



# Noise Management Plan

AxTRF Management Plans to be used in conjunction with the Visy Management System

## AxTRF

Alexandria Dry Recyclables Transfer Facility

85 Burrows Road, Alexandria NSW

[aka. 112-120 Euston Road – no site access from Euston Road]



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## Attachments

A – Noise Management Plan acoustic engineer review

### Document control

Version	Revisions	Date of issue	Prepared By	Approved By
V1	Draft for DPIE	31 August 2020	Jake Luschwitz Anne Trevena	
V1	Address DPIE comments	7 October 2020	Anne Trevena	Luke Krstanovski
V1	Acoustic expert review	24 November 2020	Wilkinson Murray	
V1	Final	30 November 2020		Luke Krstanovski

## Glossary/Abbreviations

<b>AxTRF/Facility/Site</b>	The dry recyclables facility approved as SSD-10364 on 22 April 2020
<b>AxTRF management plans</b>	The OEMP and its supporting management plans, including this NMP
<b>Conditions</b>	The conditions of consent for the approval of SSD-10364 dated 22 April 2020
<b>DPIE</b>	Department of Planning, Industry and Environment
<b>Development approval</b>	SSD-10364 for Visy DRF/AxTRF
<b>DRF</b>	Dry recyclables facility
<b>EIS</b>	Environmental Impact Statement for Visy Dry Recyclables Facility dated November 2019
<b>EPA</b>	Environment Protection Authority
<b>EP&amp;A Act</b>	Environmental Planning & Assessment Act 1979
<b>EPL</b>	Environmental Protection License
<b>FCM</b>	Fully commingled recyclable material
<b>FEL</b>	Front End Loader
<b>HSE system</b>	Visy's Health, Safety and Environment System within VMS
<b>MRF</b>	Materials recovery facility
<b>NMP</b>	Noise Management Plan
<b>NPfi</b>	NSW Noise Policy for Industry 2017
<b>NVIA</b>	Noise and Vibration Impact Assessment for Visy Dry Recyclables Facility EIS dated October 2019
<b>OEMP</b>	Operational Environmental Management Plan
<b>P&amp;C</b>	Source-separated paper and cardboard
<b>Planning Secretary</b>	The Secretary of the Department of Planning, Industry and

	Environment
<b>PME</b>	Powered Mobile Equipment, including forklift and FEL
<b>POEO Act</b>	Protection of the Environment Operations Act 1997
<b>RBL</b>	Rating Background Level of noise (see Attachment A for definition)
<b>RNP</b>	NSW Road Noise Policy 2011
<b>RTS</b>	Response to Submissions for Visy Dry Recyclables Facility dated February 2020
<b>SSD</b>	State Significant Development
<b>Stage 1</b>	Operation as a recyclable material transfer facility for up to 110,000 tpa FCM and 45,000 tpa P&C
<b>TMP</b>	Traffic Management Plan (Attachment D to OEMP)
<b>tpa</b>	Tonnes per annum
<b>TRF</b>	Recyclable material transfer facility
<b>Visy</b>	Visy Industries Australia Pty Ltd ABN 74 004 337 615
<b>VMS</b>	Visy Management System incorporating HSE System
<b>Waste Regs</b>	Protection of the Environment Operations (Waste) Regulation 2014

# 1 INTRODUCTION

## 1.1 Overview

Visy is an integrated packaging, paper and resource recovery company operating in Australia for over 70 years and with over 120 sites throughout Australasia and has provided recycling services to eastern Sydney and beyond since the late 1990s.

In 2020 Visy received approval (SSD-10364) to develop the Visy Alexandria Dry Recyclables Transfer Facility (AxTRF; the facility/site) to replace the St Peters facility. In accordance with the approval, Visy has prepared this Noise Management Plan (NMP) as an Attachment to the Operational Environmental Management Plan (OEMP).

This NMP utilises noise assessment and management measures identified for the facility by acoustic consultants Wilkinson Murray in preceding documents<sup>1,2</sup> and noise management experience Visy has garnered from other resource recovery sites (ie. St Peters Recyclable Transfer Facility, Taren Point Resource Recovery Facility, Smithfield Resource Recovery and Manufacturing Precinct). It also includes noise requirements from the facility’s Environmental Protection Licence (EPL) 21359. It has been reviewed by noise expert consultants Wilkinson Murray and their letter of review is provided as Attachment A.

