

Memo

Enquiries: Project No:	Ben Martis 301250498		
To:	Adrian Dhue		
From:	Ben Martis	Date:	05 December 2022
Subject:	Onslow Township Village – Acoustics – Site Access via Bo	ack Beach	Road

1. Introduction

Stantec was commissioned by Mineral Resources Limited (c/- Milieu Creative Design Group) to undertake an acoustic assessment for the Onslow Township Village, to be located in Onslow WA.

As an amendment to do the Development Application Acoustic Report (Stantec report *AC-RE-001-301250498_004* dated 18 March 2022), a predictive noise assessment has been undertaken to determine the acoustic impact of accessing the site via Back Beach Road rather than Third Avenue, Onslow WA.

Predicted noise levels were compared against the criteria of the Western Australian *Environmental Protection (Noise) Regulations 1997* (EPNR).

This technical memorandum provides the outcomes of the predictive acoustic assessment and is to be read in conjunction with the Development Application Acoustic Report.

2. Acoustic Criteria

Noise emissions to external receivers must comply with the EPNR at all times.

The nearest noise sensitive receivers have been considered as the residential properties along the south and east of the site, with representative addresses selected as:

- 1 First St; and
- 5 Hedditch St, Onslow WA.

Table 1 summarises the assigned levels at the nearest noise sensitive premises. It is required that all noise emissions from the development are below the assigned level criteria for all defined periods of the day and at the lot boundary of the receiver or 15m from any associated building.

Table 1: Assigned levels for 5 Hedditch St

Type of promises receiving poise	Time of day	Assigned Level (dB)			
Type of premises receiving hoise	Time of day	L _{A10}	L _{A1}	L _{Amax}	
	0700 to 1900 hours Monday to Saturday	45	55	65	
Noise sensitive premises: Highly sensitive area	0900 to 1900 hours Sunday & public holidays	40	50	65	
	A1900 to 2200 hours all days	40	50	55	



Type of promises receiving poise	Time of day	Assigned Level (dB)			
Type of premises receiving horse	Time of day	L _{A10}	L _{A1}	L _{Amax}	
	2200 hours on any day to 0700 hours Monday to Saturday, and 0900 hours Sunday & public holidays	35	45	55	
Noise sensitive premises: any area other than highly sensitive areas	All Hours	60	75	80	
Commercial premises	All Hours	60	75	80	
Industrial and utility premises	All Hours	65	80	90	

3. Noise Modelling

The noise model was updated to include Back Beach Road as the primary access road to the site, affecting:

- Car park noise emissions, with the main site carpark being located approximately 150m closer to the nearest residences; and
- Service vehicle paths (loading docks and waste collection).

The assumptions and noise modelling parameters including source Sound Power Levels remained as stated in Sections 5.4 and 5.5 of the Acoustic Report.

The updated main site carpark location and service vehicle paths were taken from the Site Plan (Milieu Creative DA002 Site Master_N.pdf dated 30 November 2022), as shown in Figure 1.

The Shire of Ashburton has queried the existing and future levels of traffic noise on Back Beach Road. Without accurate traffic information for the present and future scenarios, this cannot be determined. Further, noise from motor vehicles travelling on public roads cannot be assessed against the assigned levels of the EPNR.

The site access road is considered a gazetted road, at which point the vehicle noise emissions become assessable against the EPNR and have been modelled. It can be seen from the noise contours in Appendix A that the noise emissions from service vehicles are less than the predicted noise emissions from Onslow Salt operations in the area (60 dBA).



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Figure 1: Proposed Site Plan

3.1 Results – Carpark Movements

Results of the assessments are shown in Table 2 below, with each scenario assessed against a different statistical parameter. As these are the worst-case results, compliance is inferred for all nearby sensitive receivers. Noise contours are presented in Appendix A.

Table 2	Car	Parking	Assessment	Results
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Assessment Scenario	Assigned Level – Night, dB(A)	Highest Received Noise Level, at Receiver	Complies? (Y/N)
L _{A10}	35	35 dB(A) – 1 Hedditch St	YES
L _{A1}	45	44 dB(A) – 1 Hedditch St	YES

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Assessment	Assigned Level – Night,	Highest Received Noise Level,	Complies?
Scenario	dB(A)	at Receiver	(Y/N)
L _{Amax}	55	54 dB(A) – 1 Hedditch St	YES

3.1.1 Management Measures

• Due to the closer proximity of the main site carpark to noise sensitive receivers, a solid and continuous wall of 2.7m height and minimum surface mass 14 kg/m² (example 9mm fibre cement sheet) may be required to maintain compliance with the EPNR. Impacts of the site main carpark and mitigation measures for the neighbouring residences will be further developed during the detailed design phase;

- Vehicles using the site carpark should be fitted with broadband type reversing alarms (referred to as "quackers" or croakers") as opposed to "beepers". This is especially critical where reverse parking is mandated by the Client. It is recommended that the Sound Power Level is no more than 88 dBA per unit. **Tonality at the receiver locations** would attract a +5 dB adjustment per the EPNR and may result in non-compliance; and
- Personnel may be notified in the site induction to arrive and leave the carpark in an orderly fashion, to minimise noise (e.g. no slamming of doors) so as not to disrupt their colleagues or the community.

