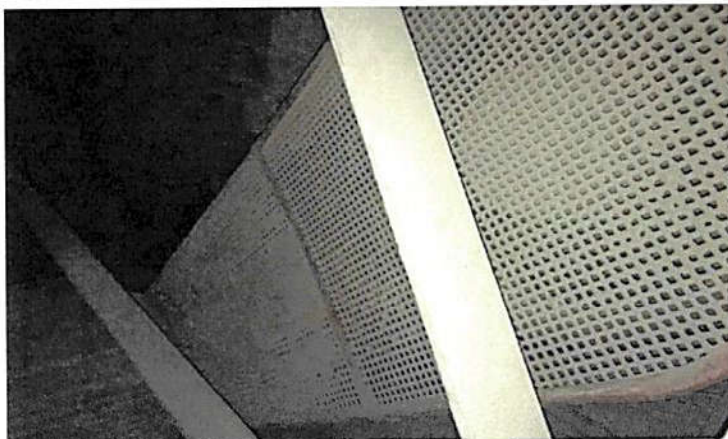
Clyde Transport Terminal [Veolia]

SYSTEM DEFECT REGISTER 2

EAF	1 & 2	Project:	Clyde Transport Terminal [Veolia]
System Location:	Disposal Shed	Address:	321 Parramatta Road, Auburn, NSW
Area Served:	Disposal Shed	Client:	Equilibrium



Extraction Fan 2 hub intake
 Large amount of debris accumulated on intake mesh.
 Debris restricting airflow.
 Comprehensive clean required



Extraction Fan 1 pulley drive guard
 Build up of dust & debris causing excessive wear on belts & pulleys.
 Comprehensive clean required



Extraction Fan 1 drive motor
 Dust / debris build up may be causing motor to overheat
 Comprehensive clean required

NOTES:

Clyde Transport Terminal [Veolia]

SYSTEM DEFECT REGISTER 3

EAF 1 & 2

System Location: Disposal Shed

Area Served: Disposal Shed

Project: Clyde Transport Terminal [Veolia]

Address: 321 Parramatta Road, Auburn, NSW

Client: Equilibrium



Side view of Extraction Fan 2

Large amount of debris accumulated on intake mesh & discharge duct work.

Comprehensive clean required

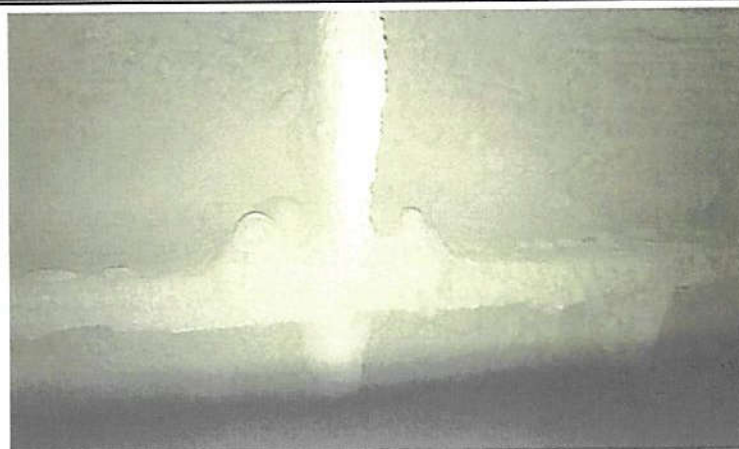


Top view of Extraction Fan 2 VSD showing

build up of dust / debris on VSD cooling vanes.

Possible fire hazard due build up restricting VSD internal ventilation.

Recommend moving BOTH VSDs to a new location, OUTSIDE the exhaust intake chamber. Preferably external to the shed, near the main electrical cabinet.



Fan housing for Extraction Fan 1.

Comprehensive clean required.

NOTES:

*Current VSD location to be reviewed as a matter of urgency.

Clyde Transport Terminal [Veolia]

SYSTEM DEFECT REGISTER 4

EA	1 & 2	Project:	Clyde Transport Terminal [Veolia]
System Location:	Disposal Shed	Address:	321 Parramatta Road, Auburn, NSW
Area Served:	Disposal Shed	Client:	Equilibrium



Canvass connection at fan discharge for
Extraction Fan 1 torn.

Large gap between fan scroll and discharge
duct. Fan short-cycling as a result.

Canvass connection to be replaced.



Dimensions of duct work at canvass connection:
2170mm x 2030mm

2030mm is the length of the torn connection
side.



NOTES:

*Recommend replacing canvass connections for both fans as connection for Extraction Fan 2 appears to be worn and also on the verge of tearing.



APPENDIX B –

WEATHER DATA CALIBRATION REPORTS

(16 NOVEMBER 2018 – 31 MAY 2019)

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

24 May 2019

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 22/05/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

[Horsley Park 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	15.0	15.1
2m*	15.0	13.9 Cleaned then 14.9
Relative Humidity*	75	82
Wind Speed	0.9 m/s at ground	1.1 m/s at 10 metres
Wind Direction	270	270
Solar Radiation	168	150
TBRG	10mm	20 tips
Battery/Solar	14.5	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0740 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

[Clyde 22/05/19](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	24.7	22.8
2m*	24.7	25.3
Relative Humidity*	45.7	44.9 Cleaned
Wind Speed	1.2 m/s at ground (poor exposure at ground)	3.27 m/s at 10 metres
Wind Direction	100 to 180	156 fluctuating
Solar Radiation	300	303
TBRG	10mm	20 tips
Battery/Solar	13.6/20.0	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1435 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

Mob 0402 134 092

Email glenmurf@ozemail.com.au

www.hydrometric.com.au

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

14 February 2019

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 13/02/19 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

Horsley Park 13/02/19

Sensor	Actual (field)	Logger
Temperature – 10m*	20.1	19.5
2m*	20.1	19.6
Relative Humidity*	67.5	67.2
Wind Speed	1.2 m/s at ground	1.5 m/s at 10 metres
Wind Direction	170	168
Solar Radiation	90	80
TBRG	10mm	20 tips
Battery/Solar	13.6	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0630 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

Clyde 13/02/19

Sensor	Actual (field)	Logger
Temperature – 10m*	25	23.7
2m*	25	24.4
Relative Humidity*	38	35 Cleaned
Wind Speed	2 m/s at ground (poor exposure at ground)	3.8 m/s at 10 metres
Wind Direction	170	170 fluctuating
Solar Radiation	750	820
TBRG	10mm	21 tips
Battery/Solar	13.3/20.4	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0930 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

Mob 0402 134 092

Email glenmurf@ozemail.com.au

www.hydrometric.com.au

Hydrometric Consulting Services Pty Ltd

ABN 16 091 437 071

22 November 2018

Constance Georgiou
Environmental Engineer
Veolia Australia and New Zealand

Re – Quarterly service of weather stations

Dear Constance,

As per our service agreement, on the 20/11/18 HCS undertook the service, calibration and maintenance of the weather stations located at the Horsley Park and Clyde sites. Field readings were obtained by a combination of a Kestral 3500, compass, Monitor Solar Radiation field unit and HS TBRG calibration device. Details are as follows:

[Horsley Park 20/11/18](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	28	26.1
2m*	28	27
Relative Humidity*	41	40
Wind Speed	2 m/s at ground	3.2 m/s at 10 metres
Wind Direction	24	24
Solar Radiation	1000	900
TBRG	10mm	20 tips
Battery/Solar	13.9	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 1140 EST as these were testing.

Additional Items

1. Solar panel and components cleaned. All components were very dirty.
2. Installation sprayed for insects.
3. Guy wires checked.

[Clyde 20/11/18](#)

Sensor	Actual (field)	Logger
Temperature – 10m*	20	19.1
2m*	20	19.3
Relative Humidity*	65	64
Wind Speed	0.8 m/s at ground (poor exposure at ground)	1.1 m/s at 10 metres
Wind Direction	350	340
Solar Radiation	90	100
TBRG	10mm	21 tips
Battery/Solar	13.1	

* Note 1: Field reading is not inside the radiation shield.

Note 2: Ignore rainfall tips logged at approximately 0830 EST as these were testing.

Additional Items

1. All components cleaned.
2. Installation sprayed for insects.

Both sites are now polled weekly by HCS and data is downloaded and available on the HCS website.

Should you require any further information on this report please do not hesitate to contact me on 0402 134 092.

A handwritten signature in black ink, appearing to read 'Glen Murphy'.

