



Zone Group

Environmental Noise Impact Assessment

Hesperia Property Pty Ltd

L3/338 Barker Road Subiaco WA 6904

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Basis of Report

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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1.0 Introduction

SLR Consulting Pty Ltd (SLR) was commissioned by Hesperia Property Pty Ltd to undertake an Environmental Noise Impact Assessment of a proposed warehouse and storage yard development, to be occupied by Zone Group. The proposed site development is to include office and workshop buildings, with hardstand storage area for hire equipment such as telehandlers. Site activity will be during the 'weekday' time period as defined by the Noise Regulations.

The site is on Lot 14 Hatch Court and Lot 9000 Adelaide Street, High Wycombe, which is to be subdivided in the future. The site is adjacent other industrial premises of a similar type, with existing residential development to the south-east. The site is being developed in accordance with local planning policies / structure plan, with the rural-residential lots off Hatch Court re-zoned to industrial.

This report, prepared by SLR Consulting Australia Pty Limited (SLR), details an assessment of predicted noise emissions from the proposed development. The report details the predicted noise levels to the surrounding receptors, and an assessment of compliance against applicable noise limits from the Regulations.

2.0 Criteria

2.1 Noise Regulations

The site noise emissions are required to achieve compliance with the Environmental Protection (Noise) Regulations 1997 (the "Regulations"). Under the regulations, noise levels at nearby residential areas from development operations are not to exceed defined limits (Assigned levels). The 'assigned levels' are defined in **Table A** and vary with time of day and standard workdays versus holiday periods.

Table A: EPNR Table 1 'Assigned Levels'

Type of premises receiving noise	Time of day	Assigned level (dB)		
		LA10	LA1	L _{Amax}
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 to 1900 hours Sunday and public holidays	40 + IF	50 + IF	65 + IF
	1900 to 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35 + IF	45 + IF	55 + IF
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial premises	All hours	60	75	80
Industrial and utility premises other than those in the Kwinana Industrial Area	All hours	65	80	90

The most critical receptors to the southeast of the proposed development are termed 'noise sensitive premises'. These are residential receptors, for which the 'assigned levels' are determined from a 'base level' with an Influencing Factor (IF) based on proximity to industrial and commercial land uses, and roads with high traffic flows. The relevant parameter for



assessment of operational noise is the LA10 statistical noise level, the noise level exceeded from greater than 10% of the representative time period.

2.2 Adjustments for intrusive or dominant characteristics

Table B summarises applicable adjustments for intrusive or annoying characteristics.

Table B: Adjustment for Intrusive or Dominant Noise Characteristics

Adjustment where noise emission is not music			Adjustment where noise emission is music	
Where tonality is present	Where modulation is present	Where impulsiveness is present	Where impulsiveness is not present	Where impulsiveness is present
+5 dB	+5 dB	+10 dB	+10 dB	+15 dB

These adjustments are cumulative to a maximum of 15 dB.

2.3 Key receptors

Representative residential receptors have been determined for Lot 14 Hatch Court and Lot 9000 Adelaide Street, High Wycombe. These receptors are shown in **Figure A**.

Figure 1 Residential receptor locations



One existing residence has been excluded from assessment. This is shown within a red circle, **Figure 1**. It is understood that this lot has been acquired for the purpose of a road reserve and that residence will be removed.



To simplify this assessment, the most significant receptors have been considered. The key noise sensitive residential receptors are described in **Table C**. Compliance at these identified receptors is predicted to result in compliance at all other receptors in the vicinity.

Table C: Key residential receptors

Sensitive receivers	Description
R1	Stirling Cres
R2	Corner Stirling Cre/ Adelaide Street
R3	Adelaide Street
R4	Existing residence (Hatch Ct)
R5	Existing residence (Hatch Ct)
R6	Existing residence (Hatch Ct)
R7	Existing residence (Hatch Ct)

2.4 Receptor assigned levels

The assigned noise levels determined for sensitive receivers adjacent to the site are detailed in **Table D**. The assigned levels include the IF derived based on the proximity of the receivers to industrial and commercial zoned areas, and major and secondary roads.

