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Health, Safety
& Noise Specialists

Environmental Noise Assessment

Tyrecycle – Erskine Park
1/21 Grady Cres, Erskine Park NSW 2759

July 2025
Job Ref: J22971

Health, Safety & Noise Specialists

Simplifying Safety and Environmental Compliance

TABLE OF CONTENTS

SUMMARY I
1 INTRODUCTION 2
2 METHODOLOGY 3
3 SITE LOCATION AND SURROUNDINGS 7
4 OBSERVATIONS 8
5 MEASUREMENT RESULTS 14
6 NOISE MODELLING 16
7 CONCLUSION 18
APPENDIX I – NOISE CONTOUR MAP 19
APPENDIX II – HOURLY WEATHER DATA 21
APPENDIX III – GLOSSARY 36

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Job Ref: N22971 Environmental Noise Assessment Tyrecycle Erskine Park July 2025 V1

Our Accreditations

We are committed to continuously improving the quality of our business. Through accreditation we ensure that our processes meet all regulatory requirements and we provide a quality service to our clients.

Environmental Approved ISO 14001 — ISO 14001: 2015

OH-SMS Approved ISO 45001 — ISO 45001

Quality Approved ISO 9001 — AS/NZS ISO 9001: 2015

SUMMARY

Between 7 and 9 July 2025, JTA Health, Safety & Noise Specialists performed an Environmental Noise Assessment at the Tyrecycle Recycling Facility at 1-21 Grady Crescent (the subject site) located in Erskine Park, NSW. The Environmental Noise Assessment was performed in accordance with the NSW Noise Policy for Industry: 2017 and the requirements of the EPL Licence.

Operational levels were obtained, and the results were compared to the EPL Licence criteria to determine compliance. Based on the measurements and predicted noise model results, the facility was found to be compliant during the day, evening and night-time periods.

Note: It is recommended that the site use dynamic adjustment and quacker/chirp alarms/alerters to reduce potential impacts from yard operations.

It is also recommended that the noise emissions from the site extraction system be investigated, particularly at the 315Hz 1/3 Octave band. It is recommended that an attenuator or the like be introduced to reduce the tonal noise emissions off-site.

1 INTRODUCTION

Between 7 and 9 July 2025 JTA Health, Safety & Noise Specialists performed an Environmental Noise Assessment at the Erskine Park Facility of Tyrecycle (the subject site). The Environmental Noise Assessment was commissioned by Peter Scioscia of Tyrecycle.

The Environmental Noise Assessment was performed in accordance with the NSW Noise Policy for Industry: 2017 and the requirements of the Environment Protection Licence.

The Environmental Noise Assessment includes the following:

- Measurement of operational noise levels (L_{Aeq}) generated by the subject site at the nearest noise-sensitive locations relative to the subject site during the day, evening and night-time periods;
- Measurement of operational noise sources (L_{Aeq}) at the subject site. The measurements were performed during the daytime.
- Prediction of the effective noise levels at noise-sensitive locations to determine compliance with the licence noise limits.
- Report detailing the conditions during the assessment, the results of the assessment, a comparison with the relevant noise limits specified in the EPL Licence and if/where required, recommendations for noise control measures.

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2 METHODOLOGY

2.1 Noise Emission Criteria

The EPL licence sets the noise emission criteria for the subject site. Noise emission measurements are to be taken at the following properties:-

- Point 1: 22 Regulus Street.
- Point 2: 28 Shaula Crescent.
- Point 3: 116 Weaver Street.

Figure 2.1 shows the measurement locations relative to the subject site.

Figure 2.1 Subject Site, Measurement Locations and Surrounding Environment.

The EPL licence states the following conditions with regard to noise emissions from the facility:

"L3.1 POINT 1,2,3

Noise Emission Criteria			
Period	**Measurement Parameter**	**Measurement Frequency**	**Noise Level dB(A)**
Day	Day- $L_{Aeq\ 15\text{-}min}$	Yearly	42
Evening	Evening - $L_{Aeq\ 15\text{-}min}$	Yearly	42
Night	Night - $L_{Aeq\ 15\text{-}min}$	Yearly	42
Night	L_{AFmax}	Yearly	56

L3.2 For the purpose of condition L3.1:

a) Day means the period from 7 am to 6 pm Monday to Saturday and the period from 8 am to 6 pm Sunday and public holidays.
b) Evening means the period from 6 pm to 10 pm.
c) Night means the period from 10 pm to 7 am Monday to Saturday and the period from 10 pm to 8 am Sunday and public holidays.

L3.3 Noise-enhancing meteorological conditions

a) Unless referred to in condition L3.3 (b), the noise limits that apply are the noise limits in condition L3.1 plus 5 dB.
b) The noise limits set out in condition L3.1 apply under the following meteorological conditions:

Assessment period	Meteorological Conditions
Day	Stability Categories A, B, C and D with wind speeds up to and including 3 m/s at 10 m above ground level
Evening	Stability Categories A, B, C and D with wind speeds up to and including 3 m/s at 10 m above ground level
Night	Stability Categories A, B, C and D with wind speeds up to and including 3 m/s at 10 m above ground level; or Stability category E and F with wind speeds up to and including 2 m/s at 10 m above ground level

L3.4 For condition L3.3:

a) The meteorological conditions are to be determined from meteorological data obtained from the meteorological weather station identified as Bureau of Meteorology AWS at Horsley Park
b) Stability category shall be determined using the following method from Fact Sheet of the Noise Policy for Industry (NSW, EPA,2017) - Use of sigma-theta data (section D1.4)

L3.5 To assess compliance:

a) With the $L_{Aeq\ 15\text{-}min}$ or the L_{AFmax} noise limits in condition L3.1 and L3.3, the noise measurement equipment must be located:

   i. Approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to premises; or where applicable,
   ii. in an area within 30 metres of a residence facade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable,
   iii. in an area within 50 metres of the boundary of a National Park or Nature Reserve, (iv) at any other location identified in condition L3.1

b) With the $L_{Aeq\ 15\text{-}min}$ or the L_{AFmax} noise limits in condition L3.1 and L3.3, the noise measurement equipment must be located:

   i. At the reasonably most affected point at a location where there is no residence at the location; or, (ii) at the reasonably most affected point within an area at a location prescribed by condition L3.5 (a).

L3.7 For the purpose of determining the noise generated from the premises, the modifying factor corrections in Table C1 in Fact Sheet C of the Noise Policy for Industry (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.

L3.8 Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

M1.3 The following records must be kept in respect of any samples required to be collected for this licence:

a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) The name of the person who collected the sample.

M2 Weather monitoring

M2.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in Columns 2, 3, 4 and 5, respectively.

POINT 1,2,3

Weather Sampling Method				
Parameter	**Sampling method**	**Units of measure**	**Averaging period**	**Frequency**
Temperature at 2 metres	AM-4	Celsius	1 hour	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	15 minutes	Continuous
Wind Speed	AM-2 & AM-4	metres per second	15 minutes	Continuous
Sigma Theta	AM-2 & AM-4	Degrees	15 minutes	Continuous
Rainfall	AM-4	millimetres	15 minutes	Continuous
Relative humidity	AM-4	percent humidity	1 hour	Continuous

M5 Other monitoring and recording conditions

M5.1 Attended noise monitoring must be undertaken in accordance with condition L3.5 and must:

1. Occur annually in a reporting period.
2. Occur at each location in condition L3.1.
3. Occur during each day, evening and night period as defined in the Noise Policy for Industry for a minimum of:

   - 1.5 hours during the day.
   - 30 minutes during the evening; and
   - 1 hour during the night.

4. Occur for three consecutive operating days''

2.2 Measurement Locations and Equipment.

Measurements were conducted at the following noise-sensitive locations:-

- Point 1: 22 Regulus Street
- Point 2: 28 Shaula Crescent
- Point 3: 116 Weaver Street

The measurement of sound pressure levels was performed using a Larson Davis Lxt Class 1 sound level meter (SN 0004097- calibration due 08/12/2025), a Svantek 971 Class 1 sound level meter (SN 61520 -

calibration due 26/08/2026) and an Nti XL2 sound level meter (SN A2A-06798-E0 – calibration due 05/02/2026. The sound level meters have built-in real-time integrating/averaging and 1/3 octave band facilities. The sound level meters were positioned outdoors, fixed to a tripod approximately 1.5 meters above ground level at least 4 meters from any reflective surface. The sound level meters were calibrated prior to and following the assessment using a Svantek SV36 external acoustic calibrator (SN 109934 – calibration due 17/01/26). No significant drift in calibration was measured.

Where possible, extraneous noise events were excluded using the back-erase/pause function of the sound level meters. Note, there was generally a constant hum of traffic noise from the surrounding highway at all locations, though the noise level varied. In addition, there was significant noise from adjacent industrial premises during the measurements. During the evening and night time measurements, it was difficult to ascertain which sites were generating the extraneous noise as there was no sightline to the noise sources.

As per the Noise Policy, to minimise the impact of extraneous events, L_{A90} values have been used where appropriate, where the difference between the source L_{Aeq} and L_{A90} is small for the evening and night periods.