3.2 Results – Loading Dock

Prediction results are presented in Table 3. Compliance to the EPNR, based on the assumption that the <u>loading dock will</u> <u>be used between 0700 – 1900 hours Monday to Saturday only.</u> Noise contours are presented in Appendix A.

Noise levels at the Accommodation Pods are predicted to be up to 51 dB(A) externally, below the design level of 60 dB(A).

Time of Day	Most Stringent EPNR L _{A10}	1 First St	2 Second Ave	9 Third Ave	1 Hedditch St	3 Back Beach Rd	29 Simpson St	Complies? (Y/N)
0700-1900 hr Mon-Sat	45 dB(A)	36	34	37	39	44	44	YES

Table 3: Loading Dock Noise Emissions at External Receivers

3.3 Results – Waste Collection

Under the EPNR Regulation 14A, the assigned noise levels of Regulation 7 do not apply to waste collection (both domestic and commercial sources), provided certain conditions are met. Assessment of predicted noise emissions due to waste collection has been carried out as a due diligence.

Compliance to the EPNR is predicted, with the recommendation that waste collection occur between 0700 – 1900 hours Monday to Saturday only. Generally, local councils cannot confirm collection times for waste collections, however they endeavour to conduct waste collection during the hours 0700 – 1900 hr Monday to Saturday in accordance with the WA Department of Environmental Regulation's Draft Guide to Management of Noise from Waste Collection and Other Works (December 2014). Noise contours are presented in Appendix A.

Noise levels at the Accommodation Pods are predicted to be up to 48 dB(A) externally, below the design level of 60 dB(A).



Table 4.	Waste	Collection	Noise	Fmissions	at External	Receivers
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Time of Day	Most Stringent EPNR L _{A10}	1 First St	2 Second Ave	9 Third Ave	1 Hedditch St	3 Back Beach Rd	29 Simpson St	Complies? (Y/N)
0700-1900 hr Mon-Sat	45 dB(A)	33	28	35	37	41	41	YES

The recommended management measures in Section 5.5.2 of the Acoustic Report are retained.

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APPENDIX A – Noise Contours

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LOADING DOCK NOISE EMISSIONS - DAYTIME

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT

Noise level in dB(A) < 35.0 < 37.5 35.0 <= 37.5 <= < 40.0 40.0 <= < 42.5 42.5 <= < 45.0 45.0 <= < 47.5 47.5 <= < 50.0 < 52.5 50.0 <= < 55.0 52.5 <= < 57.5 55.0 <= 57.5 <= < 60.0 60.0 <=







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WASTE COLLECTION NOISE EMISSIONS - DAYTIME

TAVERN/RESTAURANT BIN STORE

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT

> Noise level in dB(A) 35.0 <= < 35.0 < 37.5 37.5 <= < 40.0 40.0 <= < 42.5 42.5 <= < 45.0









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WASTE COLLECTION NOISE EMISSIONS - DAYTIME

MAINTENANCE SHEDS BIN STORE

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT

> Noise level in dB(A) < 35.0 < 37.5 35.0 <= 37.5 <= < 40.0 < 42.5 40.0 <= 42.5 <= < 45.0 < 47.5 45.0 <= 47.5 <= < 50.0 < 52.5 50.0 <= < 55.0 52.5 <=

55.0 <= 57.5 <=



< 57.5

< 60.0





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CARPARK NOISE, L10 EMISSIONS - NIGHT

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT

> Noise level in dB(A) < 35.0 < 37.5 35.0 <= < 40.0 37.5 <= 40.0 <= < 42.5 42.5 <= < 45.0 < 47.5 45.0 <= 47.5 <= < 50.0 < 52.5 50.0 <= < 55.0 52.5 <= < 57.5 55.0 <= 57.5 <= < 60.0 60.0 <=







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CARPARK NOISE, L1 EMISSIONS - NIGHT

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT









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CARPARK NOISE, Lmax EMISSIONS - NIGHT

NOISE CONTOUR AT 1.5m RECIEVER HEIGHT

Noise level in dB(A) < 35.0 35.0 <= < 37.5 < 40.0 37.5 <= 40.0 <= < 42.5 < 45.0 42.5 <= < 47.5 45.0 <= < 50.0 47.5 <= < 52.5 50.0 <= < 55.0 52.5 <= < 57.5 55.0 <= 57.5 <= < 60.0 60.0 <=