Glen Murphy

Hydrometric Consulting Services Pty Ltd

PO Box 3332

Putney NSW 2112

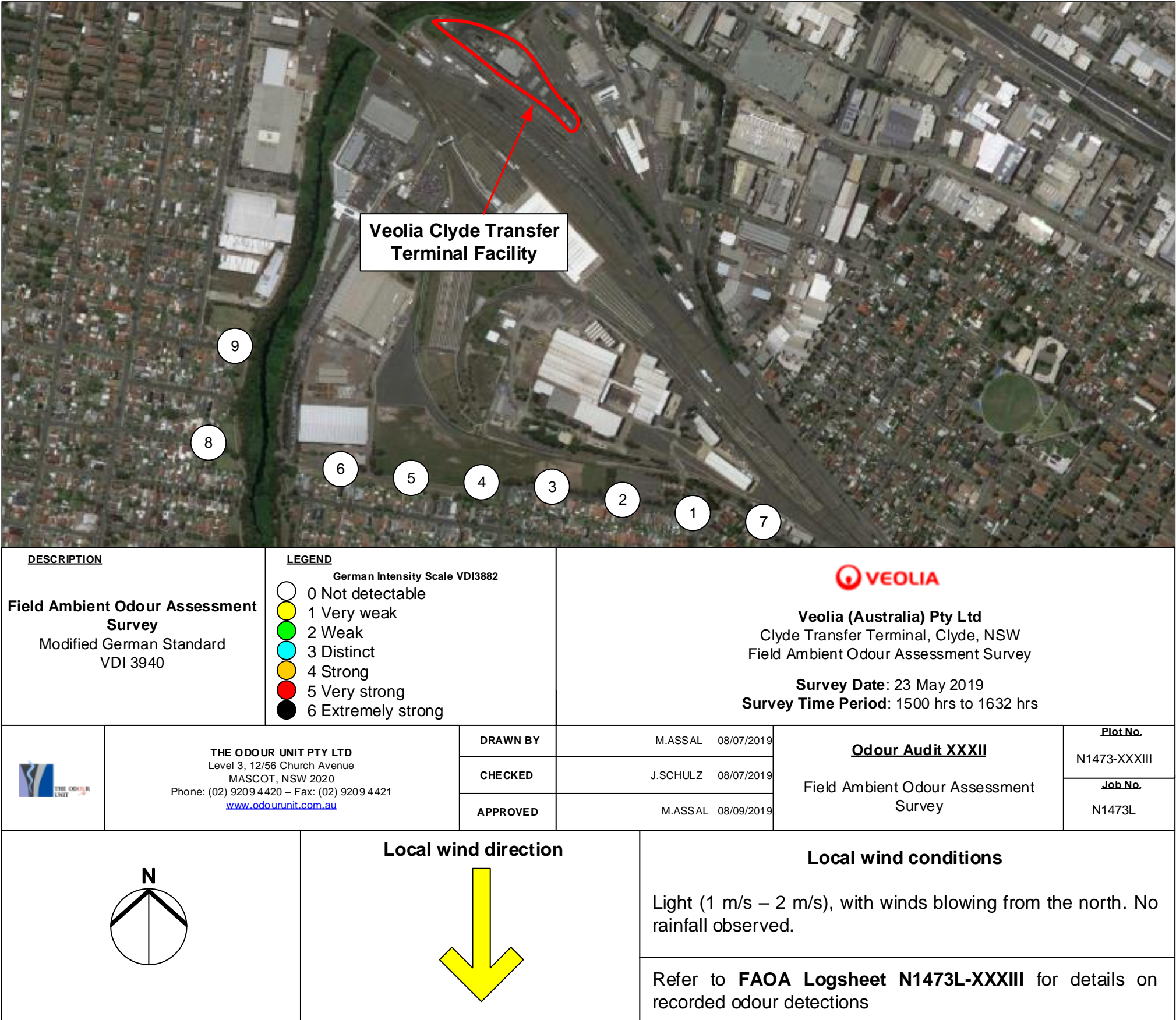
Mob 0402 134 092

Email glenmurf@ozemail.com.au

www.hydrometric.com.au



APPENDIX C –
FIELD AMBIENT ODOUR ASSESSMENT PLOT
AND FIELD LOG SHEETS
(23 MAY 2019)





THE ODOUR UNIT PTY LTD

Level 3, 12/56 Church Avenue
MASCOT NSW 2020

Phone: +61 2 9209 4420
Facsimile: +61 2 9209 4421
Email: info@odourunit.com.au
Internet: www.odourunit.com.au
ABN: 53 091 165 061

Field Ambient Odour Assessment Log Sheet

Date: 23 May 2019

Assessor: J. Schulz

Weather Conditions: Light (1 m/s to 2 m/s) wind speeds blowing from the north. No rainfall observed.

Survey Reference Plot No: N1473L-XXXIII

GRIF REF. POSITION	MEASUREMENT TIME PERIOD (hrs)	WIND DIRECTION	WIND SPEED (m/s)	ODOUR PRESENT (Y/N)	ODOUR CHARACTER	VDI 3940 INTENSITY SCALE 0-6	COMMENTS
1	1500 – 1505	N	1 – 2 m/s	N	--	0	--
2	1507 – 1512	N	1 – 2 m/s	N	--	0	--
3	1515 – 1520	N	1 – 2 m/s	N	--	0	--
4	1523 – 1528	N	1 – 2 m/s	N	--	0	--
5	1533 – 1538	N	1 – 2 m/s	N	--	0	--
6	1545 – 1550	N	1 – 2 m/s	N	--	0	--
7	1556 – 1601	N	1 – 2 m/s	N	--	0	--
8	1618 – 1623	N	1 – 2 m/s	N	--	0	--
9	1627 – 1632	N	1 – 2 m/s	N	--	0	--

Appendix D3 - Noise Monitoring Data

Annual Truck Noise Measurements

Clyde Transfer Terminal

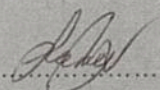
October 2019



Annual Truck Noise Measurements

Quality Information

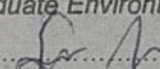
Completed by:


.....

Mary Wong

Graduate Environmental Engineer – Resource Recovery

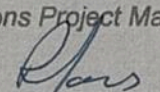
Reviewed by:


.....

Sara Maddison

Operations Project Manager – Resource Recovery

Authorised by:


.....

Rod Jones

Facility Manager – Resource Recovery

Address:

Veolia Australia & New Zealand
Corner Unwin and Shirley Streets, Rosehill, NSW, 2142

Date:

October 2019

Reference:

CTT_TRUCK_1019

Status:

Final

Revision History and Distribution List:

Rev No.	Details	Issued to	Date
0	Draft	• Veolia (internal QA)	October 2019
1	Final	• Veolia (internal QA)	October 2019

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Introduction

1. Introduction

The Clyde Transfer Terminal was issued with Conditions of Development Consent (Conditions) by the Department of Planning and Environment (DPE) formerly known as the Department of Planning, which are attached to the Development Consent. The Conditions include a requirement to assess heavy vehicle noise limits specified in Australian Design Rule 28/01 (ADR 28/01).

The requirements of Condition 112 are as follows:

The Applicant shall implement a Heavy Vehicle Noise Monitoring Management Program for the development to the satisfaction of the Director-General. This program must:

- (a) monitor heavy vehicle noise on site, in accordance with the methods outlined in the “Truck Noise Monitoring – Proposed Test and Management Plan” prepared by Heggies and dated 26 May 2008;
- (b) be undertaken quarterly for a year starting in October 2008, and annually thereafter, unless otherwise agreed by the Director-General;
- (c) measure at least 25% of the heavy vehicles visiting the site;
- (d) identify heavy vehicles exceeding the relevant noise criteria specified in the Australian Design Rule 28/01, or its successor, and ensure that the owners of these subsequently comply with the relevant noise criteria;
- (e) report the number of non-compliant heavy vehicles identified and the actions undertaken to address these non-compliances in the Annual Environmental Monitoring Report; and
- (f) be amended, should the monitoring activities not achieve the aim of the program to the satisfaction of the Director-General.

This Annual Truck Noise Measurements report (the Report) presents the results of the fourteenth round of heavy vehicle noise monitoring at the Terminal. Monitoring was completed by Veolia on the 22 October 2019 between 8:12 AM and 11:59 AM, in accordance with the Proposed Test Management Plan (PTMP) developed by Heggies. This is the tenth sampling event and report prepared by Veolia under Condition 112 since assuming the responsibility of monitoring from Heggies.

Noise Limit Criteria

2. Noise Limit Criteria

The noise limit criteria for maximum allowable noise levels for Goods Vehicles described in the PTMP (2008) are provided in Table 1 below.

Table 1: LMax Noise Limits (dBA) – ADR 28/01

Vehicle Category Code	Vehicle Type	Vehicles In Motion	Stationary Vehicles			
		Direct Injection & Spark Ignition Diesel Engines	Spark Ignition Engines Exhaust Outlet Height		Direct Injection Engines Exhaust Outlet Height	
			<1500mm	≤1500mm	<1500mm	≤1500mm
NA	Light Goods Vehicles GVM ≤3.5t on road use	78 to 80	89	85	99	95
NB	Medium Goods Vehicles GVM >3.5t ≤12t on road use	81 to 84	95	91	101	97
NC	Heavy Goods Vehicles GVM >12t on road use	81 to 87	95	91	103	99

Note: For vehicles in motion test, LMax noise limits are based on the Gross Vehicle Mass (GVM) and the Net Engine Power (NEP). The noise limits in the table are expressed as a range where the lower noise level refers to the minimum GVM and NEP in each category and the upper noise level refers to the maximum GVM and NEP in each category.

Waste collection trucks entering the Terminal are loaded vehicles with a Gross Vehicle Mass (GVM) over 12 tonnes, based on tare weights of incoming vehicles on the site weighbridge. Hence, for the purpose of conducting a vehicle noise assessment at the Terminal, Vehicle Category Code “NC”, for heavy goods vehicles with a GVM of 12 tonnes or more on the road, a Net Engine Power (NEP) of greater than 150 kilowatts (kW) has been applied. The upper limit (87dBA) of the NC range provided in Table 1 will be used to assess truck noise measurements. This is consistent with the assessment criteria applied by Heggies in previous monitoring rounds.

