NOISE IMPACT ASSESSMENT

3/132 NEWTON ROAD
WETHERILL PARK NSW 2164

PREPARED FOR

Goterra Pty Ltd

CONTRACT NO C23 9017
REPORT NO EMS23 0622

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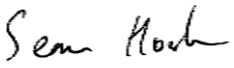
AUTHOR:		Sean Hook MArchSci (Audio and Acoustics) Acoustic Consultant MAAS	Date: 15.06.2023
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1 Introduction

1.1 Project Description

Environmental Monitoring Services Pty Ltd (EMS) was employed by Goterra Pty Ltd to provide a Noise Impact Assessment for the proposed change of use DA for an existing warehouse to be converted to a composting facility processing up to 4,800 tonnes per annum using Soldier Fly technology at warehouse 3, 132 Newton Road, Wetherill Park NSW (the site).

The proposed operating hours for the facility with Planning Secretary's Environmental Assessment Requirements No.: 1765 are:

Internal Production and Processing

- Monday to Friday — All day

Waste Receival

- Mon to Friday — 12:00 to 22:00
- Saturday — 14:00 to 20:00
- Sunday — 05:00 to 12:00

The assessment for the proposed change of use will evaluate the internal and external mechanical plant, waste and delivery/dispatch vehicles entering and egressing the site. The purpose of this Noise Impact Assessment is to investigate the site's noise emissions and compare these levels against an established Noise Criteria.

1.2 Site Location and Surrounding

The site, Unit 3, 132-136 Newton Road, Wetherill Park, NSW 2164, is an industrial IN1 zoned warehouse unit in a complex of eight similar warehouses as part of the Brescia Industrial Estate. In alignment with the Land Use Table contained within the Fairfield City LEP 2013, waste facilities are permissible in General Industrial IN1 zones with consent.

The nearest residential receiver areas are approximately 1.1 km to the west, 1.4 km to the south, and 3 km to the east of the site and therefore residential receivers will not be assessed as geometric spreading during sound propagation of noise emission from the site combined with high existing background levels at the receivers surrounding the industrial zone will result in the emissions being compliant with all relevant standards.

Table 1.1 below displays the surrounding noise receivers to the site.

Table 1.1 – Surrounding Noise Receiver Locations

Receiver	Address	Location in Relation to the Development	Description
I1 Industrial	4/132 Newton Road	West	Adjoining industrial warehouse within Brescia Industrial Estate
I2 Industrial	2/132 Newton Road	East	Adjoining industrial warehouse within Brescia Industrial Estate
I3 Industrial	5/132 Newton Road	South-East	Industrial warehouse within Brescia Industrial Estate
I4 Industrial	6/132 Newton Road	South-East	Industrial warehouse within Brescia Industrial Estate
I5 Industrial	122 Newton Road	South	Industrial warehouse
I6 Industrial	165 Newton Road	North	Industrial warehouse (Wulcan, metals distributor)

Figure 1.1 on the following page displays the development's location and surrounding industrial noise receivers.

Figure 1.1

Map provided by Six Maps

Legends

The Site

Attended Noise Monitor Location

I1, I2 ... Noise Prediction Locations

Site: 3/132 Newton Road, Wetherill Park NSW

Report No.: EMS23 0622

Contract No.: C23 9017

2 Noise Monitoring

2.1 Site Visit, Attended Background Noise Measurement

Attended noise monitoring was conducted on the 25th of March 2021 at the boundary of the adjoining industrial units to the site (Unit 4 & Unit 2), using the Svantek 955 Sound Level Meter (SLM). The calibration of the unit was checked prior to and after monitoring, and no significant drift was found. There was no rainfall during the measurement and wind speeds were within 5 m/s.

The SLM was set to record 'A' weighted statistical Sound Pressure Levels (SPL) using a 'fast response'. The SLM was approximately 1.3 metres above the ground at the locations shown in Figure 1.1.

