

Appendix 5 Noise and Vibration Impact Assessment

This page is intentionally blank



Noise and Vibration Impact Assessment

Barina Quarry Modification 3

Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP86342

Collector, NSW

Prepared for: Irwin Environmental Management Pty Limited
October 2025
MAC211420-02RP1V3



Document Information

Noise and Vibration Impact Assessment

Barina Quarry Modification 3

Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP86342

Collector, NSW

Prepared for: Irwin Environmental Management Pty Limited

85 Pippin Way

Orange NSW 2800

Prepared by: Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

P: +61 2 4920 1833

www.mulleracoustic.com

DOCUMENT ID	DATE	PREPARED	SIGNED	REVIEWED	SIGNED
MAC211420-02RP1V3	31 October 2025	Dale Redwood		Oliver Muller	

DISCLAIMER

All documents produced by Muller Acoustic Consulting Pty Ltd (MAC) are prepared for a particular client's requirements and are based on a specific scope, circumstances and limitations derived between MAC and the client. Information and/or report(s) prepared by MAC may not be suitable for uses other than the original intended objective. No parties other than the client should use or reproduce any information and/or report(s) without obtaining permission from MAC. Any information and/or documents prepared by MAC is not to be reproduced, presented or reviewed except in full.

CONTENTS

1	INTRODUCTION	5
2	PROJECT DESCRIPTION	7
2.1	APPROVED DEVELOPMENT	7
2.2	OPERATIONAL HISTORY AND CURRENT STATUS	7
2.3	PROJECT OVERVIEW	11
3	NOISE POLICY AND GUIDELINES	13
3.1	INTERIM CONSTRUCTION NOISE GUIDELINE	13
3.2	NOISE POLICY FOR INDUSTRY	13
3.2.1	PROJECT NOISE TRIGGER LEVELS (PNTL)	14
3.2.2	RATING BACKGROUND LEVEL (RBL)	14
3.2.3	PROJECT INTRUSIVENESS NOISE LEVEL (PINL)	14
3.2.4	PROJECT AMENITY NOISE LEVEL (PANL)	15
3.3	ROAD NOISE POLICY	17
3.4	ANZEC BLASTING GUIDELINES	17
4	EXISTING ENVIRONMENT	19
4.1	RECEIVER REVIEW	19
4.2	BACKGROUND NOISE LEVELS	21
4.3	ATTENDED NOISE MONITORING	22
5	ASSESSMENT CRITERIA	23
5.1	OPERATIONAL NOISE TRIGGER LEVELS (CRITERIA)	23
5.1.1	INTRUSIVENESS NOISE LEVELS	23
5.1.2	AMENITY NOISE LEVELS AND PROJECT AMENITY NOISE LEVELS	23
5.1.3	PROJECT NOISE TRIGGER LEVELS	24
5.2	ROAD TRAFFIC NOISE	24
5.2.1	RELATIVE INCREASE CRITERIA	25
5.3	ANZEC GUIDELINE BLASTING LIMITS	25
6	MODELLING METHODOLOGY	27
6.1	OPERATIONAL NOISE MODELLING PARAMETERS	27

6.1.1	METEOROLOGICAL ANALYSIS	28
6.1.2	OPERATIONAL NOISE MODELLING SCENARIO AND SOUND POWER LEVELS	29
6.1.3	NOISE ATTENUATION ASSUMPTIONS	30
6.1.4	SOUND POWER LEVELS.....	34
6.1.5	ANNOYING CHARACTERISTICS.....	35
6.2	ROAD TRAFFIC NOISE ASSESSMENT METHODOLOGY.....	35
6.3	BLASTING ASSESSMENT METHODOLOGY.....	35
6.3.1	AIR-BLAST OVERPRESSURE	36
6.3.2	GROUND-BORNE VIBRATION.....	36
7	NOISE ASSESSMENT RESULTS	37
7.1	OPERATIONAL NOISE ASSESSMENT.....	37
7.2	BLASTING ASSESSMENT.....	38
8	DISCUSSION AND CONCLUSION	39
APPENDIX A – GLOSSARY OF TERMS		
APPENDIX B – NOISE MONITORING CHARTS		
APPENDIX C – NEWA METEOROLOGICAL DATA		
APPENDIX D – SOUND POWER DATA		
APPENDIX E – ANNOYING CHARACTERISTICS ASSESSMENT		
APPENDIX F – NOISE CONTOUR PLOTS		

1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by Irwin Environmental Management Pty Limited (IEM) to prepare a Noise and Vibration Impact Assessment (NVIA) to quantify emissions from the proposed Barina Quarry Modification 3 Project (the 'Project') near Collector, NSW.

The NVIA was completed to quantify potential noise and vibration impacts associated with the Project on the surrounding community and will accompany the Modification Application for the Project.

This assessment has been undertaken in accordance with the following documents:

- Environment Protection Authority's (EPA's), Noise Policy for Industry (NPI), 2017;
- NSW Department of Environment and Climate Change (DECC), NSW Interim Construction Noise Guideline (ICNG), 2009;
- Department of Environment, Climate Change and Water NSW (DECCW), Road Noise Policy (RNP), 2011;
- Australian and New Zealand Environment Council (ANZEC) 1990, Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration;
- Standards Australia AS2187.2-2006 (AS2187.2) – Explosives—Storage and Use Part 2: Use of Explosives;
- NSW Environment Protection Authority (EPA), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022; and
- Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise".

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

This page has been intentionally left blank

2 Project Description

2.1 Approved Development

Collector Resources owns and operates the Barina Quarry, located on Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP1177623, Collector Road, Collector NSW, within the Queanbeyan-Palerang Regional Council (QPRC) Local Government Area (LGA) (refer to **Figure 1**).

The operations are approved under a State Significant Development (SSD) consent approved by Orders of the Land & Environment Court on 28 May 2001 (DA1-01-2000). The approval permits a production of up to 300,000 tonnes per annum (tpa) with a maximum monthly production of 40,000 tonnes (t).

The approved activities are summarised as follows:

- Completion of extraction from an initial open cut (Pit 1) to a floor elevation of 716m Australian Height Datum (AHD) and floor area of 1.5 hectares (ha);
- Extraction by drill and blast methods from a second open cut (Pit 2) to a maximum depth of 714m;
- Delivery and disposal of overburden to emplacements north of Pit 1 and 2, respectively;
- In-pit crushing and screening operations utilising a primary jaw crusher, one or more cone crushers and a variety of stationary and vibrating screens;
- Transport from the Quarry operations allowing for up to 134 truck movements (72 laden) and 20 truck movements (10 laden) per hour;
- Hours of operation commencing at 7am to 6pm Monday to Saturday.

The approved disturbance area of the Quarry incorporates additional features in the form of stripped and excavated land, drainage lines, dams, bunds and cut batters associated with the operations on the Quarry Site preceding DA 1-01-2000. These areas have been included within the approved disturbance footprint of the Barina Quarry (refer to **Figure 2**).

2.2 Operational History and Current Status

Operations under DA 1-01-2000 commenced in 2005, with extraction in Pit 1 completed before transitioning to Pit 2 from which extraction was undertaken intermittently for several years. Crushing and screening was undertaken within Pit 1 with products stockpiled within Pit 1 and on lands to the immediate north of Pit 1. Extraction and other operations effectively ceased in 2008, with Pit 2 approximately 2ha in area and maximum depth of 778m, and the Quarry was placed into care & maintenance. The extents of disturbance compared to the approved disturbance footprint are identified on **Figure 2**.

Collector Resources acquired the property and DA 1-01-2000 in 2016, however, operational control only reverted to the Applicant in 2019. While initially intending to recommence extraction operations in 2020, these plans were postponed pending the completion of further feasibility and quarry planning work.

A modification to DA 1-01-2000 was approved in November 2023 under Section 4.56 of the *Environmental Planning & Assessment Act 1979* for a 12-month extension to operations. DA 1-01-2000 (MOD 2) made no change to the overall operations of the Quarry, however, introduced conditions requiring satisfactory completion of road upgrades and an independent environmental audit prior to recommencement.

