



NOISE MANAGEMENT PLAN
Prepared for B&J Catalano Pty Ltd
Lots 4 and 5, Ludlow Road, Myalup
Shire of Harvey

1. INTRODUCTION

This Noise Management Plan (NMP) has been prepared in accordance with guidelines published by Department of Environmental Protection, Government of Western Australia *Environmental Protection (Noise) Regulations 1997*. This NMP should be read in conjunction with the report entitled “Extractive Industries Licence Application and Environmental Management Plan, Lots 4 & 5 Ludlow Road, Myalup, Shire of Harvey (April 2020)” prepared for B & J Catalano Pty Ltd by Lundstrom Environmental Consultants Pty Ltd.

2. LOCALITY AND OWNERSHIP

Locality: Lots 4 and 5, Ludlow Road, Myalup, Shire of Harvey

3. THE DEVELOPMENT PROPOSAL

B & J Catalano Pty Ltd has been operating a limestone extraction operation in the area since 2009. It is proposed to continue extracting limestone from a 21 ha area on the site. Upon completion of extraction, the area will be returned primarily for use as pasture for cattle grazing.

Figure 1 is a recent aerial photograph showing the property and its surrounds.

4. CRITERIA

4.1 The Regulations

Environmental noise is governed in Western Australia by the *Environmental Protection (Noise) Regulations 1997* (the Regulations). The Regulations set noise standards to ensure that noise from other premises is kept to assigned noise levels as follows:

- “7. (1) Noise emitted from any premises or public place when received at other premises —
- (a) must not cause, or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and

- (b) must be free of –
- i. tonality; and
 - ii. impulsiveness; and
 - iii. modulation”

“9. (3) Noise is taken to be free of the characteristics of tonality, impulsiveness and modulation if –

- (a) the characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of the noise emission; and
- (b) the noise emission complies with the standard prescribed under regulation 7(1)(a) after the adjustments in the table (Table 1.) to this sub regulation are made to the noise emission as measured at the point of reception.”

Table 1: Adjustments for intrusive characteristics

Adjustment where noise emission is not music		
Tonality	Modulation	Impulsiveness
+5 dB	+5 dB	+10 dB

4.2 Assigned Noise Levels

The Regulation 8 describes assigned levels for sensitive areas for day and night time as follows:

Table 2: Assigned noise levels

Type of premises receiving noise	Time of day	Assigned level (dB)		
		LA10	LA1	LA MAX
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holiday	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises: any other are other than highly sensitive area	All hours	60	75	80
Commercial premises	All hours	60	75	80
Industrial and utility premises	All hours	65	80	90

Extractive industry due to the use of bulldozers may incur tonality penalty. In this case, the limestone is fairly soft and the tonality impacts are anticipated as being low.

5. METHODOLOGY

5.1 Software

This model has been developed using the software Sound Plan Essential ver. 4.0. This software is a version of Sound Plan which can be used for acoustic modelling and simulations for small projects where noise is emanating from a single source.

5.2 Modelling assumptions and input data

- Outdoor noise propagation has been modelled using international standard ISO 9613-2 model. The model includes the influence of meteorological information.
- The ground surface was developed using contour lines in 5m intervals and 2m intervals.
- Due to the rural location, the ground surface was assumed to be acoustically absorptive.
- Source sound power levels from manufacturers' data or from previous experience have been used.
- For modelling purposes, it has been assumed that all equipment works simultaneously to show the worst-case scenario.

6. PROPOSED WORKS AND POTENTIAL IMPACTS

6.1 Proposed Mining Actions

B&J Catalano Pty Ltd intends to continue extracting limestone from the 21 ha site (Figure 1), by using a D8 bulldozer and CAT 988 front-end loader. The bulldozer will rip and blade raw material to a stockpile where it will be loaded into Finlay crusher and processed. This will result in the extraction of approximately 55 000 m³ annually, but this will depend on demand. It is intended to progressively rehabilitate the area to a mix of native vegetation and pastures for cattle grazing.

