



Lloyd George Acoustics

ABN: 79 125 812 544

PO Box 717
Hillarys WA 6923

Ocean Reef
Padbury
Scarborough
Waterford

Enquiries to: E: daniel@lgaoustics.com.au
P: 08 9300 4188
F: 08 9300 4188
M: 0439 032 844

Email Report

To: Ecologia From: Daniel Lloyd

Attention: Tammy Souster Date: 12 November 2009

Email: tammy.souster@ecologia.com.au Pages: 5

Our Ref: 8071048-02

Re: SMM Weld Range Airstrip Noise

Introduction

This report provides an assessment of aircraft noise to the accommodation village associated with the proposed Sinosteel Midwest Management (SMM) - Weld Range Iron Ore Project. Three options are considered in the assessment as shown in *Figures 1 to 3*.

The assessment calculates the maximum noise level from aircraft take-off and landing and provides recommendations on the building materials required to satisfy relevant standards.

Methodology

Two aircraft types have been used in the assessment. These being:

- BAe 146-100; and
- Boeing Dash 8.

It is assumed that there will be two flights per day. However, our recommendations are valid for up to 20 flights per day.

Maximum noise levels and the suitability of accommodation buildings have been determined using Australian Standard 2021-2000 – *Acoustics – Aircraft noise intrusion – Building siting and construction*. The standard uses distances from the airstrip, offset from the centreline of the runway and aircraft types. The variables used in the calculations include:

Base Option

- Distance from closest end of runway to village = 400 metres
- Distance from furthest end of runway to village = 400 metres
- Offset from runway centreline = 3400 metres.

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Option 1

- Distance from closest end of runway to village = 650 metres
- Distance from furthest end of runway to village = 3500 metres
- Offset from runway centreline = 3000 metres

Option 2

- Distance from closest end of runway to village = 740 metres
- Distance from furthest end of runway to village = 3800 metres
- Offset from runway centreline = 2500 metres

Results

Based on this information, we have calculated the maximum noise levels for each option as follows:

Base Option

- BAe 146-100 aircraft < L_{Amax} 48 dB(A); and
- Boeing Dash 8 aircraft < L_{Amax} 46 dB(A).

Option 1

- BAe 146-100 aircraft < L_{Amax} 50 dB(A); and
- Boeing Dash 8 aircraft < L_{Amax} 50 dB(A).

Option 2

- BAe 146-100 aircraft = L_{Amax} 52 dB(A); and
- Boeing Dash 8 aircraft = L_{Amax} 50 dB(A).

Assessment

The maximum noise levels are deemed suitable for residential buildings.

AS 2021-2000 sets an indoor design sound level of 50 dB(A) for sleeping areas in houses, home units, flats and caravan parks. To achieve this there would be no special requirements in terms of construction of the accommodation village buildings.