This NMP is for Stage 1 of the facility which involves:

- Transfer facility for up to 110,000 tonnes per annum (tpa) of fully commingled recyclable material (FCM) from kerbside collections to Visy’s network of material recovery facilities (MRFs); and
- Baling operation for up to 45,000 tpa of source-separated paper and cardboard (P&C) from commercial businesses for transfer to Visy’s network of recycled paper machines.

This NMP addresses the specific environmental conditions for operational noise from SSD-10364, which are (in summary):

- **B25.** Hours of work – Applicant must comply with the following hours of work: Operation Monday to Sunday 24 hours.
- **B28.** Noise Limits – Applicant must ensure noise generated by operation does not exceed the noise limits in Table 1.

*Table 1. AxTRF noise limits from SSD-10364 (and EPL 21359).*

Location	Morning Shoulder L <sub>Aeq</sub> (a5 minutes)	Day L <sub>Aeq</sub> (a5 minutes)	Evening L <sub>Aeq</sub> (a5 minutes)	Night L <sub>Aeq</sub> (a5 minutes)
All residential receivers	51	58	48	43
95 Burrows Road (Childcare)	-	54	-	-

<sup>1</sup> *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.

<sup>2</sup> *Visy Resource Recovery Facility – Construction Noise & Vibration Management Plan (19258-CN vA)*, April 2020, Wilkinson Murray.

- **B31.** Operational Noise and Vibration Management Plan – Must be prepared prior to commencement of operation to the satisfaction of the Planning Secretary and must include noise expert input, strategies to manage high noise generating activities, and a complaints management system.

Under condition B32, operation must not commence until this NMP is approved by the Planning Secretary and the NMP must be implemented for the duration of operation.

It should be noted that this NMP includes consideration of vibration management but as there is minimal potential for vibration impact during operation, the term 'vibration' is excluded from the management plan title.

## 1.2 Site Management Plans

This NMP is a supporting operational management plan to the OEMP and forms one of the AxTRF management plans that have been developed in accordance with the conditions of approval, the management and mitigation measures for the development presented by Visy, and the Visy Management System (VMS). AxTRF management plans comprise:

- Operational Environmental Management Plan (OEMP)
- Waste Management Plan (WMP)
- Traffic Management Plan (TMP)
- Air Quality Management Plan (AQMP)
- Noise Management Plan (NMP; this plan)
- Flood Evacuation and Emergency Response Plan (FEERP)

The purpose of AxTRF management plans is to provide an outline of the operational procedures that are applied to meet environmental requirements for stage 1 operation – recyclables transfer facility. It is applicable to all staff and contractors associated with the operation of the TRF.

The OEMP includes a Register of Statutory Operational Control Measures and Implementation which lists the key management and mitigation measures for the facility and identifies each measure as a design and/or operation control. Design controls are implemented into the facility operation on an ongoing basis as they are incorporated into the facility design, layout and infrastructure. Operation controls are implemented through their inclusion in AxTRF management plans and site VMS requirements.

AxTRF management plans should be used in conjunction with VMS which is described in the OEMP. They are available to all staff and subcontractors via the site management system document control which includes a hard copy onsite and are made available to the public via Visy's website.

The site management team are responsible for the implementation, monitoring and review of AxTRF management plans as described in the OEMP.

## 1.3 Noise Receivers

The site street address is 85 Burrows Road, Alexandria NSW Australia. The legal site address is 112-120 Euston Road, however there is no access from Euston Road, so the site is known as 'Visy TRF Burrows Road'.

An overview of the site in the context of neighbouring premises and key features is provided in the OEMP. The site is located in an IN1 General Industrial zone within the City of Sydney. AxTRF operations are completely contained within the approximately 7,700m<sup>2</sup> operations building. Rapid doors at the Burrows Road entry and exit open only to permit truck passage and close immediately after. There is also a two-storey office building on the site and a 28 space car park.

The nearest surrounding receivers to AxTRF are identified in Table 2 and Figure 1. They include neighbouring industrial and commercial receivers surrounding the site, a child care centre (Only About Children) in the east neighbouring multi-tenanted development at 95 Burrows Road, residential receivers approximately 285 metres to the north across Sydney Park, future residential receivers approximately 250 metres to the west across Euston Road.