3 SITE LOCATION AND SURROUNDINGS

The subject site is located at 1-21 Grady Crescent, Erskine Park, NSW.

Industrial areas bound the subject site to the east, west and south. To the north is an open vegetated corridor, and some residences are located at 330m north of the subject site.

Figure 3.1 below provides an aerial photograph of the local area.

Figure 3.1 Subject Site and Surrounding Environment.

4 OBSERVATIONS

- Weather conditions experienced during the attended measurements were generally fine with light winds. Measurements during periods of showers or elevated wind periods have been excluded. The daily weather observations from Horsley Park Equestrian Centre AWS (station 067119) are summarised in Table 4.1 below. 10-minute data for the measurement periods are shown in the Appendices.

Table 4.1: Daily Weather Observations

Date	Temperature °C		Rain	9 am rh%	Wind 9 am		3 pm rh%	Wind 3 pm	
	Min	Max	mm		dir	Speed km/h		dir	speed km/h
7/07/2025	5.8	16.4	0	83	N	2	54	WSW	7
8/07/2025	4.6	15.7	0	87	NNW	4	58	N	9
9/07/2025	6.6	19.1	0	63	N	4	45	N	7

At the noise-sensitive receiver measurement points, the following observations were made.

- The main noise source in the area primarily consisted of traffic noise from the trucks on the adjacent roads servicing the nearby industrial sites and on the highway. Additionally, there was some local traffic noise, as well as noise from trucks, forklifts, and crane movements, from commercial operations adjacent to the subject site.
- New adjacent industrial sites have been developed since the last noise survey (2024)
- There was wildlife noise from frogs, birds, and insects during the measurements. This was most notable at 116 Weaver Street.
- There was intermittent noise from passenger aircraft overhead.
- The extraneous traffic noise from the highway and larger roads was considerable and varied in volume over the measurement period.
- Tonal and broadband forklift/truck alerters were noted as audible at all measurement locations and during all measurement periods. During the daytime, forklift movements from the adjacent sites were noted. During a site visit during the daytime, forklift and truck operations were observed in the yard and forklift operations were observed inside the subject site building.
- According to site personnel, the site is shut to external deliveries from 3pm to 8am, so there is limited yard activity during the evening and night-time period. Note that personnel have commented that there are a couple of truck deliveries during the night-time period for unloading from regional suppliers. There are few deliveries after 3pm. All loading and unloading by forklift takes place within the premises and not externally.
- Both tonal and 'quacker' beacons were observed to be used for trucks and forklift movements on site.
- Low frequency industrial hum audible at 28 Shaula Crescent during all measurements.

- Due to the level of extraneous noise sources at noise-sensitive locations from traffic, wildlife (frogs and birds), typical suburban activities/noises and operations at adjacent industrial facilities, direct measurement of facility noise emissions at noise-sensitive locations was not always able to be obtained. Therefore, measurements of individual site noise sources were undertaken to obtain sound power data to predict the noise contribution of the site at the noise-sensitive locations.
- The subject site building construction consists of a concrete slab and concrete wall to 2m approx, with metal sheet profile panels above and a metal sheet roof.
- The operational noise sources observed on site consisted of the following:
    - Trucks entering and exiting the site.
    - Forklift activity.
    - Plant noise.
- Observations during the attended measurements are summarised below:-

Date	Location	Period	Observations
07/07/2025	116 Weaver Street	Day	Alerters Truck with Jake brakes Planes overhead Dog barking Industrial noise from adjacent site Wildlife: birds, frogs Cars accelerating in distance. Industrial banging at adjacent site Motorbikes Distant traffic
07/07/2025	28 Shaula Crescent	Day	Metal dragging noise from adjacent industrial site. Local traffic Industrial hum (tone at 315Hz) Truck horn Aircraft overhead Distant traffic
07/07/2025	22 Regulus Street	Day	Alerters, local traffic Noise from adjacent site loading dock: trucks loading and moving. Moving containers at an adjacent site Drilling from construction at nearby house site Birds, Dogs barking, Distant traffic Planes overhead
07/07/2025	116 Weaver Street	Evening	Frogs 2k-4kHz Industrial ventilation noise constant Constant distant traffic Local traffic Alerters Birds
07/07/2025	28 Shaulua Crescent	Evening	Industrial hum (tone at 315Hz) Intermittent Birds Constant Traffic Constant Low-level frogs

Date	Location	Period	Observations
07/07/2025	22 Regulus Street	Evening	Alerters Dogs barking Distant traffic very noisy Trucks Planes overhead Birds
07/07/2025	22 Regulus Street	Night	Alerters Dogs barking Distant traffic
07/07/2025	28 Shaula Crescent	Night	Alerters - tonal and chirp for 2 mins Planes overhead Dogs barking Distant and Local traffic Truck Jake braking Frogs
07/07/2025	116 Weaver Street	Night	Truck traffic is very noisy Alerters, Local traffic Plane, Dogs barking Frogs
08/07/2025	116 Weaver Street	Day	Highway noise dominant Dogs barking Birds, Frogs Local traffic Planes overhead Dirt bike motorcycles on easement Alerters
08/07/2025	28 Shaula Crescent	Day	Moving Industrial equipment in the adjacent site yard Industrial banging from adjacent site yard Planes overhead Sirens Dog barking Alarm bell ringing Birds, Dirt bikes Washing on adjacent site and works in yard
08/07/2025	22 Regulus Street	Day	Truck air brakes, Planes overhead Birds, Local and distant traffic noise Tonal hum is not as present or absent as the previous day Grinding on adjacent site Dirt Bikes Hammering on the adjacent site Loading dock noise at adjacent site Banging and alerters at adjacent site Dogs barking
08/07/2025	116 Weaver Street	Evening	Lots of frog noise Local and constant distant traffic noise No audible noise from industrial site Dogs barking Planes overhead Local and distant traffic

Date	Location	Period	Observations
08/07/2025	28 Shaula Crescent	Evening	Audible tone from industrial site Constant distant traffic Intermittent local traffic Trucks using jake breaks Planes overhead Motorbikes
08/07/2025	22 Regulus Street	Evening	Local traffic Some light wind Faint hum Residents entering Motorcycle, Planes overhead Alerters Dogs barking Distant traffic Dogs barking
08/07/2025	22 Regulus Street	Night	Faint tone from industrial site Constant distant traffic Truck braking Alerters Planes overhead Birds Motorbike.
08/07/2025	28 Shaula Crescent	Night	Low-level breeze Tonal hum from industrial site Dogs barking Local traffic Planes overhead Birds Motorbikes Birds intermittent Frogs Distant traffic constant
08/07/2025	116 Weaver Street	Night	Breeze Dogs barking Local traffic Planes overhead Motorbikes Birds intermittent Frogs constant Distant traffic constant
09/07/2025	116 Weaver Street	Day	Birds chipping Airplane passing Cars driving into the neighbourhood Increasing sound of frogs + birds, trucks and planes passing by Resident with a bike and personal radio Heard forklifts/trucks beeps from a distance
09/07/2025	28 Shaula Crescent	Day	Branch cutting Hammering from a distance Plane from a distance Reverse beeps Resident motorbike
09/07/2025	22 Regulus Street	Day	Alerters Birds Trucks and distant traffic are constant Banging in yard at adjacent site Plane overhead Construction at nearby house - workers on smoko

Date	Location	Period	Observations
			Digger at nearby house Sawing at the nearby house Dogs barking Low-level hum Truck in adjacent site loading dock
09/07/2025	116 Weaver Street	Evening	Lots of distant traffic Lots of frogs Faint Industrial hum Planes overhead Distant truck Alerters Motorcycle, Dogs barking Local car accelerating,
09/07/2025	28 Shaula Crescent	Evening	Constant distant traffic Some frogs Tonal in industrial hum is audible when a very low background level is present Birds, Dog barking Planes overhead Trucks using Jake brakes Car accelerating Motorbike Alerters v clear
09/07/2025	22 Regulus Street	Evening	Noticeable Industrial hum Distant traffic Intermittent birds Intermittent frogs Planes overhead Dogs barking Distant traffic Local traffic Horn, Birds, Residents Alerters
09/07/2025	22 Regulus Street	Night	Alerters, Distant traffic Dogs barking Some frogs Trucks Motorbikes in the distance Birds, Sirens
09/07/2025	28 Shaula Crescent	Night	Low tonal hum Constant distant traffic is noisy Birds Dogs Local car Alerters Local car Car accc Frogs

Date	Location	Period	Observations
09/07/2025	116 Weaver Street	Night	Lots of traffic noise Lots of frogs noise No Industrial noise. Lots of extraneous noise Local Car Local car accelerating, Local bus Dogs barking Cars, truck Birds