These areas have been identified from the City of Swan Local Planning Scheme 17 and the Hazelmere Enterprise Area Structure Plan.

Table D: Assigned levels – key receptors, dB

Sensitive receivers	Influencing Factor	Assigned Levels, LA10		
		Day	Evening	Night
R1	13	58	53	48
R2	8	52	47	42
R3	2	47	42	37
R4	15	60	55	50
R5	15	60	55	50
R6	12	57	52	47
R7	15	60	55	50
All commercial	Not applicable	60	60	60

3.0 Methodology

Noise emissions from the operation of the proposed site were modelled using ISO 17534¹ compliant software (SoundPLAN v8.2).

3.1 Site specific noise model

A noise model was developed for the site as follows:

- Detailed 3-dimensional representation of the site terrain model and local environment inclusive of key receptor locations.

¹ ISO 17534-1:2015 Acoustics — Software for the calculation of sound outdoors — Part 1: Quality requirements and quality assurance



- Receiver buildings digitised in the model and single point receivers were established at 1.5 m above the ground floor level at representative premises.
- Buildings identified from aerial imagery as non-sensitive, including site buildings such as warehouses, and property fences were retained in the noise model as they could provide screening on noise levels.
- The buildings and representative noise sources for the proposed development were incorporated into the noise model.
- 0.6 ground absorption coefficient which is considered reasonably representative of the proportion of soft and hard ground areas in each direction.

3.2 Calculation of noise levels

The model applied the 'CONCAWE' method for calculating outdoor noise propagation. CONCAWE started with a group of oil refining companies developing methods to assess environmental emissions in 1963, a concatenation of "**CON**servation of **C**lean **A**ir and **W**ater in **E**urope". The group developed an empirical method of modelling noise emissions from refineries to the far field, which has since evolved and continues to be used in 2023.

This method is accepted as being appropriate for modelling of projects of this type in Western Australia. The CONCAWE method permits calculation of noise levels with meteorological conditions favourable for downwind propagation of noise (wind speeds between approximately 1 m/s and 5 m/s) or under a moderate ground-based temperature inversion.

Both the SoundPLAN modelling software and the CONCAWE method are widely applied in Western Australia for the prediction of noise from industrial and commercial premises.

3.3 Operational scenario

Zone Group are operating out of an existing site in Kenwick. To inform the acoustic assessment, the site was inspected and measurements taken of noise emissions from normal operations on Tuesday the 17th June 2025 from 7.30am.

Zone Group hire out specialised equipment to undertake activities such as lifting inside buildings and placement of glass sheeting, as well as a range of telehandlers. One tilt tray truck picked up an electric crawler crane. A forklift was used to move items. Site personnel operated a Manitou MT733 for a short period to allow for measurement of noise emissions from what appears to be the noisiest hire equipment item. Generally, the site activity was low with periods of quiet.

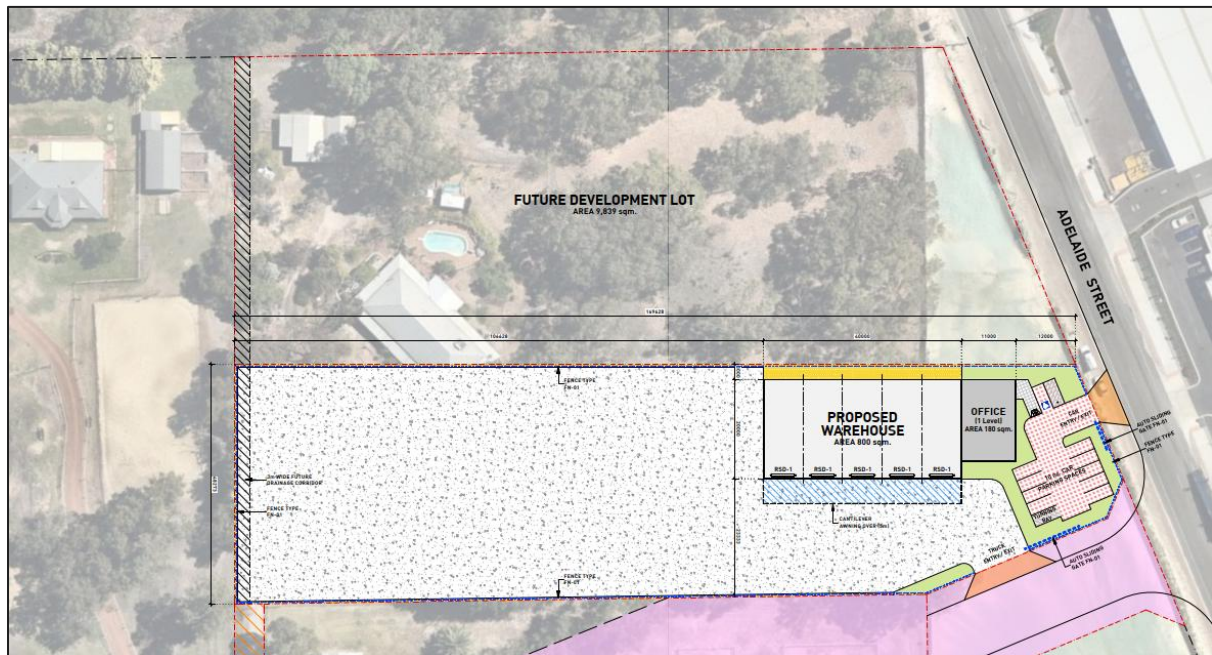
A representative 'worst case' scenario was modelled, consisting of:

- a) Crawler crane being loaded onto a tilt tray truck (truck operating including hydraulic tray movement), in front of workshop (specialised battery powered equipment is stored in the workshop)
- b) Manitou MT733 Telehandler moving in the yard, at a location towards the southern end of the yard near existing residential premises.

Two personnel able to operate equipment were observed on site. It has been assumed that this is a typical higher noise emission scenario.



Figure 2 Lot 2 site development plan



Source noise emission levels derived from measurement at the existing Zone Group site are provided in **Table E**. Noise emissions in the vicinity of all operated equipment are considered to be tonal.

Table E: Noise Source Sound Power Levels, LA10 dB

Source	A-weighted Sound Power Level, dB
Truck entering site - 20 km/hr	93
Forklift reversing	92
Electric crawler crane moving	88
Load crawler crane onto tilt truck	95
Move Manitou MT733 Telehandler	96

4.0 Impact assessment

The predicted noise emissions at the key receptors are shown in **Table F**.

Table F: Predicted noise emissions for day-time period, LA10 dB

Receptor	Weekday assigned noise level	Predicted noise emission	5 dB adjustment	Total predicted noise emission (Note 1)	Predicted Outcome
R1	58	31	5	36	Complies
R2	52	22	-	22	Complies
R3	47	22	-	22	Complies
R4	60	48	5	53	Complies
R5	60	41	5	46	Complies
R6	57	50	5	55	Complies
R7	60	42	5	47	Complies

Note 1 Results inclusive of a 5 dB adjustment.



It can be seen that the predicted noise levels comply with weekday L_{A10} 'assigned levels'.

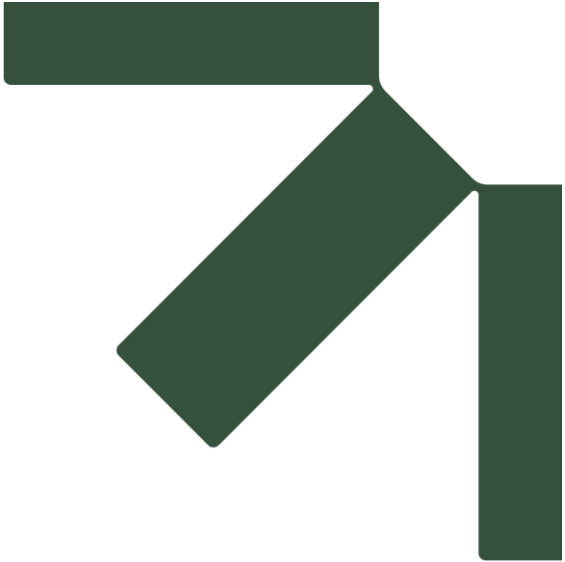
Appendix A includes predicted noise contours for the day-time operations, adjustments for characteristic have not been applied to the contours.