Measurement Methodology

3. Measurement Methodology

The monitoring location from which the truck noise was measured was consistent with previous monitoring rounds conducted by Veolia and Heggies. Measurements were taken at a distance of 7.5 metres from the centre of vehicle travel path and a height of 1.2 metres above the vehicle entrance ramp from the weighbridge to the Terminal building, which was the test site surface. Trucks accelerating at this location, which is shown in Appendix A, were measured where the vehicle was accelerating in line with the microphone of the sound level meter. For further information regarding measurement location and methodology refer to the PTMP prepared by Heggies (Heggies, 2008).

Measurements were taken with a TSI Quest SoundPro SE/DL Sound Level Meter, using an A-weighted (LA) filter network and fast response time constant as required under ADR 28/01. The (LA) filter ensured that the sound level meter was less sensitive to very high and very low frequencies which would be outside the range of noise emitted by the heavy vehicles entering and exiting the Terminal, while the fast response time constant enabled a more accurate reading of noise from each vehicle movement. Calibration of the Sound Level Meter was completed by AirMet Scientific prior to monitoring. The calibration certificate is included in Appendix B.

For each truck movement a LA maximum noise level measurement was recorded. Additional information on each truck movement was noted (where possible) to assist in identification of trucks exceeding noise criteria, including:

- Company;
- Vehicle Make and Type;
- Registration; and
- Exhaust Location.

The collected data was cross referenced with the Terminal's weighbridge records for vehicles entering the facility on 22 October 2019, a copy of which is provided in Appendix C, to identify trucks measured during this sampling period and to calculate the percentage of trucks sampled.

Noise Measurement Results

4. Noise Measurements Results

A total of 119 truck movements were recorded entering the Terminal and a measurement for each vehicle movement past the monitoring location was taken as the trucks accelerated on the entrance ramp. Four (4) of these measurements were under impeded traffic conditions causing distorted noise emissions, caused by queuing of waste trucks waiting to enter the Terminal building during busy periods or idling of engines past the testing zone. Impeded traffic conditions affected the representative quality of the noise measurements. The measured sound levels of each pass-by event were recorded on field sheets, which have been tabulated in Appendix D.

A total measurement 38.76% of all truck movements (307) was achieved during this monitoring round, which satisfies the minimum requirements of Condition 112 (25% of daily truck movements). Figure 1 presents the distribution of recorded sound level frequencies which were measured in A-weighted decibels (dBA).

Measurements of 'normal' truck acceleration ranged from 64dBA to 83dBA with the highest frequency occurring between 75dBA to 80dBA. Impaired acceleration readings due to the impeded traffic conditions ranged from 71dBA to 75dBA, with the highest frequency occurring 75dBA. Impaired acceleration readings were plotted separately from the normal accelerating vehicles on Figure 1.

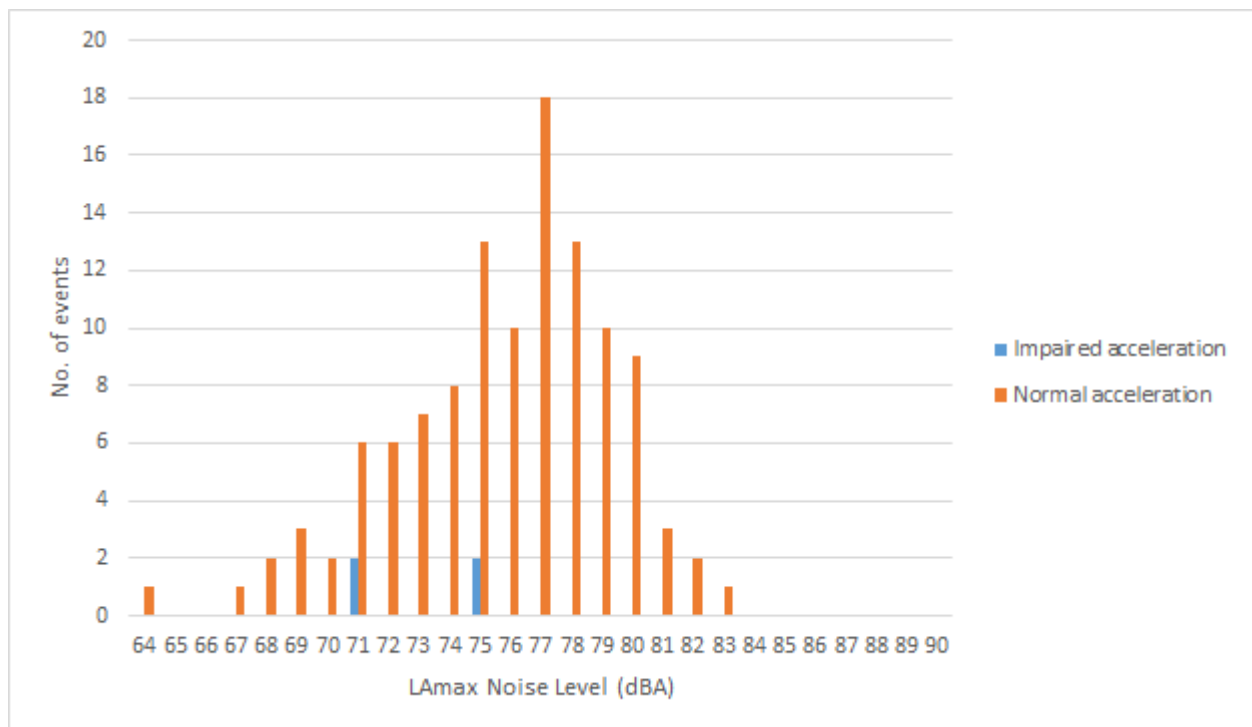


Figure 1: Noise level distribution from Truck Noise Monitoring – 22 October 2019

Discussion

5. Discussion

Comparison of the heavy vehicle noise measurement results against the limits specified in ADR 28/01 (refer to Table 1) indicates that all trucks entering the Terminal in this monitoring round were within the acceptable noise criteria for the NC category vehicles (<87dBA).

Two smaller waste vehicles (ranging from approximately 6 – 11 tonnes when loaded) were observed entering the facility during this monitoring event. For the purpose of this assessment it is considered that these vehicles would fall within the NB category with a noise limit of 84dBA. All noise emitted from vehicles assigned to this category was measured below this threshold as indicated in Table 3.

Table 3: NB class vehicle noise measurements

Time	Company	Make	Lift Type	Registration	L _A Max (dBA)	Impeded Movement
9:45	Cleanaway Pty Ltd	SCANIA		XN09FM	73.4	NO
10:37	Enfield Bulk	ISUZU		4HOOKN	73.1	NO

Noise from the Terminal's operations such as plant noise (forklift, compactor, front end loader and road sweeper) and surrounding areas (Parramatta Road, train tracks) were not significant enough to influence waste truck noise measurements at this location. The noise wall located adjacent to the exit ramp, on the North-western boundary of the Terminal, also assisted in focusing noise measurements on truck movements into the facility by limiting interference noise sources.

No noise complaints pertaining to the Terminal's operations were received between the annual truck noise monitoring rounds. This indicates that noise impacts from waste truck movements at the Terminal boundary are within the Terminal and surrounding area background noise levels.

Conclusions

6. Conclusions

Truck noise monitoring was conducted on 22 October 2019 8:12 AM and 11:59 AM. The results indicated:

- Noise from 119 truck movements was measured;
- A total of 38.76% of truck movements were measured, which satisfies the minimum 25% requirement of Condition 112;
- All measured trucks were identified against weighbridge records to verify the accuracy of field data for reporting.
- All truck noise measurements were within the noise criteria of ADR 28/01 and hence did not exceed the trigger limits.
- Noise from the Terminal's operations was not significant enough to influence the truck noise assessment.
- No noise complaints pertaining to the Terminal's operations were received since the previous truck noise monitoring round.
- Truck noise impacts at the Terminal boundary are considered to be within background levels.