Regards,

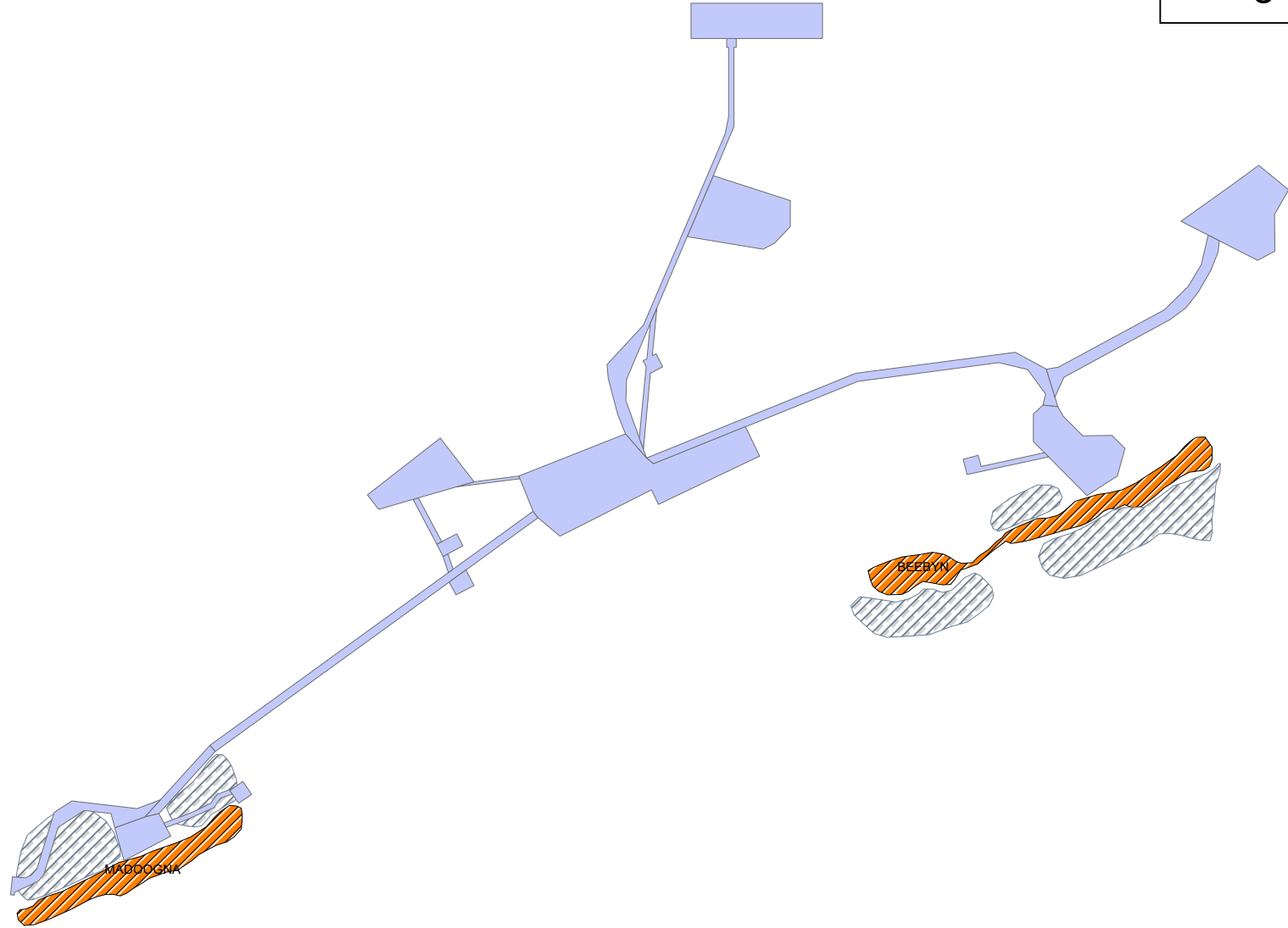


Daniel Lloyd

LEGEND

- BFS_BASE_CASE_20091021
- WASTE DUMP
- PIT

Figure 1



2,500 1,250 0 2,500 5,000 7,500 10,000

Datum: GDA94, Projection: MGA94, Zone50s (metres)

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WELD RANGE IRON ORE PROJECT
BANKABLE FEASIBILITY STUDY
INFRASTRUCTURE BASE CASE

DRG No

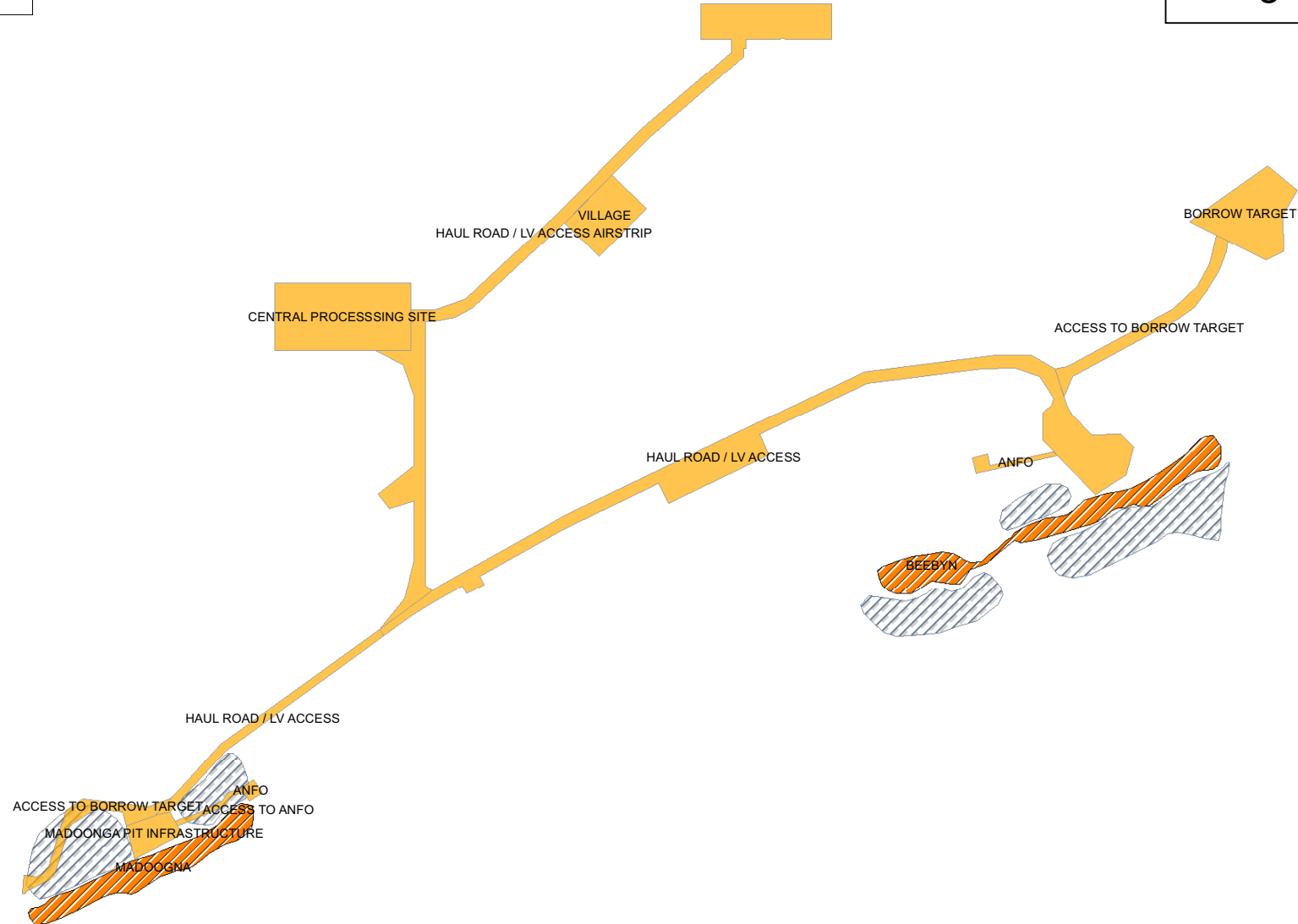
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 BFS_OPTIONS_STUDY_1_20091021
 WASTE DUMP
 PIT