Table 3 provides a description of all activities, their duration and an assessment of potential for noise impacts.

Table 3: Summary of Noise Generating Activities

Activity	Duration	Equipment to be used	Comments
Strip and stack topsoil. Excavate limestone to processing site.	6 week per year from commencement	D8 Bulldozer CAT 988 front end loader (FEL)	No impact as specified by Noise Regulations to closest residents
Screening and stockpiling of limestone.	8 weeks from commencement	Finlay Screen 693 Striker 25m Stacker	No impact as specified by Noise Regulations to closest residents
Loading of trucks from stockpiles.	4 years at an average of 14 trucks per day	Single Semi-loader (24 tonnes) CAT 988 FEL	No impact as specified by Noise Regulations to closest residents
Rehabilitation of completed stages.	2 weeks per year from commencement	D8 Bulldozer CAT 988 FEL	No impact as specified by Noise Regulations to closest residents

6.2 Plant and Equipment to be used

Equipment to be used and the estimated maximum sound pressure of the equipment are summarized in Table 4.

Table 4: Equipment used on Site and source sound power levels

Equipment	Sound Power Level dB(A)
D8 Bulldozer ¹	116
Caterpillar 988 ¹	111
Mobile Finlay Crusher ²	113
Mobile Stacker ²	100
Truck ¹	100

X¹ manufacturers noise data

X² noise data estimated from previous experience

6.3 Potentially Sensitive Receptors

6.3.1 Residential Dwellings

There is one residence within the impact zone of a 1000m from the extraction area (measured from the closest point) which can be exposed to some noise impacts. This sensitive receptor (Holiday Cottage Res 1) is owned by Geoffrey Thomas Pearson who is the landowner of the property. Residence 2 is located more than a 1000m to the west of the extraction area. Based on Sound Plan modelling for the limestone extraction operation, the 45dB contour occurs at about 500m from the noise source. Noise received at the two residences are shown in Table 5 and illustrated in Figure 2.

Table 5: Dwellings within 1500 m of the extraction area

Reference No. on Figure 1	Street/ Lot No.	Occupants Name	Distance to closest area of pit (metres)	L _{Amax}
1	Lot 4	Holiday Cottage (owned by landowner)	480	40-45
2	1815	Unknown	>1500	<40