*Table 2. AxTRF nearby noise receivers as shown in Figure 1.*

Receiver ID	Address	Receiver Type	Orientation from site
01A	95 Burrows Road	Childcare Centre Ground Floor	North
01B	95 Burrows Road	Childcare Centre First Floor	North
01C	95 Burrows Road	Commercial First Floor	North
02	84-88 Burrows Road	Industrial	North-East
03	76-82 Burrows Road	Industrial	East
04	122-130 Euston Road	Industrial	South
05	171A Euston Road	Industrial	West
06	106-110 Euston Road	Industrial	North
07	18 Huntley Street	Residential	North
08	362 Mitchell Road	Residential	North-West
09	177-219 Mitchell Road	Residential	North-West
10	205-225 Euston Road	Future Residential & Commercial	South-West
11	Sydney Park – 416 Sydney Park Road	Active Recreation Area	West

Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.





Figure 1. AxTRF location (in blue) and nearby noise receivers as identified in Table 1.

Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.



## 2 ENVIRONMENTAL OBLIGATIONS

### 2.1 Legislative requirements

As a modern recyclables facility, AxTRF is designed and operated to meet a number of relevant national, state and local government requirements. The OEMP provides an overview of the key environmental obligations which underpin the facility design for the areas of:

- Planning legislation – Facility assessed under *Environmental Planning and Assessment Act 1979* (EP&A Act) through an Environmental Impact Statement (EIS) and granted approval with conditions through SSD-10364.
- Environment protection legislation – Facility operates under *Protection of the Environment Operations Act 1997* (POEO Act) and *Protection of the Environment Operations (Waste) Regulation 2014* (Waste Regs) as a resource recovery and waste storage facility with conditions through EPL 21359.
- Waste and resource recovery strategies – Facility contributes to waste strategy targets and provides a strategically located modern dry recyclables facility as part of Visy's integrated closed loop recycling and manufacturing model to create value from waste.
- Fire safety requirements – Facility assessed against Fire Safety in Waste Facilities guideline through consultation with Fire and Rescue NSW to ensure adequate provision for fire safety and safe fire brigade intervention.

### 2.2 Industry and Road Noise Policies

The facility was assessed against the *NSW Noise Policy for Industry 2017* (NPfI) as part of the EIS. The NPfI provides the framework and process for deriving noise criteria for premises scheduled under the POEO Act. It balances the need for industrial activity with the community's desire to minimise intrusive sounds. Noise criteria derived through the assessment in accordance with the NPfI were used to set the noise limits for the facility in SSD-10364 and EPL 21359 which are shown in Table 1.

The facility was also assessed against the *NSW Road Noise Policy 2011* (RNP) as part of the EIS. The RNP identifies strategies that address the issue of road noise from projects, including new-traffic generating developments, and defines criteria used in assessing the impact of road traffic noise.

An overview of the facility noise assessment is given in Section 3.

### 2.3 Visy Management System

The OEMP provides an overview of VMS which requires Visy sites to determine their environmental monitoring processes to ensure compliance with regulatory obligations using the VMS structure of Plan, Do, Check, Act approach.

## 3 NOISE ASSESSMENT

The facility Noise and Vibration Impact Assessment (NVIA) formed part of the EIS to determine the noise impact from the facility's operation on the nearby receivers identified in Table 2 and Figure 1 and the road traffic noise associated with the facility on residential receivers along Sydney Park Road, Campbell Road and Euston Road north of Sydney Park Road. The NVIA provides a detailed account of the assessment and it is summarised here to provide an overview of how it established the noise limits for the facility given in Table 1.

### 3.1 Background noise measurements

Unattended environmental noise monitoring was undertaken to establish the existing ambient noise environment of the nearest residential area along Mitchell Road, Erskineville with noise monitoring equipment installed at the location identified in Figure 1 for 12 days in September 2019. The measured data was processed in accordance with the NPfl to determine the RBL (background) and  $L_{Aeq}$  noise levels during daytime, evening, night time and morning shoulder periods. The RBL and  $L_{Aeq}$  noise levels for the future residential area on Euston Road were obtained from that development's acoustic report.

Daytime short-term background noise measurements were undertaken at the childcare centre neighbouring the facility on Burrows Road and at the future residential area on Euston Road to compare existing background noise level with the predicted noise impact from the facility.