The SLM collected the short-term L_{Aeq} to determine the project amenity noise levels in accordance with Section 2.4 of the NSW EPA *Noise Policy for Industry*. The L_{Aeq} represents the level of noise equivalent to the energy average of varying noise occurring over a measurement period.

2.2 Monitoring Results

Table 2.1 below displays the short-term existing Sound Pressure Level (SPL) measured at the boundary of the site.

Table 2.1 – Short-term attended measurement

Monitoring Location	Sound Pressure Level ($L_{Aeq, 5minute}$) dB(A)	Observed Noise Sources[1]
Boundary of Industrial Warehouse/Unit 2	64	• Forklifts • Vehicles entering and egressing • Waste Removal Vehicle • Medium Rigid Trucks • Truck Radio
Boundary of Industrial Warehouse/Unit 4	53	

1. No noise emissions were heard from stationary mechanical plant within the driveway area or at the front façade of the warehouses within the Brescia Industrial Estate

3 Noise Criteria

3.1 Planning Secretary's Environmental Assessment Requirement

The NSW Government Department of Planning and Environment required the following noise and vibration assessment to be included in the Environmental Impact Statement (EIS) for SEAR number 1765.

- **noise and vibration** – including:
  - a description of all potential noise and vibration sources during construction and operation, including road traffic noise
  - a noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines
  - a description and appraisal of noise and vibration mitigation and monitoring measures.

3.2 Fairfield City Council

EMS was forwarded the following noise requirements from Goterra Pty Ltd given by the Fairfield City Council:

Noise Impacts

The goal of the project should include design, construction, operation and maintenance of the facility in accordance with relevant EPA policy, guidelines and criteria, and in order to minimise potential impacts from noise.

The EPA expects that potential noise sources are assessed in accordance with the Noise Policy for Industry (EPA 2017), and where required mitigation measures are proposed (e.g. appropriate equipment chosen to minimise noise levels). All residential or noise sensitive premises likely to be impacted by the development must be identified and included in the assessment.

The proposed development may result in an increase in traffic movements. The number of traffic movements associated with the proposal should be quantified and the potential noise impacts associated with these traffic movements need to be assessed in accordance with the NSW Road Noise Policy (DECCW, 2011).

3.3 The NSW EPA Noise Policy for Industry (NPfI)

The NSW EPA's publication *Noise Policy for Industry* (2017) provides guidelines for noise assessment and noise mitigation strategies for levels that exceed noise thresholds. The main aims for this policy are:

- To establish noise criteria that will protect the community from excessive intrusive noise and preserve amenity for specific land uses.
- To use the criteria as the basis for deriving project specific noise levels.
- To outline a range of mitigation measures that could be used to minimise noise impacts.

The NPfI implements an Intrusive Noise Criteria (for residential receivers only) and an Amenity Noise Criteria for residential receivers, the more stringent of the two is utilised.

The NPfI states: *The intrusiveness of an industrial source may generally be considered acceptable if the level of noise from the source (represented by the L_{Aeq} descriptor), measured over a 15-minute period, does not exceed the background noise level by more than 5 dB when beyond a minimum threshold.*

As the nearest residential receivers to the proposed development are more than 1 kilometre from the site and therefore residential receivers won't be assessed in this report.

The Amenity Criteria is used to limit continuing increases in noise by industrial developments.

3.3.1 Industrial Noise Receivers

The recommended amenity noise level, reproduced from Table 2.2 in the NPfI, is relevant to industrial receivers near the proposed facility and is displayed below in Table 3.1.

Table 3.1 - NPfI Noise Emission Criteria – Industrial (External) dB(A)

Type of Receiver	Indicative Noise Amenity	Time of Day	Recommended Amenity Noise Level $L_{Aeq,\ period}$ (external)	Project Amenity $L_{Aeq,period}$ Noise Criterion (external)
Industrial	All	When in use	70	**68**[1]

1. The recommended amenity noise level [recommended amenity noise level – 5 dB] was not 10 dB(A) or more below the existing noise level therefore the project amenity noise level was [recommended amenity noise level – 5 dB]. 3 dB(A) was added to convert from a period level to a 15-minute level as per the NPfI.

