Annual Environmental Management Report

Camellia Materials Recycling Facility

37 Grand Avenue Camellia

September 2018

QUALITY INFORMATION

Prepared by:

.....
Sara Maddison
Operations Project Manager
BE(Civ)(Hons), BE(Env)

Reviewed by:

.....
Amandeep Brar
Environmental Planner
BSc, MSc, Post Grad DipPM

Authorised by:

.....
Promit Biswas
Project Manager
BE(Civ)(Hons), Post Grad DipPM

Address:

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

Status: **FINAL**

Document Revision Register

Rev	Revision Details	Issued to	Date
0	Draft for internal review	• Veolia NSW Resource Recovery Team • Veolia NSW SHEQ Team	2 Sep 2018
1	Final	• NSW Department of Planning and Environment • Veolia NSW Resource Recovery Team (Internal Copy) • Veolia NSW SHEQ Team (Internal Copy)	6 Sep 2018

Contents

DEFINITIONS/ABBREVIATIONS

AEMR	Annual Environmental Management Report
ALS	Australian Laboratory Services Pty Ltd
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
DA	Development Application
DP	Douglas Partners Pty Ltd
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment (Act and Regulations)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence 4806
RAP	Remediation Action Plan
The Consent	Development Consent SSD 4964
The Site	37 Grand Ave Camellia
TMP	Traffic Management Plan
VENM	Virgin Excavated Natural Material
Veolia	Veolia Australia and New Zealand
WMP	Water Management Plan

EXECUTIVE SUMMARY

This Annual Environmental Management Report (AEMR) 2017-2018 is the first report prepared to detail the environmental performance construction phase of the Camellia Materials Recycling Facility (MRF) (the Site). This report covers Stage 1 - Preloading activities on site, which commenced end of July 2017. This AEMR covers the period of 7th July 2017 to 6th July 2018 (2017-2018 reporting period).

The Department of Planning and the Environment granted the Site a Development Consent for the construction and operations of the proposed MRF (SSD 4964) on 6 July 2016. The Development Consent is comprised of 3 Parts, which dictate the construction and operational requirements of the Site. As a result a Construction and Environmental Management Plan (CEMP) was prepared which was approved by the Department of Planning and Environment (DPE) on 23 May 2017. Veolia Australia and New Zealand (Veolia) has prepared this AEMR in accordance with Part C, Condition 11 of Development Consent SSD 4964 (the Consent), as well as relevant legislative requirements and industry best practices.

During this reporting period, Select Civil Pty Ltd (Select Civil) was the Principal Contractor engaged by Veolia, responsible for carrying out the initial earthworks for preloading of the Site. This work included the importation and placement of Virgin Excavated Natural Material (VENM) over the site to raise the levels to the required design height and to allow for geotechnical consolidation of the subsurface layers. Select Civil was responsible for implementing Veolia's management systems for construction activities as detailed in the CEMP for the Site.

In accordance with Condition 11 of Part C of the Conditions of Development Consent (SSD 4964) (the Consent Conditions), the AEMR includes a description of the construction activities that were carried out in the previous year and the proposed activities to be carried out over the current year. It also includes a review of the monitoring results and complaint records in relation to the environmental performance of the Site against relevant performance measures and statutory requirements.

No non-compliances were identified against the Consent Conditions during this reporting period.

Section 1

Introduction

SECTION 1 INTRODUCTION

1.1 Site Background

The Site is located at 37 Grand Avenue, Camellia, NSW. Refer to Appendix A for Site Location Plan.

Veolia is currently leasing the Site, with the intention to develop a MRF capable of processing up to 200,000 tonnes per annum of general solid (non-putrescible) waste received from the commercial and industrial sector.

The proposed development involves the construction and operation of a facility to house a multi stage processing system in a new, enclosed building, including a combination of equipment designed to separate incoming waste and extract recyclable material for transfer to secondary markets. There is also the potential to allow for a refuse derived fuel stream for energy recovery.