References

7. References

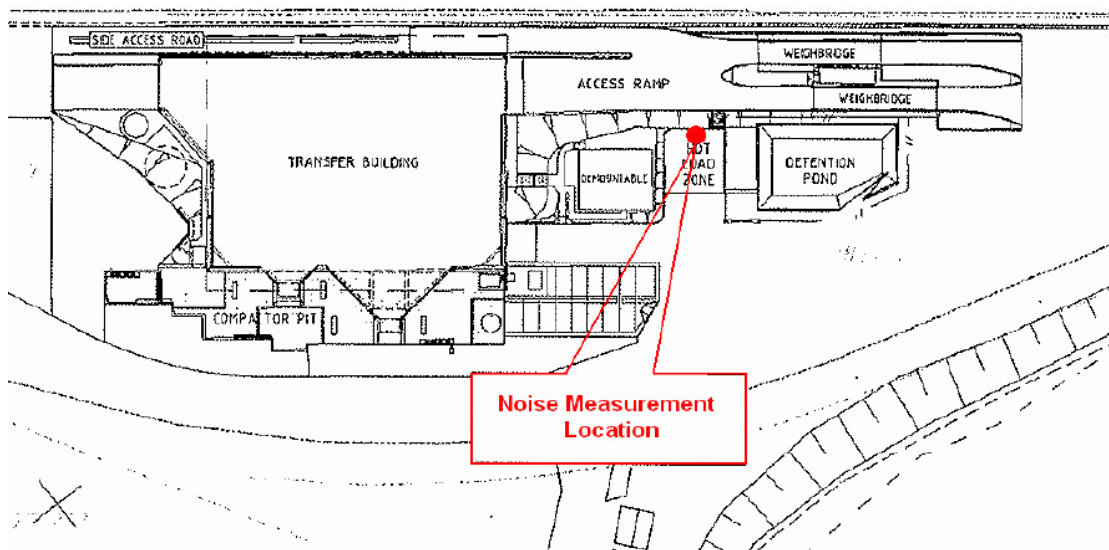
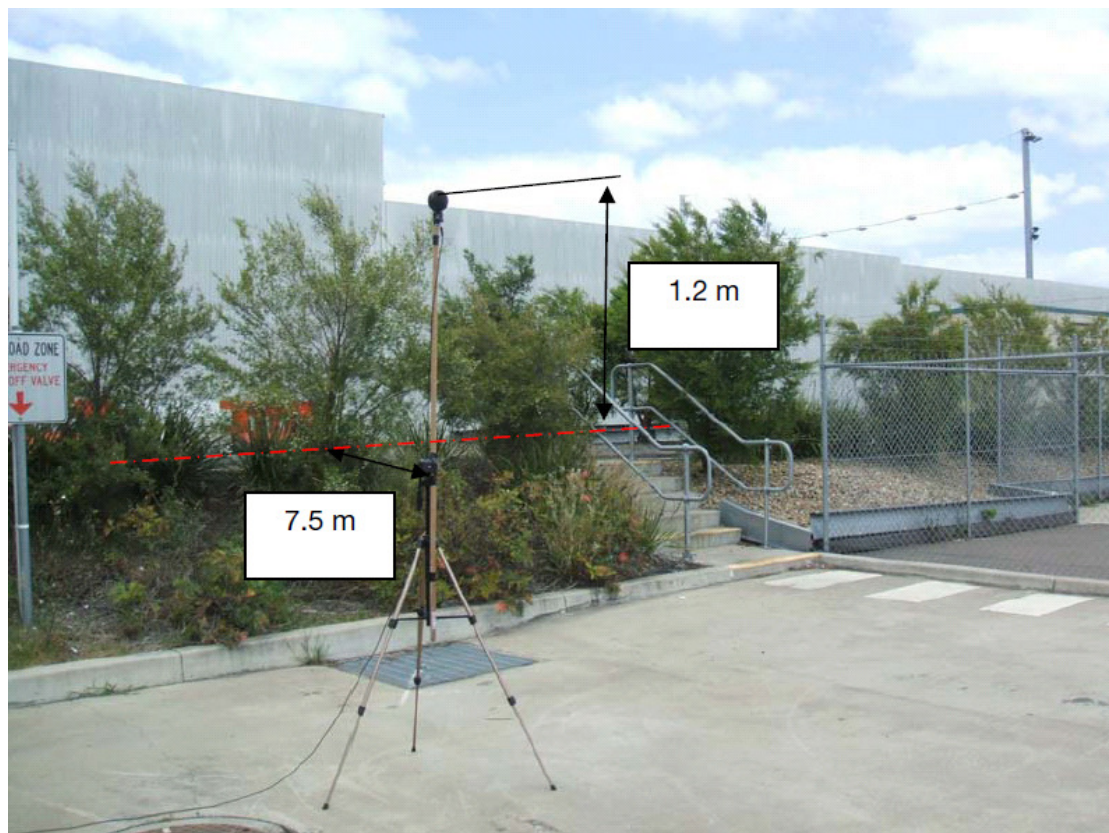
- ADR 28/01 Vehicle Standard Australian Design Rule 28/01 – External Noise of Motor Vehicles), 2006. Federal Register of Legislative Instruments F2006L01279. Australian Government.
- PTMP (2008) Clyde Waste Transfer Facility – Truck Noise Monitoring Proposed Test and Management Plan, 2008. Heggies Pty Ltd.

Appendices

Appendix A Truck Noise Monitoring Location



Truck Noise Monitoring Location



Appendices

Appendix B Sound Level Meter Calibration Certificates

Calibration Certificate

AirMet Scientific P/L

135 Sydney Street
Mackay
QLD 4740, Australia
Tel: 07 4951 7500
Fax: 07 4951 7575

This document certifies that the instrument detailed has been calibrated to the parameters

Certificate Print Date: 9-May-2019

Call ID / Order No: 236882

Calibration Date: 07-May-2019

Job No / Pack No: S2368820001

Next Calibration Due: 7-May-2020

Customer: AMS VIC Rental-ID 399981

Serial No: BLJ090020

Description: Sound Level Meter

Calibration Summary

Frequency: 1 Years Temp: 22°C As Found: Out of Tolerance Result: Pass
Humidity: 45% Certificate: S2368820001

<u>Desc</u>	<u>As Found</u>		<u>As Left (Cal Status)</u>	
	<u>Actual</u>	<u>Result</u>	<u>Actual</u>	<u>Result</u>
114dB	114.2	Pass	114.0	Pass
94dB	94.3	Fail	94.1	Pass

Standard Used			
<u>Equip ID</u>	<u>Description</u>	<u>Valid Until</u>	<u>Cert</u>
901663	GenRad 1986 Omnical Sound Level Calibrator	05/10/2019	20181005-61562

Completed By: Lance Hodda

Signed: 

Sound Level Meter

Instrument **Sound Pro**
Serial No. **BLJ090020**



Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Battery Holder	✓	
	Alkaline Battery	✓	
	Cover	✓	
	Output	✓	
Switch/Keypad	Operation	✓	
Display	Intensity	✓	
	Operation	✓	
Microphone	Type	✓	
	Socket	✓	
	Plug	✓	
PCB	Condition	✓	
Calibrator	Condition	✓	
	Battery Holder	✓	
	IVAC Output	✓	
	Frequency	✓	
A Weighting	Operation	✓	
C Weighting	Operation	✓	
Software	Version		
Datalogger	Operation	✓	
Download	Operation	✓	
Other Tests			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Frequency	dB	Volts AC	Certified	Calibration Equipment	Instrument Reading	
					Before	After
1Khz	114dB	1 Vac		QC10 QIH120145	114.4dB	114.0dB

Calibrated by: Sarah Lian

Calibration date: **21/10/2019**

Next calibration due: **18/04/2020**

Appendices

Appendix C Weighbridge Record

Facility	Date	Time In	Rego No	Customer name
Clyde	22-10-19	00:21	CD69KW	External Bulk - No Jobs Available
Clyde	22-10-19	00:37	BR21TB	External Bulk - No Jobs Available
Clyde	22-10-19	00:46	BL63SB	Enfield Bulk
Clyde	22-10-19	01:02	XN39HQ	Canterbury-Bankstown Council
Clyde	22-10-19	01:04	CK24KZ	Enfield FrontLift
Clyde	22-10-19	01:22	CE66LP	Enfield FrontLift
Clyde	22-10-19	01:23	BIN752	Bingo Recycling Pty Ltd
Clyde	22-10-19	01:29	CL98LU	Sydney Waste Pty Ltd
Clyde	22-10-19	01:30	CQ07CK	Veolia Newcastle Frontlift
Clyde	22-10-19	01:43	XN61FN	Enfield FrontLift
Clyde	22-10-19	01:45	BQ33AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	02:00	BIN722	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:02	XN83AX	External Bulk - No Jobs Available
Clyde	22-10-19	02:05	BIN734	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:07	CL91UL	Cleanaway Pty Ltd
Clyde	22-10-19	02:16	BIN635	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:17	CP08NQ	Enfield Bulk
Clyde	22-10-19	02:26	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	02:26	5URM	URM Environmental Services Pty Limi
Clyde	22-10-19	02:27	AO24JO	External Bulk - No Jobs Available
Clyde	22-10-19	02:28	CN76MI	Ku-ring-gai Council
Clyde	22-10-19	02:39	CI01DZ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	02:47	CD69KW	Enfield FrontLift
Clyde	22-10-19	02:48	BIN762	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:49	BIN724	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:56	CL85CO	Enfield Bulk
Clyde	22-10-19	02:59	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	03:13	BL63SB	Enfield Bulk
Clyde	22-10-19	03:16	CAL068	Enfield RearLift
Clyde	22-10-19	03:23	BK19BD	Enfield Bulk
Clyde	22-10-19	03:36	GOTOG8	VES/Greenacre
Clyde	22-10-19	03:36	URM406	URM Environmental Services Pty Limi
Clyde	22-10-19	03:48	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	03:54	AF38AL	Capital City Waste Services Pty Ltd
Clyde	22-10-19	04:00	BD95ZZ	Enfield RearLift
Clyde	22-10-19	04:08	CN76MI	Ku-ring-gai Council
Clyde	22-10-19	04:21	URM660	URM Environmental Services Pty Limi
Clyde	22-10-19	04:29	CH22SK	Sydney Waste Pty Ltd
Clyde	22-10-19	04:33	URM817	Cumberland Council - Auburn
Clyde	22-10-19	04:39	URM811	Cumberland Council - Auburn
Clyde	22-10-19	04:45	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	04:47	CJ65PS	Sydney Waste Pty Ltd
Clyde	22-10-19	04:48	CP44NP	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	04:53	XN42CY	Enfield RearLift
Clyde	22-10-19	05:05	XN14AS	Loumbos Exports Pty Ltd