3.4 NSW Road Noise Policy

To assess the vehicular noise impact of the proposal upon the surrounding environment, we refer to the criteria defined by the NSW Road Noise Policy (RNP).

Table 3.2 displays the noise criteria given in the RNP for land use developments with potential to create additional traffic on existing roads.

Table 3.2 – Applicable Noise Criteria – Residents surrounding work site

Road Category	Type of project/land	Assessment criteria – dB(A)	
		Day (7am – 10:00pm)	Night (10:00pm – 7am)
Freeway/ arterial/ sub-arterial roads	Existing residences affected by **additional traffic** on existing freeways/arterial/sub-arterial roads generated by land use developments	$L_{Aeq(15hour)}$ 60 (external)	$L_{Aeq(9hour)}$ 55 (external)
Local Roads	Existing residences affected by **additional traffic** on existing local roads generated by land use developments	$L_{Aeq, (1\ hour)}$ 55 (external)	$L_{Aeq, (1\ hour)}$ 50 (external)

The RNP states the following:

- New industrial, commercial or residential developments that generate additional traffic on existing roads are likely to provide limited potential for noise control, because these developments are not usually linked to road improvements. However, strategies to minimise noise from traffic associated with the development should be applied.

  Mitigation that is implemented should be applied to the location along the public road from the development to the location where road traffic noise levels from the development are contained within the existing road traffic noise levels. Examples of applicable strategies include the appropriate location of private access roads, regulating times of use, clustering vehicle movements, using 'quiet' vehicles and using barriers and acoustic treatments. Strategies should be appropriate to the type of development. For example, it is not appropriate or possible to control vehicle types and movements for residential developments but it may be possible when traffic is being generated from an industrial site.

- For **existing residences** and **other sensitive land uses** affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise level should be limited to **2 dB** above that of the corresponding 'no build option'.

3.5 NSW DECC Interim Construction Noise Guideline (2009)

The Noise Criteria will be in compliance with the NSW Department of Environment and Climate Change's *Interim Construction Noise Guideline* (2009) is aimed to manage noise from construction work. The main objectives of the guidelines are:

- To protect the majority of residences and other sensitive land uses from noise pollution most of the time;
- Identify and minimise noise from construction works;
- Applying 'feasible' and 'reasonable' work practices to minimise construction noise; and
- Encouraging construction to be undertaken only during least sensitive noise periods.
-

3.5.1 Commercial and industrial premises

Due to the broad range of sensitivities that commercial or industrial land can have to noise from construction, the process of defining management levels is separated into three categories, outlined below in Table 3.3. The external noise levels should be assessed at the most-affected point within 50 m of the area boundary.

Table 3.3 – Noise Criteria at Commercial Premises

Land Use	Noise Management Level (NML) $L_{Aeq(15\ minute)}$
Industrial premises	**External Noise Level 75dB (A)**
Offices, retail outlets	External Noise Level 70dB (A)
Other businesses that may be very sensitive to noise. Where the noise level is project specific the proponent should undertake a special investigation to determine suitable noise levels on a project-by-project basis; the recommended 'maximum' internal noise levels in AS 2107 Acoustics – *Recommended design sound levels and reverberation times for building interiors* may assist in determining relevant noise levels.	

4 Vibration Criteria

4.1 Structural Damage Criteria

EMS adopts the well-known German Standard DIN 4150:3:2016-12 – *Effects on structures* (below) which gives structural damage vibration criteria for vibration affected buildings based on the type of building occupancy and frequency or vibration. However, the DIN 4150:3:2016-12 allows higher PPV for frequencies above 10 Hz to 100 Hz as PPV with higher frequencies of vibration have lower particle displacement.