Veolia is currently implementing a Remedial Action Plan (RAP)(refer to the Table 1-1. below) which will render the site suitable for commercial / industrial land use. The Site was granted approval for construction and operations of the MRF (SSD 4964) on 6 July 2016 under the Section 89E of the Environmental Planning and Assessment Act 1979. The Development Consent is comprised of 3 Parts, which dictate the construction and operational environmental performance requirements of the Site.

Veolia commenced the remediation works in March 2017, under the existing Council development consent for remediation works (DA/54/2013). Table 1 summarises the current status of works on the Site and the relevant approval authority for each stage.

Table 1-1 – Status of Works at the Site

Works	Approval Authority & Document Reference	Status
Demolition Works	Parramatta City Council (DA/54/2013)	Completed
Decommissioning of existing stormwater system	Parramatta City Council (DA/54/2013)	Completed
Construction of the new stormwater outlet works and capping of the grass area	Parramatta City Council (DA/54/2013)	Completed
Stage 1 - Preloading of the site to improve ground conditions before the construction of MRF	Department of Planning and Environment (DPE) (SSD 4964)	In progress
Installation of new stormwater system & capping layer across the site	Department of Planning and Environment (DPE) (SSD 4964)	To follow Stage 1 completion
Stage 2 - Progressing towards the Construction of the MRF	Department of Planning and Environment (DPE) (SSD 4964)	To follow Stage 1 completion

This reporting period covers activities relating to the Stage 1 - Preloading of the site which commenced in August 2017 and was undertaken in two phases as summarised below.

Table 1-2 - Pre-loading works conducted during the reporting period

Dates	Works	Status
Jul - Aug 2017	Preloading Filling period (Phase 1)	Completed
Sep 2017 – May 2018	Preloading Settlement period (Phase 1)	Completed
Jul 2018	Movement of preloading material around the site (Phase 2)	Commenced
Jul 2018 – current	Preloading Filling period (Phase 2)	Commenced

As per the Construction and Environmental Plan (CEMP), during preloading the contractor and / or Veolia personnel were responsible for ensuring environmental controls and mitigation measures were effectively undertaken on-site. To validate this, checklists, registers and forms were completed as records of site inspections. These documents provide a means to evaluate and verify compliance with the relevant regulatory requirements and the contractual environmental requirements.

In the event a non-compliance was identified during site inspections or through monitoring results, an investigation would be carried out to determine the cause and to ascertain the necessary corrective actions. No non-compliances were identified this reporting period.

1.2 Legislative Requirements

The main legislative instruments governing the environmental performance and activities undertaken at the Site include the EP&A Act regulated by the Department of Planning & Environment (DPE), and the *Protection of the Environment Operations Act 1997* (POEO Act) regulated by the Environment Protection Authority (EPA), as well as their respective associated regulations.

In addition to the Consent, an EPL has been issued by the EPA, under the POEO Act, to regulate the construction activities conducted at the Site.

Consent Condition SSD stipulate the conditions for the construction and operation of the Materials Recycling Facility. The Conditions pertaining to this AEMR are provided in Table 1-3.

Table 1-3 - Consent Conditions for the preparation of this AEMR

Relevant Condition	Requirement
PART C – ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING	
Annual Review	

C11	Within 1 year of the date of this consent, and every year thereafter, the Applicant shall review the environmental performance of the Development. This review must: (a) describe the Development that was carried out in the previous calendar year, and the Development that is proposed to be carried out over the next year; (b) include a comprehensive review of the monitoring results and complaints records of the Development over the previous calendar year, which includes a comparison of the results against the: i. the relevant statutory requirements, limits or performance measures/criteria; ii. requirements of any plan or program required under this consent; iii. the monitoring results of previous years; and iv. the relevant predictions in the EIS; (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; (d) identify any trends in the monitoring data over the life of the Development; (e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the next year to improve the environmental performance of the Development.