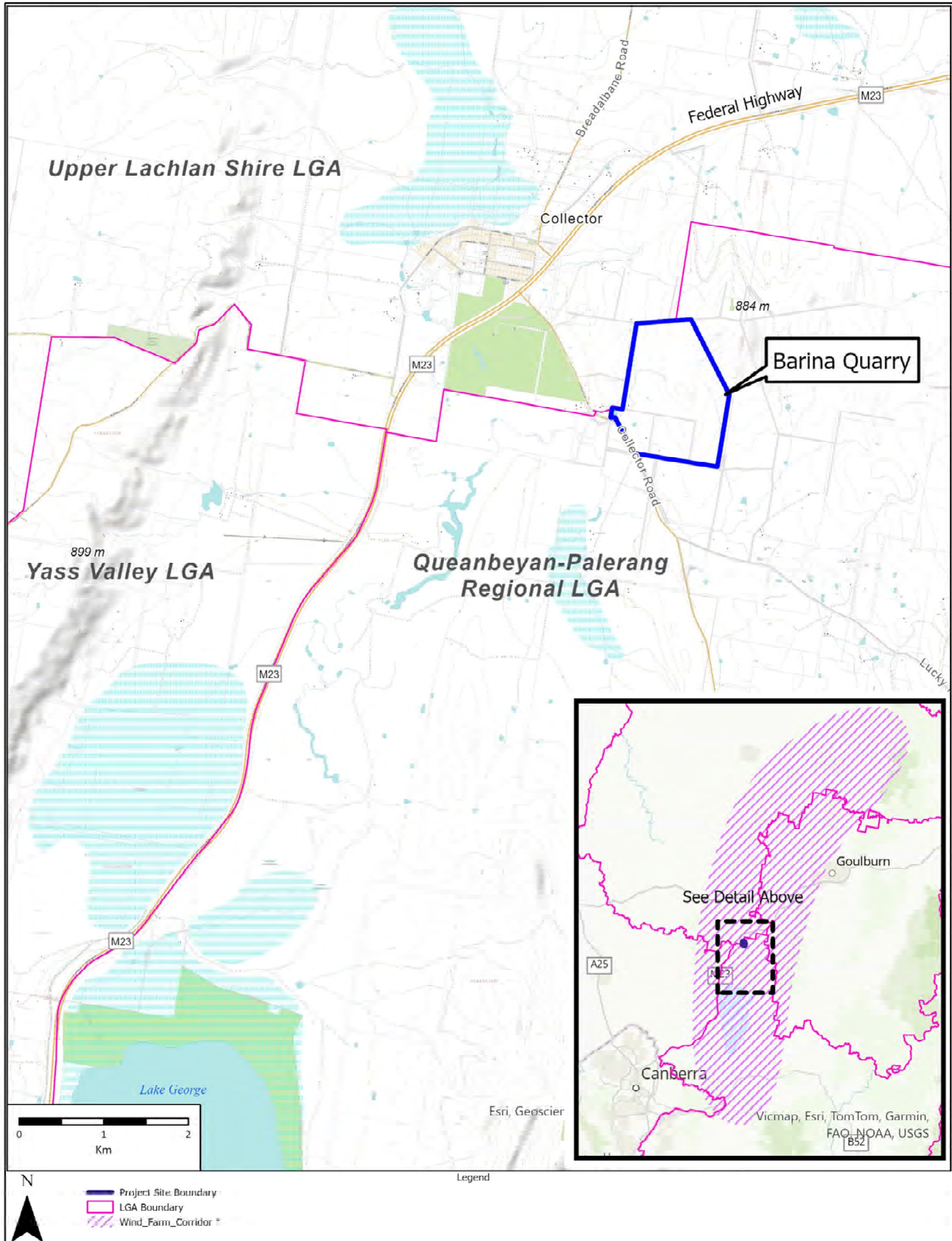


Figure 1
Local Setting

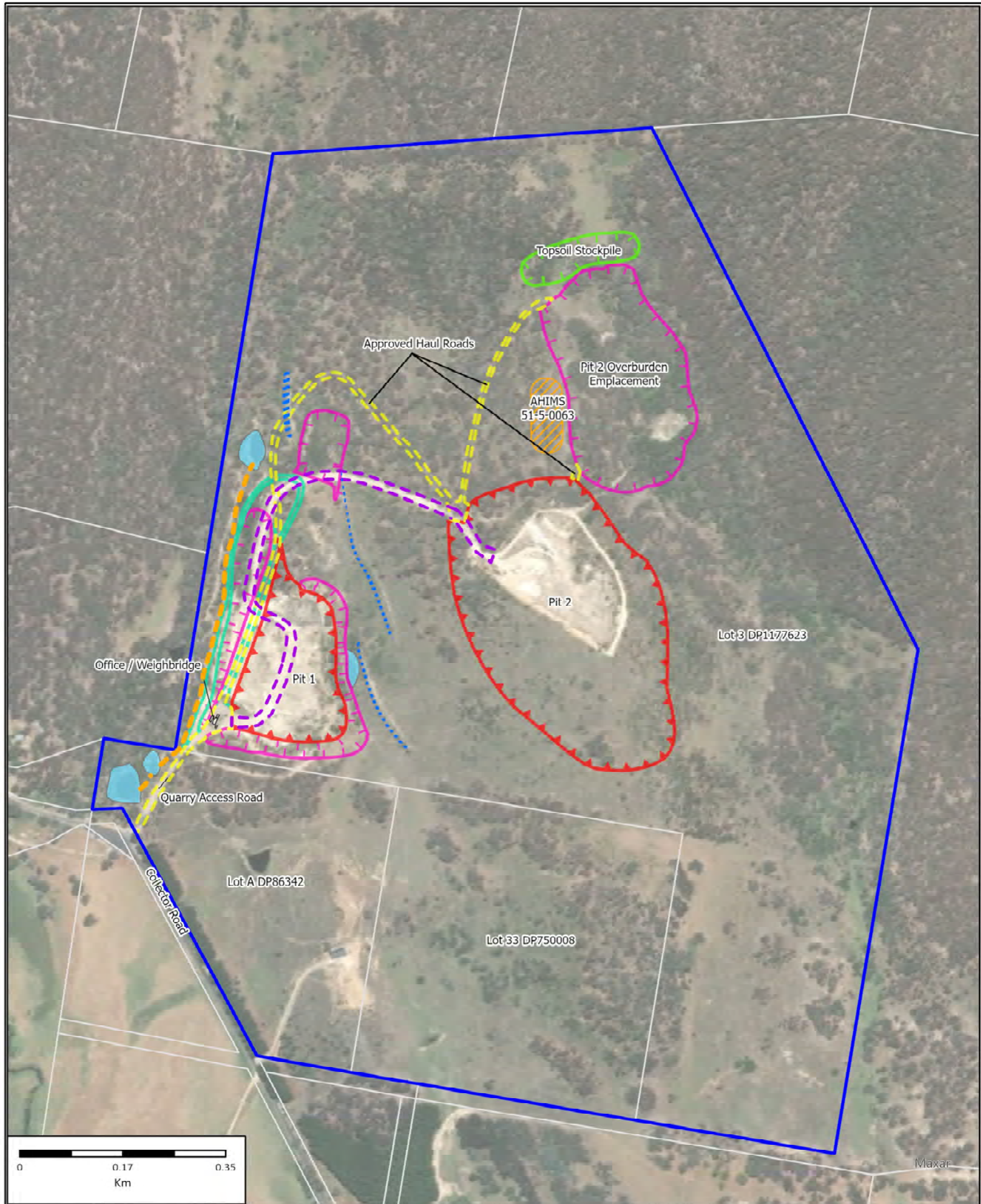


Figure 2
Approved Quarry Layout and Existing Disturbance

2.3 Project Overview

A second modification is proposed to allow for continuation of operations. These modifications, which are identified on **Figure 3**, are as follows:

- An extension to operations for 15 years (excluding rehabilitation which could be completed beyond the term of extended operations);
- Establishment of additional stockpiling areas;
 - South Stockpile Area. A new stockpiling area between Pits 1 and 2. This area has been the subject of ancillary activities associated with the Quarry (by a previous owner and operator) and ongoing property management. As per the Biodiversity Development Assessment Report (OzArk, 2025), the area is considered modified and of low biodiversity value;
 - North Stockpile Area. Conversion of an area allocated to overburden emplacement (to the north of Pit 1) along with a small extension to the north and east;
 - Overburden Emplacement Stockpile Area. Modification to the Pit 2 Overburden Emplacement to allow for supplementary stockpiling of Quarry product.
- Importation of clean fill materials for use as engineered fill for the construction of internal roads and stockpiling areas, and possible backfill of the extraction areas;
- Relocation of mobile and modular crushing and screening operations to either Pit 2 (preferred option) or the new Stockpile Area (secondary option). It is also proposed to add a small washing circuit for the production of manufactured sand products;
- Removal of the distinction between laden and unladen movements (allowing for laden trucks to enter the Quarry Site with clean fill and leave with quarry products);
- Relocation of the Quarry Office, weighbridge and amenities onto the South Stockpile Area, inclusion of workshops and a small laydown area on Lot A DP86342, and realignment of some internal roads between the Quarry entrance, relocated facilities and stockpile areas.

Operations on the Quarry Site would continue to be undertaken during daytime hours, being Monday to Friday 7am to 6pm and Saturday 8am to 6pm with the exception of minor non-audible maintenance, repair or monitoring activities, which may be undertaken outside of these hours.

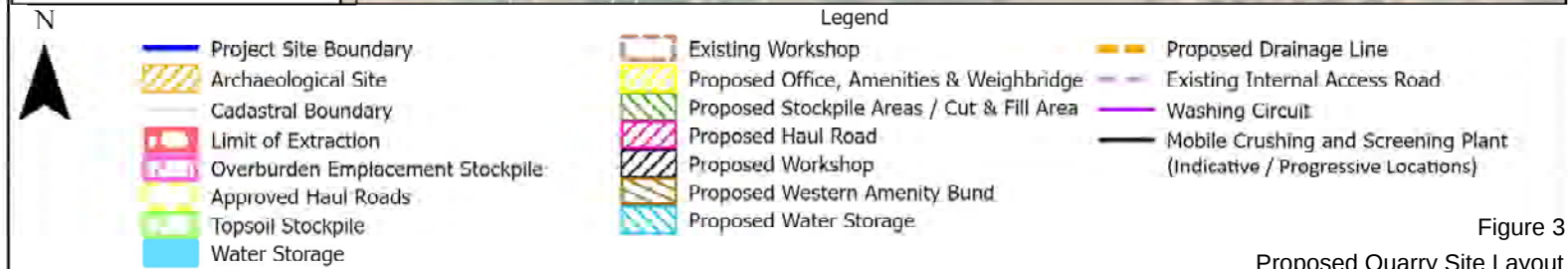
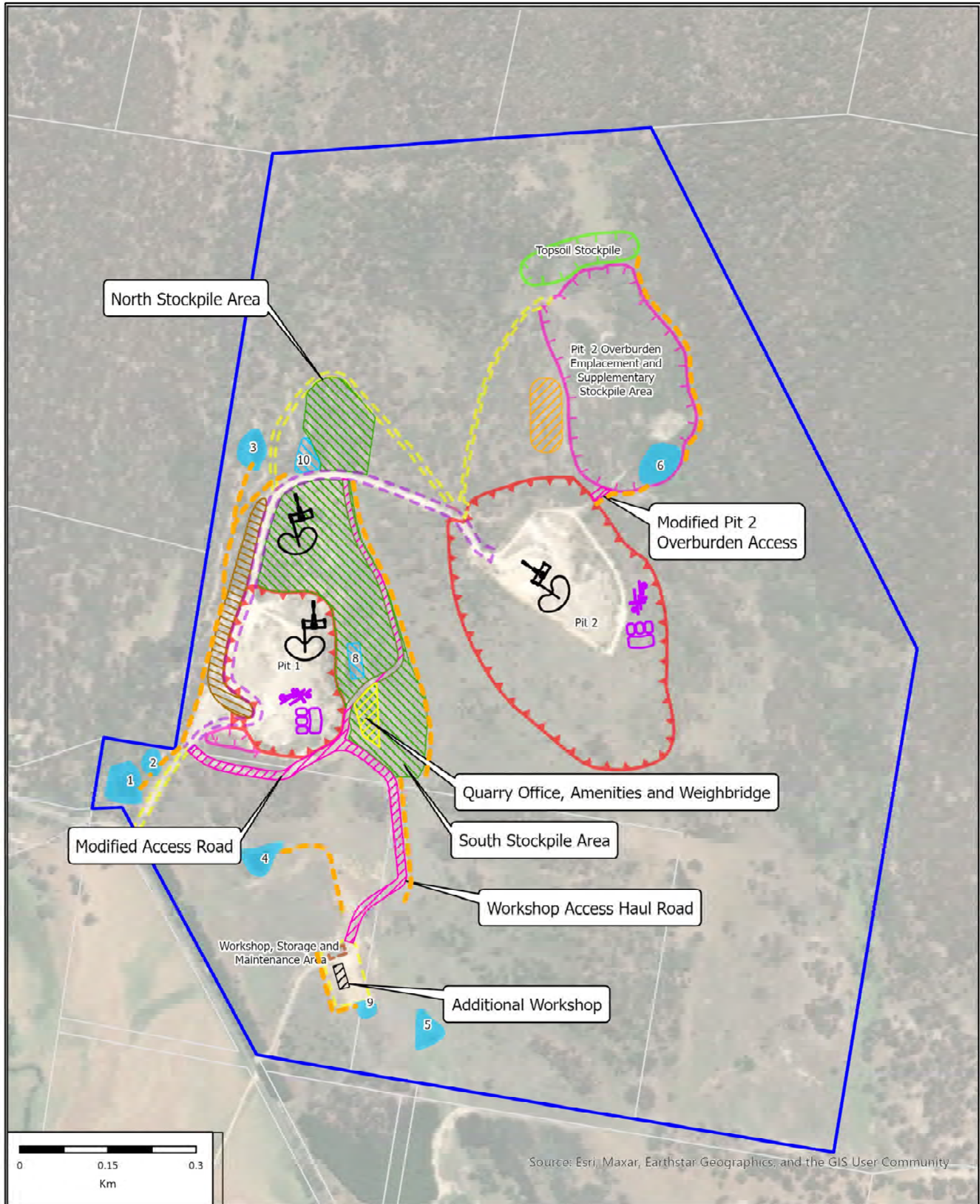


Figure 3
Proposed Quarry Site Layout

3 Noise Policy and Guidelines

3.1 Interim Construction Noise Guideline

The ICNG sets out procedures to identify and address the impacts of construction noise on residences and other sensitive land uses. In accordance with Section 1.2 of the ICNG, noise from construction associated with quarrying and mining is assessed under the Noise Policy for Industry (NPI).

3.2 Noise Policy for Industry

The EPA released the NPI in October 2017 which provides a process for establishing noise criteria for consents and licenses enabling the EPA to regulate noise emissions from scheduled premises under the Protection of the Environment Operations Act 1997.

The objectives of the NPI are to:

- provide noise criteria that is used to assess the change in both short term and long-term noise levels;
- provide a clear and consistent framework for assessing environmental noise impacts from industrial premises and industrial development proposals;
- promote the use of best-practice noise mitigation measures that are feasible and reasonable where potential impacts have been identified; and
- support a process to guide the determination of achievable noise limits for planning approvals and/or licences, considering the matters that must be considered under the relevant legislation (such as the economic and social benefits and impacts of industrial development).

The policy sets out a process for industrial noise management involving the following key steps:

1. Determine the Project Noise Trigger Levels (PNTLs) (ie criteria) for a development. These are the levels (criteria), above which noise management measures are required to be considered. They are derived by considering two factors: shorter-term intrusiveness due to changes in the noise environment; and maintaining the noise amenity of an area.
2. Predict or measure the noise levels produced by the development with regard to the presence of annoying noise characteristics and meteorological effects such as temperature inversions and wind.
3. Compare the predicted or measured noise level with the PNTL, assessing impacts and the need for noise mitigation and management measures.

4. Consider residual noise impacts - that is, where noise levels exceed the PNTLs after the application of feasible and reasonable noise mitigation measures. This may involve balancing economic, social and environmental costs and benefits from the proposed development against the noise impacts, including consultation with the affected community where impacts are expected to be significant.
5. Set statutory compliance levels that reflect the best achievable and agreed noise limits for the development.
6. Monitor and report environmental noise levels from the development.

3.2.1 Project Noise Trigger Levels (PNTL)

The policy sets out the procedure to determine the PNTLs relevant to an industrial development. The PNTL is the lower (ie, the more stringent) of the **Project Intrusiveness Noise Level** (PINL) and **Project Amenity Noise Level** (PANL) determined in accordance with Section 2.3 and Section 2.4 of the NPI.

3.2.2 Rating Background Level (RBL)

The Rating Background Level (RBL) is a parameter determined from noise monitoring and is used for assessment purposes. As per the NPI, the RBL is an overall single figure background level representing each assessment period (day, evening and night) over the noise monitoring period.

For low noise environments, such as rural environments, minimum assumed RBLs apply within the NPI can be adopted in lieu of completing background noise measurements. This is considered the most conservative method for establishing noise criteria for a project. The minimum assumed RBLs are as follows:

- Minimum Day RBL = 35dBA;
- Minimum Evening RBL = 30dBA; and
- Minimum Night RBL = 30dBA.

3.2.3 Project Intrusiveness Noise Level (PINL)

The PINL ($LA_{eq}(15min)$) is the RBL + 5dB and seeks to limit the degree of change a new noise source introduces to an existing environment. Hence, when assessing intrusiveness, background noise levels need to be measured.

3.2.4 Project Amenity Noise Level (PANL)

The PANL is relevant to a specific land use or locality. To limit continuing increases in intrusiveness levels, the ambient noise level within an area from all combined industrial sources should remain below the recommended Amenity Noise Levels specified in Table 2.2 (of the NPI). The NPI defines two categories of Amenity Noise Levels:

- **Amenity Noise Levels (ANL)** – are determined considering all current and future industrial noise within a receiver area; and
- **Project Amenity Noise Level (PANL)** – is the recommended level for a receiver area, specifically focusing the project being assessed.