Table 4.1 below gives a guideline value for short term vibration velocity at the foundation. Short term vibration is classified as vibrations which do not occur often enough to cause structural fatigue.

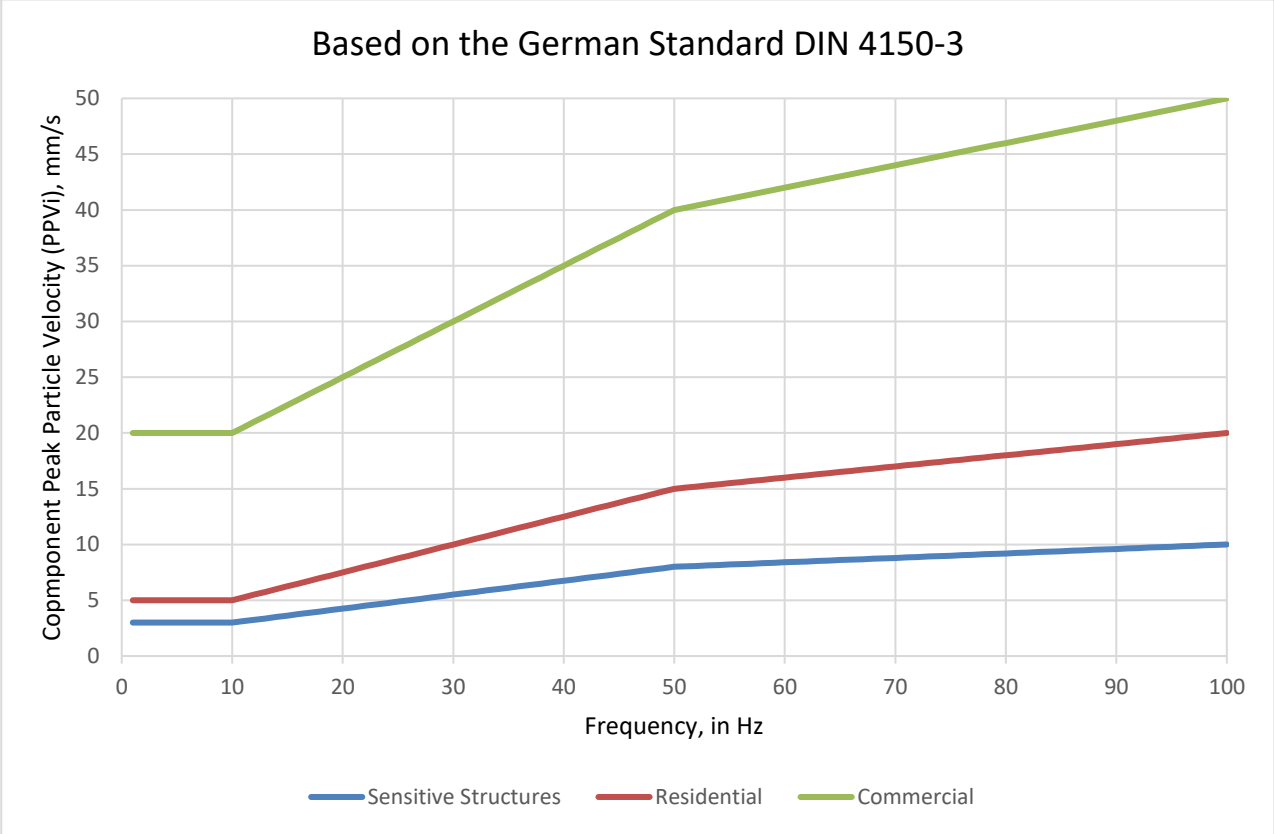
Table 4.1 – Structural Damage – Short Term Vibration (mm/s)