5 MEASUREMENT RESULTS

Table 5.1 - Attended Noise Measurement Results -2025				
Period	**Parameter**	**Measured Level dB(A)**	**Noise Limit dB(A)**	**Result/ Comment**
Point 1 – 22 Regulus Street				
(07/07 15:20-16:40) Day (08/07 11:00-12:30) Day (09/07 12:40-14:10) Day	$L_{Aeq\ 15\text{-}min}$	41 40 40	42	Pass Pass Pass
(07/07 21:00-21.30) Evening (08/07 20:45-21:15) Evening (09/07 21:00-21:30) Evening	$L_{Aeq\ 15\text{-}min}$	(43[1,2]) 37 40	42	Pass Pass Pass
(07/07 06:00-07:00) Night (08/07 01:50-02:50) Night (09/07 00:30-01:30) Night	$L_{Aeq\ 15\text{-}min}$	42 37 40	42	Pass Pass Pass
(07/07 22:00-23:00) Night (08/07 22:00-23:00) Night (09/07 22:00-23:00) Night	L_{AFmax}	51 52 54	56	Pass Pass Pass
Point 2 – 28 Shaula Crescent				
(07/07 15:20-16:40) Day (08/07 11:00-12:30) Day (09/07 12:40-14:10) Day	$L_{Aeq\ 15\text{-}min}$	42 42 40	42	Pass Pass Pass
(07/07 21:00-21.30) Evening (08/07 20:45-21:15) Evening (09/07 21:00-21:30) Evening	$L_{Aeq\ 15\text{-}min}$	41 40 42	42	Pass Pass Pass
(07/07 06:00-07:00) Night (08/07 01:50-02:50) Night (09/07 00:30-01:30) Night	$L_{Aeq\ 15\text{-}min}$	41 38 (43[1,2])	42	Pass Pass Pass
(07/07 22:00-23:00) Night (08/07 22:00-23:00) Night (09/07 22:00-23:00) Night	L_{AFmax}	53 52 53	56	Pass Pass Pass
Point 3 – 116 Weaver Street				
(07/07 15:20-16:40) Day (08/07 11:00-12:30) Day (09/07 12:40-14:10) Day	$L_{Aeq\ 15\text{-}min}$	41 42 39	42	Pass Pass Pass
(07/07 21:00-21.30) Evening (08/07 20:45-21:15) Evening (09/07 21:00-21:30) Evening	$L_{Aeq\ 15\text{-}min}$	41 37 42		Pass Pass Pass
(07/07 06:00-07:00) Night (08/07 01:50-02:50) Night (09/07 00:30-01:30) Night	$L_{Aeq\ 15\text{-}min}$	40 37 41	42	Pass Pass Pass
(07/07 22:00-23:00) Night (08/07 22:00-23:00) Night (09/07 22:00-23:00) Night	L_{AFmax}	52 49 54	56	Pass Pass Pass

1. Measurements in brackets have been excluded from assessment due to extraneous noise during measurement.
2. Exceedances of less than 2dB have been allocated as a minor exceedance.

The results for Noise Policy for Industry Fact Sheet C: Corrections for annoying noise characteristic shown below:-

Table 5.2 Corrections for annoying noise characteristic

Factor	Assessment/ measurement	Application	Correction	Comments
Tonal noise	One-third octave band analysis using the objective method for assessing the audibility of tones in noise – simplified method (*ISO1996.2-2007).* – *Annexe D*).	Level of one-third octave band exceeds the level of the adjacent bands on both sides by: • 5 dB or more if the centre frequency of the band containing the tone is in the range 500–10,000 Hz • 8 dB or more if the centre frequency of the band containing the tone is in the range 160–400 Hz • 15 dB or more if the centre frequency of the band containing the tone is in the range 25–125 Hz.	5 dB	No tonal noise from site internal operations was observed at the measurement points. Potential tonal noise from trucks, reversing beepers, forklift alerters and reversing beepers operating in the yard. Noise from alerters was audible during all measurement periods and at all locations. Tonal noise would generally be in the range of 160-1500Hz. However, 5 dB or 8dB octave band level differences were not discernible in the 1-minute time history samples. Note a significant number of trucks and reversing beepers operating in the adjacent industrial sites, as well as the subject site.
Low-frequency noise	Measurement of source contribution C-weighted and A-weighted level and one-third octave measurements in the range 10–160 Hz	Measure/assess source contribution C- and A-weighted Leq,T levels over same period. Correction to be applied where the C minus A level is 15 dB or more and: • where any of the one-third octave noise levels in Table C2 are exceeded by up to and including 5 dB and cannot be mitigated, a 2-	2 or 5 dB	Low-frequency industrial hum was noticeable, particularly at Shaula Crescent. The LCeq-LAeq exceeds 15dB at all measurement points during daytime measurements. No exceedance measured during evening/night. However, no 1/3rd octave band levels from table C2 exceeded by up to and including 5dB. As a result, no low-frequency correction required.

		dB(A) positive adjustment to measured/predicted A-weighted levels applies for the evening/night period • where any of the one-third octave noise levels in Table C2 are exceeded by more than 5 dB and cannot be mitigated, a 5-dB(A) positive adjustment to measured/predicted A-weighted levels applies for the evening/night period and a 2- dB(A) positive adjustment applies for the daytime period.		
Intermittent noise Adjustment to be applied for **night- time only**.	Subjectively assessed but should be assisted with measurement to gauge the extent of change in noise level.	The source noise heard at the receiver varies by more than 5 dB(A), and the intermittent nature of the noise is clearly audible.	5 dB	Intermittent noise from reversing alarms and alerters operating in the yard would potentially cause a 5dB(A) adjustment.
Duration	Single-event noise duration may range from 1.5 min to 2.5 h.	One event in any assessment period.	0 to 20 dB(A)	Not observed
Site adjustment				5 dB(A) for intermittency

6 NOISE MODELLING

Noise modelling of facility emitted noise levels has been conducted using SoundPLAN software. The SoundPLAN model implements the ISO 9613-2 outdoor noise propagation model. Appendix I provides a 3D image of the noise model with an overlay of the noise contours.

6.1 Site Noise Sources

To determine the emitted noise levels from the facility, noise levels have been determined for the key facility elements and incorporated into the model. Sound level results are presented in Table 6.1 below.

Table 6.1 – Site Noise Sources	
Location / Activity	**Sound Level L_{Aeq} dB(A)**
Internal Plant noise – on start	87
Internal Plant noise – at full power	92
External Plant Noise – at full power (at 5m from northern wall)	65
Roof Extraction Fan	Not measured

It is to be noted that noise source levels for the forklift and truck movements and reversing alarms were used from the JTA noise database in the noise model.

Calibration measurements were also taken to verify the model accuracy, with the model being considered accurate if modelled results are within ±3 dB of measured results. Model results are all within the margin of error, so it is considered accurate.

As the site operates continuously over a 24-hour period, the noise source have been assumed as constant.

6.2 Predicted Facility Noise Levels

Noise levels from the facility have been predicted at the most affected noise-sensitive receivers and are presented in Table 6.2.

Table 6.2 – Predicted Facility Noise Level at Noise Sensitive Receivers	
Location	**Sound Pressure L_{Aeq} dB**
Point 1: 22 Regulus Street	38
Point 2: 28 Shaula Crescent	39
Point 3: 116 Weaver Street	31

The dominant noise source at the residential receivers was the radiated noise from the main building walls.

6.3 Predicted Facility Compliance

A comparison of the Predicted Facility Noise Levels with the EPL Licence Noise limits is presented in Table 5.3.

Table 5.3 – Predicted Facility Compliance

Location	Noise Limit L_{Aeq} dB	Predicted Facility Noise Level L_{Aeq} dB	Effective noise level accounting for intermittency[1]	Compliance with EPL Licence
Point 1: 22 Regulus Street	42	38	38	Yes
Point 2: 28 Shaula Crescent		39	39	Yes
Point 3: 116 Weaver Street		31	36	Yes

1. Intermittency is applicable during the night period.

7 CONCLUSION

Between 7 and 9 July 2025, JTA Health, Safety & Noise Specialists performed an Environmental Noise Assessment at the Tyrecycle Erskine Park facility. The Environmental Noise Assessment was performed in accordance with the requirements of the EPL Licence.

Measurements taken at the noise-sensitive receivers were generally compliant, though minor exceedances were recorded. These were largely due to extraneous noise, such as constant traffic noise, which could not be excluded from the measurement. Measurements during high weather events (wind/rain) have been excluded.