Clyde	22-10-19	05:08	BL82AG	Sydney Waste Pty Ltd
Clyde	22-10-19	05:08	CL85CO	Enfield Bulk
Clyde	22-10-19	05:09	XN15BC	Enfield FrontLift
Clyde	22-10-19	05:11	CL78JV	Enfield RearLift
Clyde	22-10-19	05:15	GOTOG8	VES/Greenacre
Clyde	22-10-19	05:16	XN49CY	Enfield RearLift
Clyde	22-10-19	05:26	BIN814	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:27	BIN727	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:29	BIN784	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:30	CC23RU	Sydney Waste Pty Ltd
Clyde	22-10-19	05:36	ISTINK	Remondis Australia Pty Ltd
Clyde	22-10-19	05:45	CO84BV	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	05:50	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	06:07	CP03AT	Canterbury-Bankstown Council
Clyde	22-10-19	06:08	XN72BC	Canterbury-Bankstown Council
Clyde	22-10-19	06:09	CC18DN	Canterbury-Bankstown Council
Clyde	22-10-19	06:14	CP80RB	Canterbury-Bankstown Council
Clyde	22-10-19	06:18	STINKS	External Bulk - No Jobs Available
Clyde	22-10-19	06:21	XN44ML	Canterbury-Bankstown Council
Clyde	22-10-19	06:22	URM811	Cumberland Council - Auburn
Clyde	22-10-19	06:29	XN23JX	Canterbury-Bankstown Council
Clyde	22-10-19	06:31	CP02AT	Canterbury-Bankstown Council
Clyde	22-10-19	06:32	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	06:32	XQ93EY	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	06:33	CK24KZ	Enfield FrontLift
Clyde	22-10-19	06:34	CB10ZY	Canterbury-Bankstown Council
Clyde	22-10-19	06:35	XN15KU	Canterbury-Bankstown Council
Clyde	22-10-19	06:41	URM827	Cumberland Council - Auburn
Clyde	22-10-19	06:57	CH89NS	Canterbury-Bankstown Council
Clyde	22-10-19	07:04	URM406	URM Environmental Services Pty Limi
Clyde	22-10-19	07:07	URM840	Cumberland Council - Auburn
Clyde	22-10-19	07:09	URM821	Cumberland Council - Auburn
Clyde	22-10-19	07:16	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	07:16	URM814	Cumberland Council - Auburn
Clyde	22-10-19	07:22	XQ93AE	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	07:25	BIN849	Bingo Recycling Pty Ltd
Clyde	22-10-19	07:28	URM819	Cumberland Council - Auburn
Clyde	22-10-19	07:32	XN69LJ	Hornsby Council
Clyde	22-10-19	07:35	CI69WY	Enfield FrontLift
Clyde	22-10-19	07:37	YRT604	Viking Waste Services Pty Ltd
Clyde	22-10-19	07:39	CF33PN	City of Canada Bay Council - Domestic
Clyde	22-10-19	07:43	CH53RO	Canterbury-Bankstown Council
Clyde	22-10-19	07:46	URM841	Cumberland Council - Auburn
Clyde	22-10-19	07:47	XN35EB	Burwood Council
Clyde	22-10-19	07:52	XN00KT	Hornsby Council
Clyde	22-10-19	07:53	CN76MI	Ku-ring-gai Council

Clyde	22-10-19	07:54	CG47SH	Hornsby Council
Clyde	22-10-19	07:57	URM811	Cumberland Council - Auburn
Clyde	22-10-19	08:12	URM805	Cumberland Council - Auburn
Clyde	22-10-19	08:12	XN75MK	City of Ryde
Clyde	22-10-19	08:14	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	08:15	CN65YN	City of Ryde
Clyde	22-10-19	08:16	XQ81GB	Burwood Council
Clyde	22-10-19	08:23	BH97MA	City of Canada Bay Council - Domestic
Clyde	22-10-19	08:26	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	08:27	CQ49QR	Enfield RearLift
Clyde	22-10-19	08:28	CB46UN	City of Ryde
Clyde	22-10-19	08:28	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	08:31	4HOOKN	Enfield Bulk
Clyde	22-10-19	08:34	XN26KZ	External Bulk - No Jobs Available
Clyde	22-10-19	08:37	CK69TO	Ku-ring-gai Council
Clyde	22-10-19	08:38	URM808	Cumberland Council - Auburn
Clyde	22-10-19	08:39	CD28PG	City of Ryde
Clyde	22-10-19	08:44	CP70DL	Strathfield Municipal Council
Clyde	22-10-19	08:44	XN72BC	Canterbury-Bankstown Council
Clyde	22-10-19	08:47	CP19KQ	Ku-ring-gai Council
Clyde	22-10-19	08:48	CP03AT	Canterbury-Bankstown Council
Clyde	22-10-19	08:49	CF65GX	Cumberland Council - Auburn
Clyde	22-10-19	08:50	CE72ZF	City of Canada Bay Council - Domestic
Clyde	22-10-19	08:51	CO41MK	Leichhardt Municipal Council
Clyde	22-10-19	08:52	CD29PG	City of Ryde
Clyde	22-10-19	08:52	VMU428	Sydney Waste Pty Ltd
Clyde	22-10-19	08:53	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	08:56	CD26PG	City of Ryde
Clyde	22-10-19	08:58	BL54KN	Leichhardt Municipal Council
Clyde	22-10-19	09:00	URM827	Cumberland Council - Auburn
Clyde	22-10-19	09:00	CN92MI	Ku-ring-gai Council
Clyde	22-10-19	09:01	XQ82GB	Burwood Council
Clyde	22-10-19	09:01	BF40CG	Ashfield Council
Clyde	22-10-19	09:02	URM823	Cumberland Council - Auburn
Clyde	22-10-19	09:02	CK52AL	Canterbury-Bankstown Council
Clyde	22-10-19	09:03	XN44ML	Canterbury-Bankstown Council
Clyde	22-10-19	09:05	CD64NX	Leichhardt Municipal Council
Clyde	22-10-19	09:05	CK96VW	Fairfield City Council-waste
Clyde	22-10-19	09:10	URM841	Cumberland Council - Auburn
Clyde	22-10-19	09:10	CC18DN	Canterbury-Bankstown Council
Clyde	22-10-19	09:13	CE65RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:13	CM57DM	Strathfield Municipal Council
Clyde	22-10-19	09:13	XN49HD	City of Canada Bay Council - TS&O
Clyde	22-10-19	09:17	CE58RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:21	CP80RB	Canterbury-Bankstown Council
Clyde	22-10-19	09:22	BX97ZK	Sydney Waste Pty Ltd

Clyde	22-10-19	09:22	XN23JX	Canterbury-Bankstown Council
Clyde	22-10-19	09:23	XN72LJ	Hornsby Council
Clyde	22-10-19	09:27	URM989	URM Environmental Services Pty Limi
Clyde	22-10-19	09:28	XN15KU	Canterbury-Bankstown Council
Clyde	22-10-19	09:29	CD85SC	City of Ryde
Clyde	22-10-19	09:29	CK27AL	Ashfield Council
Clyde	22-10-19	09:33	CN26MD	Leichhardt Municipal Council
Clyde	22-10-19	09:34	AP71YU	Hornsby Council
Clyde	22-10-19	09:34	CP02AT	Canterbury-Bankstown Council
Clyde	22-10-19	09:35	CL43KU	Enfield RearLift
Clyde	22-10-19	09:40	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	09:40	XQ83GB	Burwood Council
Clyde	22-10-19	09:42	XN09FM	Cleanaway Pty Ltd
Clyde	22-10-19	09:45	CB10ZY	Canterbury-Bankstown Council
Clyde	22-10-19	09:45	CK10EJ	Enfield RearLift
Clyde	22-10-19	09:48	CF33PN	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:53	CH53RO	Canterbury-Bankstown Council
Clyde	22-10-19	09:54	CM75VP	URM Environmental Services Pty Limi
Clyde	22-10-19	09:55	XN62FN	Enfield FrontLift
Clyde	22-10-19	09:59	CQ59LV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	10:02	CK68TO	Ku-ring-gai Council
Clyde	22-10-19	10:04	CK41CQ	Cumberland Council - Auburn
Clyde	22-10-19	10:06	CQ64LO	Fairfield City Council-waste
Clyde	22-10-19	10:07	CF71JM	Sydney Waste Pty Ltd
Clyde	22-10-19	10:08	CL42KU	Enfield RearLift
Clyde	22-10-19	10:13	XN60GO	Enfield FrontLift
Clyde	22-10-19	10:15	CM72SQ	Ku-ring-gai Council
Clyde	22-10-19	10:15	CK72UK	Ku-ring-gai Council
Clyde	22-10-19	10:17	5URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:17	XN90LJ	Hornsby Council
Clyde	22-10-19	10:18	URM049	URM Environmental Services Pty Limi
Clyde	22-10-19	10:18	1HA3AK	Hornsby Council
Clyde	22-10-19	10:22	URM840	Cumberland Council - Auburn
Clyde	22-10-19	10:23	CC23RU	Sydney Waste Pty Ltd
Clyde	22-10-19	10:24	XN07KT	Hornsby Council
Clyde	22-10-19	10:24	XN70LJ	Hornsby Council
Clyde	22-10-19	10:26	XN25GD	Sydney Waste Pty Ltd
Clyde	22-10-19	10:29	CH89NS	Canterbury-Bankstown Council
Clyde	22-10-19	10:30	XN16KT	Hornsby Council
Clyde	22-10-19	10:30	CP61YV	Strathfield Municipal Council
Clyde	22-10-19	10:31	CJ32RX	Fairfield City Council-waste
Clyde	22-10-19	10:36	4HOOKN	Enfield Bulk
Clyde	22-10-19	10:37	CF47UC	Enfield RearLift
Clyde	22-10-19	10:43	CN99LG	Ku-ring-gai Council
Clyde	22-10-19	10:43	CN98LG	Ku-ring-gai Council
Clyde	22-10-19	10:44	CM73SQ	Ku-ring-gai Council