Type of Structure	Guideline values for $v_{i, max}$ in mm/s				
	Foundation, all direction, i = x, y, z, At a frequency of			Topmost floor, horizontal direction, i = x, y	Floor slabs, vertical direction, i = z
	1Hz to 10Hz	10Hz to 50Hz	50Hz to 100Hz[a]	All frequencies	All frequencies
Building use for commercial purposes, industrial buildings and buildings of similar design	**20**	**20-40**	**40-50**	**40**	**20**
Dwelling and buildings of similar design and/or occupancy	5	5-15	15-20	15	20
Structures that because of their particular sensitivity to vibration and are of great intrinsic value (e.g. heritage listed structures)	3	3-8	8-10	8	20

[a] At frequencies above 100 Hz, the guideline values for 100 Hz can be applied as minimum values.

Figure 4.1 below displays the DIN4150-3 PPV limit for the three different types of structures.

Figure 4.1 - DIN4150-3 Graph



4.2 Human Comfort Criteria

When considering the vibration accumulated over a daytime or night-time period the NSW EPA publication *'Assessing Vibration: a technical Guideline',* based on the BS 6472 Standard, gives a recommendation for intermittent vibration. This Guideline covers the appropriate methods and criteria for the assessment of the intrusive vibration on living and working space. The guideline describes the following:

This Guideline covers the appropriate methods and criteria for the assessment of the intrusive vibration on living and working space. The guideline describes the following:

- The characteristics of vibration and associated effects that can cause community disturbance and concern to people, in particular the occupants of buildings.
- Criteria defining values of vibration to protect amenity.
- Procedures for the measurement and evaluation of vibration values and other associated emissions.

The preferred assessment method is the Vibration Dose Value (VDV). A summary of the VDV criteria for human comfort limits are adopted from the EPA's publication *'Assessing Vibration: a technical Guideline* and are presented in Table 4.2 below.

Table 4.2 – Acceptable vibration dose values for intermittent vibration ($m/s^{1.75}$)

Location	Daytime		Night-time	
	Preferred Value	Maximum Value	Preferred Value	Maximum Value
Critical Areas	0.10	0.20	0.10	0.20
Residents	0.20	0.40	0.13	0.26
Offices, Schools, Educational, institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	**0.80**	**1.60**	**0.80**	**1.60**

The EPA's vibration publication also gives the preferred and maximum vibration limits for continuous (e.g. continuous construction or maintenance activity) and impulsive (e.g. occasional loading and unloading, or dropping of heavy equipment) types of vibration, seen below in Table 4.3.

Table 4.3 – Acceptable continuous and impulsive vibration

Location	Vibration Type	Time	RMS Acceleration (m/s^2)		RMS Velocity (mm/s)		Peak Velocity (mm/s)	
			Preferred Value	Maximum Value	Preferred Value	Maximum Value	Preferred Value	Maximum Value
Critical Areas	Continuous	Day- or night-time	0.005	0.01	0.10	0.20	0.14	0.28
	Impulsive							
Residents	Continuous	Daytime	0.01	0.02	0.2	0.4	0.28	0.56
		Night-time	0.007	0.014	0.14	0.28	0.2	0.4
	Impulsive	Daytime	0.3	0.6	6.0	12.0	8.6	17.0
		Night-time	0.1	0.2	2.0	4.0	2.8	5.6
Offices	Continuous	Day- or night-time	0.02	0.04	0.4	0.80	0.56	1.1
	Impulsive		0.64	1.28	13.0	26.0	18.0	36.0
Workshops	**Continuous**	**Day- or night-time**	**0.04**	**0.08**	**0.8**	**1.6**	**1.1**	**2.2**
	Impulsive		**0.64**	**1.28**	**13.0**	**26.0**	**18.0**	**36.0**

5 Noise Assessment

The noise predictions were carried out in SoundPLAN (version 9.0). The ground absorption was given a reflective surface of 0.05 surrounding the site and receivers. Receiver locations were modelled adjacent to the most affected façade at 1.5 metres above ground.

The acoustic model had both garage shutter doors open. The warehouse is constructed from precast concrete walls and therefore internal to internal noise transmission paths were not assessed.