### 3.2 Operational noise criteria

In accordance with the NPfl framework and process for deriving noise criteria for approvals and EPLs, the NVIA determined Operational Project Noise Trigger Levels (facility noise criteria) for the nearby receivers which represent noise levels that, if exceeded, may indicate a potential noise impact upon the community. These facility noise criteria were derived using the intrusive and amenity noise levels for the facility.

The intrusive noise levels for the facility used the background noise level and consideration of the facility noise sources and operation to assess intrusiveness across daytime, evening, night time and morning shoulder periods.

The amenity noise levels for the facility were based on noise criteria specific to land use and associated activities with the aim to limit continuing increases in noise levels for nearby receivers from successive development within an area. Consideration of sleep disturbance screening noise levels were also considered for residential receivers.

### 3.3 Operational noise modelling

Noise emissions for the facility were modelled using a representative 3-D model of the site and surrounding receivers addressing the following factors:

- Equipment and plant sound level emissions and locations
- Screening effects from buildings
- Receiver locations
- Ground topography
- Noise attenuation due to geometric spreading
- Ground and atmosphere absorption.

The modelling used  $L_{Aeq,15min}$  Sound Power Levels for plant and equipment obtained through

attended noise measurements of Visy's St Peters facility and another MRF. The Sound Power Levels for noise sources operating at the facility are given in Table 3. Noise modelling was undertaken for the facility's stage 1 operation (scenario 1) and stage 2 operation with MRF (scenario 2).

The sleep disturbance assessment used the highest adjusted  $L_{Amax}$  Sound Power Level noise source of the Front End Loader moving FCM containing glass, which is a level of 121 dBA.

*Table 3. AxTRF noise sources and Sound Power Levels, including sources for stage 2 MRF.*

Noise Source	Sound Power Level,	Scenario
	$L_{Aeq,15min}$ (dBA)	
Front End Loader moving/loading waste	106	1 & 2
Unloading from Waste Truck	105	1 & 2
Haul Trucks & Waste Trucks	105	1 & 2
Unloading of Cardboard Box	97	1 & 2
Waste Truck idling	101	1 & 2
Baler & Conveyor	100	1 & 2
Forklift	95	1 & 2
Condenser Unit	75*	1 & 2
3x Plant & Vehicle Emission Exhaust Fans	89	1 & 2
Recovery Facility Plant	114	2
Glass falling into silo	108	2

\*Assumed Sound Power Level

Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.

Wind measurements from the Sydney airport database were reviewed to determine whether wind conditions would affect noise propagation from the facility and meteorological conditions for both a neutral and worst-case scenario were adopted in line with NPfI standardised conditions.

A number of assumptions around the facility operation and noise control measures were used in the noise model which were in line with the facility layout and operation described in the EIS, including kerbside truck movement times, acoustic louvres on disused doorways and acoustic ducting on the ventilation exhaust fans. These assumptions and noise controls are incorporated into SSD-10364 management and mitigation measures (OEMP Attachment B) and therefore within the AxTRF management plans.

Continuous cumulative operational noise levels for the facility were predicted at the nearest receivers under neutral and worst-case conditions for day, evening and night time periods and assessed against the facility noise criteria. The predicted operational noise levels at the noise receivers identified in Figure 1 for the facility stage 1 (TRF and baling operation) is shown in Table 4 for the day and evening period (6am to 10pm). The evening noise criterion is the most

stringent and was used to assess compliance. The facility stage 1 operation noise levels complied with the evening noise criteria at all nearby receivers.

The predicted operational noise levels for the facility stage 1 night time period (10pm to 6am) is shown in Table 5 for the residential receivers identified in Figure 1. The facility stage 1 operation noise levels complied with the night noise criteria at the residential receivers.

The sleep disturbance assessment used the Front End Loader moving FCM containing glass to predict maximum noise levels at the nearest residential receivers and assessed these against sleep disturbance screening criteria. This noise source remains unchanged for both stage 1 and stage 2 of the facility. The predicted maximum noise levels at residences and the sleep disturbance screening criteria are shown AxTRF predicted maximum noise levels at residences during night time. The predicted maximum noise levels at residences from the facility stage 1 and stage 2 complied with the sleep disturbance screening criteria at the nearest residential receivers during night time operations.