1.3 Responsibilities

- Environmental monitoring on site was undertaken and/or supervised by Select Civil, the Principal Contractor for the preloading phases in accordance with the CEMP;
- Environmental monitoring on site was undertaken by NSW Resource Recovery technical support personnel – Sara Maddison (Operations Project Manager – Resource Recovery) during the reporting period;
- Analyses of samples were performed at Australian Laboratory Services Pty Ltd (ALS), which is a NATA accredited laboratory;
- SLR Consulting conducted an background noise and vibration assessment in September 2017

Section 2

Environmental Monitoring and Management

SECTION 2 ENVIRONMENTAL MONITORING AND MANAGEMENT

2.1 Site Monitoring Requirements

The following sections detail the monitoring undertaken throughout the reporting period in accordance with the requirements of the consent.

Environmental Monitoring Program within the Construction Environmental Management Plan (CEMP) provides details on all monitoring requirements of the Consent and other appropriate regulations for the Stage 1- Preloading works, to measure and assess the effectiveness of on-site environmental management measures during the preloading phase of the Site.

Table 2-1 summarises the environmental monitoring conducted at the Site as per the Environmental Monitoring Program.

Table 2-1 Construction Monitoring Requirements

Condition Ref	Type of Monitoring	Frequency	Commentary
Part B, Condition B17	Site Inspections	Weekly	Ongoing basis
Part B, Condition B18	Traffic Spot Monitoring	As required	Ongoing basis
CEMP	Visual Dust Monitoring	Weekly or as required	Ongoing basis
Part B, Condition B24	Noise Monitoring	At the commencement of the project followed by as required	Background Noise monitoring completed July 2017
Part B, Condition B26	Vibration Monitoring (Vibratory Rollers)	At the commencement of the activity using Rollers	Not triggered
Water Management Plan	Inspection of Water Management System	Weekly during construction activities on site	Ongoing basis
Water Management Plan	Inspection of Sediment and Erosion Controls	Monthly and following all rainfall of greater than 29.5mm over a five-day period	Ongoing basis

Water Management Plan	Stormwater Quality Monitoring	During event of basin overflow and as required	Condition satisfied on 12 & 13 August 2018

2.1.1 Meteorology

Monitoring meteorological data during this reporting period provided an understanding of the ambient air quality and rainfall conditions at the Site, which was utilised to manage environmental performance, as well as investigate potential impact to nearby sensitive receivers.

Meteorological data is downloaded from the public weather station situated at the Bureau of Meteorology (BoM) Parramatta North (Masons Drive) (Station ID: 066124), provided in recorded at 15 minute intervals. During the reporting period, meteorological conditions such as wind speed, wind direction and rainfall were monitored on an ongoing basis and/or in the event a noise or dust complaint was received.

A summary of daily wind speeds and wind directions at 9am at the nearby BoM weather station is presented in Figure 2-1 and Figure 2-2. During the reporting period the 9am prevailing wind directions were westerly and north-westerly and the wind speeds were most frequently between 1 – 10 m/s.