The noise predictions were based on the assumptions mentioned below. The main noise sources from the proposed development that may potentially affect the nearby noise receivers are as follows:

- Mechanical Plant
    - Air Conditioner Plant
    - Exhaust Fans (Internal and External)
    - Processing Plant
        - 9 x Air Compressors (one for each MIBs)
        - Depackager
        - Vibratory Sifter
- Mobile Plant
    - Excavator
    - 2 x Electric Forklifts

- Vehicle Movements
    - Organic Waste Deliveries
    - Waste Removal
    - Larvae Deliveries
    - Dispatch Vehicles

5.1 Mechanical Plant

5.1.1 Air Conditioner Plant

EMS understands that the warehouse area will not be serviced by air conditioning plant, only the office areas will be serviced by existing plant with the condenser/compressors located on the mezzanine level. EMS assumes the "outdoor" unit is similar to the Daikin Industries LTD RZQ160LV1 having a cooling and heating Sound Pressure Level (SPL) of **57 dB(A)** and **59 dB(A)** respectively at 1 metre.

5.1.2 Exhaust Fans

Exhausts fans are required for the site in the following areas shown below in Table 5.1. At the time of the report the fan's make and model were not determined and therefore the Sound Power Levels (SWL) were assumed based on their required flow rates. EMS assumes all the fans will be axial.

Table 5.1 – Exhausts fans and assumed SWL

Area	Minimum Flow Rate m^3/h	Assumed Sound Power Level dB(A)
Waste Receival (internal)	> 5,500	78[1]
Processing (internal)	> 6,500	78[1]
Storage (internal)	> 3,000	66[2]
Rooftop x 2 fans (external, north)	> 10,000 (each)	92 (each)[3]

1. Based on the Cyclo V61-116-3P
2. Based on the PowerLine Ultra Series PUE506ER
3. Based on the Cyclo V61-404-3P

5.1.3 Processing Plant

- Air Compressors

  Each of the 9 MIBs containers will have a Chicago Hush 150 air compressor with an individual Sound Power Level (SWL) of 71 dB which is assumed to be A-weighted.

- Depackager

  EMS was provided with the data sheet for the Dominator (Depackager) manufactured by Rowan Food and Biomass Engineering Ltd which states:

  This machine alone should not produce more than 80dB, however as part of a system it may produce noise in excess of 80dB. In which case an operator should take suitable safety precautions in line with national safety regulations.

It is unknown whether this is referring to a Sound Power Level (SWL) of Sound Pressure Level (SPL) or what frequency weighting is used. As a conservative measure EMS assumes this is referring to a SPL at 1 metre, resulting in a A-weighted Sound Power Level of 88 dB.

- Vibration Sifter (Linear Vibrating Screen)

  EMS was provided with the data sheet for the Linear Vibrating Screen (DZSF) manufactured by XINXIANG YONGQING SCREEN MACHINE CO., LTD which states:

  The low energy consumption and low noise (73-80 dB) make the machine quite eco-friendly.

  It is unknown whether this is referring to a Sound Power Level (SWL) of Sound Pressure Level (SPL) or what frequency weighting is used. As a conservative measure EMS assumes this is referring to a SPL at 1 metre, resulting in a A-weighted Sound Power Level of 88 dB.

5.1.4 Mobile Plant

EMS understands the following mobile plant will be utilised within the warehouse facility displayed below in Table 5.2 with their corresponding Sound Power Levels (SLW).

Table 5.2 – Mobile Plant within facility

Mobile Plant Item	Make/Model	Sound Power Level dB(A)
Excavator	Kubota 5 Tonne	95
Electric Forklift	Hyster J.25GX	97[1]

1. The noise emissions from an electric forklift are lower than fuel powered forklift, however, the reverse beeper alarm for the forklift was modelled as 97 dB(A) according to the BBS-tek – AO935.