*Table 4. AxTRF stage 1 (TRF and baling operation) noise prediction day and evening - LAeq,15min dBA (6am - 10pm).*

ID	Address	Predicted Operational Noise Level		Evening Noise Criteria	Compliance
		Neutral	Worst-Case		
01A	95 Burrows Road – Ground Floor Childcare Centre	50	51	54	Complies
01B	95 Burrows Road – First Floor Childcare Centre	46	46	54	Complies
01C	95 Burrows Road – Commercial First Floor	47	48	63	Complies
02	84-88 Burrows Road	59	60	68	Complies
03	76-82 Burrows Road	61	62	68	Complies
04	122-130 Euston Road	59	59	68	Complies
05	171A Euston Road	46	47	68	Complies
06	106-110 Euston Road	50	51	68	Complies
07	18 Huntley Street	36	37	48	Complies
08	362 Mitchell Road	37	37	48	Complies
09	177-219 Mitchell Road	35	35	48	Complies
10	205-215 Euston Rodd	37	38	48	Complies
11	Sydney Park	42-47	42-47	53	Complies

Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.

Table 5. AxTRF stage 1 (TRF and baling operation) noise prediction night - LAeq,15min dBA (10pm - 6am).

ID	Address	Predicted Operational Noise Level		Noise Criteria	Compliance
		Neutral	Worst-Case		
01A	95 Burrows Road – Ground Floor Childcare Centre	49	50	54	Complies
01B	95 Burrows Road – First Floor Childcare Centre	45	45	54	Complies
01C	95 Burrows Road – Commercial First Floor	45	46	63	Complies
02	84-88 Burrows Road	57	58	68	Complies
03	76-82 Burrows Road	59	59	68	Complies
04	122-130 Euston Road	56	57	68	Complies
05	171A Euston Road	47	47	68	Complies
06	106-110 Euston Road	49	50	68	Complies
07	18 Huntley Street	36	37	43	Complies
08	362 Mitchell Road	37	37	43	Complies
09	177-219 Mitchell Road	35	35	43	Complies
10	205-215 Euston Road	37	38	43	Complies
11	Sydney Park	42-47	42-48	53	Complies

Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.

Table 6. AxTRF predicted maximum noise levels at residences during night time (10pm - 6am).

Receiver ID	Receiver Location	Noise Level		Screening Criteria
		Neutral	Worst-Case	
07	18 Huntley Street	41	42	60
08	362 Mitchell Road	42	42	60
09	177-219 Mitchell Road	41	41	60
10	205-215 Euston Road	43	44	59



### 3.4 Road traffic noise

Road traffic movements associated with the facility were predicted and assessed against RNP criteria for residential land uses along Sydney Park Road, Campbell Road and Euston Road north of Sydney Park Road.

Existing and new facility traffic noise on these roads were predicted using the following traffic data obtained from the EIS traffic assessment for the facility:

- Existing traffic volume data for these roads
- Predicted traffic generation associated with the facility for the Burrows Road entry and exit
- Predicted traffic routes pre-WestConnex to and from the facility for these roads.

In addition, existing road traffic noise for Sydney Park Road was obtained from measurements at the receiver location along Sydney Park Road.

Existing traffic noise was compared against the RNP criteria and determined to exceed most of the day and night criteria for Sydney Park Road, Campbell Road and Euston Road north of Sydney Park Road. In line with the RNP, when existing traffic noise levels are above the noise criteria, the noise objective is to protect against excessive decreases in amenity from a development by applying the relative increase criteria. An increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person.

The predicted traffic noise associated with the facility was an increase ranging between 0.3dB to 0.5dB for these roads for day and night periods. Therefore, the facility traffic noise was predicted to have a negligible impact on the surrounding receivers.

### 3.5 Vibration assessment

The vibration assessment for the facility focused on the construction phase when use of some vibration intensive plant and activities were required, such as hydraulic hammers and bored piling. Operation of the facility does not involve use of any vibration intensive plant or activities and there are no vibration controls required for the facility operation.

## 4 NOISE CONTROLS & MONITORING

### 4.1 Objectives and Performance

AxTRF noise objectives and performance are included in the overall Objectives and Performance Indicators from the OEMP as shown in Table 7.