Additionally, Section 2.4 of the NPI states: “to ensure that industrial noise levels (existing plus new) remain within the recommended Amenity Noise Levels for an area, a Project Amenity Noise Level applies for each new source of industrial noise as follows”:

PANL for new industrial developments = recommended **ANL** minus 5dBA.

The following exceptions apply when deriving the PANL:

- areas with high traffic noise levels;
- proposed developments in major industrial clusters;
- existing industrial noise and cumulative industrial noise effects; and
- greenfield sites.

Where relevant this assessment has considered influences of traffic with respect to Amenity Noise Levels (ie areas where existing traffic noise levels are 10dB greater than the recommended ANL).

Furthermore, Section 2.4 of the NPI states “*where the Project Amenity Noise Level applies and it can be met, no additional consideration of cumulative industrial noise is required.*”

The recommended Amenity Noise Levels as per Table 2.2 of the NPI are reproduced in **Table 1**.

Table 1 Amenity Noise Levels

Receiver Type	Noise Amenity Area	Time of day	Recommended Amenity Noise Level dB LAeq(period)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks.	See column 4	See column 4	5dB above the recommended Amenity Noise Level for a residence for the relevant noise amenity area and time of day
School Classroom	All	Noisiest 1-hour period when in use	35 (internal) 45 (external)
Hospital ward			
- internal	All	Noisiest 1-hour	35
- external	All	Noisiest 1-hour	50
Place of worship			
- internal	All	When in use	40
Passive Recreation	All	When in use	50
Active Recreation	All	When in use	55
Commercial premises	All	When in use	65
Industrial	All	When in use	70

Notes: The recommended Amenity Noise Levels refer only to noise from industrial noise sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Types of receivers are defined as rural residential; suburban residential; urban residential; industrial interface; commercial; industrial – see Table 2.3 and Section 2.7 of the NPI.

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

3.3 Road Noise Policy

The road traffic noise criteria are provided in the Road Noise Policy (RNP), 2011. The policy sets out noise criteria applicable to different road classifications for the purpose of quantifying traffic noise impacts. Road noise criteria relevant to this assessment are presented in detail in **Section 5.2**.

3.4 ANZEC Blasting Guidelines

Noise and vibration levels from blasting are assessable against criteria established in the Australian and New Zealand Environment Council (ANZEC) – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration. The blasting limits are generally consistent with the guideline levels contained within AS2187:2006 Part 2 – Explosives - Storage and Usage – Part 2. Where compliance is achieved, the risk of human annoyance is minimised.

The guidelines recommend that blasting should generally be permitted during the hours of 9am to 5pm Monday to Saturday only. Blasting should not occur on Sundays or Public Holidays. Furthermore, blasting should generally take place no more than once per day.

This page has been intentionally left blank

4 Existing Environment

4.1 Receiver Review

The Quarry is located in a rural area approximately 1.5km southeast of the township of Collector, NSW. The locality plan identifying the position of the nearby residential receivers in relation to the Quarry is provided in **Figure 4**. The receiver addresses, MGA (55) coordinates and receiver ID are summarised in **Table 2**.

It is noted that the residential receivers were separated into two Noise Catchment Areas (NCAs), based on their relative position to the Quarry. NCA 1 included receivers in close proximity to the Quarry (ie R3 and R4). NCA 2 included receivers further from the Quarry.

Table 2 Residential Receiver Locations				
NCA	Receiver ID	Address	MGA55 Coordinates	
			Easting	Northing
NCA 1	R3	2727 Collector Road	723191	6132252
	R4	"Comalie Creek" Lot 130 DP750008 Collector Road	723388	6132253
NCA 2	R1	"Windermere" 5178 Federal Highway	723291	6131051
	R2	"Winderadeen" 5177 Federal Highway	721809	6130830
	R5	"Avoca" 2812 Collector Road	723421	6133577
	R6	"The Selection" 67 Mays Lane	724460	6134334
	R7	111 Mays lane	724728	6133878
	R8	606 Lucky Pass Road	725693	6131637
	R9	"Pepper Hill" 720 Luck Pass Road	725368	6131371
	R10	"Barina" 702 Lucky Pass Road	724922	6130879
	R11	5178 Federal Highway	724353	6130937
	R12	"Athenabaccus" 699 Lucky Pass Road	724973	6130393
	R13	674 Lucky Pass Road	725296	6130630
	R14	"Sheperds Delight" 606 Lucky Pass Road	725696	6130684
	R15	628 Lucky Pass Road	725703	6130400
	R27	5177 Federal Highway	721663	6130992



FIGURE 4
Sensitive Receiver Map
MAC211420-02
Barina Quarry

KEY

- Project Area
- Receiver Location
- Logger Location



4.2 Background Noise levels

To quantify the existing background noise environment of the area, unattended noise monitoring was conducted at two locations representative of the ambient environment surrounding the project site. The selected monitoring locations are shown in **Figure 4** and are considered representative of the surrounding NCAs and residential receivers as per Fact Sheet B1.1 of the NPI.

The unattended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, 'Acoustics – Description and Measurement of Environmental Noise'.

The measurements were carried out using Svantek 977 noise analysers from Tuesday 10 September 2024 to Thursday 19 September 2024. All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ± 0.5 dBA.

The results of long-term unattended noise monitoring are provided in **Table 3**. The noise monitoring charts for the background monitoring assessment are provided in **Appendix B**. Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI. It is noted that logger L1 was located in a cleared, open plain, with greater exposure to the nearby Federal Highway and meteorological conditions, while logger L2 was located in a wooded area with undulating topography, which may provide shielding effects to significant noise sources.

Table 3 Background Noise Monitoring Summary

Location	Measured background noise level, RBL, dBA			Measured dB LAeq(period)		
	Day	Evening ¹	Night ¹	Day	Evening ¹	Night ¹
L1 (Collector Road) NCA 1	38	36	28	51	45	44
L2 (Mays Lane) NCA 2	35 (31) ²	31	23	40	38	38

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology Goulburn Airport AWS (34.81°S 149.73°E 640m AMSL).

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 1: Evening and night periods not considered as part of this assessment. Background noise levels provided for completeness only.

Note 2: Where the RBLs are below the NPI minimums, the minimum assumed RBLs are adopted.

4.3 Attended Noise Monitoring

To supplement the unattended noise assessment and to quantify the changes in ambient noise in the community surrounding the operation, one 15 minute attended measurement was completed.

The attended noise survey was conducted in general accordance with the procedures described in Australian Standard AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

The acoustic instrumentation used carries current NATA calibration and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ± 0.5 dBA. All equipment carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per the EPA's Approved methods for the measurement and analysis of environmental noise in NSW (EPA, 2022).

The attended noise monitoring was conducted using a Svantek 971 noise analyser at the site (see **Figure 4**) on Tuesday 10 September 2024 to quantify ambient background noise levels.

The attended measurement was completed during calm and clear meteorological conditions and confirmed that ambient traffic and commercial noise dominated the surrounding environment. The results of the short-term noise measurement and observations are summarised in **Table 4**.

Table 4 Operator-Attended Noise Survey Results					
Date/Time (hrs)	Noise Descriptor (dB re 20μPa)			Meteorology	Description and SPL, dBA
	L _A max	L _A eq	L _A 90		
Location 1, Collector Road					
10/09/2024	56	35	28	WD: NE	Traffic 26-36
14:16				WS: 1.0m/s	Birds 28-56
				18°C	Livestock 28-30
Location 2, Mays Lane					
10/09/2024	59	38	29	WD: NE	Traffic 26-34
14:53				WS: 1.5m/s	Birds 29-59
				18°C	Wind in vegetation 27-31

5 Assessment Criteria

5.1 Operational Noise Trigger Levels (Criteria)

This section outlines the determination of PNTLs in accordance with NPI methodology.

5.1.1 Intrusiveness Noise Levels

The PINL for the project are presented in **Table 5** and have been determined based on the RBL +5dBA and only apply to residential receivers.

Table 5 Project Intrusiveness Noise Levels					
Location	Receiver Type	Period ¹	Measured RBL dB LA90	Adopted RBL ² dB LA90	PINL dB LAeq(15min)
NCA 1 R3 & R4	Residential	Day	38	38	43
NCA 2 All others	Residential	Day	31	35	40

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Note 2: Where the noise level is less than 35dBA for the day period, the RBL is set to 35dBA..

5.1.2 Amenity Noise Levels and Project Amenity Noise Levels

The PANL for residential receivers and other receiver types (ie non-residential) potentially affected by the project are presented in **Table 6**. The residential receiver category for each NCA is determined from the applicable land zoning as per Table 2.3 of the NPI.

Table 6 Amenity Noise Levels and Project Amenity Noise Levels					
Receiver Type	Noise Amenity Area	Assessment Period ¹	NPI Recommended ANL dB LAeq(period)	ANL dB LAeq(period) ²	PANL dB LAeq(15min) ³
Residential	Rural	Day	50	45	48

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public.

Note 2: Project Amenity Noise Level equals the Amenity Noise Level -5dB as there is other industry in the area.

Note 3: Includes a +3dB adjustment to the amenity period level to convert to a 15-minute assessment period as per Section 2.2 of the NPI.

5.1.3 Project Noise Trigger Levels

The PNTL are the lower of either the PINL or the PANL. **Table 7** presents the derivation of the PNTLs in accordance with the methodologies outlined in the NPI.

Table 7 Project Noise Trigger Levels					
Receiver	Noise Amenity Area	Assessment Period ¹	PINL dB LAeq(15min)	PANL dB LAeq(15min)	PNTL dB LAeq(15min)
NCA 1 R3 & R4	Rural	Day	43	48	43
NCA 2 All others	Rural	Day	40	48	40

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

5.2 Road Traffic Noise

In accordance with the RNP, this assessment has adopted the 'Freeway/arterial/sub-arterial road' category for the designated inbound and outbound transport routes, consistent with the classification of Collector Road and Federal Highway as 'freeway/arterial/sub-arterial road'. **Table 8** reproduces the road traffic noise assessment criteria relevant for this road type.

Table 8 Road Traffic Noise Assessment Criteria for Residential Land Uses		
Road category	Type of Project/development	Assessment Criteria - dB(A) Day (7am to 10pm)
Freeway/arterial/sub-arterial road	Existing residences affected by additional traffic on existing freeways/sub-arterial/roads generated by land use developments	60dB(A) LAeq(15hr)

Note: For road noise assessments, the day period is from 7am to 10pm (ie there is no evening assessment period as there is with operational noise).

Additionally, the RNP states where existing road traffic noise criteria are already exceeded, any additional increase in total traffic noise level should be limited to 2dB, which is generally accepted as the threshold of perceptibility to a change in noise level.

5.2.1 Relative Increase Criteria

In addition to meeting the assessment criteria, any significant increase in traffic noise at receivers adjacent to a freeway, arterial or sub-arterial road, in environments where there is a low existing level of traffic noise, must be considered. Receivers experiencing increases in traffic noise levels above those presented in **Table 9** due to the addition of vehicles along the haulage route should be considered for mitigation. It is noted that where the existing LAeq(period) road traffic noise levels is found to be less than 30dBA, it is deemed to be 30dBA.

Table 9 Increase Criteria for Residential Land Uses

Road Category	Type of Project/Development	Total Traffic Noise Level Increase, dB(A)
		Day (7am to 10pm)
Freeway/arterial/sub-arterial roads and transitways	New road corridor/redevelopment of existing road/land use development with the potential to generate additional traffic on existing road.	Existing traffic LAeq(15hr) +12dB (external)

5.3 ANZEC Guideline Blasting Limits

The ANZEC blasting limits for air-blast overpressure and ground vibration are presented in **Table 10**.

Table 10 ANZEC Guideline Blasting Limits

	Overpressure dB (Linear Peak)	Ground Vibration PPV (mm/s)
Recommended Maximum (95% of all blasts)	115	5
Level not to be exceeded	120	10

This page has been intentionally left blank

6 Modelling Methodology

A computer model was developed to quantify project noise emissions to neighbouring receivers using DGMR (iNoise, Version 2024.2.1) noise modelling software. iNoise is an intuitive and quality assured software for industrial noise calculations in the environment. 3D noise modelling is considered industry best practice for assessing noise emissions from projects.

The model incorporated a three-dimensional digital terrain map giving all relevant topographic information used in the modelling process. Additionally, the model uses relevant noise source data, ground type, attenuation from barrier or buildings and atmospheric information to predict noise levels at the nearest potentially affected receivers. Where relevant, modifying factors in accordance with Fact Sheet C of the NPI have been applied to calculations.

The model calculation method used to predict noise levels was in accordance with ISO 9613:1 and ISO 9613:2 including corrections for meteorological conditions using CONCAWE¹. The ISO 9613 standards are the most used noise prediction method worldwide. Many countries refer to ISO 9613 in their noise legislation. However, the ISO 9613 standard does not contain guidelines for quality assured software implementation, which leads to differences between applications in calculated results. In 2015 this changed with the release of ISO/TR 17534-3. This quality standard gives clear recommendations for interpreting the ISO 9613 method. iNoise fully supports these recommendations. The models and results for the 19 test cases are included in the software.