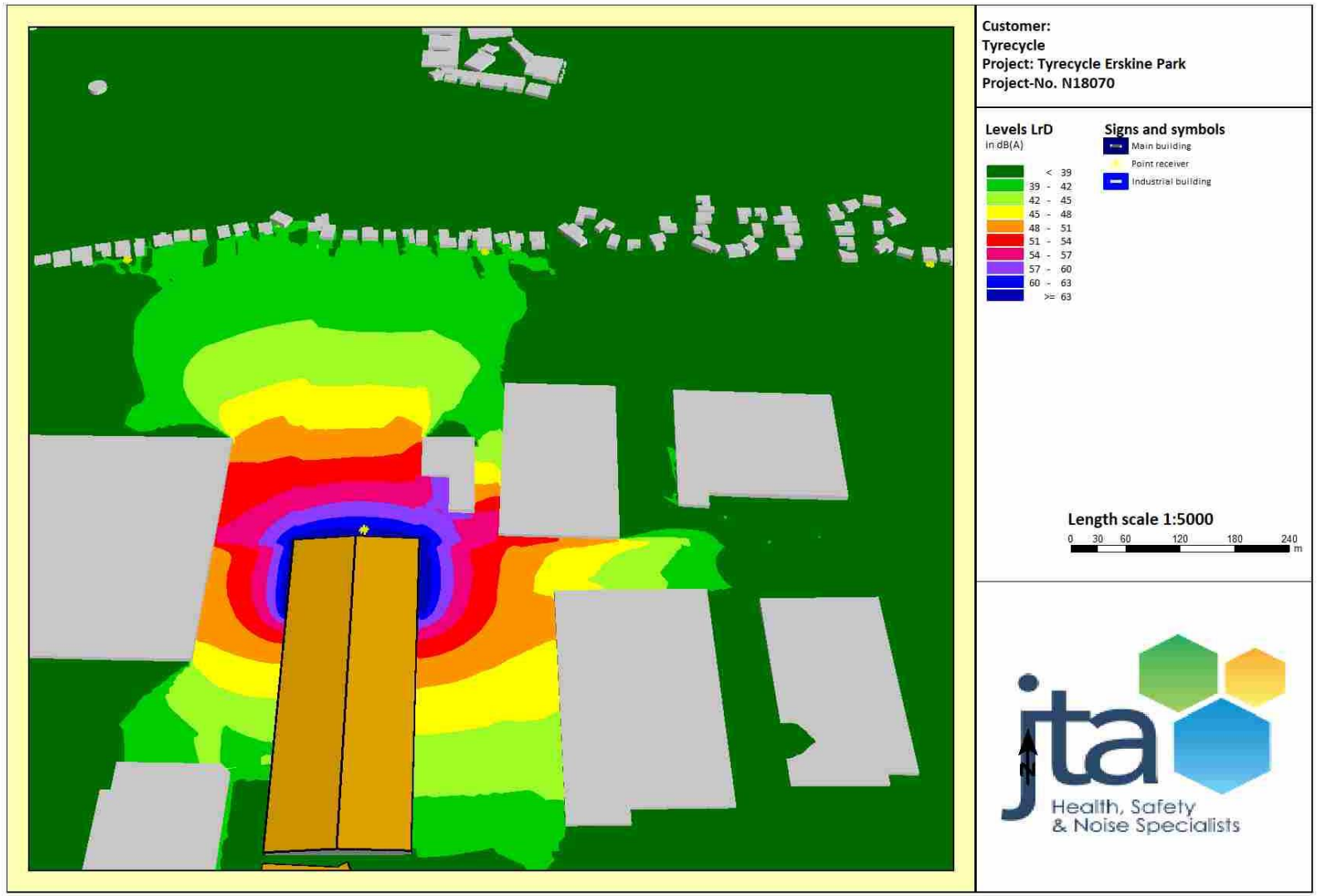
Noise modelling based on site measurements has been completed to predict operational noise emissions from the site. Operational noise level predictions at the nearest noise-sensitive receivers were obtained, and the results were compared to the EPL Licence criteria to determine compliance.

Based on the measurements and predicted noise model results, the facility was found to be compliant during the day, evening and night periods. One significant exceedance was measured due to the high level of extraneous traffic noise at 116 Weaver Street.

Note: It is recommended that the site use dynamic adjustment and quacker/chirp alarms/alerters to reduce potential impacts from yard operations.

It is also recommended that the noise emissions from the site extraction system be investigated, particularly at the 315Hz 1/3 Octave band. Consider introducing an attenuator or the like to reduce the tonal noise emissions off-site.

APPENDIX I – NOISE CONTOUR MAP


Customer:
Tyrecycle
Project: Tyrecycle Erskine Park
Project-No. N18070
Levels LrD
in dB(A)
< 39
39 - 42
42 - 45
45 - 48
48 - 51
51 - 54
54 - 57
57 - 60
60 - 63
>= 63
Signs and symbols
Main building
Point receiver
Industrial building
Length scale 1:5000
0 30 60 120 180 240
m
N
Health, Safety
& Noise Specialists

APPENDIX II – HOURLY WEATHER DATA

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Tue 00:00	N	0	0	6.3	5.3	5.4	94	0	0
Mon 23:50	N	0	0	6.1	5	5.2	94	0	0
Mon 23:40	N	0	0	6	4.8	4.8	92	0	0
Mon 23:30	N	0	0	6.3	5.2	5.1	92	0	0
Mon 23:20	N	0	0	6.6	5.5	5.2	91	0	0
Mon 23:10	N	0	0	6.7	5.6	5.1	89	0	0
Mon 23:00	N	0	0	6.9	5.8	5.2	89	0	0
Mon 22:50	N	0	0	7.2	6.2	5.5	89	0	0
Mon 22:40	N	0	0	7.3	6.3	5.6	89	0	0
Mon 22:30	N	0	0	7.2	6.3	5.8	91	0	0
Mon 22:20	N	0	0	6.9	5.9	5.5	91	0	0
Mon 22:10	N	0	0	6.8	5.7	5.2	89	0	0
Mon 22:00	N	0	0	7	6	5.6	91	0	0
Mon 21:50	N	0	0	7.1	6.1	5.5	89	0	0
Mon 21:40	N	0	0	7.3	6.3	5.6	89	0	0
Mon 21:30	N	0	0	7.1	6.1	5.4	89	0	0
Mon 21:20	N	0	0	7.5	6.6	5.9	90	0	0
Mon 21:10	N	0	0	7.3	6.4	5.9	91	0	0
Mon 21:00	N	0	0	7.3	6.3	5.4	88	0	0
Mon 20:50	N	0	0	7.6	6.5	5.2	85	0	0
Mon 20:40	N	0	0	8	7	5.8	86	0	0
Mon 20:30	SSW	4	6	8.1	6.5	6.1	87	0	0
Mon 20:20	N	0	4	7.9	7	6.2	89	0	0
Mon 20:10	N	0	0	7.9	7	6	88	0	0
Mon 20:00	N	0	0	7.8	6.8	5.8	87	0	0
Mon 19:50	N	0	0	8.2	7.3	6	86	0	0
Mon 19:40	N	0	0	8.4	7.5	5.8	84	0	0
Mon 19:30	N	0	0	8.9	7.9	5.8	81	0	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Mon 19:20	N	0	0	9.3	8.5	6.7	84	0	0
Mon 19:10	N	0	0	8.9	8.1	6.3	84	0	0
Mon 19:00	N	0	0	9.6	8.8	6.3	80	0	0
Mon 18:50	N	0	0	9.9	9.1	6.4	79	0	0
Mon 18:40	N	0	0	9.8	9	6.5	80	0	0
Mon 18:30	N	0	0	10.4	9.6	6.4	76	0	0
Mon 18:20	N	0	0	11.4	10.5	5.9	69	0	0
Mon 18:10	N	0	2	12.1	11.1	5.7	65	0	0
Mon 18:00	W	4	7	13.1	11.5	6	62	0	0
Mon 17:50	W	4	6	13.2	11.5	5.8	61	0	0
Mon 17:40	WSW	6	6	13.5	11.5	5.9	60	1	0
Mon 17:30	W	6	9	13.8	11.8	5.9	59	1	0
Mon 17:20	W	4	6	14.2	12.6	6	58	1	0
Mon 17:10	W	9	11	14.5	11.9	6.3	58	2	0
Mon 17:00	W	4	9	14.4	12.9	6.5	59	1	0
Mon 16:50	W	6	7	14.7	12.8	6.7	58	1	0
Mon 16:40	W	4	6	14.9	13.4	6.9	58	1	0
Mon 16:30	W	6	15	14.9	13	6.5	57	1	0
Mon 16:20	W	6	6	15	13.1	6.5	57	1	0
Mon 16:10	WSW	4	6	15	13.5	6.5	57	1	0
Mon 16:00	WSW	4	9	15.1	13.6	6.7	57	1	0
Mon 15:50	W	4	6	15	13.5	6.5	57	1	0
Mon 15:40	W	4	4	15	13.5	6.5	57	1	0
Mon 15:30	WSW	7	13	15	12.8	6.6	57	1	0
Mon 15:20	WSW	7	9	14.9	12.6	6.2	56	1	0
Mon 15:10	W	9	11	15	12.3	6.3	56	2	0
Mon 15:00	WSW	7	15	15.1	12.7	5.9	54	1	0
Mon 14:50	W	15	19	15.1	11.2	5.8	53	4	0
Mon 14:40	WSW	7	9	15.3	12.9	6	54	1	0
Mon 14:30	WSW	11	26	15.4	12.3	5.9	53	2	0
Mon 14:20	W	19	22	15.2	10.6	5.7	53	5	0
Mon 14:10	W	13	17	15.1	11.7	6.1	55	3	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Mon 14:00	WSW	9	19	14.9	12.2	6	55	2	0
Mon 13:50	W	11	17	14.8	11.7	5.8	55	2	0
Mon 13:40	W	9	13	14.8	12.1	5.8	55	2	0
Mon 13:30	W	7	13	14.8	12.3	5.6	54	1	0
Mon 13:20	W	6	7	14.9	12.8	5.6	53	1	0
Mon 13:10	WSW	7	9	14.8	12.3	5.6	54	1	0
Mon 13:00	WSW	9	17	14.8	11.9	5.3	53	2	0
Mon 12:50	WSW	11	15	14.9	11.6	5.1	52	2	0
Mon 12:40	W	6	7	14.9	12.9	6.2	56	1	0
Mon 12:30	W	6	9	15	13.1	6.6	57	1	0
Mon 12:20	W	7	9	15.1	12.8	6.4	56	1	0
Mon 12:10	NW	7	11	15	12.7	6.3	56	1	0
Mon 12:00	WNW	9	15	15.2	12.4	5.7	53	2	0
Mon 11:50	W+B36	7	11	15.4	12.9	5.6	52	1	0
Mon 11:40	WNW	9	11	16.3	13.7	6.7	53	2	0
Mon 11:30	NW	9	17	15.8	13.1	6.3	53	2	0
Mon 11:20	WNW	4	6	15.8	14.1	5.9	51	1	0
Mon 11:10	NW	7	7	15.5	13.2	6.2	54	1	0
Mon 11:00	NW	4	9	15.4	13.8	6.4	55	1	0
Mon 10:50	NNW	9	11	15	12.2	5.5	53	2	0
Mon 10:40	NW	6	7	15	13.1	6.3	56	1	0
Mon 10:30	NNW	6	9	14.6	12.8	6.7	59	1	0
Mon 10:20	NNW	6	6	14.3	12.7	7.8	65	1	0
Mon 10:10	NW	7	9	14.2	12.3	7.9	66	1	0
Mon 10:00	NNW	6	9	13.9	12.2	7.2	64	1	0
Mon 09:50	NW	6	6	13.7	12	7.4	65	1	0
Mon 09:40	NNW	4	4	13.5	12.4	8.5	72	0	0
Mon 09:30	N	4	6	12.9	11.8	8.4	74	0	0
Mon 09:20	N	2	4	12.6	11.8	8.4	75	0	0
Mon 09:10	N	0	0	12.3	11.9	8.5	77	0	0
Mon 09:00	N	2	4	11.8	11.2	9	83	0	4.4
Mon 08:50	N	4	4	11	10.2	9.5	90	0	4.4