Clyde	22-10-19	10:47	XN32FK	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	10:49	CD04PE	City of Ryde
Clyde	22-10-19	10:50	3URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:50	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	10:52	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	10:55	BU62QK	Cumberland Council - Auburn
Clyde	22-10-19	10:57	URM819	Cumberland Council - Auburn
Clyde	22-10-19	10:58	4URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:59	CG47SH	Hornsby Council
Clyde	22-10-19	11:02	CK24KZ	Enfield FrontLift
Clyde	22-10-19	11:04	URM327	Hunter's Hill Council
Clyde	22-10-19	11:07	CBB804	Sydney Waste Pty Ltd
Clyde	22-10-19	11:08	BV96PW	Fairfield City Council-waste
Clyde	22-10-19	11:11	XN29EW	Loumbos Exports Pty Ltd
Clyde	22-10-19	11:11	URM808	Cumberland Council - Auburn
Clyde	22-10-19	11:14	URM906	URM Environmental Services Pty Limi
Clyde	22-10-19	11:25	CI01DZ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	11:27	CK34SQ	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	11:30	URM427	URM Environmental Services Pty Limi
Clyde	22-10-19	11:30	CM16SR	Strathfield Municipal Council
Clyde	22-10-19	11:37	CL98LU	Sydney Waste Pty Ltd
Clyde	22-10-19	11:37	CE28GN	Cumberland Council - Auburn
Clyde	22-10-19	11:39	BI82JD	Hunter's Hill Council
Clyde	22-10-19	11:39	AP70YU	Hornsby Council
Clyde	22-10-19	11:44	URM393	Hunter's Hill Council
Clyde	22-10-19	11:45	URM814	Cumberland Council - Auburn
Clyde	22-10-19	11:46	XN13KR	Sydney Waste Pty Ltd
Clyde	22-10-19	11:53	BIN766	Bingo Recycling Pty Ltd
Clyde	22-10-19	11:53	XN75CW	Wanless Waste Management Pty Ltd
Clyde	22-10-19	11:59	XN35EB	Burwood Council
Clyde	22-10-19	12:02	CD28PG	City of Ryde
Clyde	22-10-19	12:02	CD26PG	City of Ryde
Clyde	22-10-19	12:03	CL02TB	Sydney Waste Pty Ltd
Clyde	22-10-19	12:03	CD29PG	City of Ryde
Clyde	22-10-19	12:07	ISTINK	Remondis Australia Pty Ltd
Clyde	22-10-19	12:09	XN19IN	Sydney Waste Pty Ltd
Clyde	22-10-19	12:10	CN05CG	Enfield FrontLift
Clyde	22-10-19	12:11	BQ26AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	12:15	BIN762	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:17	BIN813	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:19	CN41XN	Sydney Waste Pty Ltd
Clyde	22-10-19	12:20	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	12:23	XN34EB	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	12:24	BH97MA	City of Canada Bay Council - Domest
Clyde	22-10-19	12:25	CL78JV	Enfield RearLift
Clyde	22-10-19	12:26	BIN850	Bingo Recycling Pty Ltd

Clyde	22-10-19	12:31	URM814	Cumberland Council - Auburn
Clyde	22-10-19	12:36	CD85SC	City of Ryde
Clyde	22-10-19	12:38	BIN699	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:39	4HOOKN	Enfield Bulk
Clyde	22-10-19	12:44	URM474	URM Environmental Services Pty Limi
Clyde	22-10-19	12:52	CP70DL	Strathfield Municipal Council
Clyde	22-10-19	12:53	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	13:01	CM57DM	Strathfield Municipal Council
Clyde	22-10-19	13:02	CM16SR	Strathfield Municipal Council
Clyde	22-10-19	13:07	ZJH325	Hornsby Council
Clyde	22-10-19	13:13	CK72UK	Ku-ring-gai Council
Clyde	22-10-19	13:14	BIN849	Bingo Recycling Pty Ltd
Clyde	22-10-19	13:14	XN35EB	Burwood Council
Clyde	22-10-19	13:15	XN00KT	Hornsby Council
Clyde	22-10-19	13:18	CK68TO	Ku-ring-gai Council
Clyde	22-10-19	13:18	BJB386	Enfield Bulk
Clyde	22-10-19	13:21	CE72ZF	City of Canada Bay Council - Domestic
Clyde	22-10-19	13:23	BA98FZ	Enfield FrontLift
Clyde	22-10-19	13:24	URM823	Cumberland Council - Auburn
Clyde	22-10-19	13:29	CE58RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	13:31	CD04PE	City of Ryde
Clyde	22-10-19	13:37	URM827	Cumberland Council - Auburn
Clyde	22-10-19	13:41	CM72SQ	Ku-ring-gai Council
Clyde	22-10-19	13:49	CN99LG	Ku-ring-gai Council
Clyde	22-10-19	13:51	CK29AL	Ashfield Council
Clyde	22-10-19	13:51	CE46AG	Enfield FrontLift
Clyde	22-10-19	13:54	URM041	Hunter's Hill Council
Clyde	22-10-19	13:55	XN96LU	Enfield Bulk
Clyde	22-10-19	14:00	GTG004	VES/Greenacre
Clyde	22-10-19	14:02	CE65RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	14:03	CN98LG	Ku-ring-gai Council
Clyde	22-10-19	14:04	CG47SH	Hornsby Council
Clyde	22-10-19	14:14	CE66LP	Enfield FrontLift
Clyde	22-10-19	14:16	CK27AL	Ashfield Council
Clyde	22-10-19	14:29	XN69LA	Wanless Waste Management Pty Ltd
Clyde	22-10-19	14:39	URM820	Cumberland Council - Auburn
Clyde	22-10-19	14:41	URM819	Cumberland Council - Auburn
Clyde	22-10-19	14:52	AP70YU	Hornsby Council
Clyde	22-10-19	14:52	BT80CL	Cumberland Council - Auburn
Clyde	22-10-19	14:54	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	14:55	BP02LI	Canterbury-Bankstown Council
Clyde	22-10-19	15:10	XN72LJ	Hornsby Council
Clyde	22-10-19	15:12	BX77NO	Enfield FrontLift
Clyde	22-10-19	15:21	XN90LJ	Hornsby Council
Clyde	22-10-19	15:24	URM823	Cumberland Council - Auburn
Clyde	22-10-19	15:26	XN70LJ	Hornsby Council

Clyde	22-10-19	15:29	BV22EK	Enfield Bulk
Clyde	22-10-19	15:35	XN16KT	Hornsby Council
Clyde	22-10-19	15:45	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	15:53	BIN671	Bingo Recycling Pty Ltd
Clyde	22-10-19	16:07	1HA3AK	Hornsby Council
Clyde	22-10-19	17:36	BA98FZ	External Bulk - No Jobs Available
Clyde	22-10-19	17:57	XN96LU	Enfield Bulk
Clyde	22-10-19	18:46	BV22EK	Enfield Bulk
Clyde	22-10-19	19:15	BL63SB	Enfield Bulk
Clyde	22-10-19	19:16	BIN725	Bingo Recycling Pty Ltd
Clyde	22-10-19	19:16	XN96LU	Enfield Bulk
Clyde	22-10-19	19:42	CD64NX	Leichhardt Municipal Council
Clyde	22-10-19	19:46	CO41MK	Leichhardt Municipal Council
Clyde	22-10-19	19:49	XN83AX	External Bulk - No Jobs Available
Clyde	22-10-19	19:51	BIN796	Bingo Recycling Pty Ltd
Clyde	22-10-19	20:15	CD69KW	Enfield FrontLift
Clyde	22-10-19	20:28	BL63SB	Enfield Bulk
Clyde	22-10-19	20:37	CN26MD	Leichhardt Municipal Council
Clyde	22-10-19	20:57	CK24KZ	Enfield FrontLift
Clyde	22-10-19	21:45	XN96LU	Enfield Bulk
Clyde	22-10-19	21:49	XN42CY	Enfield RearLift
Clyde	22-10-19	21:57	BL63SB	Enfield Bulk
Clyde	22-10-19	22:02	BIN727	Bingo Recycling Pty Ltd
Clyde	22-10-19	22:09	BV22EK	Enfield Bulk
Clyde	22-10-19	22:16	BQ33AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	22:17	XN49CY	Enfield RearLift
Clyde	22-10-19	22:27	BY56EK	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	22:40	CE66LP	Enfield FrontLift
Clyde	22-10-19	22:46	XN51GJ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	23:21	XN96LU	Enfield Bulk
Clyde	22-10-19	23:39	AZ19NY	Zero Waste Management Pty Ltd
Clyde	22-10-19	23:48	BV22EK	Enfield Bulk