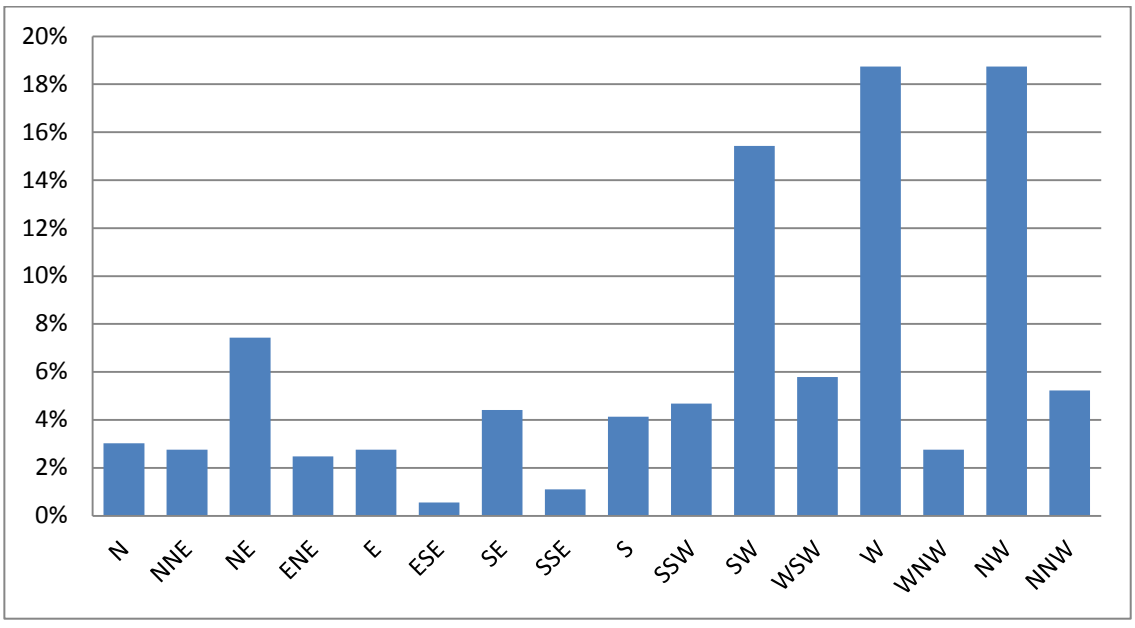

Figure 2-1 Distribution of 9AM wind direction data during the reporting period

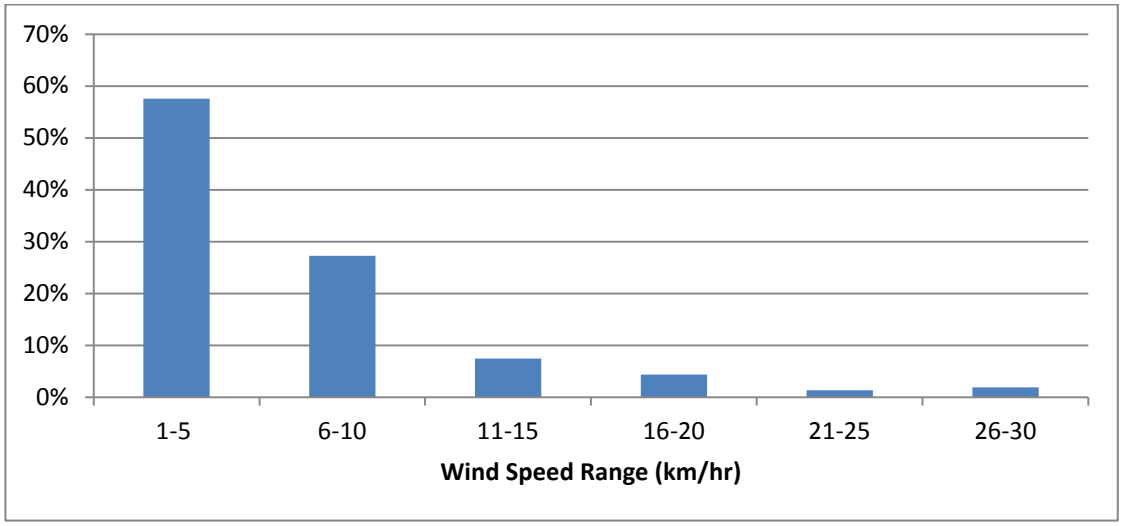

Figure 2-2 Distribution of 9AM wind speed data during the reporting period

Ongoing rainfall data was monitored to supplement stormwater system operation and discharge, as well as for general housekeeping management such as inspection and maintenance of sediment and erosion control measures.

A summary of rainfall data at the Site during the reporting period is presented in Figure 2-3. Overall, the average rainfall for the Site during the reporting period was approximately 37mm per month.