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Mon 08:40	N	4	4	10.6	10.1	10.6	100	0	4.4
Mon 08:30	N	0	2	10	10.1	10	100	0	4.4
Mon 08:20	N	0	0	9.3	9.2	9.3	100	0	4.4
Mon 08:10	N	0	0	8.6	8.3	8.6	100	0	4.4
Mon 08:00	N	0	2	7.9	7.4	7.9	100	0	4.4
Mon 07:50	N	0	0	7.9	7.4	7.9	100	0	4.4
Mon 07:40	N	0	0	6.6	5.8	6.4	99	0	4.4
Mon 07:30	N	0	2	6.6	5.8	6.5	99	0	4.4
Mon 07:20	N	0	0	6.7	5.9	6.5	99	0	4.4
Mon 07:10	N	0	0	6.9	6.2	6.7	99	0	4.4
Mon 07:00	N	0	0	6.4	5.5	6.3	99	0	4.4
Mon 06:50	N	0	0	6.8	6	6.6	99	0	4.4
Mon 06:40	N	0	0	6.9	6.2	6.7	99	0	4.4
Mon 06:30	N	0	0	6.5	5.7	6.4	99	0	4.4
Mon 06:20	N	0	0	6.7	5.9	6.5	99	0	4.4
Mon 06:10	N	0	0	6.7	5.9	6.5	99	0	4.4
Mon 06:00	N	0	0	7.2	6.5	7.1	99	0	4.4
Mon 05:50	N	0	0	7.2	6.5	7	99	0	4.4
Mon 05:40	N	0	0	7.3	6.6	7.1	99	0	4.4
Mon 05:30	N	0	0	7.2	6.5	7.1	99	0	4.4
Mon 05:20	N	0	0	7.2	6.5	7	99	0	4.4
Mon 05:10	N	0	0	7.3	6.6	7.1	99	0	4.4
Mon 05:00	N	0	0	7.3	6.6	7.2	99	0	4.4
Mon 04:50	N	0	0	7.3	6.6	7.1	99	0	4.4
Mon 04:40	N	0	0	7.3	6.6	7.1	99	0	4.4
Mon 04:30	N	0	0	7.3	6.6	7.2	99	0	4.4
Mon 04:20	N	0	0	7.5	6.9	7.3	99	0	4.4
Mon 04:10	N	0	0	7.6	7	7.4	99	0	4.4
Mon 04:00	N	0	0	6.8	6	6.7	99	0	4.4
Mon 03:50	N	0	0	7.4	6.8	7.2	99	0	4.4
Mon 03:40	N	0	0	7.4	6.8	7.2	99	0	4.4
Mon 03:30	N	0	0	7.7	7.1	7.6	99	0	4.4

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Mon 03:20	N	0	0	7.4	6.8	7.2	99	0	4.4
Mon 03:10	N	0	0	7.3	6.6	7.1	99	0	4.4
Mon 03:00	N	0	0	7.1	6.4	6.8	98	0	4.4
Mon 02:50	N	0	0	7.3	6.6	7	98	0	4.4
Mon 02:40	N	0	0	7.5	6.8	7.2	98	0	4.4
Mon 02:30	N	0	0	7.6	7	7.3	98	0	4.4
Mon 02:20	N	0	0	7.5	6.8	7	97	0	4.4
Mon 02:10	WNW	2	4	7.5	6.5	7	97	0	4.4
Mon 02:00	NW	4	7	8.6	7.5	8.5	99	0	4.4
Mon 01:50	NW	6	7	8.3	6.8	8	98	0	4.4
Mon 01:40	NW	4	4	7.7	6.4	7.4	98	0	4.4
Mon 01:30	NW	6	6	7.8	6.1	7.5	98	0	4.4
Mon 01:20	NW	6	6	6.9	5	6.3	96	0	4.4
Mon 01:10	N	0	0	7.2	6.5	6.7	97	0	4.4
Mon 01:00	W	2	4	7.3	6.2	6.9	97	0	4.4
Mon 00:50	WNW	4	4	6.9	5.3	6.1	95	0	4.4
Mon 00:40	WNW	4	4	7.5	6	6.7	95	0	4.4
Mon 00:30	WNW	2	4	7.7	6.7	7.1	96	0	4.4
Mon 00:20	WNW	2	2	7.8	6.8	7	95	0	4.4
Mon 00:10	WNW	2	4	7.7	6.6	6.8	94	0	4.4
Mon 00:00	NW	4	4	8.1	6.7	7.2	94	0	4.4