Appendices

Appendix D Truck Noise Measurement Field Sheets

Noise Level Measurement Results								
Time	Company	Make	Lift type	Registration	Exhaust location	LA Max (dBA)	Movement (Y/N)	Comments
8:12	Cumberland council	IVECO	Side	URM 805	Front Right	78.9	No	
8:14	City of Ryde	IVECO	Side	XN75MK		78.7	No	
8:15	Ku-ring-gai Council	FUSO	Rear	CN73MI		68.9	No	
8:16	City of Ryde	IVECO	Side	CN65YN	Front Right	78.9	No	
8:23	Burwood Council		Side	XQ81GB	Front Right	71.1	No	
8:26	City of Canada Bay Council - Domestic	IVECO	Side	BH97MA	Front Right	80	No	
8:27	Canterbury - Bankstown Council	DENNIS	Rear	BP01LI	Front Right	75	No	
8:28	Enfield RearLift	ISUZU	Rear	CQ49QR	Side	68.2	No	
8:28	City of Ryde	ISUZU	Rear	CB46UN		75.6	No	
8:31	Strathfield Municipal Council	HINO	Rear	CL51CZ	Side	74.6	No	
8:34	Enfield Bulk	ISUZU		4HOOKN		68.3	No	
8:37	External Bulk	ISUZU	Rear	XN26KZ	Side	76.9	No	
8:38	Ku-ring-gai Council	IVECO	Side	CK69TO	Front Right	76.7	No	
8:39	Cumberland council - Auburn	IVECO	Side	URM808	Front Right	81.4	No	
8:44	City of Ryde	IVECO	Side	CD28PG	Front Right	75.3	No	
8:44	Strathfield Municipal Council	HINO	Side	CP70DL		82.9	No	
8:47	Canterbury - Bankstown Council	IVECO	Rear	XN72BC		79.2	No	
8:48	Ku-ring-gai Council	ISUZU	Rear	CP19KQ		77.4	No	
8:49	Canterbury - Bankstown Council	IVECO	Rear	CP03AT	Front Right	79.2	No	
8:50	Cumberland council - Auburn	ISUZU	Rear	CF65GX		71.7	No	
8:51	City of Canada Bay Council - Domestic	DENNIS	Rear	CE72ZF	Side	75.1	No	
8:52	Leichhardt Municipal Council	HINO	Rear	CO41MK	Side	71.8	No	
8:52	City of Ryde	IVECO	Side	CD29PG	Front Right	76.9	No	
8:53	Sydney Waste Pty Ltd		Rear	VMU428	Front Right	77	No	
8:56	JJ Richards & Sons Pty Ltd	DENNIS	Rear	CM18AV		78.1	No	
8:58	City of Ryde	IVECO	Side	CD26PG	Front Right	78.7	No	
9:00	Leichhardt Municipal Council	HINO	Rear	BL54KN		75	No	
9:00	Cumberland council - Auburn	IVECO	Rear	URM827	Front Right	78	No	
9:01	Ku-ring-gai Council	FUSO	Rear	CN92MI		74	No	
9:01	Burwood Council	VOLVO	Side	XQ82GB		75.1	No	

9:02	Ashfield Council			BF40CG		75	No	
9:02	Cumberland Council - Auburn	IVECO	Side	URM823	Front Right	72.3	No	
9:03	Canterbury-Bankstown Council	IVECO	Rear	CK52AL	Front Center	74.8	Yes	
9:05	Canterbury-Bankstown Council	IVECO	Rear	XN44ML	Front Center	75.1	Yes	
9:05	Leichhardt Municipal Council	HINO	Rear	CD64NX		70.5	Yes	
9:10	Fairfield City Council-waste	FUSO	Rear	CK96VW	Front Right	64.1	No	
9:10	Cumberland Council - Auburn	IVECO	Side	URM841	Front Right	75.5	No	
9:13	Canterbury-Bankstown Council	IVECO	Side	CC18DN	Front Right	81.2	No	
9:13	City of Canada Bay Council - Domestic	IVECO	Rear	CE65RY	Front Right	80.2	No	
9:13	Strathfield Municipal Council			CM57DM		73.3	No	
9:17	City of Canada Bay Council - TS&O	HINO	Rear	XN49HD		73.6	No	
9:21	City of Canada Bay Council - Domestic	IVECO	Side	CE58RY	Front Right	73.5	No	
9:22	Canterbury-Bankstown Council	IVECO	Side	CP80RB	Front Right	79.8	No	
9:22	Sydney Waste Pty Ltd	IVECO	Rear	BX97ZK		77.1	No	
9:23	Canterbury-Bankstown Council		Rear	XN23JX	Front Right	78.3	No	
9:27	Hornsby Council			XN72LJ	Front Right	74.8	No	
9:28	URM Environmental Services Pty Limi	ISUZU	Rear	URM989	Side	71.9	No	
9:29	Canterbury-Bankstown Council	IVECO		XN15KU	Front Right	80.1	No	
9:29	City of Ryde	DENNIS	Rear	CD85SC	Side	73.8	No	
9:33	Ashfield Council	IVECO	Side	CK27AL		74.9	No	
9:34	Leichhardt Municipal Council	HINO	Rear	CN26MD		79.6	No	
9:34	Hornsby Council	IVECO	Rear	AP71YU	Front Right	74.9	No	
9:35	Canterbury-Bankstown Council	IVECO	Side	CP02AT	Front Right	80.2	No	
9:40	Enfield RearLift	ISUZU	Rear	CL43KU		73.9	No	
9:40	Ku-ring-gai Council	FUSO	Rear	CN79MI		70	No	
9:42	Burwood Council	VOLVO	Side	XQ83GB	Side	75.9	No	
9:45	Cleanaway Pty Ltd	SCANIA		XN09FM		73.4	No	Small Truck with skip bin
9:45	Canterbury-Bankstown Council	IVECO	Side	CB10ZY	Front Right	81.5	No	
9:48	Enfield RearLift	ISUZU	Rear	CK10EJ		72.9	No	
9:53	City of Canada Bay Council - Domestic	DENNIS	Rear	CF33PN		80.4	No	
9:54	Canterbury-Bankstown Council	IVECO	Side	CH53RO	Front Right	73.5	No	
9:55	URM Environmental Services Pty Limi	ISUZU	Rear	CM75VP		70.2	No	

9:59	Enfield FrontLift	VOLVO	Front	XN62FN		75	No	
10:02	JJ Richards & Sons Pty Ltd	DENNIS	Front	CQ59LV		77.9	No	
10:04	Ku-ring-gai Council	IVECO	Side	CK68TO	Front Right	78.4	No	
10:06	Cumberland Council - Auburn	ISUZU	Rear	CK41CQ	Center	70.5	No	
10:07	Fairfield City Council-waste	FUSO	Rear	CQ64LO	Center	68.9	No	
10:08	Sydney Waste Pty Ltd	ACCO	Rear	CF71JM	Front Right	79.7	No	
10:13	Enfield RearLift	ISUZU	Rear	CL42KU		76.9	No	
10:15	Enfield FrontLift	VOLVO	Front	XN60GO		75.7	No	
10:15	Ku-ring-gai Council	IVECO	Side	CM72SQ	Front Right	77	No	
10:17	Ku-ring-gai Council	IVECO	Side	CK72UK		67.4	No	
10:17	URM Environmental Services Pty Limi	VOLVO	Front	5URM		76.3	No	
10:18	Hornsby Council	IVECO	Side	XN90LJ	Front Right	77	No	
10:18	URM Environmental Services Pty Limi	HINO	Rear	URM049		70.6	Yes	
10:22	Hornsby Council	IVECO	Side	1HA3AK	Center	75.2	No	
10:23	Cumberland Council - Auburn	IVECO	Side	URM840	Front Center	78.8	No	
10:24	Sydney Waste Pty Ltd	ACCO	Rear	CC23RU	Front Right	76.7	No	
10:24	Hornsby Council	IVECO	Side	XN07KT	Front Right	77.8	No	
10:26	Hornsby Council	IVECO	Side	XN70LJ		79.6	No	
10:29	Sydney Waste Pty Ltd	ISUZU	Front	XN25GD		75.2	No	
10:30	Canterbury-Bankstown Council	IVECO	Side	CH89NS	Front Right	81.7	No	
10:30	Hornsby Council	IVECO	Side	XN16KT	Front Right	78.6	No	
10:31	Strathfield Municipal Council		Rear	CP61YV		70.6	No	
10:36	Fairfield City Council-waste	ISUZU	Side	CJ32RX		71.2	No	
10:37	Enfield Bulk	ISUZU		4HOOKN		73.1	No	Small Truck
10:43	Enfield RearLift	ISUZU	Rear	CF47UC		73.2	No	
10:43	Ku-ring-gai Council	IVECO	Side	CN99LG	Front Right	78.5	No	
10:44	Ku-ring-gai Council	IVECO	Side	CN98LG	Front Right	77.6	No	
10:47	Ku-ring-gai Council	IVECO	Side	CM73SQ	Front Right	78.1	No	
10:49	JJ Richards & Sons Pty Ltd	DENNIS	Rear	XN32FK	Front Right	71.1	No	
10:50	City of Ryde	IVECO	Side	CD04PE	Front Right	76.5	No	
10:50	URM Environmental Services Pty Limi	IVECO	Front	3URM		78.2	No	
10:52	URM Environmental Services Pty Limi	VOLVO		CM46GT	Front Right	76.3	No	