Figure 2



Datum: GDA94, Projection: MGA94, Zone50s (metres)

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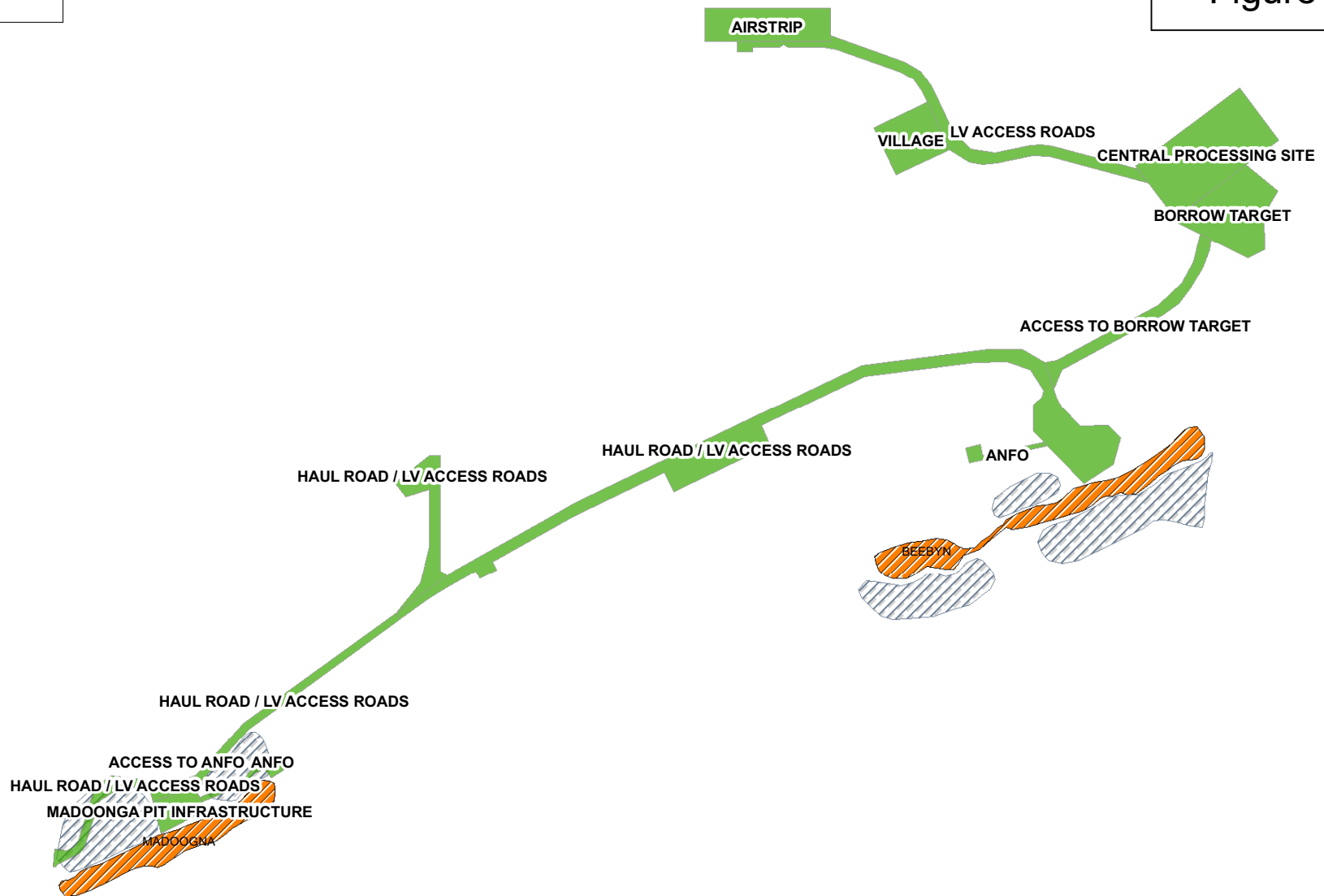
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WELD RANGE IRON ORE PROJECT
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Figure 3



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WELD RANGE IRON ORE PROJECT
BANKABLE FEASIBILITY STUDY
INFRASTRUCTURE LOCATION OPTION 2

DRG No

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