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Wed 00:00	N	2	4	9.2	7.5	3.8	69	0	0
Tue 23:50	N	2	4	9.1	7.4	3.7	69	0	0
Tue 23:40	N	0	0	8.8	7.4	3.4	69	0	0
Tue 23:30	N	4	6	9.8	7.7	3.5	65	0	0
Tue 23:20	N	4	6	9.8	7.6	3.1	63	0	0
Tue 23:10	N	4	6	10.1	7.9	3.3	62	0	0
Tue 23:00	NNE	4	7	10.3	8.1	3.1	61	0	0
Tue 22:50	NNE	4	6	11	8.8	3	58	1	0
Tue 22:40	NE	6	7	10.8	8.3	3.3	60	1	0
Tue 22:30	NE	7	11	10.9	8	3.5	60	1	0
Tue 22:20	NE	7	9	10.4	7.5	3.2	61	1	0
Tue 22:10	ENE	7	7	10.3	7.4	3.3	62	1	0
Tue 22:00	E	4	6	8.9	6.8	3.5	69	0	0
Tue 21:50	E	6	6	8.8	6.2	3	67	1	0
Tue 21:40	ENE	2	4	9.7	7.9	3.2	64	0	0
Tue 21:30	N	2	7	10.9	9	2.7	57	1	0
Tue 21:20	N	0	0	11.2	9.7	2.7	56	1	0
Tue 21:10	N	6	7	11.9	9.3	3.1	55	1	0
Tue 21:00	NNW	6	13	11.6	9	3.1	56	1	0
Tue 20:50	N	6	6	12.1	9.6	3.3	55	1	0
Tue 20:40	NNW	13	17	12.2	8.3	3.4	55	3	0
Tue 20:30	NNW	11	20	12.1	8.5	3.6	56	3	0
Tue 20:20	NNW	15	20	12.1	7.9	3.8	57	5	0
Tue 20:10	NW	7	9	11.4	8.6	3.9	60	1	0
Tue 20:00	NNW	7	17	11.4	8.7	4.4	62	1	0
Tue 19:50	N	6	7	10.5	8.2	4.6	67	1	0
Tue 19:40	N	7	7	10.3	7.7	4.6	68	1	0
Tue 19:30	ENE	4	7	10.1	8.2	4.5	68	0	0
Tue 19:20	NNE	4	4	10.6	8.7	4.5	66	0	0
Tue 19:10	N	7	9	11.3	8.7	4.7	64	1	0
Tue 19:00	NNW	6	11	11.3	9.1	5.2	66	1	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Tue 18:50	NNW	7	9	11.3	8.9	5.6	68	1	0
Tue 18:40	NNW	6	7	11.1	9	5.6	69	1	0
Tue 18:30	N	7	9	10.8	8.3	5.6	70	1	0
Tue 18:20	N	9	11	10.9	8.2	6.2	73	2	0
Tue 18:10	N	7	9	10.9	8.8	7.2	78	1	0
Tue 18:00	N	4	6	9.3	7.8	6.6	83	0	0
Tue 17:50	N	4	4	9.3	7.8	6.5	83	0	0
Tue 17:40	NNE	4	6	9.8	8.3	6.5	80	0	0
Tue 17:30	N	0	0	9.6	8.8	6.5	81	0	0
Tue 17:20	N	0	0	10.9	10.1	6.6	75	0	0
Tue 17:10	N	0	0	11.4	10.6	6.7	73	0	0
Tue 17:00	SSW	4	7	11.9	10.4	6.8	71	0	0
Tue 16:50	SW	6	7	12.8	10.8	6.1	63	1	0
Tue 16:40	N	4	4	14.5	12.9	6.3	58	1	0
Tue 16:30	N	6	9	14.7	12.8	6.5	58	1	0
Tue 16:20	N	9	13	14.6	11.9	6.1	56	3	0
Tue 16:10	N	9	15	14.7	12.1	6.5	58	2	0
Tue 16:00	N	6	9	14.9	13.1	6.7	58	1	0
Tue 15:50	N	6	7	14.6	12.7	6.6	58	1	0
Tue 15:40	N	6	9	14	12.1	6.6	61	1	0
Tue 15:30	N	6	13	14.3	12.4	6.4	59	1	0
Tue 15:20	N	11	15	14.3	11.3	6.4	59	3	0
Tue 15:10	N	9	11	14.3	11.7	6.4	59	2	0
Tue 15:00	N	9	19	14.5	11.9	6.3	58	2	0
Tue 14:50	N	7	11	14.6	12.2	6.1	56	2	0
Tue 14:40	N	9	13	14.7	12	6.2	56	3	0
Tue 14:30	N	7	13	15.6	13.5	7.4	58	2	0
Tue 14:20	N	9	13	15.1	12.7	7.4	60	2	0
Tue 14:10	N	4	7	14.7	13.7	8.6	67	1	0
Tue 14:00	N	7	13	13.5	11.5	7.5	67	1	0
Tue 13:50	N	7	7	13.5	11.4	7.2	65	1	0
Tue 13:40	N	7	9	13.3	11.4	7.9	70	1	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Tue 13:30	N	13	20	13	9.9	7.7	70	3	0
Tue 13:20	N	13	20	12.8	9.7	7.6	70	3	0
Tue 13:10	NNE	4	6	12.4	11.2	7.9	74	0	0
Tue 13:00	NNE	4	7	12.2	11	7.9	75	0	0
Tue 12:50	NNE	6	6	12	10.4	7.7	75	1	0
Tue 12:40	N	6	7	12	10.3	7.5	74	1	0
Tue 12:30	NNW	9	17	12	9.6	7.3	73	2	0
Tue 12:20	NNW	11	15	11.8	9	7.1	73	2	0
Tue 12:10	NNW	4	6	11.3	10	7.4	77	0	0
Tue 12:00	NNW	7	13	10.9	8.8	7.2	78	1	0
Tue 11:50	NNW	6	7	10.3	8.5	7.1	80	1	0
Tue 11:40	NNW	4	4	9.7	8.2	6.6	81	0	0
Tue 11:30	NNW	6	13	9.6	7.7	6.3	80	1	0
Tue 11:20	NNW	7	9	9.6	7.3	6.5	81	1	0
Tue 11:10	WNW	6	7	9.5	7.6	6.4	81	1	0
Tue 11:00	NNW	6	7	9.5	7.6	6.4	81	1	0
Tue 10:50	NNW	4	6	9.4	7.8	6.3	81	0	0
Tue 10:40	NNW	4	6	9.4	7.8	6.3	81	0	0
Tue 10:30	NNW	7	9	9.4	7.1	6.1	80	1	0
Tue 10:20	NNW	6	6	9.4	7.4	5.9	79	1	0
Tue 10:10	NW	6	7	9.6	7.7	6.3	80	1	0
Tue 10:00	NW	6	11	9.5	7.6	6.6	82	1	0
Tue 09:50	NW	9	11	9.5	6.9	6.4	81	1	0
Tue 09:40	NW	6	6	9.4	7.5	6.3	81	1	0
Tue 09:30	NNW	6	9	9.3	7.4	6.6	83	1	0
Tue 09:20	N	7	9	9	6.7	6.2	82	1	0
Tue 09:10	N	9	11	8.9	6.3	6.5	85	1	0
Tue 09:00	NNW	4	11	8.8	7.3	6.8	87	0	0
Tue 08:50	NNW	6	6	8.3	6.5	6.7	90	0	0
Tue 08:40	NNW	4	6	7.9	6.4	6.6	91	0	0
Tue 08:30	NNW	4	7	7.5	6	6.6	94	0	0
Tue 08:20	N	0	0	7.1	6.3	6.5	96	0	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Tue 08:10	N	2	2	6.9	5.7	6.4	97	0	0
Tue 08:00	NNW	2	4	6.6	5.4	6.2	97	0	0
Tue 07:50	N	0	0	6.4	5.5	5.9	97	0	0
Tue 07:40	N	0	0	6.3	5.4	6	98	0	0
Tue 07:30	WNW	4	6	6.4	4.8	6.3	99	0	0
Tue 07:20	WNW	2	2	5.7	4.3	5.4	98	0	0
Tue 07:10	NNW	4	4	5.4	3.6	5.1	98	0	0
Tue 07:00	N	0	4	5.4	4.3	5.1	98	0	0
Tue 06:50	N	0	0	5.4	4.3	5.1	98	0	0
Tue 06:40	N	0	0	5.5	4.4	5.2	98	0	0
Tue 06:30	N	0	0	5.5	4.4	5.1	97	0	0
Tue 06:20	N	0	0	5.6	4.5	5.3	98	0	0
Tue 06:10	N	0	0	5.4	4.3	4.9	97	0	0
Tue 06:00	W	2	4	5.5	4	5.1	97	0	0
Tue 05:50	W	2	2	5.6	4.2	5.1	97	0	0
Tue 05:40	N	0	0	5.6	4.5	5.3	98	0	0
Tue 05:30	N	0	0	5.8	4.8	5.5	98	0	0
Tue 05:20	N	0	0	5.6	4.5	5.3	98	0	0
Tue 05:10	N	0	0	5.6	4.5	5.3	98	0	0
Tue 05:00	WNW	2	6	5.6	4.2	5.3	98	0	0
Tue 04:50	N	0	0	5.3	4.2	5	98	0	0
Tue 04:40	N	0	0	5.4	4.3	5.1	98	0	0
Tue 04:30	N	0	0	5	3.8	4.6	97	0	0
Tue 04:20	N	0	0	5	3.8	4.5	97	0	0
Tue 04:10	N	0	0	5	3.8	4.5	97	0	0
Tue 04:00	N	0	2	5.1	3.9	4.7	97	0	0
Tue 03:50	N	2	4	4.8	3.2	4.3	97	0	0
Tue 03:40	N	0	0	4.9	3.6	4.3	96	0	0
Tue 03:30	N	0	2	5.3	4.2	4.9	97	0	0
Tue 03:20	W	2	4	5.6	4.2	5.1	97	0	0
Tue 03:10	N	0	0	5.4	4.2	4.8	96	0	0
Tue 03:00	N	0	0	5.6	4.5	5.2	97	0	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Tue 02:50	N	0	0	5.6	4.5	5	96	0	0
Tue 02:40	N	0	0	5.7	4.6	5.1	96	0	0
Tue 02:30	N	0	0	5.7	4.6	5.1	96	0	0
Tue 02:20	N	0	0	5.8	4.7	5.2	96	0	0
Tue 02:10	N	0	0	5.8	4.7	5.2	96	0	0
Tue 02:00	N	0	0	5.3	4.1	4.4	94	0	0
Tue 01:50	N	0	0	5.8	4.7	4.9	94	0	0
Tue 01:40	N	0	0	6	4.9	5.1	94	0	0
Tue 01:30	N	0	0	6	4.9	5.1	94	0	0
Tue 01:20	N	0	0	6.1	5	5.2	94	0	0
Tue 01:10	N	0	0	6	4.8	4.8	92	0	0
Tue 01:00	N	0	0	6.6	5.5	5.2	91	0	0
Tue 00:50	N	0	0	6.6	5.5	5.2	91	0	0
Tue 00:40	N	0	0	7	6.1	6.2	95	0	0
Tue 00:30	N	0	0	6.2	5.1	5.3	94	0	0
Tue 00:20	N	0	0	6	4.9	4.9	93	0	0
Tue 00:10	N	0	0	6.6	5.7	5.8	95	0	0
Tue 00:00	N	0	0	6.3	5.3	5.4	94	0	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Thu 00:00	NNW	2	4	9.1	7.9	6.5	84	0	0.2
Wed 23:50	NNW	2	2	9.1	7.9	6.5	84	0	0.2
Wed 23:40	N	0	0	8.9	8.1	6.3	84	0	0.2
Wed 23:30	NW	2	4	9.4	8.2	6.5	82	0	0.2
Wed 23:20	NW	2	4	9.6	8.4	6.5	81	0	0.2
Wed 23:10	WNW	4	6	9.5	8	6.7	83	0	0.2
Wed 23:00	WNW	4	6	9.4	7.9	6.7	83	0	0.2
Wed 22:50	WNW	4	4	9.6	8.2	7.2	85	0	0.2
Wed 22:40	N	0	0	9.4	8.7	7	85	0	0.2
Wed 22:30	NNW	2	4	9.7	8.7	7.3	85	0	0.2
Wed 22:20	NNW	2	2	10	9.1	7.7	86	0	0.2
Wed 22:10	N	0	0	9.5	8.8	7.2	85	0	0.2
Wed 22:00	N	0	2	9.4	8.8	7.3	87	0	0.2
Wed 21:50	N	0	0	9.6	9.1	7.7	88	0	0.2
Wed 21:40	N	0	0	9.3	8.7	7.5	88	0	0.2
Wed 21:30	N	0	0	9.5	8.9	7.3	86	0	0.2
Wed 21:20	N	0	0	10	9.6	8.1	88	0	0.2
Wed 21:10	N	0	0	9.4	8.7	6.8	84	0	0.2
Wed 21:00	N	0	2	10.1	9.5	7.5	84	0	0.2
Wed 20:50	N	0	0	10.2	9.6	7.4	83	0	0.2
Wed 20:40	SSW	4	4	10.1	8.7	7.1	81	0	0.2
Wed 20:30	N	0	0	10.5	9.9	7.6	82	0	0.2
Wed 20:20	N	0	0	10.5	9.9	7.5	82	0	0.2
Wed 20:10	N	0	0	11.1	10.5	7.6	79	0	0.2
Wed 20:00	N	2	7	11.2	10.3	7.5	78	0	0.2
Wed 19:50	N	0	2	11.1	10.5	7.4	78	0	0.2
Wed 19:40	N	0	0	11.2	10.6	7.5	78	0	0.2
Wed 19:30	N	0	0	11.1	10.4	6.8	75	0	0.2
Wed 19:20	N	0	0	12.1	11.5	7.4	73	0	0.2
Wed 19:10	N	0	0	12.4	11.8	7.3	71	0	0.2