6.1 Operational Noise Modelling Parameters

The model incorporated several superimposed layers to quantify noise levels including, three-dimensional digitised ground contours for the Quarry, as derived from proposed site plans and the surrounding land base topography. The noise model predicts LAeq noise levels, although it should be noted that this assessment has assumed that all plant and equipment operate simultaneously. In practice, such an operational scenario would be unlikely to occur, and the results should therefore be considered conservatively high. Where relevant, modifying factors in accordance with Fact Sheet C of the NPI have been applied to calculations (refer to **Section 6.1.5**).

¹ Report no. 4/18, "the propagation of noise from petroleum and petrochemical complexes to neighbouring communities", Prepared by C.J. Manning, M.Sc., M.I.O.A. Acoustic Technology Limited (Ref.AT 931), CONCAWE, Den Haag May 1981

6.1.1 Meteorological Analysis

Noise emissions from industry can be significantly affected by prevailing weather conditions. Wind has the potential to increase noise at a receiver when it is at low velocities and travels from the direction of the noise source. As the strength of the wind increases, the noise produced by the wind will mask the audibility of most industrial sources.

Meteorological conditions that enhance received noise levels include source to receiver winds and the presence of temperature inversions. To account for potential enhancements, the NPI specifies that the source to the receiver wind component speeds up to 3m/s for 30% or more of the time in any seasonal period (ie day, evening, or night), is considered to be a feature wind and predictions must incorporate these conditions.

Prevailing conditions were determined for the Quarry through review of weather data for the period January 2022 to January 2024, obtained from the Bureau of Meteorology's (BOM) Goulburn Airport automatic weather station (AWS) located approximately 29km northeast of the Quarry site. The data was analysed using the EPA's Noise Enhancement Wind Analysis (NEWA) program to determine the frequency of occurrence of winds of speeds up to 3m/s in each season.

Table 11 summarises the results of the wind analysis and includes the dominant wind direction and percentage occurrence during each season for each assessment period. The results of the detailed analysis of meteorological data are presented in **Appendix C**.

Table 11 Seasonal Frequency of Occurrence Wind Speed Intervals			
Season	Period ¹	Wind Direction $\pm(45^\circ)$	% Wind Speeds (m/s)
			0.5 to 3 m/s
Summer	Day	NE, ENE, ESE	8
Autumn		N, NNE, ESE, SE, NNW	8
Winter		NW, NNW	9
Spring		NW to ESE	7

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

Based on the results of this analysis, prevailing winds are not applicable for the assessment and the relevant meteorological conditions adopted in this assessment are summarised in **Table 12**.

Table 12 Modelled Site-Specific Meteorological Parameters				
Assessment Condition	Temperature	Wind Speed / Direction	Relative Humidity	Stability Class
Day	20°C	Calm	60%	D

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

6.1.2 Operational Noise Modelling Scenario and Sound Power Levels

Three modelling scenarios were adopted in this assessment to represent noise emissions at various stages of the Quarry life. The scenarios are summarised below:

- Scenario 1: Development of stockpile areas between Pit 1 and Pit 2 from imported VENM and ENM. Quarrying of material in Pit 2 to a depth of 746m AHD with overburden transported to the Overburden Emplacement Area to the north of Pit 2. Crushing and screening operations in Pit 1, and establishment of a washing circuit in Pit 1.
- Scenario 2: Development of stockpile areas between Pit 1 and Pit 2 from imported VENM and ENM. Quarrying of material in Pit 2 to a depth of 746m AHD with overburden transported to the Overburden Emplacement Area to the north of Pit 2. Crushing, screening and washing operations relocated to South Stockpile Area.
- Scenario 3: Stockpiling activities within the South Stockpile Area. Quarrying of material in Pit 2 to a final depth of 714m AHD with overburden transported to the Overburden Emplacement Area to the north of Pit 2. Crushing, screening and washing operations within Pit 2.

Drilling operations will occur on a campaign basis, with the drill rig brought to site by the drill and blast contractor.

A summary of plant and equipment, including operating location, is provided in **Table 13**. The modelled noise source locations are provided in **Figure 5** (Scenario 1), **Figure 6** (Scenario 2) and **Figure 7** (Scenario 3). It is noted that operations will occur during the day period only.

Table 13 Equipment and Activity List for Modelling Scenarios

Noise Source/Item	Activity	Location of Activity		
		Scenario 1	Scenario 2	Scenario 3
Jaw Crusher	Processing	Pit 1	South Stockpile Area	Pit 2
Cone Crusher (x2)	Processing	Pit 1	South Stockpile Area	Pit 2
Screen Decks (x2)	Processing	Pit 1	South Stockpile Area	Pit 2
Washing Circuit	Processing	Pit 1	South Stockpile Area	Pit 2
Roller	Stockpile Construction	North Stockpile Area	N/A	N/A
Grader	Stockpile Construction	North Stockpile Area	N/A	N/A
Bulldozer (D8)	Stockpile Operations / Extraction	South Stockpile Area / Pit 2		
Wheeled loader (WA480)	Stockpile Operations	South Stockpile Area		
Wheeled loader (WA500)	Processing	Pit 1	South Stockpile Area	Pit 2
Wheeled loader (WA500)	Extraction	Pit 2		
Excavator (PC55MR)	Dispatch	Pit 1	South Stockpile Area	Pit 2
Excavator (PC200)	Stockpile Operations	South Stockpile Area		
Excavator (PC300LC)	Extraction	Pit 2		
Excavator (PC450LC)	Extraction	Pit 2		
Haul Truck (CAT785)	Extraction	Pit 2		
Water Cart (Hino)	All of Quarry	Internal Roads		
Drill Rig ¹	Extraction	Pit 2		
Road Truck	Dispatch	Site Access Road / Pit 1	Site Access Road / South Stockpile Area	Site Access Road / Pit 2

Note 1: Drill rig used on campaign basis only.

6.1.3 Noise Attenuation Assumptions

The noise model assumed that the following noise attenuation measures would be implemented:

- Scenario 1: Construction of an amenity bund to 4m RL to the west of the crushing plant to block line of sight to receivers R3 and R4;
- Scenario 2: Construction of an amenity bund to 4m RL to the west and south of the crushing and screening plant to block line of sight to receivers R3 and R4; and
- Scenario 3: No mitigation required.

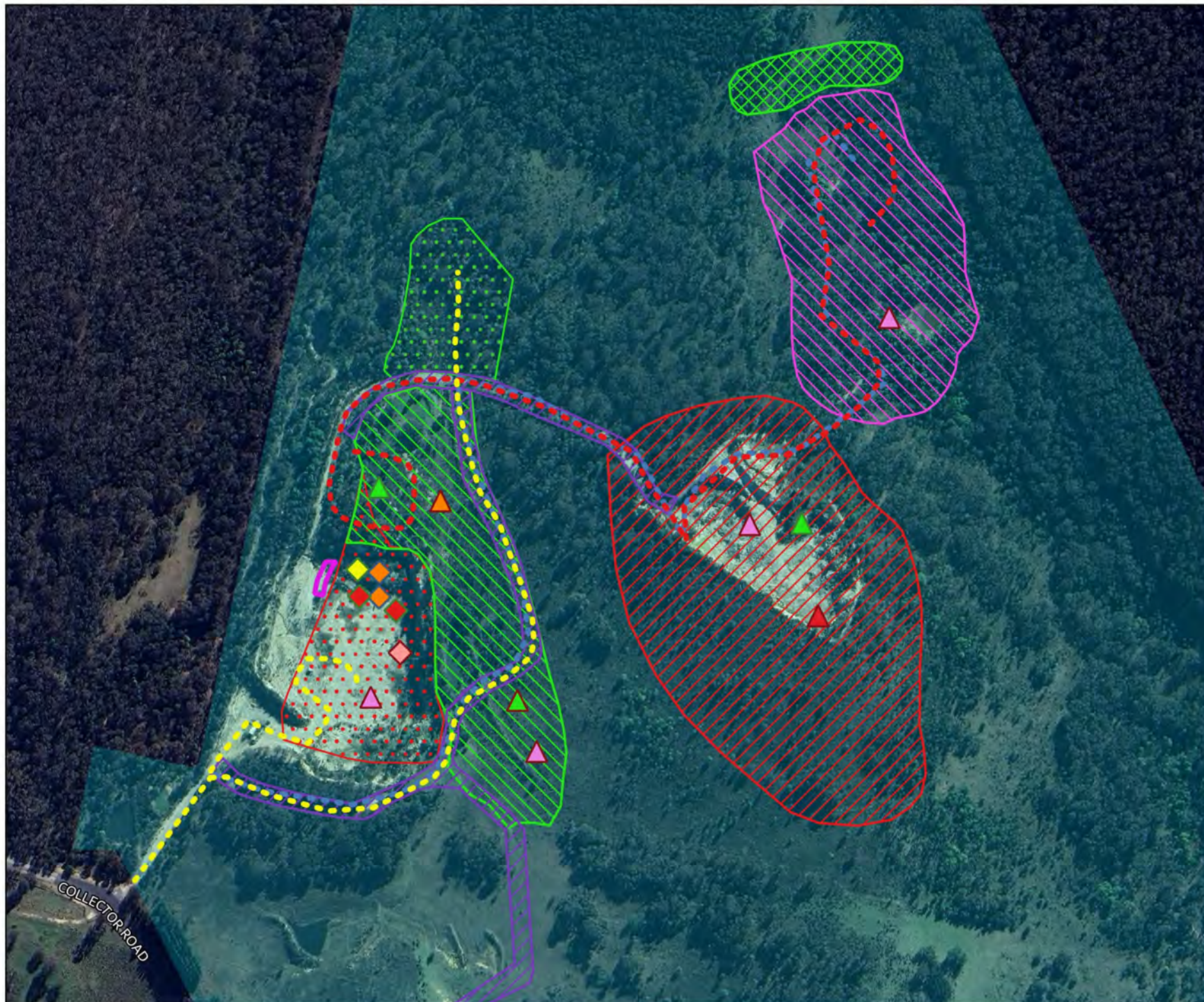
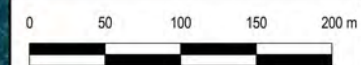
FIGURE 5
Noise Sources - Scenario 1
MAC211420-02
Barina Quarry

KEY

-  Project Site
-  Internal Road
-  Pit 1
-  Pit 2
-  Pit 2 Overburden Emplacement
-  North Stockpile Area
-  South Stockpile Area
-  Recommended Amenity Bund

Modelled Noise Sources

-  Bulldozer
-  Drill Rig
-  Excavator
-  Front End Loader
-  Primary Crusher
-  Cone Crusher
-  Screen
-  Washing Circuit
-  Haul Truck
-  Road Truck
-  Water Cart