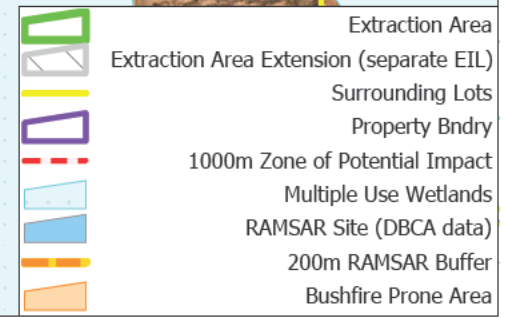
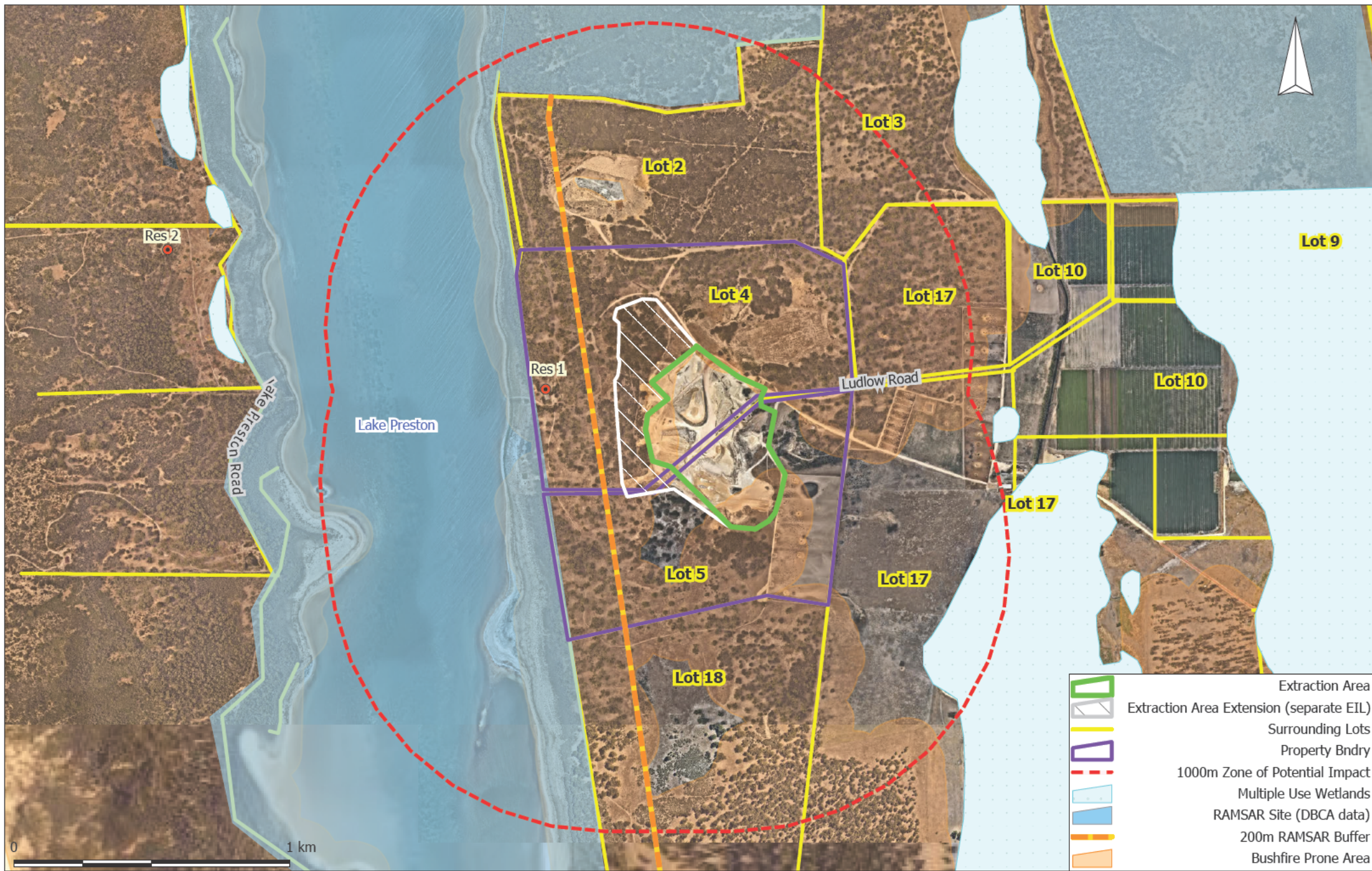
7. CONCLUSION

Based on modelling conducted there will be no noise impacts associated with this project.

8. REFERENCES

Department of Environmental Protection, Government of Western Australia. *Environmental Protection (Noise) Regulations 1997*.