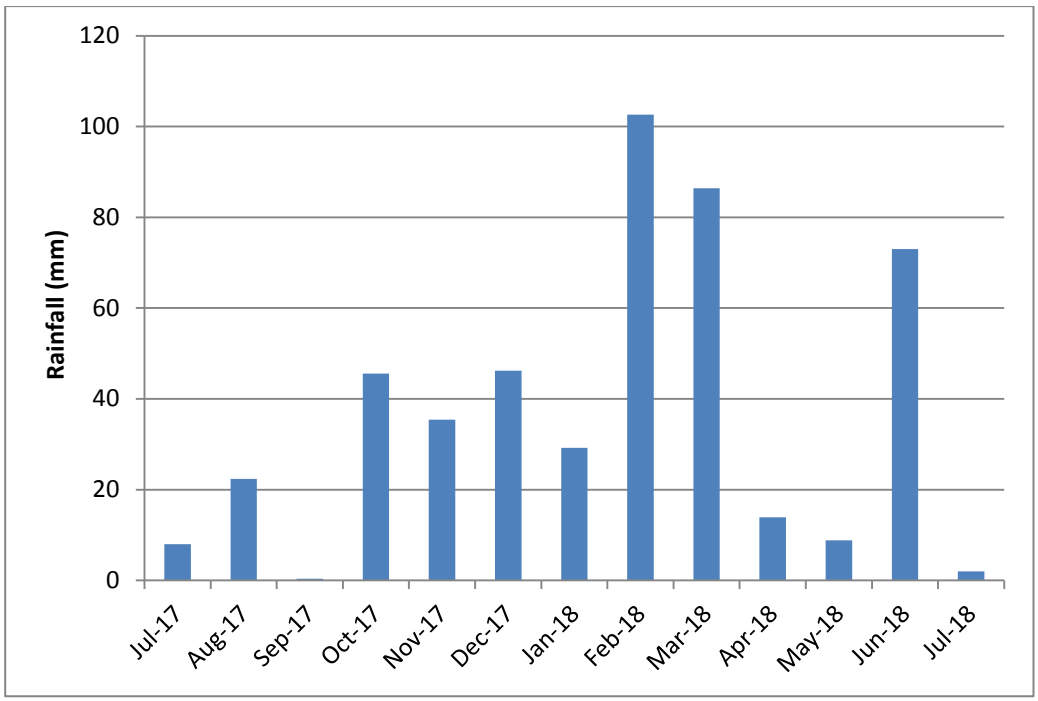

Figure 2-3 Monthly rainfall data during the reporting period

2.2 Air Quality

Air quality monitoring in accordance with the Consent, was carried out as required to determine whether preloading activities conducted at the Site impacted ambient air quality. Construction activities were undertaken on-site over a period of 2 months, the remainder of the time the Site was in settlement period where no activity was occurring on-site.

Further details regarding air quality monitoring and management practices undertaken at the Site are provided in the following sections.

2.2.1 Dust

Activities associated with preloading and levelling of the site with imported fill material had to the potential to generate dust emissions at the Site.

During the construction period, Contractors maintained dust mitigation measures to minimise airborne dust generation and subsequent impact on neighbouring sites and workers. During the loading of the site with preload material water trucks were used for dust suppression.

Immediately following the placement of material, the Contractors were responsible for installing of a geofabric layer (bidim) keyed onto the surface of the preloaded material to control dust.

Weekly site inspection checklists were used during the construction activities to assess the effectiveness of control measures. Following the completion of on-Site activities for the Stage 1-Preloading, the weekly site inspections were reduced to monthly checks.

No dust complaints were received during the reporting period therefore no dust monitoring was required.

2.2.2 Exhaust Emissions

Exhaust emissions, such as diesel exhaust from construction traffic and machinery, have the potential to temporarily impact on local air quality during preloading. Given the relatively low number of vehicles and machinery preloading compared to existing traffic at the Camellia industrial area, exhaust emissions are unlikely to cause significant impacts on the local and regional air quality.