5.2 Vehicle Movements

5.2.1 Organic Waste Delivery and Waste Removal

Organic waste deliveries will be contracted to Cleanaway trucks and will backhaul the proposal's waste at the same time. For a previous assessment EMS has measured the Sound Power Level of a Cleanaway truck driving at 10 km/h to be 105 dB(A).

Table 5.3 below outlines the proposed Cleanaway truck schedule.

Table 5.3 – Cleanaway Truck Schedule

Day	No. of Front Loadings Trucks (6.4T)	No. of Rear Loadings Trucks (4.7T)	Daily Tonnage
Monday to Friday	2 per day	2 per day	22.2
Saturday	1 per day	2 per day	15.8
Total vehicle movements	1 per day	2 per day	15.8

5.2.2 Larvae Delivery and Produce Dispatch

The development proposes a 3 Tonne flatbed Goterra truck for the delivering of larvae to the site and dispatchment of the produce (frass and protein) with one delivery and one dispatch per week.

As conservative measure the delivery/dispatch vehicle was modelled as a line source having a SWL of 63 dB(A)/m according to the Hessian truck study 2005.

5.2.3 Acoustic Model Vehicle Frequency

For the model both 1 x Cleanaway truck and the 3 Tonne Goterra truck entered and exited the proposal within 1 hour.

5.2.4 Construction Noise

EMS was informed by Head of Operations Volant Wills that no construction will be taking place onsite other than the fixing of electrical trays to the walls of the building.

In accordance with the Australian Standard 2436-2050 (R2016) – *Guide to Noise Control on Construction, maintenance and Excavation and construction sites* electric hand tools have a SWL 102 dB(A).

6 Vibration Assessment

EMS was informed that there are two proposed onsite pieces of equipment that will generate vibration, namely:

- Depackager
- Vibratory Screening/Sifter Machine

6.1 Vibration Measurement

The vibration measurement was conducted at Goterra's ACT facility at 14 Arnott Street Hume on the 12th of June 2023 between approximately 2:30 pm and 5:30pm on their in-situ Depackager and Vibratory Screening/Sifter Machine using the Svantek 958 sound & vibration analyser (monitor) with accelerometer. The monitor was programmed to record the Peak Particle Velocity (PPV) and Vibration Dose Values (VDV) in 30 second intervals.

The accelerometer of the Svantek Sv 958 was mounted to the concrete floor slab and secured using heated beeswax with the Radial (X) axis of the accelerometer parallel to the normal of the vibratory plant (front or side) being measured.

Table 6.1 below displays the maximum PPV per channel over for each measurement.

Table 6.1 – Peak Particle Velocity Results

Plant	Orientation to radial axis of accelerometer	Measurement distance (metres)	Maximum Peak Particle Velocity (mm/s)		
			X	Y	Z
Depackager	front	3	0.06	0.06	0.08
	side		0.06	0.07	0.04
Vibratory Sifter	front		0.10	0.08	0.28
	side		0.07	0.32	0.17

EMS notes the ACT Goterra Depackager was observed in the photos of the measurements to have no vibration isolation pads whilst the Vibratory Sifter was observed to have padding.

Based on the Vibration Dose Value measurements should both plant items operate continuously over a 24-hour period at the proposed Wetherill Park facility the Human Comfort Criteria will not be exceeded at the adjacent receiver warehouses.

7 Predicted Noise Levels

7.1 The NSW EPA Noise Policy for Industry Noise Predictions

7.1.1 Industrial Receiver Predicted Noise Levels

Table 7.1 below shows the precited noise levels from the daytime at the surrounding industrial noise receivers.