FIGURES

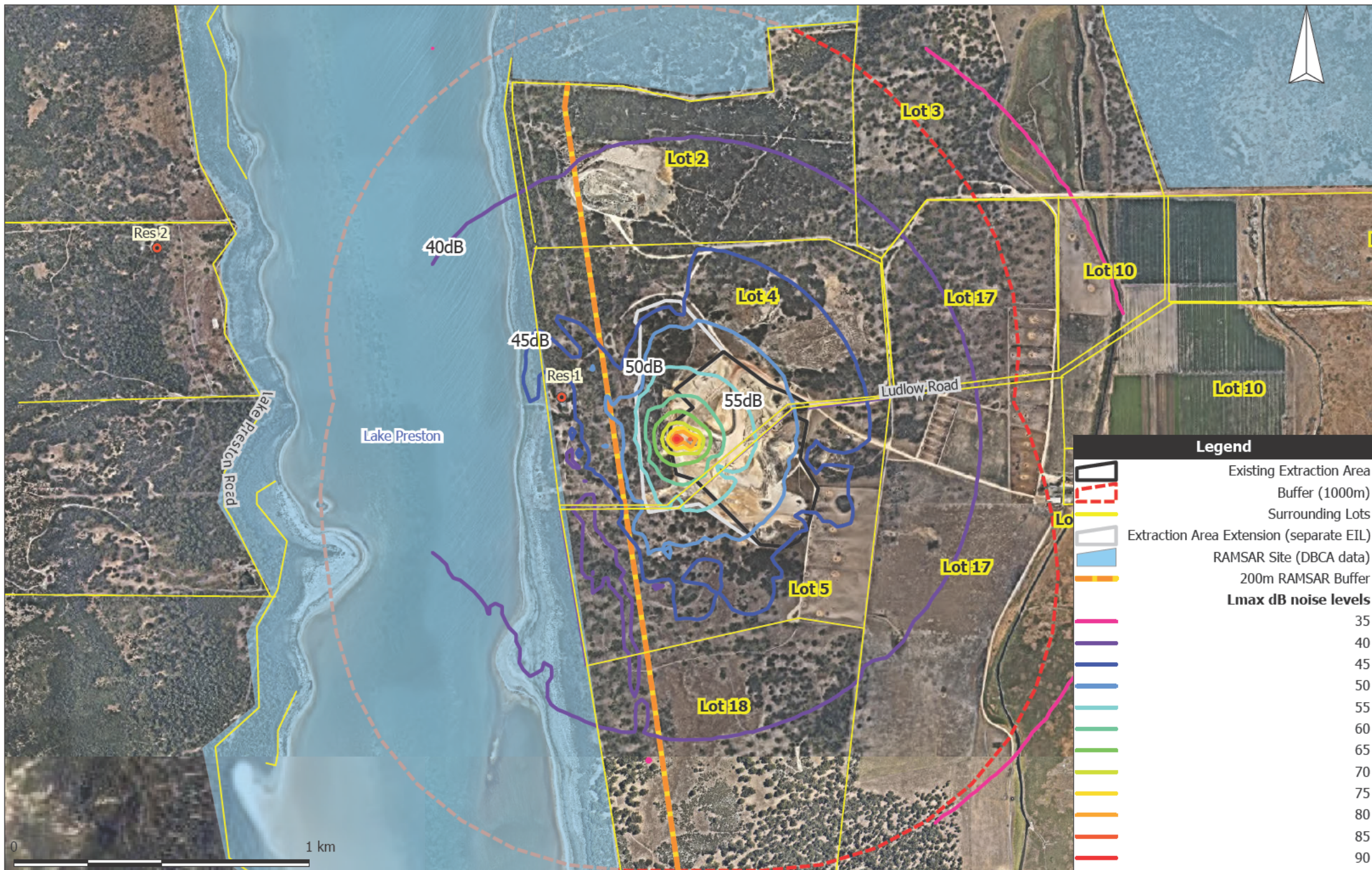


Lundstrom Environmental Consultants Pty Ltd
 Leeming WA 6149
 Mob: 0417934863, mikelund1@bigpond.com

Scale: 1:17000
 Original Size: A4
 Air Photo Source: Nearmap Dec 2019
 Datum: GDA94
 Projection: Australia MGA94 (50)

Client: B & J Catalano
 Project: Limestone Extraction
 Location: Lots 4 & 5 Ludlow Rd, Myalup

**Figure 1:
 Site and Surrounds**



**Lundstrom Environmental
Consultants Pty Ltd**

Leeming WA 6149
Mob: 0417934863, mikelund1@bigpond.com

Scale: 1:16000
Original Size: A4
Air Photo Source: Nearmap Dec 2019
Datum: GDA94
Projection: Australia MGA94 (50)

Client: B & J Catalano
Project: Limestone Extraction
Location: Lots 4 & 5 Ludlow Rd, Myalup

**Figure 2:
Noise Contour Map**