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Wed 19:00	N	0	4	12.9	12.3	7.6	70	0	0.2
Wed 18:50	N	0	0	12.8	12.2	7.2	69	1	0.2
Wed 18:40	N	0	0	14	13.4	7.3	64	1	0.2
Wed 18:30	N	0	0	13.9	13.3	7.2	64	1	0.2
Wed 18:20	N	0	0	14	13.4	7.5	65	1	0.2
Wed 18:10	E	2	4	14.4	13.4	7.6	63	1	0.2
Wed 18:00	E	2	6	14	13.2	8	67	1	0.2
Wed 17:50	N	0	0	14.6	14.1	7.6	63	1	0.2
Wed 17:40	E	2	2	14.8	13.9	7.6	62	1	0.2
Wed 17:30	E	2	4	14.8	13.9	7.8	63	1	0.2
Wed 17:20	N	0	0	14.6	14.3	8.5	67	1	0.2
Wed 17:10	N	0	0	14.7	14.4	8.8	68	1	0.2
Wed 17:00	N	0	0	15	14.9	9.4	69	1	0.2
Wed 16:50	N	0	0	15.6	15.3	8.8	64	1	0.2
Wed 16:40	N	0	0	16.6	16	7.5	55	1	0.2
Wed 16:30	ENE	2	4	17	15.9	6.8	51	1	0.2
Wed 16:20	ENE	2	4	17.2	16.1	6.9	50	1	0.2
Wed 16:10	ENE	6	6	17.4	15.5	6.8	49	2	0.2
Wed 16:00	NE	6	9	17.6	15.7	6.5	48	2	0.2
Wed 15:50	ENE	6	7	17.8	15.9	6.6	48	2	0.2
Wed 15:40	NE	6	7	17.4	15.5	6.5	48	2	0.2
Wed 15:30	NE	7	11	17.5	15.2	6.1	47	3	0.2
Wed 15:20	NNE	7	9	17.7	15.4	6.2	47	3	0.2
Wed 15:10	NE	7	7	17.8	15.4	6	46	3	0.2
Wed 15:00	N	7	11	17.8	15.4	5.7	45	3	0.2
Wed 14:50	N	6	7	18.4	16.4	5.9	44	2	0.2
Wed 14:40	N	7	9	18.2	15.7	5.4	43	3	0.2
Wed 14:30	NE	6	9	18.4	16.3	5.6	43	2	0.2
Wed 14:20	ENE	6	7	18.4	16.2	4.9	41	3	0.2
Wed 14:10	N	4	6	18.6	16.8	5.1	41	2	0.2
Wed 14:00	N	6	13	18.5	16.4	5.4	42	2	0.2

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Wed 13:50	NNW	6	6	18.3	16.1	5.1	41	3	0.2
Wed 13:40	N	6	6	18.4	16.3	5.2	42	2	0.2
Wed 13:30	N	7	15	18.2	15.7	5.4	43	3	0.2
Wed 13:20	N	4	6	18.3	16.6	5.8	44	1	0.2
Wed 13:10	NNE	7	7	18.2	15.7	5.4	43	3	0.2
Wed 13:00	NNE	6	11	18.2	16.1	5.8	44	2	0.2
Wed 12:50	N	2	4	18.4	17.1	5.9	44	1	0
Wed 12:40	N	9	11	17.8	14.9	5.4	44	6	0
Wed 12:30	N	7	11	17.9	15.5	5.8	45	3	0
Wed 12:20	N	11	13	17.7	14.5	5.3	44	6	0
Wed 12:10	N	7	7	17.3	14.8	5.5	45	3	0
Wed 12:00	NNE	7	11	17.4	15.1	6.3	48	3	0
Wed 11:50	NNE	7	11	17.1	14.7	5.7	47	3	0
Wed 11:40	NNE	9	11	16.9	14.1	5.8	48	4	0
Wed 11:30	NNW	7	11	16.7	14.4	6.2	50	3	0
Wed 11:20	NNW	7	9	16.6	14.3	6.4	51	2	0
Wed 11:10	WNW	4	6	15.9	14.2	5.7	50	1	0
Wed 11:00	NNW	4	9	16.1	14.5	6.3	52	1	0
Wed 10:50	N	0	2	16.1	15.3	6.5	53	1	0
Wed 10:40	N	0	0	15.6	14.8	6.3	54	1	0
Wed 10:30	WNW	4	6	15.2	13.8	7	58	1	0
Wed 10:20	WNW	2	4	14.8	13.6	6.3	56	1	0
Wed 10:10	N	4	4	14.8	13.3	6.6	58	1	0
Wed 10:00	NW	4	7	14.4	12.9	6.5	59	1	0
Wed 09:50	NW	4	6	13.9	12.3	6	59	1	0
Wed 09:40	NNW	6	7	13.4	11.4	6	61	1	0
Wed 09:30	NNW	9	15	13.1	10.2	5.3	59	3	0
Wed 09:20	NNW	13	17	13	9.3	5.1	58	6	0
Wed 09:10	NNW	7	9	12.8	10.3	5.2	60	2	0
Wed 09:00	N	4	7	12.7	11	5.8	63	1	0
Wed 08:50	N	7	9	12.3	9.8	5.4	63	1	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Wed 08:40	N	4	6	12.3	10.6	5.4	63	1	0
Wed 08:30	N	4	7	12.1	10.4	5.9	66	1	0
Wed 08:20	N	4	4	12	10.3	5.6	65	1	0
Wed 08:10	NNW	2	4	11.7	10.3	5.5	66	1	0
Wed 08:00	NNW	2	6	11	9.6	5.5	69	0	0
Wed 07:50	NNW	4	6	10.3	8.5	5.4	71	0	0
Wed 07:40	N	6	7	10.2	8.1	5.5	72	1	0
Wed 07:30	N	4	9	8.6	6.8	5.4	80	0	0
Wed 07:20	NNW	4	4	7.4	5.4	4.1	79	0	0
Wed 07:10	N	6	6	7.5	5.1	4.2	79	1	0
Wed 07:00	N	4	6	7.3	5.3	4.3	81	0	0
Wed 06:50	NNE	4	6	7.2	5.2	4.1	81	0	0
Wed 06:40	N	0	0	7.1	5.8	4.2	82	0	0
Wed 06:30	N	2	4	7.3	5.7	4.3	81	0	0
Wed 06:20	N	0	0	7.2	6	4.8	85	0	0
Wed 06:10	N	2	2	7.1	5.5	4.2	82	0	0
Wed 06:00	NNW	2	4	7.3	5.7	4.3	81	0	0
Wed 05:50	NNW	2	2	7	5.3	4.1	82	0	0
Wed 05:40	N	0	0	7.3	6.1	4.6	83	0	0
Wed 05:30	N	0	2	7.4	6.2	4.5	82	0	0
Wed 05:20	N	0	0	6.7	5.3	3.8	82	0	0
Wed 05:10	NNE	4	4	7.1	5.1	4	81	0	0
Wed 05:00	N	0	4	7.1	5.8	4.1	81	0	0
Wed 04:50	NNE	2	4	7.9	6.3	4.1	77	0	0
Wed 04:40	N	0	0	8.2	7	4.4	77	0	0
Wed 04:30	N	0	0	8.2	7	4.4	77	0	0
Wed 04:20	N	0	0	8.5	7.2	4.3	75	0	0
Wed 04:10	NW	2	2	8.3	6.6	3.7	73	0	0
Wed 04:00	NNW	6	9	10.4	8	3.9	64	1	0
Wed 03:50	NNW	6	7	10.6	8.3	4.5	66	1	0
Wed 03:40	NNW	6	7	9.8	7.4	4.1	67	1	0