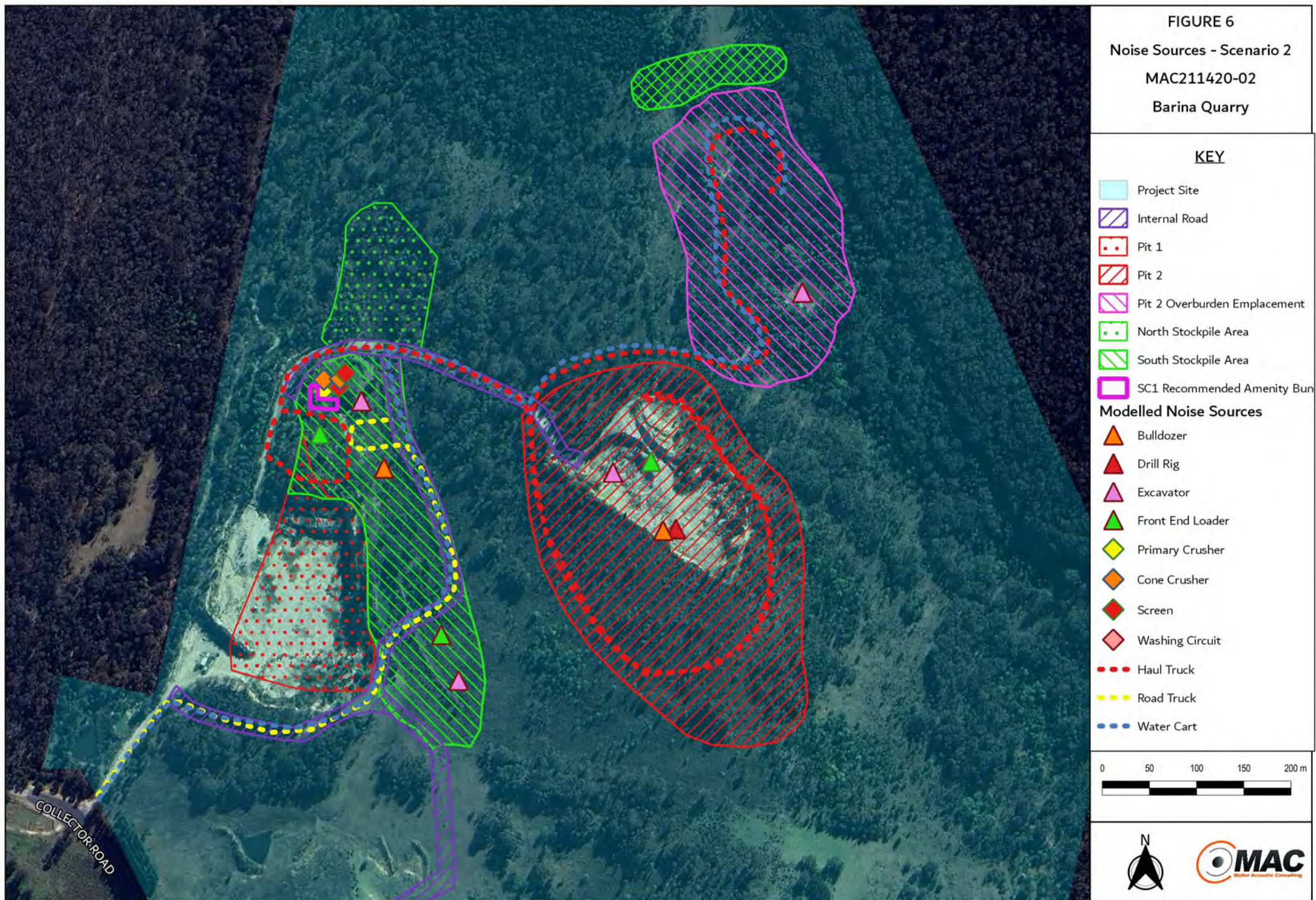


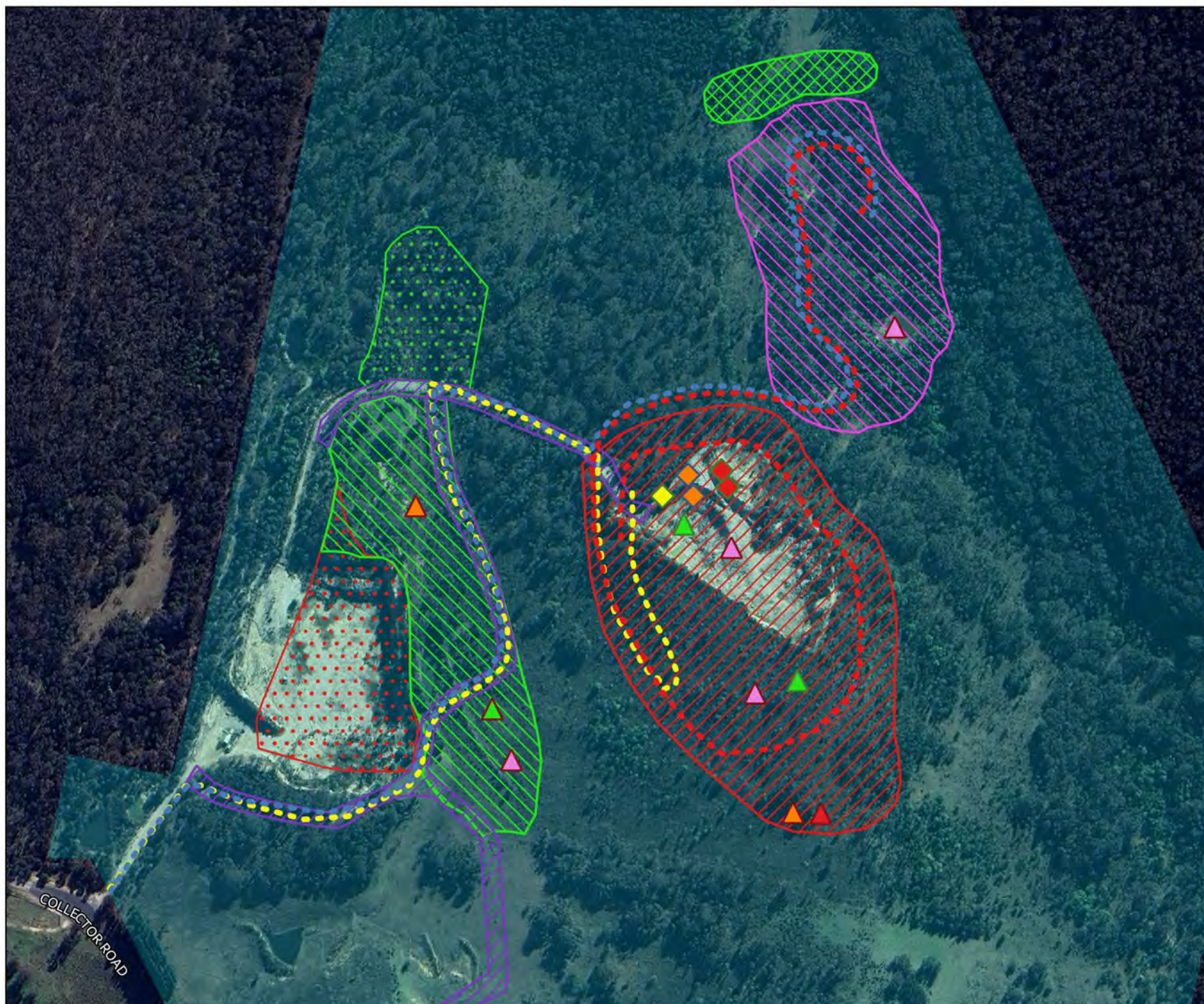
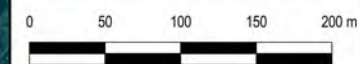
FIGURE 7
Noise Sources - Scenario 3
MAC211420-02
Barina Quarry

KEY

-  Project Site
-  Internal Road
-  Pit 1
-  Pit 2
-  Pit 2 Overburden Emplacement
-  North Stockpile Area
-  South Stockpile Area

Modelled Noise Sources

-  Bulldozer
-  Drill Rig
-  Excavator
-  Front End Loader
-  Primary Crusher
-  Cone Crusher
-  Screen
-  Washing Circuit
-  Haul Truck
-  Road Truck
-  Water Cart



6.1.4 Sound Power Levels

The noise emission levels used in modelling are summarised in **Table 14** and octave data is provided in **Appendix D**. It is noted drilling will be undertaken on a campaign basis, during which time, a drill rig will be brought onto the Quarry. Modelled noise levels were sourced from manufacture's specifications, or the MAC database of measurements from similar items of plant and/or equipment.

Table 14 Equipment Sound Power Levels		
Noise Source/Item	Activity	Sound Power Level (SWL), dBA
Jaw Crusher (Astec)	Processing	111
Cone Crusher (Astec) (x2)	Processing	110
Screen Decks (Astec) (x2)	Processing	108
Washing Circuit	Processing	107
Roller	Stockpile Construction	107
Grader	Stockpile Construction	107
Bulldozer (D8)	Stockpile Construction / Extraction	111
Wheeled loader (WA480)	Stockpile Construction	108
Wheeled loader (WA500) (x2)	Processing / Extraction	109
Excavator (PC55MR)	Dispatch	96
Excavator (PC200)	Stockpile Construction	100
Excavator (PC300LC)	Extraction	104
Excavator (PC450LC)	Extraction	107
Haul Truck (x3 CAT785) (8/hr)	Extraction	116
Water Cart (Hino)	Extraction	101
Drill Rig ¹	Extraction	114
Road Truck (20/hr)	Dispatch	102

Note 1: Drill rig used on campaign basis only.

6.1.5 Annoying Characteristics

Fact Sheet C of the NPI provides guidelines for applying 'modifying factors' adjustments to account for annoying noise characteristics such as low-frequency, tonality, intermittent noise, irregular or noise of short duration. An assessment of annoying characteristics has been undertaken for the Project, and is provided in **Appendix E**. It is noted that due to the nature of the quarry operations, intermittent noise is unlikely to be a feature of the site and has not been considered further.

The analysis of low-frequency noise found that modelled noise levels from all sources exceeded the screening test of C-A weighted noise levels greater or equal to 15dB. Further analysis was undertaken to determine whether noise levels exceeded the threshold in any octave band. The results of the assessment indicated that Z weighted noise levels remained below the relevant thresholds for all octave bands for each receiver location. Hence, no correction for low-frequency noise is applied.

An assessment of tonality was undertaken to identify dominant tones associated with the Quarry. The tonal noise correction applies when the level of an octave band exceeds the level of the adjacent band on either side by at least 5dB. The results of the tonality assessment demonstrates that the Quarry operations do not result in dominant tones. Hence, no correction for tonality is applied.

6.2 Road Traffic Noise Assessment Methodology

Under the proposed Project, there would be no change to typical daytime haulage operations, including vehicle types, vehicle movements, or haulage routes. Importation of VENM and ENM will be via backloaded product trucks only. Hence, the Project would not result in a change to road traffic noise levels during the day period, and further assessment is not required.

6.3 Blasting Assessment Methodology

An estimation of air-blast overpressure and ground-borne vibration levels has been conducted in accordance with methods in AS2187.2. The estimation adopted an MIC of 100kg for blasting within Pit 2 to nearby sensitive receivers.

6.3.1 Air-Blast Overpressure

Calculations of overpressure have been completed using the following AS2187.2 equation:

Where:

$$P = K_a \left(\frac{R}{(Q^{1/3})} \right)^a$$

P = Pressure, in kilopascals;

Q = Effective explosives charge mass, in kilograms (MIC);

R = Distance from charge, in metres;

K_a = Site constant, a value of 15 was adopted; and

a = Site exponent, a value of -1.45 was adopted.

The conversion of 'P' to unweighted decibels (dBZ) is completed using the following formula:

$$SPL = 10 \times \log \left(\frac{P}{P_0} \right)^2$$

6.3.2 Ground-Borne Vibration

Preliminary estimations for vibration have been completed using the following AS2187.2 equation:

$$V = K_g \left(\frac{R}{(Q^{1/2})} \right)^{-B}$$

Where:

V = ground vibration as vector peak particle velocity, in mm/s;

R = distance between charge and point of measurement, in m;

Q = maximum instantaneous charge (effective charge mass per delay, MIC), in kg;

K_g = a constant related to site and rock properties, a value of 1140 was adopted; and

B = a constant related to site and rock properties for estimation purposes, a value of 1.6 was adopted.

7 Noise Assessment Results

This assessment has quantified operational noise levels at the nearest receivers.

7.1 Operational Noise Assessment

Noise predictions from all sources, under neutral meteorological conditions during the day period, have been quantified at surrounding residential receivers to the project site and are tabulated in **Table 15**, with noise contours for each scenario presented in **Appendix F**.

The results of the model show that noise emissions from operations satisfy the relevant criteria at all assessed receivers, where the noise attenuation measures provided in **Section 6.1.3** are implemented.

Table 15 Predicted Operational Noise Levels – Day Period

Location	Predicted Noise Level			PNTL dB LAeq(15min)	Compliant
	dB LAeq(15min)				
	Scenario 1	Scenario 2	Scenario 3		
R1	35	34	33	40	✓
R2	<30	<30	<30	40	✓
R3	41	41	39	43	✓
R4	43	43	41	43	✓
R5	32	34	<30	40	✓
R6	<30	<30	<30	40	✓
R7	<30	<30	<30	40	✓
R8	<30	30	<30	40	✓
R9	<30	31	30	40	✓
R10	30	30	30	40	✓
R11	33	34	33	40	✓
R12	<30	<30	<30	40	✓
R13	<30	<30	<30	40	✓
R14	<30	<30	<30	40	✓
R15	<30	<30	<30	40	✓
R27	<30	<30	<30	40	✓

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays.

7.2 Blasting Assessment

Airblast overpressure and ground vibration levels have been calculated to each assessed receiver for the Project adopting a conservative MIC of 100kg. Calculated level for overpressure and vibration have been compared to the relevant ANZEC criteria and are presented in **Table 16**. Results identify blasting using an MIC of up to 100kg would satisfy relevant ANZEC overpressure and vibration criteria.

Notwithstanding, the proposed MIC blast patterns should be designed specifically to meet the relevant ANZEC guidelines at receivers and be completed in conjunction with an appropriate blast monitoring program.

Table 16 Blasting Emissions

Receiver ID	Predicted Level		Criteria ¹	
	Airblast Overpressure	Ground Vibration	Airblast Overpressure	Ground Vibration PPV
	dBZ Peak	PPV, mm/s	dBZ Peak	mm/s
R1	104.3	0.4	115	5
R2	97.2	0.1	115	5
R3	111.6	0.9	115	5
R4	114.8	1.4	115	5
R5	106.3	0.5	115	5
R6	101.3	0.2	115	5
R7	103.7	0.3	115	5
R8	102.3	0.3	115	5
R9	103.3	0.3	115	5
R10	102.7	0.3	115	5
R11	104.7	0.4	115	5
R12	99.8	0.2	115	5
R13	100.0	0.2	115	5
R14	98.9	0.2	115	5
R15	97.8	0.2	115	5
R27	97.0	0.1	115	5

Note 1: Criteria relevant to 5% of the total number of blasts over a period of 12 months.