The predicted noise emissions comply with the regulation assigned level for the weekday time period.

5.0 Conclusion

Predicted noise emissions from of operation of the Zone Group development at Lot 14 Hatch Court and Lot 9000 Adelaide Street, High Wycombe are compliant at all receptors.





Appendix A Noise contour plots

Zone Group

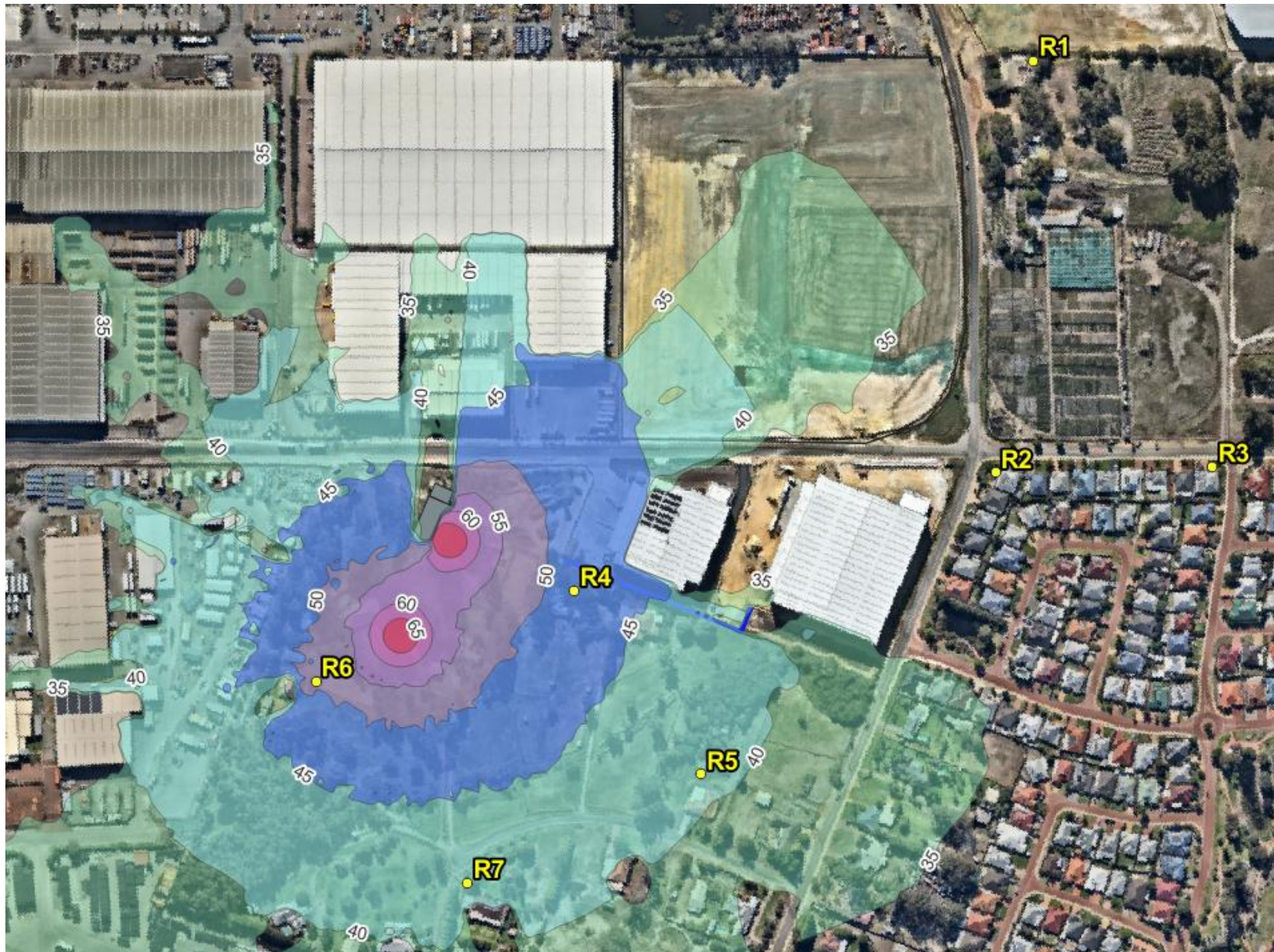
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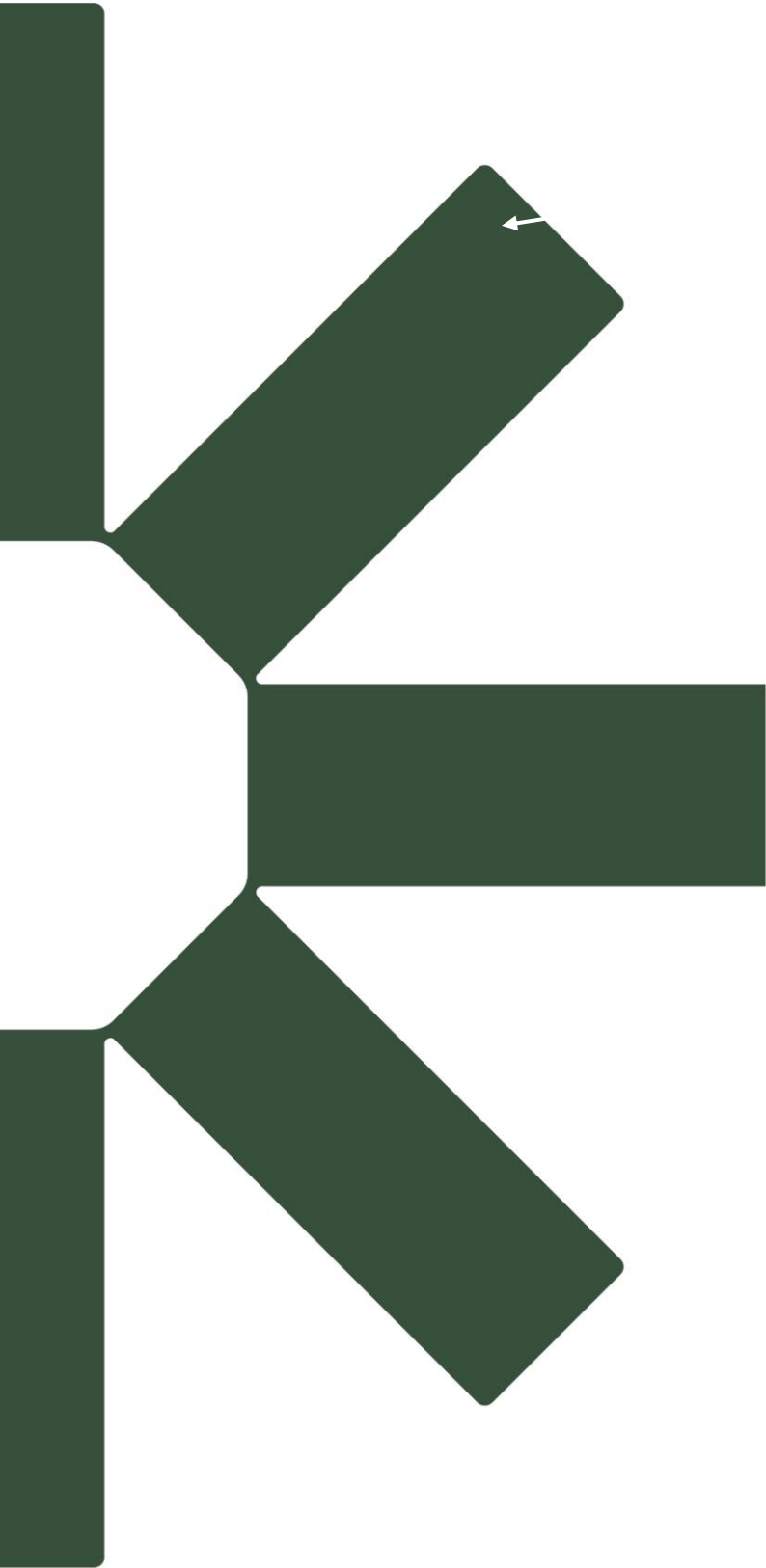
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Figure 3 Zone Group - Noise contours





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