DATE & TIME	WIND(direction)	WIND(km/h)	GUST(km/h)	TEMP(°C)	FEELS LIKE(°C)	DEW POINT(°C)	HUMIDITY(%)	FIRE	RAIN(mm)
Wed 03:30	NNW	6	9	10.4	8	4.1	65	1	0
Wed 03:20	NNW	6	7	10.5	8.1	4.2	65	1	0
Wed 03:10	NNW	6	6	10.4	8	4.1	65	1	0
Wed 03:00	N	6	9	10.4	8.1	4.5	67	1	0
Wed 02:50	N	7	7	10.1	7.4	4.6	68	1	0
Wed 02:40	N	4	6	9	7	4	71	0	0
Wed 02:30	N	0	4	9.2	7.9	4.2	71	0	0
Wed 02:20	NE	4	4	8.4	6.4	4.2	75	0	0
Wed 02:10	NNE	4	6	10	8	3.9	66	0	0
Wed 02:00	NNE	4	7	9.9	8	4.5	69	0	0
Wed 01:50	NNE	2	4	8.5	6.8	3.9	73	0	0
Wed 01:40	N	4	6	10.2	8.3	4.5	68	0	0
Wed 01:30	N	2	6	8.6	7	4.4	75	0	0
Wed 01:20	N	4	4	8.3	6.3	3.9	74	0	0
Wed 01:10	N	4	6	9.3	7.3	4.3	71	0	0
Wed 01:00	N	4	7	8.7	6.6	3.7	71	0	0
Wed 00:50	N	2	4	8.7	6.9	3.5	70	0	0
Wed 00:40	N	6	7	9.2	6.7	3.6	68	1	0
Wed 00:30	NNW	6	9	9.3	6.8	3.5	67	1	0
Wed 00:20	N	6	7	10.3	8	4.4	67	1	0
Wed 00:10	N	6	6	9	6.5	3.4	68	1	0
Wed 00:00	N	2	4	9.2	7.5	3.8	69	0	0

APPENDIX III – GLOSSARY

Term	Definition
Airborne noise management levels	Airborne noise management levels – to be measured and assessed at the residential property boundary that is most exposed to construction noise and at a height of 1.5 m above ground level. If the residential property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most affected point within 30 m of the residence.
Background Noise	Background noise refers to the underlying noise environment in the local area, excluding all transient events, in the absence of noise from the site in question. The background noise level is characterised by the L_{90} descriptor, which means that only the average of the quietest 10% of noise measured will form the background noise level. This means that events such as dogs barking, cars passing by, or car horns will be excluded, while the general hum of traffic and other background noises will be included.
Ambient Noise	Ambient noise is any sound other than the sound being monitored or assessed and is associated with that environment, being a composite of sounds from many sources, both near and far. The ambient noise level is characterised by the L_{eq} descriptor, which means that the logarithmic average of all noise measured will form the ambient noise level.
dB(A)	An expression of the relative loudness of sounds in the air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, compared with unweighted decibels, in which no correction is made for audio frequency. A unit of acoustic measurement electronically weighted to approximate the sensitivity of human hearing to sound frequency.
dB(C)	The C scale is practically linear over several octaves and is thus suitable for subjective measurements only for very high sound levels. Measurements made on this scale are expressed as dB(C).
dB(lin)	dB(lin) or dB(Z) is an unweighted value of sound over a spectrum.
Decibel	The decibel is a logarithmic unit used for a wide variety of measurements in science and engineering. A unit of acoustic measurement. Measurements of power, pressure and intensity may be expressed in dB relative to standard reference levels.
Effective Noise Level	The Effective Noise Level is the level of noise emitted from commercial, industrial, or trade premises, adjusted if necessary for character and duration.
Extraneous Noise	Extraneous noise is any noise which is not part of the noise being measured/assessed, i.e. from the facility, premises or venue. Extraneous noise can include any noise that masks the noise emissions from the site in question, with examples being wind on vegetation or the microphone, aircraft noise, and wildlife.
Impulse Noise	Impulse noise is noise that consists of a distinct single pressure peak, a sequence of single peaks, a single burst with multiple pressure peaks or a sequence of such bursts. Impulse noise may be the only noise present or may be superimposed on a background of a continuous noise. Impulse noise presents an additional noise hazard, as it can cause an instantaneous injury if the peak level is sufficiently high.
$L_{A1\ (1\ min)}$	$L_{A1\ (1\ min)}$ – the A-weighted sound pressure level that is exceeded for 1% of the 1-minute measurement period.
$L_{A10\ (15\ min)}$	$L_{A10\ (15\ min)}$ – the A-weighted sound pressure level that is exceeded for 10% of the 15-minute measurement period. i.e. the average of the noisiest 10 per cent of measured values over the 15 minutes.

Term	Definition
$L_{A90\ (15\ min)}$	$L_{A90\ (15\ min)}$ – the A-weighted sound pressure level that is exceeded for 90% of the 15-minute measurement period, when measured in the absence of the construction works under consideration and excluding extraneous noise. This is considered to represent the background noise. i.e. the average of the quietest 10 per cent of measured values over a the period.
$L_{Aeq\ (15\ min)}$	$L_{Aeq\ (15\ min)}$ – the A-weighted equivalent continuous sound pressure level (energy average) of the construction works under consideration over a 15-minute period. It excludes other noise sources such as from industry, road, rail and the community. i.e. The sound pressure level of a continuous steady sound that has the same sound energy as the actual time-varying sound. Other descriptors may be used providing they can be justified as representing the characteristics of the construction noise.
$L_{A\ (max)}$	$L_{A\ (max)}$ – the A-weighted maximum noise level only from the construction works under consideration, measured using the fast time weighting on a sound level meter.
Most affected location(s)	Most affected location(s) – location(s) that experience (or will likely experience) the greatest noise impact from the construction works under consideration. In determining these locations, existing background noise levels, noise source location(s), distance and any shielding between the construction works (or proposed works) and the residences and other sensitive land uses need to be considered.
Noise Limit	The Noise Limit is defined as the maximum effective noise level allowed at a measurement point at a Noise Sensitive Receiver location.
Noise Logger	A noise logger is a long term noise monitoring device deployed into the field where it can operate with no direct control from a user for a significant amount of time (4 days to 2 weeks to infinite).
Noise Sensitive Receiver (NSR)	A Noise Sensitive Receiver (NSR) is an identified location where sensitive personal and/or activity are located, usually a dwelling where people sleep.
Octave & 1/3 Octave Bands	The spectrum of the sound split into distinct logarithmic frequencies in Hertz (HZ).
RBL	RBL, Rating background level – the overall single-figure background noise level for each assessment period. Determination of the rating background level is by the method described in the NSW Industrial Noise Policy (EPA 2017). This approach aims to result in the noise management level being met for at least 90% of the time periods (15 minutes each) over which reactions of annoyance can occur.
Tonal Noise	Tonal noise is defined as a significant variation between a 1/3 octave band relative to its adjacent bands. An example would be a whistle blowing, where a large portion of the sound energy is focused into a narrow part of the noise spectrum.
Sound Pressure Level	A measurement of sound pressure, expressed in decibels, with respect to the threshold of hearing. The threshold of hearing is usually defined as 20 micropascals, which is assigned a value of 0 decibels. Ambient sound pressure level – The all-encompassing sound/noise during typical operations within an environment e.g. workshop, office, factory floor Task specific sound pressure level measurements – generally performed at the operator position or a representative area of as piece of equipment.
Sound Power Level	The sound energy emitted by a sound source. i.e. where a sound wave energy is condensed to its point of origin. An example would be measuring a speaker at 10 metres is the sound pressure level, where if the sound wave sphere that is being generated by the speaker was shrunk back to the point of the speaker cone, that would be the sound power energy level.

Term	Definition
	It could also be thought of as a balloon being inflated to a very large size is the sound wave growing from a point source, where the edge of the balloon skin is the edge of the sound wave front. If a small square was drawn onto the balloon when it is inflated, then if the balloon was to have air let out of it, the balloon would shrink and the square would get smaller and condense. If this was done all the way back to where the balloon had no air left then the square would be too tiny to see. This point is the Sound Power Level, where all the energy has been un-stretched back to one point.