8 Discussion and Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise and Vibration Impact Assessment (NVIA) to quantify emissions from the proposed Barina Quarry Modification 3 Project at Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP86342 on Collector Road, Collector, NSW.

The assessment has quantified potential operation emissions, pertaining to quarrying activities, crushing and screening activities, stockpiling activities and dispatch of product / importation of ENM and VENM.

The results of the NVIA demonstrated that noise emissions from the operation would satisfy the relevant PNTLs at all assessed receivers during the day period once noise controls for the project are implemented (see **Section 6.1.3**):

- Scenario 1: Construction of an amenity bund to 4m RL to the west of the crushing plant to block line of sight to receivers R3 and R4;
- Scenario 2: Construction of an amenity bund to 4m RL to the west and south of the crushing and screening plant to block line of sight to receivers R3 and R4; and
- Scenario 3: No mitigation required.

The Project would not result in a change to daytime haulage operations, including vehicle types, vehicle movements, or haulage routes. Hence, there would be no change to road traffic noise levels from the Project.

The results of the blasting assessment demonstrated that blasting using an MIC of up to 100kg would satisfy relevant ANZEC overpressure and vibration criteria.

Accordingly, the Noise and Vibration Impact Assessment supports the Modification Application for the project incorporating the recommendations and controls outlined in this report.

This page has been intentionally left blank

Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

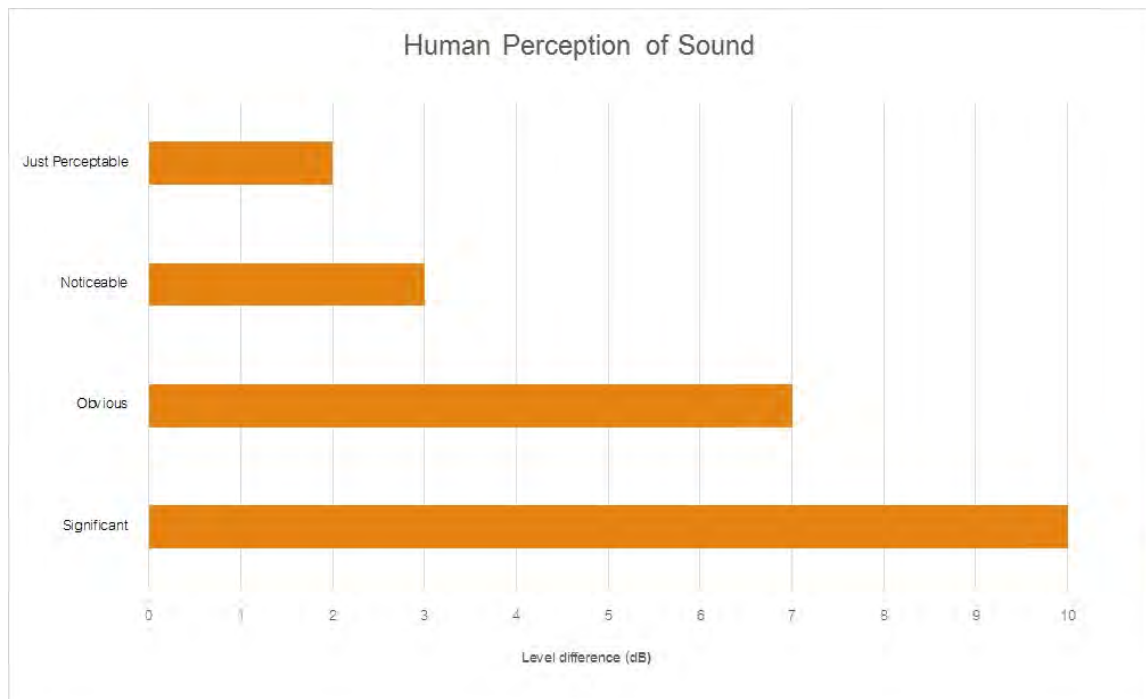
Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound

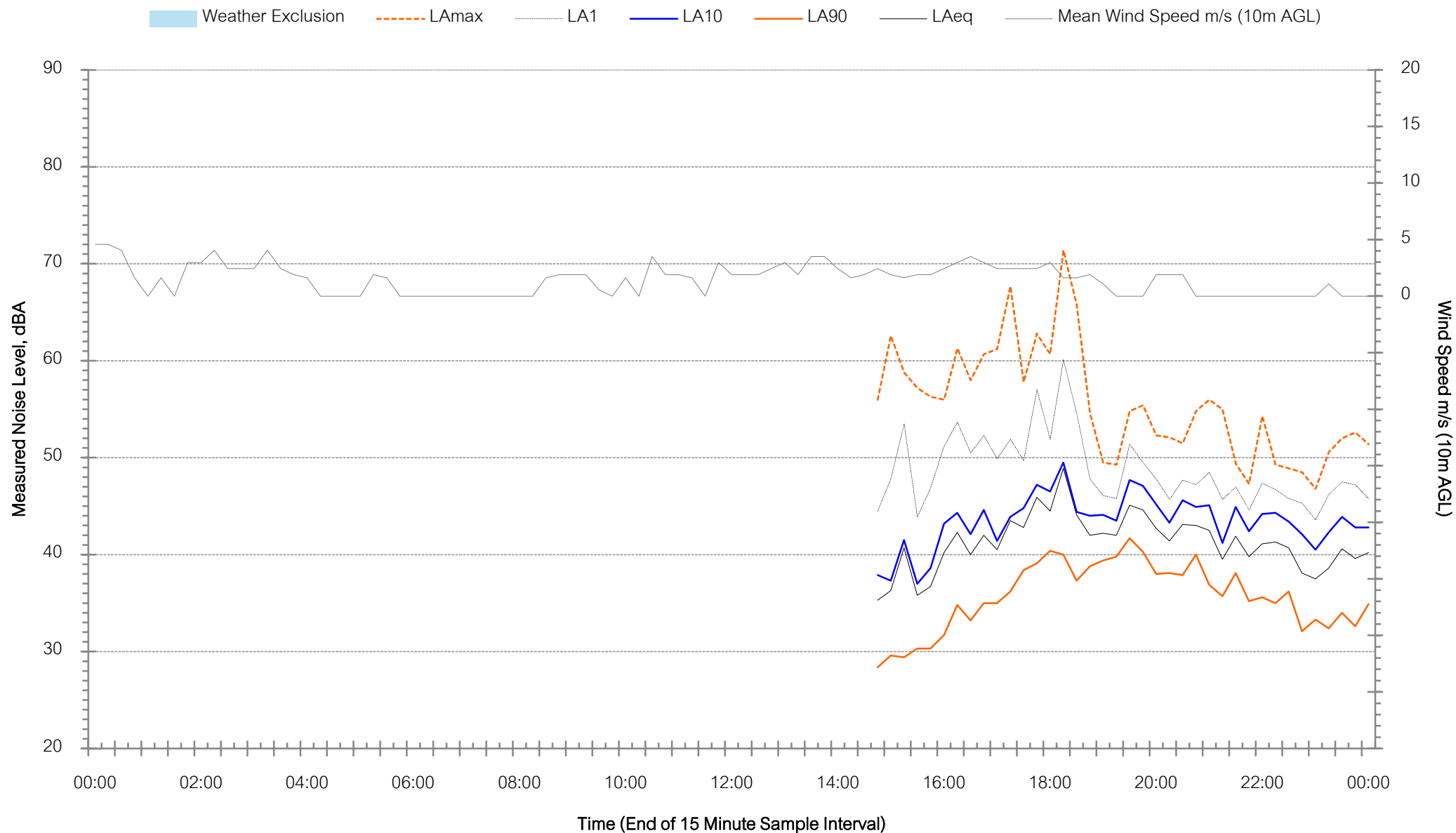


This page has been intentionally left blank

Appendix B – Noise Monitoring Charts

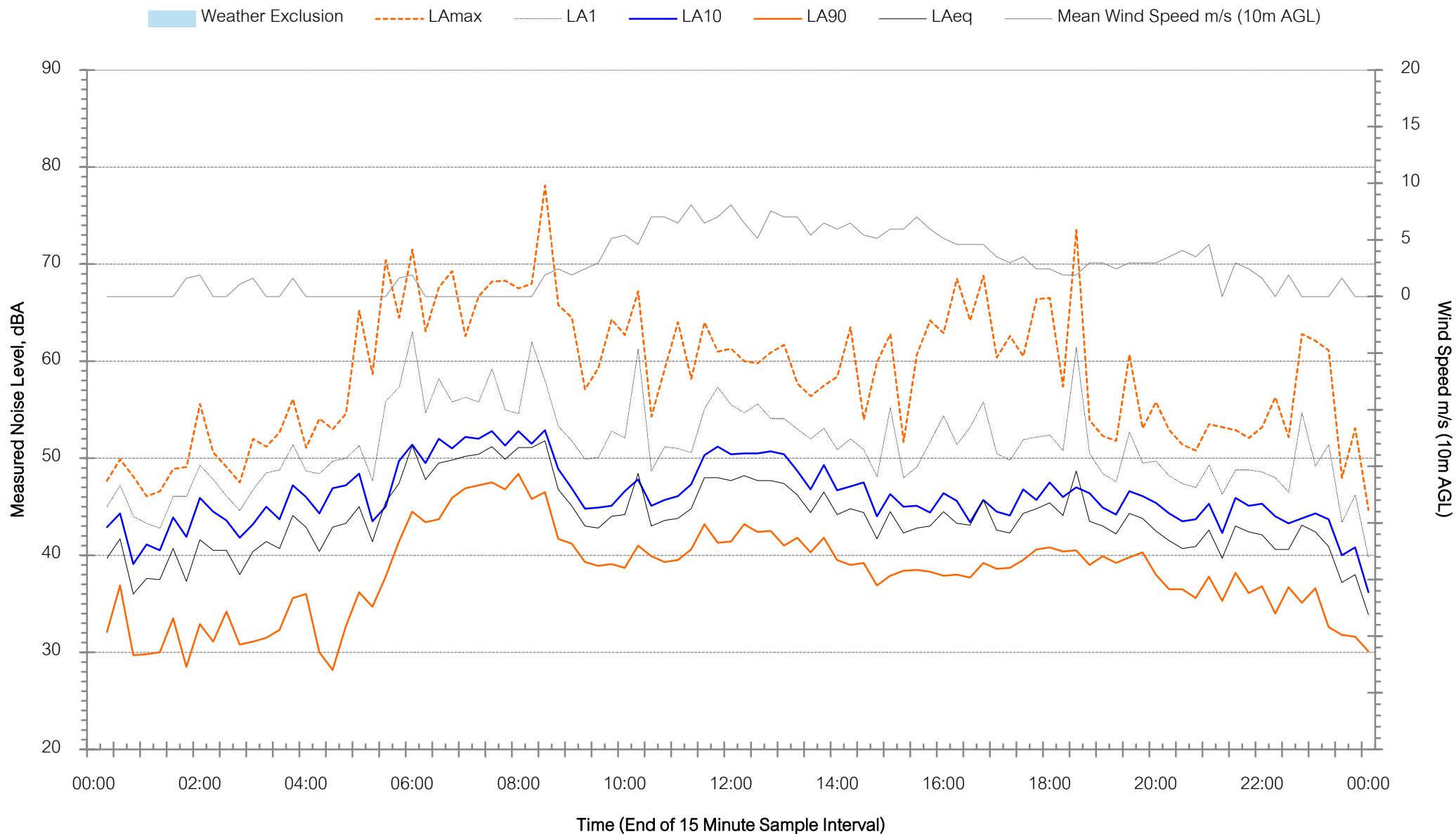
Background Noise Levels

Collector Road - Tuesday 10 September 2024



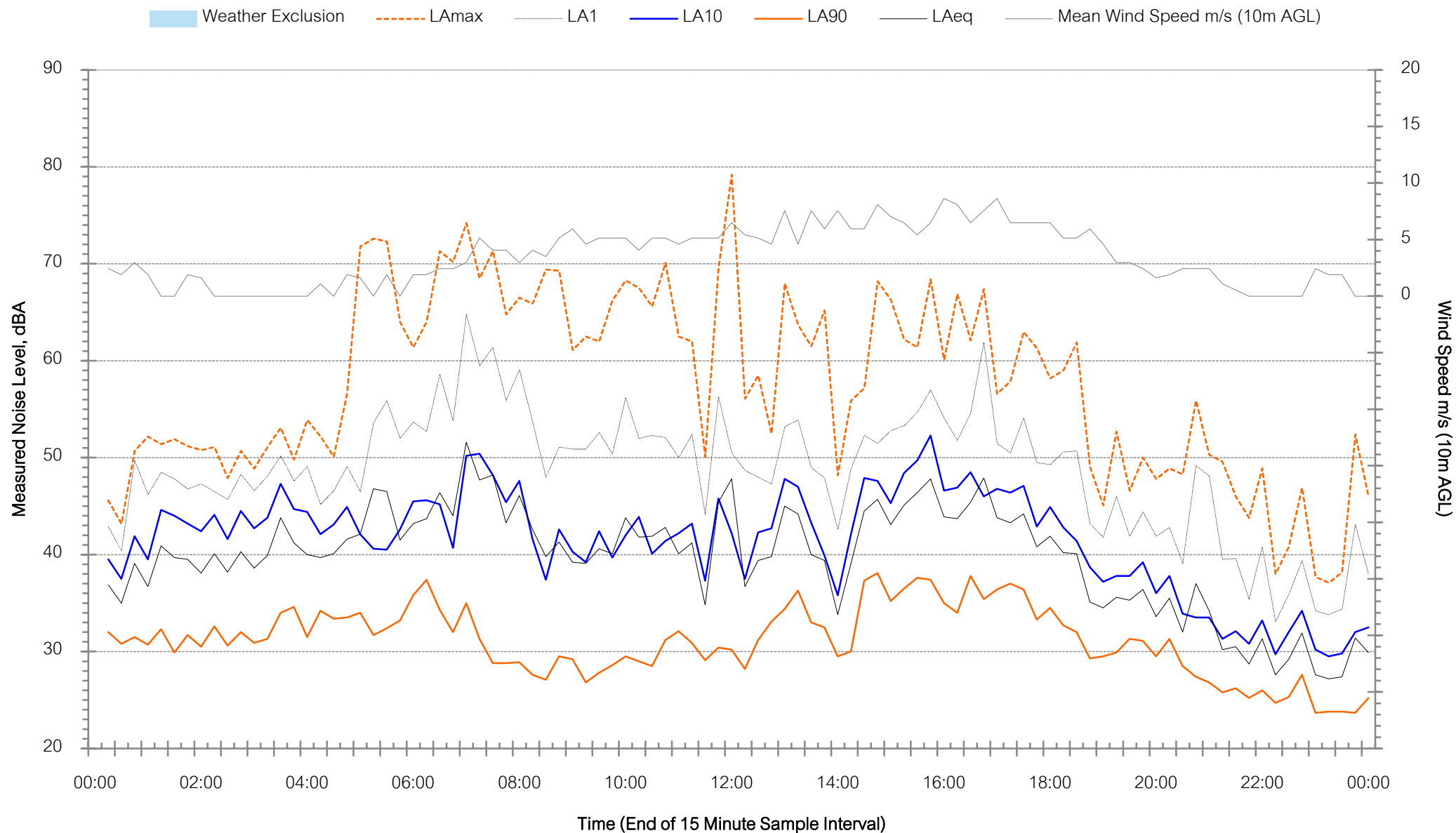
Background Noise Levels

Collector Road - Wednesday 11 September 2024



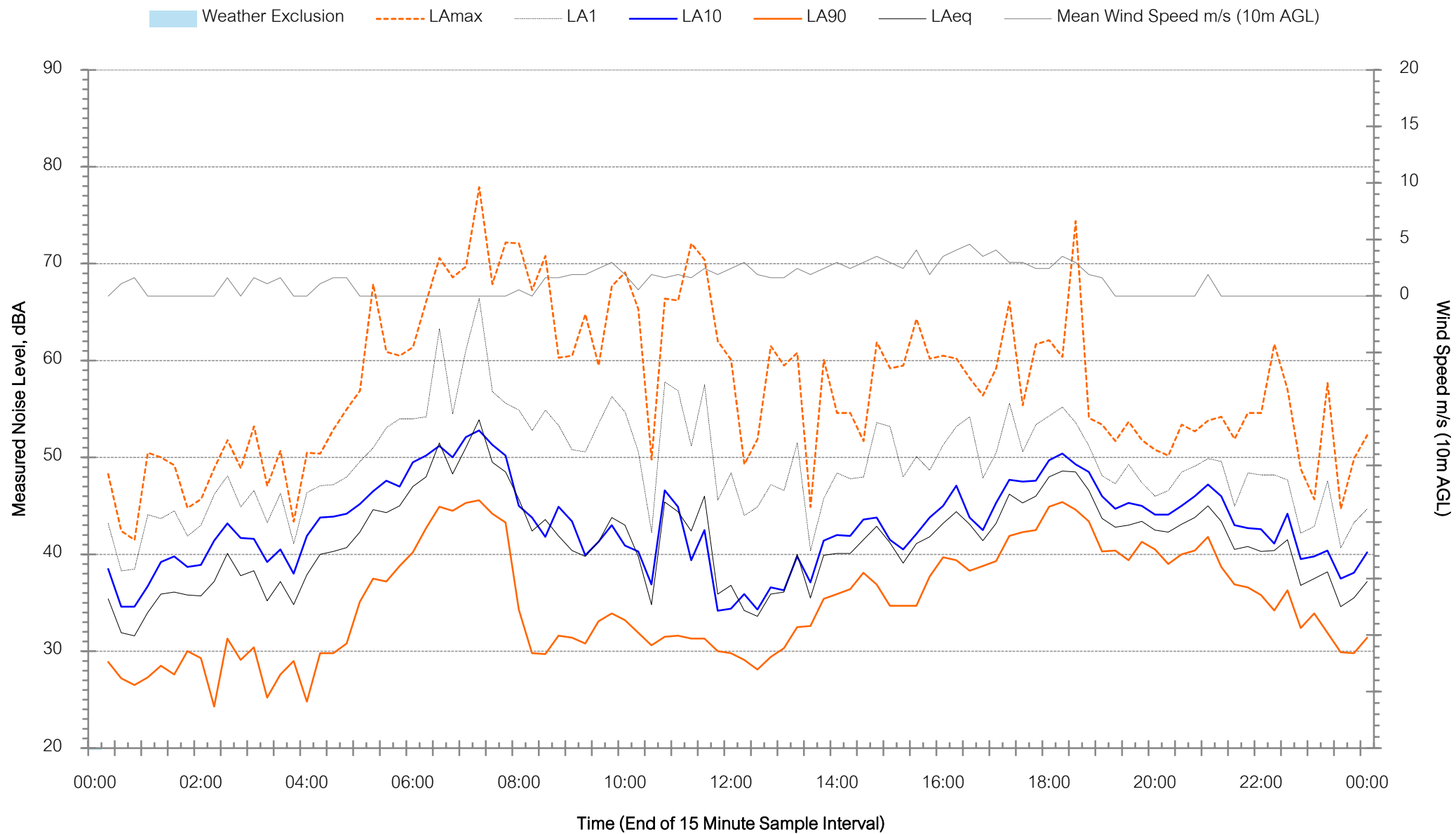
Background Noise Levels

Collector Road - Thursday 12 September 2024



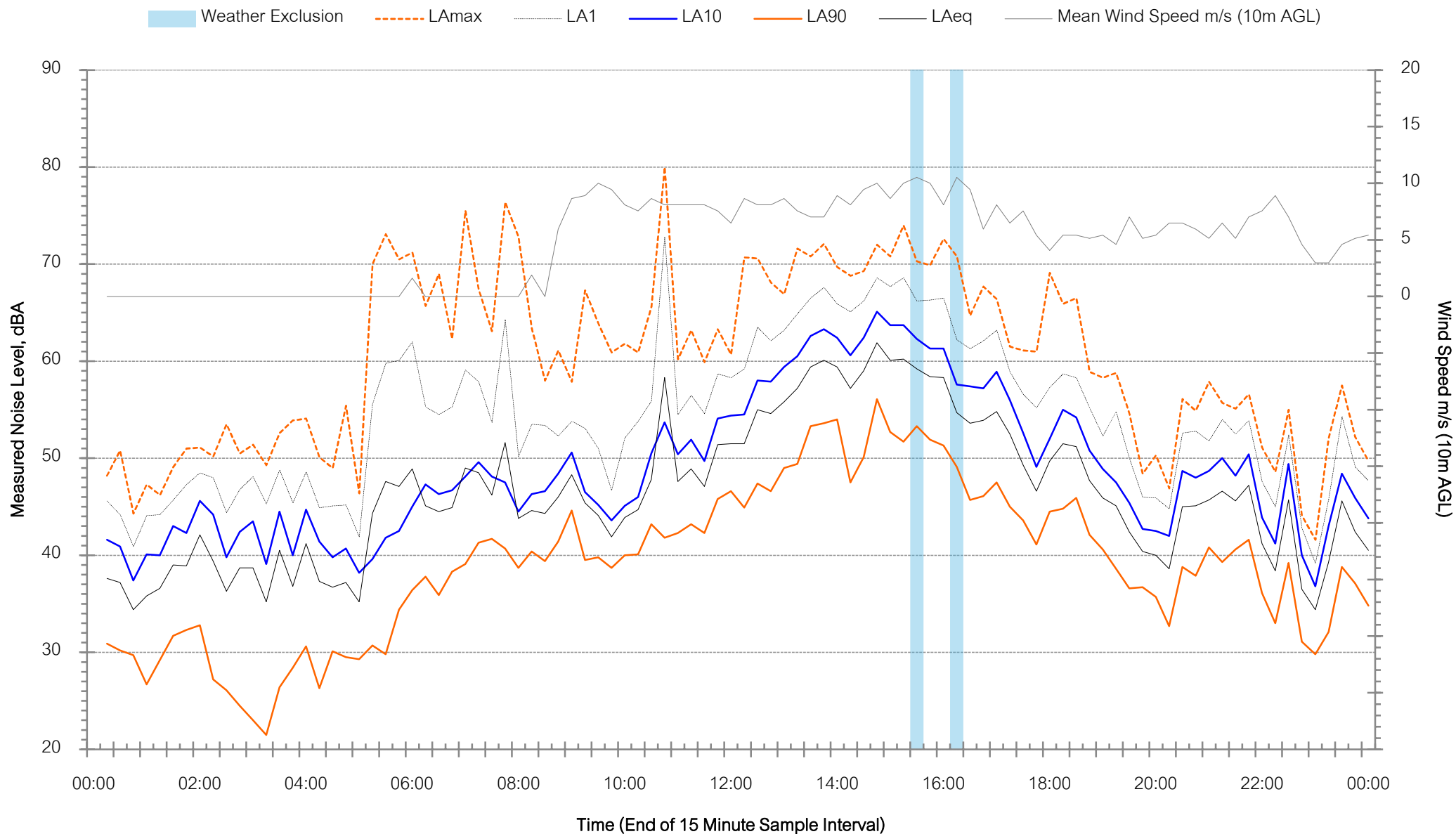