*Table 7. Objectives and Performance Indicators for stage 1 operation.*

Objectives	Performance Indicators
<ul style="list-style-type: none"> <li>● Operation in accordance with development approval and AxTRF management plans.</li> <li>● Identify potential environment impact sources and implement control measures.</li> <li>● Engage with neighbours to inform of site activities.</li> <li>● Maintain reasonable levels of noise amenity for surrounding businesses and residents.</li> <li>● Contain litter within the site boundary.</li> <li>● Minimise traffic impact to Burrows Road.</li> <li>● Respond quickly and effectively to issues or complaints.</li> <li>● Monitor environmental performance in line with VMS and AxTRF management plan requirements.</li> </ul>	<ul style="list-style-type: none"> <li>● Full compliance with all requirements.</li> <li>● Effective and practical environmental control measures implemented.</li> <li>● No impact to neighbouring businesses or surrounding residents from operation.</li> <li>● Appropriate actions undertaken to investigate issues and/or effectively respond to complaints.</li> <li>● Environmental performance meets expectations.</li> </ul>

### 4.2 Design Controls

The OEMP describes the facility design, layout and operations along with key activity protocols relevant to environmental obligations. As a modern dry recyclables facility, AxTRF design is in accordance with current requirements and expectations for a resource recovery and waste storage facility. This includes a number of design noise controls which provide high level mitigation that is implemented into the facility operation on an ongoing basis as they are incorporated into the layout and infrastructure. The four key design controls for noise are:

1. Operations fully contained within the operations building with vehicle entry and exit onto Burrows Road via rapid doors that open to permit truck passage and close immediately afterwards.
2. Roller doors on north of building to facility carpark remain closed at all times during operation.
3. Acoustically shielded ductwork to the 3 roof exhaust vents for the building ventilation system.
4. Acoustic louvres on the 3 disused doorways, 2 on Euston Road and 1 on Burrows Road that allow the required air inflow to the building while minimising noise emission.

The facility NVIA (see Section 3) predicted the facility will comply with its noise limits (see Table 1). Stage 1 operation does not involve any high noise generating activities.

## 4.3 Operation Controls

### 4.3.1 Hours of operation

The facility has operation activities 24 hours a day 7 days a week, though the nature of activities varies in line with the cycle of council collection of kerbside recyclables. FCM is received primarily during the period 5am to 2pm Monday to Friday, in line with council kerbside collection schedules, and primarily consolidated and dispatched at other times. Commercial P&C is received primarily during business hours Monday to Friday. The baler operates predominantly 6am to 10pm Monday to Friday, though limited operation may occur at other times.

### 4.3.2 Induction and training

The OEMP identifies that all site personnel and contractors must complete mandatory AxTRF inductions prior to commencing work. Any person visiting the site that is not inducted must be escorted at all times by an inducted person. The mandatory inductions include an environmental component to ensure all persons working at the site are aware of their responsibilities and the control measures for key environmental issues.

The OEMP also identifies that AxTRF uses a competency based training system for the operation of plant and equipment which incorporate environmental obligations and relevant operations protocols aimed to remove or reduce environmental impacts to Burrows Road, neighbouring premises, and nearby residential areas.

Awareness of environmental impacts and controls is also incorporated via VMS requirements and into toolbox talks.

### 4.3.3 Powered Mobile Equipment (PME)

AxTRF implements all VMS requirements for PME including:

- Visy Minimum Standards for PME and People Interaction
- Visy Minimum Standards for Powered Mobile Equipment.

The TMP provides an overview of these minimum standards.

Key PME systems and operations protocols that contribute to minimising PME noise for AxTRF include:

- Designated PME parking areas where PME not in use must be parked with engine turned off
- All PME are fitted with exhaust mufflers to reduce noise emissions
- A pre-start checklist must be completed prior to PME use daily to ensure all systems functioning correctly
- PME do not use audible reversing warning systems:
  - Forklifts use non-audible safety blue light system that shines a blue spot on the ground
  - FEL uses non-audible reversing light indicator.

## 4.4 Stakeholder Engagement

The EIS for the facility describes that during the facility design, various stakeholders were engaged to identify any specific requirements or concerns that Visy needed to consider for the facility. Stakeholders included a range of government agencies, local council, surrounding businesses and strata management, and a local resident's action group, who were engaged via

meetings, letters, emails and phone calls. As a result, the facility design incorporates a range of strategies that address requirements from government stakeholders and neighbouring community concerns.