10:55	Strathfield Municipal Council	HINO	Rear	CL51CZ		77.3	No	
10:57	Cumberland Council - Auburn	HINO	Rear	BU62QK		71.7	No	
10:58	Cumberland Council - Auburn	IVECO	Side	URM819	Front Right	80.7	No	
10:59	URM Environmental Services Pty Limi	IVECO	Front	4URM		75.6	No	
11:02	Hornsby Council		Rear	CG47SH		69.3	No	
11:04	Enfield FrontLift	IVECO	Front	CK24KZ		74.4	No	
11:07	Hunter's Hill Council	ACCO	Side	URM327	Front Right	73.1	No	
11:08	Sydney Waste Pty Ltd		Rear	CBB804	Front Right	77.8	No	
11:11	Fairfield City Council-waste	IVECO	Rear	BV96PW	Front Right	76	No	
11:11	Loumbos Exports Pty Ltd	SCANIA	Front	XN29EW		77.1	No	
11:14	Cumberland Council - Auburn			URM808		78.3	No	
11:25	Doyle Bros t/a Faralga Pty Ltd	IVECO	Front	CI01DZ		78.4	No	
11:27	JJ Richards & Sons Pty Ltd	DENNIS	Rear	CK34SQ		77.2	No	
11:30	URM Environmental Services Pty Limi	SCANIA	Rear	URM427		76.7	No	
11:30	Strathfield Municipal Council	IVECO	Side	CM16SR		73.8	No	
11:37	Sydney Waste Pty Ltd	IVECO	Rear	CL98LU	Front Right	76.6	No	
11:37	Cumberland Council - Auburn	IVECO	Rear	CE28GN	Side	72.2	No	
11:39	Hunter's Hill Council	ISUZU		BI82JD	Rear	75.7	No	
11:39	Hornsby Council		Rear	AP70YU	Front Right	77.1	No	
11:44	Hunter's Hill Council	IVECO	Side	URM393	Front Right	72.7	No	
11:45	Cumberland Council - Auburn	IVECO	Side	URM814	Front Right	78.7	No	
11:46	Sydney Waste Pty Ltd	IVECO	Rear	XN13KR	Front Right	77.1	No	
11:53	Bingo Recycling Pty Ltd		Rear	BIN766		77.9	No	
11:53	Wanless Waste Management Pty Ltd		Rear	XN75CW	Side	71.4	No	
11:59	Burwood Council		Rear	XN35EB	Front Right	75.7	No	

Measured Truck Movements

119

Total Truck Movements (22/10/19)

307

Percent of Truck Movements Measured (22/10/19)

38.76%

Total Impeded Truck Movements

4

Unimpeded Measurements

115

Total Small Truck Measurements

2

Appendix D4 - Pest & Vermin Reports

SERVICE REPORT

24/01/2019

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal and external areas for cockroaches, ants, spiders and rodents.

Inspected and treated internal areas, kitchen, staff rooms and toilets by using Goliath cockroach gel and Cislin 25 spray.

Inspected and treated external areas, shed area and pit area by using Roban rodent bait and Cislin 25 spray.

Spider and ant activity found in external area and treated by using Cislin 25 spray.

ONSITE SERVICE REPORT

Date: 24/1/19

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

An invoice will be sent for payment within 7 days of this service.

Property Detail:

Clyde Transfer Terminal
322 Pennant Hills rd.
Anytown

Service Provided:

To all areas

SERVICE REPORT:

Inspected and treated shed area,
pit & external areas by using Cishin 25
spray & Roban rodent bait. Treated kitchen
staff room & toilets by using Gelibath
Codroach gel & Cishin 25 spray.
spider & ants activity found at
external areas, treated by using
Cishin 25 spray.

[Signature]
Customer Signature

[Signature]
Serviceman Signature

EXPERT JUDGEMENT PEST MANAGEMENT PTY LTD

PESTICIDES APPLICATION RECORD SHEET

Owner's name: Clyde Transfer Terminal

Owner's address: 322 Garnaatha rd.

Owner's contact details: Auburn

Date, start and finish times	Operator details.	Type of equipment used.	Name of pesticides used.	Amount of concentrated product used.	Total quantity applied.	Estimated wind speed.
24/1/19	Fady	sprayer	Cybin 25	50/5.2	3.2	0
12:15 p-			Golvath Cockroach gel		10g	0
1:50 p-			Roban roach bait		500g	0
						Speed:

SERVICE REPORT

26/10/2018

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal and external areas for cockroaches, ants, spiders and rodents.

Inspected and treated internal areas, kitchen, staff rooms and toilets by using Goliath cockroach gel.

Inspected and treated external area, shed area and pit area by using Roban rodent bait.

Light rodent activity found in shed area and treated by using Roban rodent bait.

Light spider activity found in external area and treated by using Cislin 25 spray.

SERVICE REPORT

Date: 26/10/18

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

An invoice will be sent for payment within 7 days of this service.

Property Detail:

Clyde Transfer Terminal
322 Pannacatta rd.
Auburn

Service Provided:

Quarterly pest control
Service

SERVICE REPORT:

Inspected and treated all areas
as required

light rodent activity in shed area
light spider activity at external areas

W. Green
Customer Signature

[Signature]
Serviceman Signature

SERVICE REPORT

20/07/2018

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal and external areas for cockroaches, ants, spiders and rodents.

Inspected and treated internal areas, kitchen, staff rooms and toilets by using Goliath cockroach gel.

Inspected and treated external area, shed area and pit area by using Roban rodent bait.

Light Rodent activity found in shed area and treated by using Rodent rodent bait.

SERVICE REPORT

Date: 20/7/18

Service Performed by:

EXPERT JUDGEMENT PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

An invoice will be sent for payment within 7 days of this service.

Property Detail:

Slide Transfer Terminal
322 Fanna-atta rd.
Auburn

Service Provided:

To all areas

SERVICE REPORT:

Inspected and treated staff rooms
kitchen & toilets by using Gelbath
Codrinach gel. Treated shed area, Pitt
area & internal areas by using Roban
rodent bait.
Light Rodent activity found at shed
area, treated by using Roban
rodent bait

f S Benkh

Customer Signature

[Signature]

Serviceman Signature

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PESTICIDES APPLICATION RECORD SHEET

Owner's name:

Slyde Transfer Terminal

Owner's address:

322 Ferrea - Alta rd.

Owner's contact details:

Audrey

Date, start and finish times	Operator details.	Type of equipment used.	Name of pesticides used.	Amount of concentrated product used.	Total quantity applied.	Estimated wind speed.
20/7/18	Fady		Roban rodent bait		400g	0
1:40 p -			Goliatu cockroach gel		5g	0
3:00 p -						
						Speed:

SERVICE REPORT

Date: 30/4/18

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

Fax: (02) 9715 5370

ABN 63 081 548 861

An invoice will be sent for payment within 7 days of this service.

Property Detail:

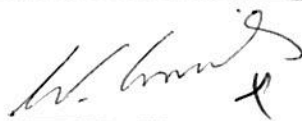
Clyde transfer terminal
322 Panna-atta rd.
Auburn

Service Provided:

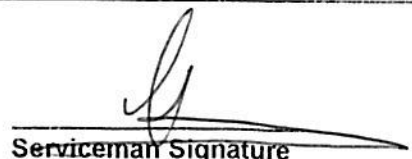
To office, staff room
external areas

SERVICE REPORT:

Treated internal areas, kitchen &
laundry by using Gelibath Cockroach gel
Treated shed & pit area by using
Roban rodent bait. Treated external
areas by using Gelibath 25 spray &
Roban rodent bait.



Customer Signature



Serviceman Signature

SERVICE REPORT

12/07/2019

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal and external areas for cockroaches, ants, spiders and rodents.

Inspected and treated all internal areas of the shed, compactor area and external area by using Roban rodent bait and Cislin 25 spray.

Inspected and treated staff room and kitchen areas by using Goliath cockroach gel.

Light rodent activity found in shed area and treated by using Roban rodent bait.

SERVICE REPORT

17/10/2019

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal and external areas for cockroaches, ants, spiders and rodents.

Inspected and treated all internal areas of the shed, compactor area and external area by using Roban rodent bait and Cislin 25 spray.

Inspected and treated staff room and kitchen areas by using Goliath cockroach gel and Coopex dust spot spray.

Light rodent activity found in shed area and treated by using Roban rodent bait.

SERVICE REPORT

23/01/2020

Service Performed by:

EXPERT JUDGEMENT

PEST MANAGEMENT PTY LTD

PO Box A25, ENFIELD SOUTH NSW 2133

enquiries@expertjudgementpest.com.au

Telephone: (02) 9715 5270

ABN 63 081 548 861

Property Detail:

Veolia Environmental Services (Australia) Pty Ltd
Clyde Transfer Terminal
322 Parramatta Road
AUBURN NSW 2144

Service Details:

A quarterly routine pest control service to internal
and external areas for cockroaches, ants, spiders
and rodents.

Inspected and treated all internal areas of the shed,
pit area and external area by using Roban rodent
bait and Cislin 25 spray.

Inspected and treated staff rooms, toilets and kitchen
areas by using Goliath cockroach gel and Coopex dust
spot spray.

Light rodent activity found in shed area and treated
by using Roban rodent bait.