During the reporting period, vehicle and machinery exhaust systems were serviced and maintained by Contractors so that exhaust emissions comply with relevant standards and exhaust emissions are kept to a minimum. Contractors were responsible for carrying out inspections of machinery through daily pre-start checklists.

No complaints relating to exhaust emissions were received during the reporting period.

2.3 Noise and Vibration

During pre-loading works, construction and traffic noise activities have the potential to generate nuisance noise emissions.

As part of the Environmental Impact Statement (EIS), a noise assessment was conducted by Bridges Acoustics Pty Ltd to assess the predicted construction and traffic noise levels generated as a result of the pre-loading works. Given the industrial nature of the area, the neighbouring properties were considered to be relatively insensitive to environmental noise. The nearest sensitive noise receivers were the residences located in and around John Street, Rydalmere (approximately 230 m from the Site). Based on the assessment no exceedance in noise impact above background levels was anticipated to occur as a result of construction noise emissions at the Site.

As per the CEMP, in order to minimise noise impacts of construction activities, the following noise and vibration mitigation measures were in place during the reporting period;

- Site speed limit of 20 km/hr enforced by the Contractor to avoid unnecessary noise due to fast engine speeds
- Machinery were fitted with squashed duck reversing alarms as opposed to reversing beepers. In addition all machinery and vehicles were fitted with flashing lights.
- Contractor carried out maintenance and servicing of machinery to ensure all machines used on the Site were maintained in working order, with particular emphasis on exhaust silencers, covers on engines and transmissions, and squeaking or rattling components.
- Contractor machinery was regularly serviced in accordance with industry standard and manufacturers recommendations. Daily pre-start checks were performed on all machinery to ensure that the plant are in good order for operation.
- Construction activities were restricted to the construction hours specified below in Table 2.4.

Table 2-2 - Construction Hours of Operation

Activity	Day	Hours
Construction	Monday- Friday	7:00am-6:00pm
	Saturday	8:00am-1:00pm
	Sunday & Public Holidays	Nil

Background Noise Survey

Prior to the commencement of pre-loading works, SLR Consulting were engaged to conduct an unattended background noise survey at the two closest noise sensitive receivers. A summary of these results is provided in Table 2-3 below.

Table 2-3 - Background Noise Levels prior to Preloading activities

Location	Mean Background Noise Levels (LAeq, 15min, dB(A))			Sleep Disturbance Criterion ((LA1, 1min, dB(A)
	Day	Evening	Night	Night
27A John Street, Rydalmere	58.8	55	52.5	56
20 Milton Street, W Rydalmere	56.6	54	49.1	56

In the event a noise complaint is received, this data would assist in the investigation of potential noise impacts from the preloading activities. In the event of levels above the set limits for noise, a review of construction activities, plant and equipment will be undertaken to resolve the issue.

There were no noise complaints received from either industrial or residential neighbours during the 2017-2018 reporting period therefore no additional noise monitoring was required.

2.3.1 Vibration Monitoring

The Construction Vibration criterion is developed in accordance with the EPA's Assessing Vibration: Technical Guideline (NSW EPA, 2006) at residential receivers which outlines that the continuous or impulsive vibration not to exceed the criteria in Table 2-4.

Table 2-4 - Vibration Performance Criteria

		Preferred Values		Maximum Values	
Location	Assessment Period	z axis	x & y axis	Z axis	x & y axis
Continuous vibration					
Critical areas2	Day-or night-time	0.0050	0.0036	0.010	0.0072
Residences	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Impulsive vibration					
Critical areas2	Day-or night-time	0.0050	0.0036	0.010	0.0072
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14

Note: Daytime is 7.00am to 10:00pm and night-time is 10:00pm to 7:00am.