Table 7.1 – Predicted Noise Emissions at Industrial Receivers (NPfI criteria)

Commercial Receiver Location (external)	Assessment Period	EPA's NPfI $L_{Aeq,15\ minute}$ Noise Criteria (dBA)	Noise Source	Predicted Noise Level (dBA)	Complies
I1 Industrial	When in use	68	Warehouse (internal)	54	✓
			Rooftop Mechanical Plant	36	
			Delivery/Dispatch Vehicles	50	
			Cumulative Noise Level	55	
I2 Industrial			Warehouse (internal)	46	✓
			Rooftop Mechanical Plant	33	
			Delivery/Dispatch Vehicles	54	
			Cumulative Noise Level	55	
I3 Industrial			Warehouse (internal)	50	✓
			Rooftop Mechanical Plant	34	
			Delivery/Dispatch Vehicles	56	
			Cumulative Noise Level	57	
I4 Industrial			Warehouse (internal)	42	✓
			Rooftop Mechanical Plant	36	
			Delivery/Dispatch Vehicles	55	
			Cumulative Noise Level	55	
I5 Industrial			Warehouse (internal)	55	✓
			Rooftop Mechanical Plant	36	
			Delivery/Dispatch Vehicles	45	
			Cumulative Noise Level	56	
I6 Industrial			Warehouse (internal)	36	✓
			Rooftop Mechanical Plant	50	
			Delivery/Dispatch Vehicles	23	
			Cumulative Noise Level	50	

7.2 Traffic Noise Assessment

EMS was not provided with the traffic route for the Cleanaway trucks nor for the Goterra delivery/dispatch vehicle(s).

The Horsley Drive provides vehicle access link between the large industrial area in which the site located and the Westlink M7. Based on the NSW Roads & Maritime *The Horsley Drive Upgrade Environmental Investigation Report (Appendix E – Traffic Impact Assessment Report)* from June 2017 the average weekday daily traffic volume at the Horsley Drive mid-block 1 (east of Ferres Road) is 38,136, with 7,009 (18.4%) being heavily vehicles.

Even if the existing number of heavy vehicles traveling past the nearest residential receivers, having the same truck route as the proposal's, was significantly less than the numbers counted from The Horsley Drive, for example 500 heavy vehicles, the proposal would need to add an extra 286 vehicles to the road to cause a 2 dB increase in noise levels.

The RNP states in Section 3.4 *"In assessing feasible and reasonable mitigation measures, an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person"*.

Whether or not $L_{Aeq,\ 9hour}$ 55 dB(A) during 10pm – 7am is exceeded the RNP gives a limit of 2 dB above the existing traffic noise level for additional traffic noise on existing roads generated by land use developments, which will not be exceeded.

7.3 Construction Noise Assessment

Based on the Sound Power Level of the tools required to fix trays to the walls and them being used in an enclosed space the NSW DECC *Interim Construction Noise Guideline* (2009) will not be exceeded at the surrounding industrial noise receivers.

8 Recommendations

The predicted noise emissions from the operational use of the site were found to be within the relevant criteria, however, EMS still give the following noise and vibration recommendations:

- Staff should be advised to make minimal noise emissions when arriving and leaving staff parking spaces.
- All onsite vehicles should not be left idling.
- The Vibratory Sifting plant should be installed on vibration isolation rubber pads similar to those used in the ACT Goterra facility. The Depackager does not require vibration isolation pads, the frame can be drilled directly into the slab.

9 Conclusion

A Noise Impact Assessment was carried out for the change of use DA for the proposed composting facility located at 3/132 Newton Road, Revesby.

In Section 6 the results from the vibration measurement of vibratory plant from Goterra's ACT facility are presented.

In Section 7 of this report the Noise Impact Assessment predicted the noise emissions generated from within the facility and by the delivery/dispatch vehicles at the nearby industrial noise receivers and were found to comply with the Fairfield City Council and NSW EPA Noise Criteria.

Recommended noise management practises are found in Section 8 of this report.

References

NSW EPA Publication – *Noise Policy for Industry* (2017)

NSW DECC *Interim Construction Noise Guideline* (2009)

NSW ECCW NSW Road Noise Policy (2011)

NSW DE&C publication Environmental Noise Management *Assessing Vibration: a technical guideline* (2006)