Stakeholder feedback was primarily around the areas of traffic access, fire safety, waste management, air quality management, and flooding and stormwater.

The concept design of the facility with all operations fully enclosed within a building and no high noise generating activities meant there was no specific concerns around high noise activities. As a result of the consultation, additional noise design control strategies 2, 3 and 4 identified in Section 4.2 were incorporated into the facility.

## 4.5 Complaints Procedure

Complaints regarding environmental impacts of the facility can be made in a number of ways:

1. Direct to Visy via the phone number provided on the site signage which is a Visy Recycling complaints hotline
2. Via the EPA 'Environment line' phone number
3. Via the DPIE NSW Planning Portal project webpage (<https://www.planningportal.nsw.gov.au/major-projects/project/20936>)

Complaints made to EPA and DPIE may be forwarded to Visy as determined by the EPA and DPIE. A complaint received by Visy is recorded, including the complainant's name, phone number and address (if provided) and description of the issue. The complaint record is then passed onto the Site Manager and put into the site complaints reporting register.

The Site Manager will then undertake (or delegate) an investigation of the issue to determine whether the facility operation is the probable cause. For air quality complaints, the investigation will include obtaining weather and air quality data from nearby OEH and BoM monitoring stations. If action is required from the facility, a contingency plan is developed, including appropriate corrective actions and a timeframe to address the issue. The complainant will be updated on actions taken to resolve the issue as requested and if a contact phone number has been provided. The information will be recorded in the environmental reporting register.

## 4.6 Monitoring

The OEMP provides an overview of monitoring and review of the implementation and objectives of this AxTRF management plans. In summary, the facility is monitored against its environmental objectives and performance through formal and informal site inspections, including an environmental checklist which incorporates relevant statutory management and mitigation controls and other additional measures contained in AxTRF management plans. Where a control or performance indicator is not satisfactory, a review of the controls will be undertaken to determine their effectiveness and, if required, a contingency plan with corrective actions will be developed.

For noise performance issues or complaints, noise monitoring may be undertaken by a noise consultant as required which may include attended noise measurements for sound levels of plant and equipment and noise levels at relevant receiver locations.

The facility EPL 21359 includes a requirement to undertake noise compliance monitoring to verify the noise emission from the facility against the NIA summarised in 3. It is the responsibility of the Site Manager to ensure this is completed.

## GLOSSARY OF ACOUSTIC TERMS

Most environments are affected by environmental noise which continuously varies, largely as a result of road traffic. To describe the overall noise environment, a number of noise descriptors have been developed and these involve statistical and other analysis of the varying noise over sampling periods, typically taken as 15 minutes. These descriptors, which are demonstrated in the graph below, are here defined.

**Maximum Noise Level ( $L_{Amax}$ )** – The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.

**$L_{A1}$**  – The  $L_{A1}$  level is the noise level which is exceeded for 1% of the sample period. During the sample period, the noise level is below the  $L_{A1}$  level for 99% of the time.

**$L_{A10}$**  – The  $L_{A10}$  level is the noise level which is exceeded for 10% of the sample period. During the sample period, the noise level is below the  $L_{A10}$  level for 90% of the time. The  $L_{A10}$  is a common noise descriptor for environmental noise and road traffic noise.

**$L_{A90}$**  – The  $L_{A90}$  level is the noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below the  $L_{A90}$  level for 10% of the time. This measure is commonly referred to as the background noise level.

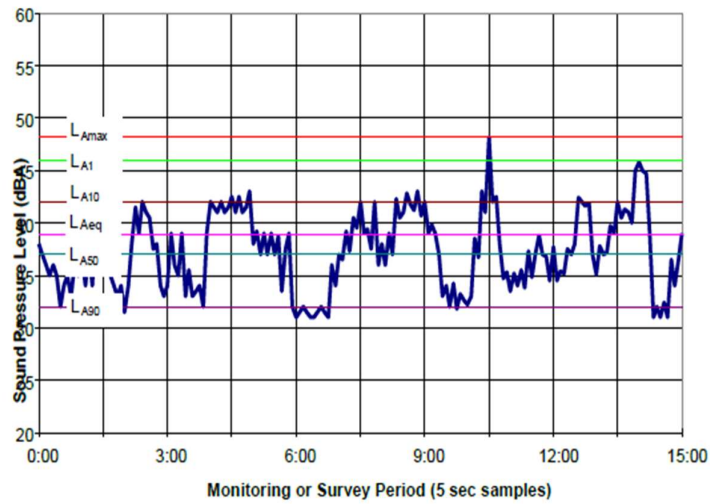
**$L_{Aeq}$**  – The equivalent continuous sound level ( $L_{Aeq}$ ) is the energy average of the varying noise over the sample period and is equivalent to the level of a constant noise which contains the same energy as the varying noise environment. This measure is also a common measure of environmental noise and road traffic noise.