During preloading, ground vibration may be caused by compaction but was assessed in the EIS to be negligible and to pose no potential impact on sensitive receivers. Given no vibratory rollers were used during compaction, no vibration monitoring was required to be completed.

In addition, no vibration complaints were received from either industrial or residential neighbours during the 2017-2018 reporting period.

2.4 Surface Water

During the pre-loading works, site runoff was managed through a temporary water management system, as per the Water Management Plan (WMP) (Consult.In, 2018) which is appended to the CEMP. The front portion of the site was bunded to hold stormwater which was then discharged as pumped flow through to the Site's outlet and into Parramatta River.

The temporary water management system also includes the use of erosion and sediment controls to minimise sediment runoff into waterways. These controls include sandbags, sediment fencing around the base of the slopes and emplacement of a geotextile layer (bidim) across the entire site over the engineered fill.

During construction, the contractor was responsible for undertaking inspections of water management systems (including sediment and erosion controls) which were documented in Site Inspection Checklists. During the settlement period, visual monitoring of the key components of the temporary water management system was done on a routine basis, including inspections of sediment and erosion controls, pump and sediment within the sump area. No issues were noted during this reporting period.

The efficacy of these measures was assessed against the performance criteria given in the table below.

Table 2-5 - Surface Water Performance Criteria

Monitoring Point	Parameters	Performance Criteria	Reference
Pit P2 (sump)	Total Suspended Solids	50 mg/L	Water Management Plan

As per the WMP, in the event the sediment basin at the southern end of the site is found to be overflowing, two consecutive samples of basin outlet water must be collected to verify performance of erosion and sediment control measures against the performance criteria in Table 2-5. During the reporting period, a basin overflow event occurred in March 2018. Water samples were collected from the basin (See Table 2-5 for results), which demonstrated sediment control measures were adequate and no further treatment was required.

Table 2-6 - Surface Water Quality Results during basin overflow event

Parameter	Units	CAM – PIT P2	CAM – PIT P2	CAM – HARDSTAND (adjacent to Pit P2)
		12 Mar 2018*	13 Mar 2018**	13 Mar 2018**
pH	mg/L	8.07	7.75	7.58
Electrical Conductivity	mg/L	534	482	284
Total Suspended Solids	mg/L	<5	<5	<5

*After 10mm of rainfall in the previous 7 days
**After 13mm of rain in the last 24 hours

Reason for Basin Overflow

Once the water ponding was observed at the basin, troubleshooting indicated the pump had tripped. The pump was reset and checked to be operational. Following this event, pump checking was added to the Site Inspections Checklist. No further issues have been noted since this occasion.

2.5 Traffic

A traffic impact statement (TIS) was undertaken as part of the EIS to assess the potential impact of the Site on traffic during the construction of the development. It was found that the Site would see variations in the daily construction vehicle generation during each construction activity conducted during preloading (as per Table 2-7) therefore construction traffic may have temporary noise impacts and has the potential to cause minor congestion/traffic disruptions in the surrounding areas.

Table 2-7 - Anticipated truck movements during Preloading Activities

Construction Activities	Anticipated truck movements per day	Indicative Timing
Preloading of the Site	60 truck movements/ day	over a 3-week period
Settlement Period	N/A	over a period of approximately 12 months
Removal of the excess material	5-10 truck movements/ day	over a period of 1 week

A total of 1,442 vehicle (truck) movements occurred during the construction reporting period, with an average of 96 truck movements each day during the period when

imported fill material was being brought to site. A breakdown of truck movements each month is provided in Table 2-8.