**ABL** – The Assessment Background Level is the single figure background level representing each assessment period (daytime, evening and night time) for each day. It is determined by calculating the 10<sup>th</sup> percentile (lowest 10<sup>th</sup> percent) background level ( $L_{A90}$ ) for each period.

**RBL** – The Rating Background Level for each period is the median value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period – daytime, evening and night time.



Typical Graph of Sound Pressure Level vs Time



Reproduced from *Visy Resource Recovery Facility 112-120 Euston Road, Alexandria – Noise & Vibration Impact Assessment (19258-N vB)*, October 2019, Wilkinson Murray.

# **ATTACHMENT A**

## **AxTRF NOISE MANAGEMENT PLAN EXPERT REVIEW**

30 November 2020

WM Project Number: 19258  
Our Ref: BRR 301120 NMP-Review  
Email: anne.trevena@buildrunrepair.com

Anne Trevena  
Build Run Repair  
Level 11, 2 Southbank Boulevard  
SOUTHBANK VIC 3006

Dear Madam,

**Re: Visy Resource Recovery Facility: 112 - 120 Euston Road, Alexandria**

I, Brian Mendieta an Acoustic Project Engineer from Wilkinson Murray, have reviewed the Visy AxTRF Noise Management Plan (NMP) for the Visy Alexandria Dry Recyclable Transfer Facility. The purpose of the review was to ensure the NMP satisfy the following consent conditions:

*B31(b) include strategies that have been developed with the community for managing high noise generating activities*

*B31(c) describe the community consultation undertaken to develop the strategies in condition B31(b)*

*B31(d) include a complaints management system that would be implemented for the duration of the development.*

Wilkinson Murray is a member of the Association of Australasian Acoustical Consultants. Brian Mendieta has a Master of Acoustic Design Science from University of Sydney. With 10 years' experience in acoustic consulting, Brian has undertaken a wide range of acoustic projects including architectural, environmental, and industrial, occupational and construction noise and vibration monitoring noise assessments. Brian has also been a member of the Australian Acoustic Society since 2017.

I have noted the NMP provides operational noise assessment details as provided in the Wilkinson Murray (WM) Noise and Vibration Impact Assessment Report (reference 19258-N). Details regarding the acoustic design control details and the predicted noise impact on the surrounding receivers is consistent with the findings with the WM's report. As noted in both documents, the site complies with the relevant noise limits at all surrounding receiver locations and therefore there is no high generating noise activities.

Condition B31 (b) and (c) is addressed through the acoustic design of the facility. And as noted in Section 4.4 of the NMP, the community did not raise concerns for high generating noise activities as there was none and was therefore not a concern.

Condition B31 (d) is addressed in Section 4.5 of the NMP. The proposed complaints procedure provides details for making contact to Visy and procedure for record keeping, informing the site manager and investigating the raised issue. We find these procedures to be reasonable and in keeping with managing any noise issues that may arise, but is unlikely.

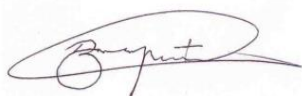
Section 4.6 of the NMP provides a generic noise monitoring recommendation for noise performance issues or after receiving complaints. It states, 'noise monitoring may be undertaken by a noise consultant as required which may include attended noise measurements for sound levels of plant and equipment and noise levels at relevant receiver locations.' The specific noise monitoring procedure to address multiple complaints, or on-going noise complaint, should be determined by a suitably qualified acoustic consultant on a case-by-case basis.

In my professional opinion, I find the Visy AxTRF NMP appropriately addresses the consent conditions, as outlined above.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully

**WILKINSON MURRAY**



**Brian Mendieta**

Project Acoustic Engineer

**Note**

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**AAAC**

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