Table 2-8 Construction Truck Movements during the 2017-2018 reporting period

Monitoring Period	Construction Activity	Truck Movements
7 – 26 July	No Activity	0
27 – 31 July	Preloading of the Site	199
1 – 22 August	Preloading of the Site	1243
23 - 31 August	Settlement Period	0
September	Settlement Period	0
October	Settlement Period	0
November	Settlement Period	0
December	Settlement Period	0
January	Settlement Period	0
February	Settlement Period	0
March	Settlement Period	0
April	Settlement Period	0
May	Settlement Period	0
June	Settlement Period	0
July	Settlement Period	0
	Total	**1442**

A number of mitigation measures were implemented at the Site to manage potential traffic impacts as detailed in the CEMP including;

- Daily 2 way radio communication with drivers at the entry to update drivers, with any recent changes to procedures and to manage traffic
- Sequencing plan during the construction stage to enable trucks minimise waiting times
- A Traffic Management Plan was implemented on-site during construction works. The Traffic Management Plan was continually updated in line with the tipping plan, which was communicated through Site inductions and toolbox talks.
- On-site parking used for construction traffic parking and deliveries away from the immediate construction zone in order to avoid congestion

The implemented traffic control measures on site assisted with the effective management of traffic flow. No traffic congestion issues or complaints were received during the reporting period.

2.6 Soil

In accordance with Condition B15 of the Consent, all imported fill material used for preloading of the site was classified as Virgin Excavated Natural Material (VENM).

During the reporting period, approximately 50,000 tonnes of VENM fill material was imported and placed at the Site to raise site levels. The imported fill material was sourced from WestConnex stage 1B tunnel spoil which had been granted with an EPA Resource Recovery exemption (WestConnex Stage 1B Tunnel Spoil Exemption 2016), and order (WestConnex Stage 1B Tunnel Spoil Order 2016) allowing the material to be used as engineered fill in earthworks.

Soil and erosion control measures as described in Section 2-4 were implemented on-site.

2.7 Waste

All waste material removed from Site is assessed and classified in accordance with NSW EPA Waste Classification Guidelines (NSW EPA, 2014) and was managed in accordance with the CEMP.

All other miscellaneous waste brought on-site by workers such as food waste, paper, plastic and glass material was removed by contractors or site staff for disposal at a EPA licensed facility.

2.8 Heritage

No excavation works were conducted therefore items of indigenous heritage were encountered during the reporting period.

2.9 Pest and Vermin and noxious weeds

As the site was under construction during the reporting period, no formal pest and vermin housekeeping were undertaken apart from regular visual inspections. For this AEMR period, no pest and vermin management issues were reported.

Weed management was undertaken as part of the Site preparation works to minimise weed establishment and invasions including clearing of vegetation to minimise weed infestation

Section 3

Environmental Performance

SECTION 3 ENVIRONMENTAL PERFORMANCE

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

3.1 Non-Compliances

A review of the environmental performance of the Site determined that for the 2017-2017 reporting period there were no environmental non-compliances reported.

3.2 Complaints

No complaints were received for preloading activities during this reporting period.

Any complaint, queries and issues received regarding noise, dust or other general community disturbances would be managed as per Veolia's corrective and preventive action procedure and documented individually in their Incident Report Form.

All complaints would be investigated and details recorded and actioned through *RIVO,* which is part of Veolia's Incident and Audit Management System for logging incidents and managing governance.

REFERENCES

1. CH2M HILL (2013) Camellia Recycling Centre: Environmental Assessment. CH2M HILL Australia Pty Ltd. February 2013.
2. Consult.In (2016) Camellia MRF - Water Management Plan. Consult.In Pty Ltd. December 2016
3. EPA (2014). NSW Waste Classification Guidelines, NSW Environmental Protection Agency. January 1996.
4. EPA (2006). Assessing Vibration: Technical Guideline. NSW Environmental Protection Agency. February 2006.
5. Veolia (2016). Construction and Environmental Management Plan (CEMP) – Preloading Stage. Veolia Australia and New Zealand. November 2016.

APPENDICES

Appendix A - Site Location Plan


Antoine St
NRG Automotive Repairs
Jean St
N
Circular Quay - Parramatta
Concrete Recyclers
Veolia Environmental Services
Grand Ave
SAMI Bitumen Technologies
Grand Ave