Background Noise Levels

Collector Road - Friday 13 September 2024



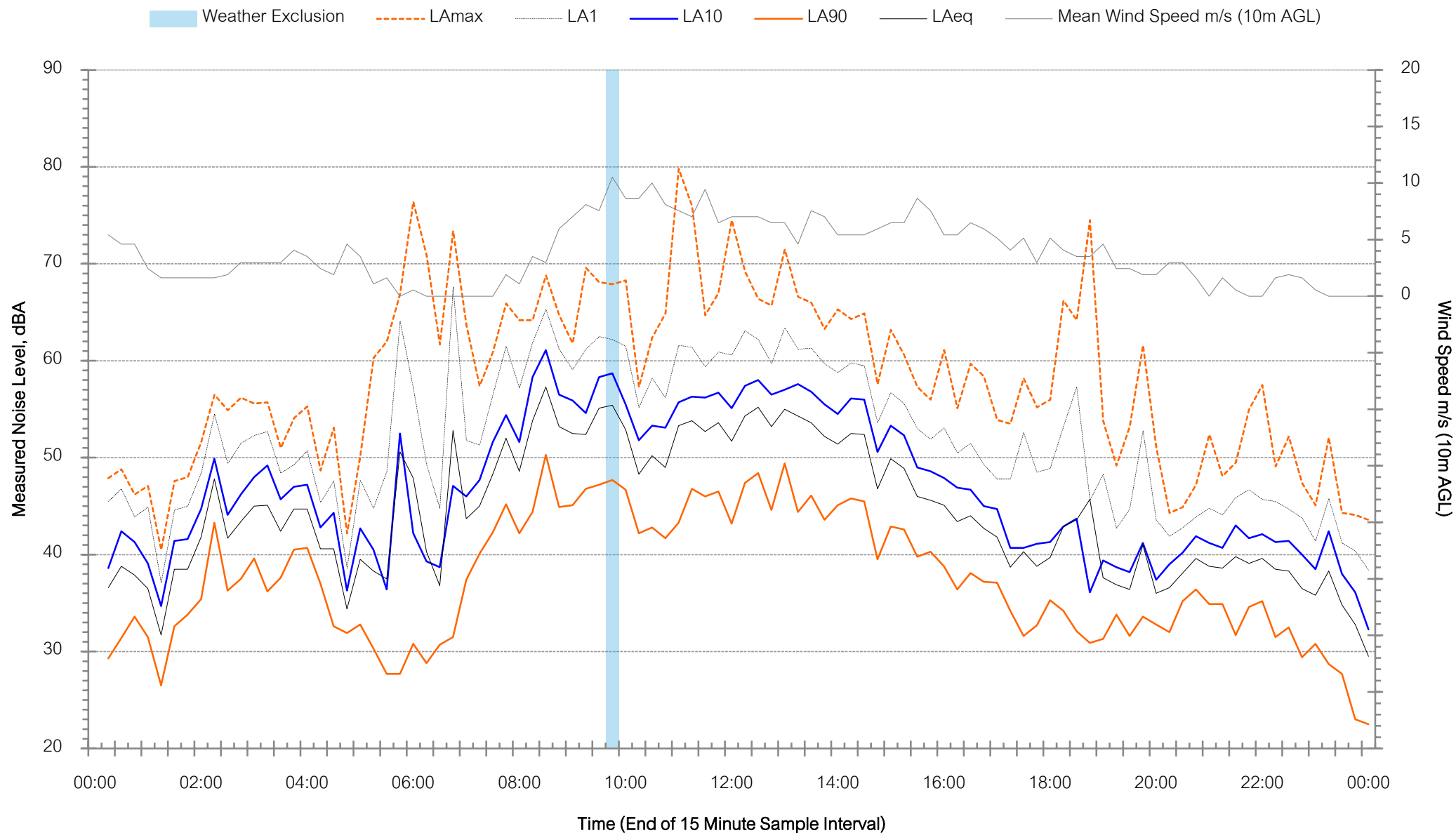
Background Noise Levels

Collector Road - Saturday 14 September 2024



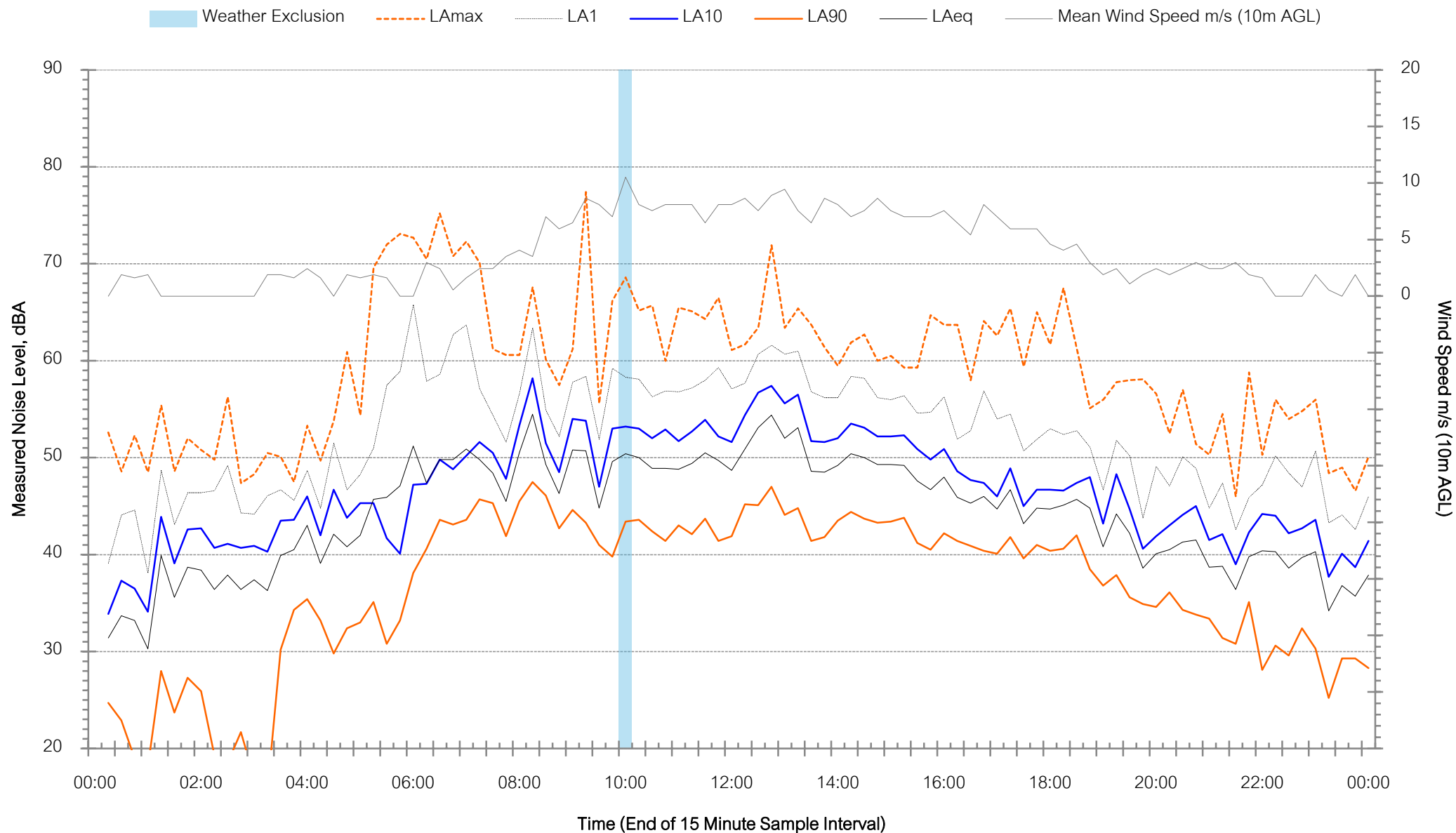
Background Noise Levels

Collector Road - Sunday 15 September 2024



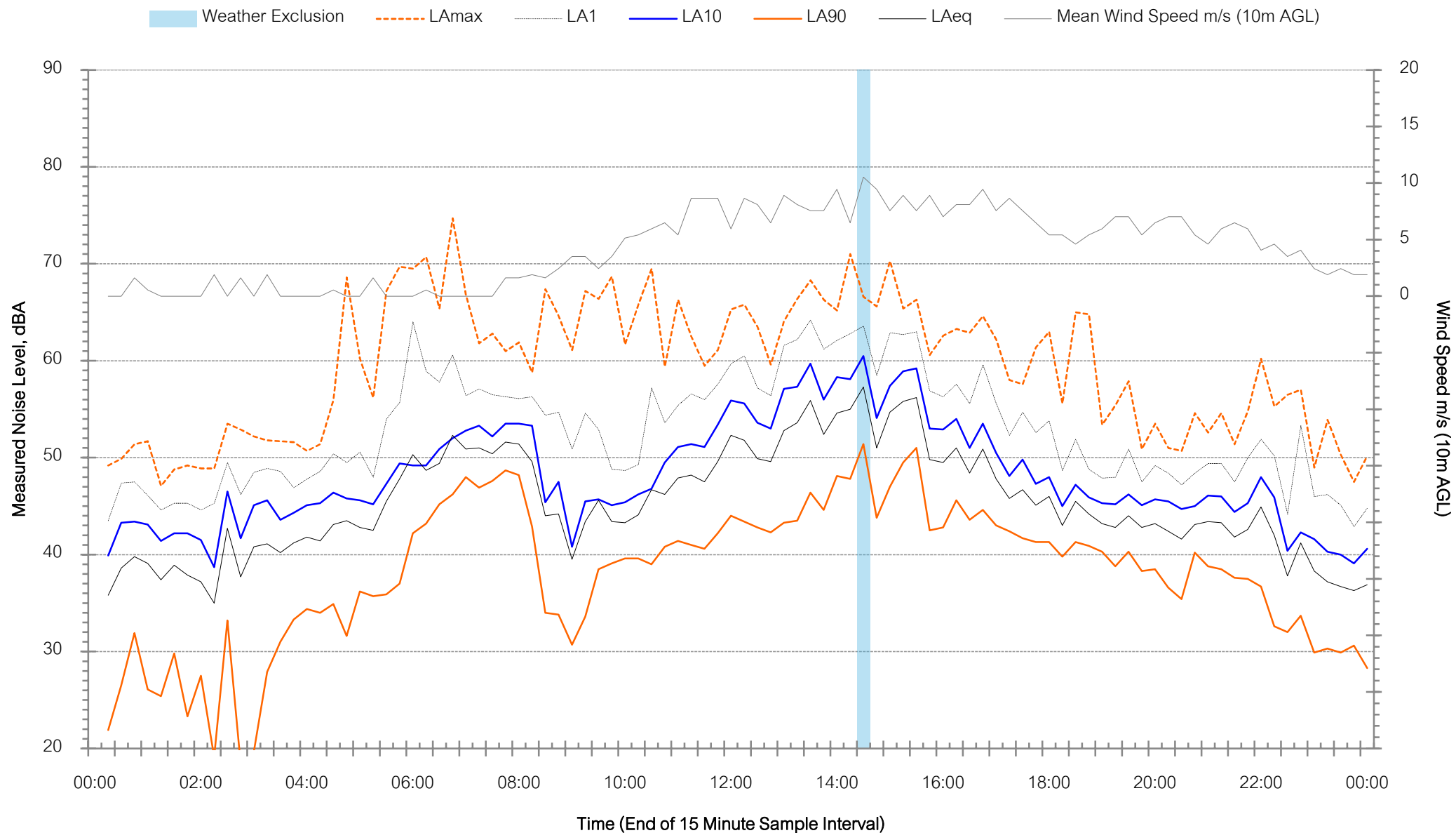
Background Noise Levels

Collector Road - Monday 16 September 2024



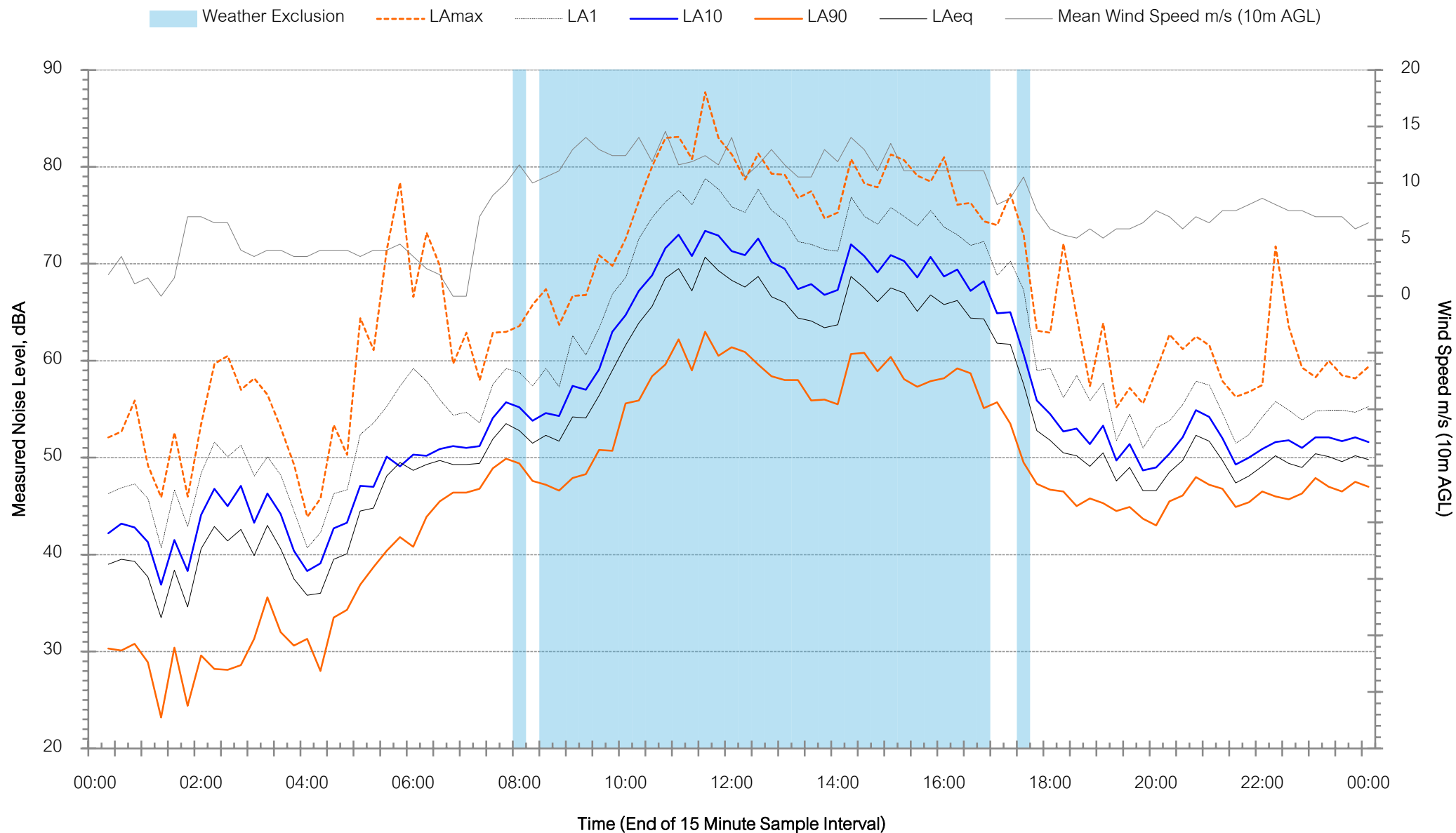
Background Noise Levels

Collector Road - Tuesday 17 September 2024



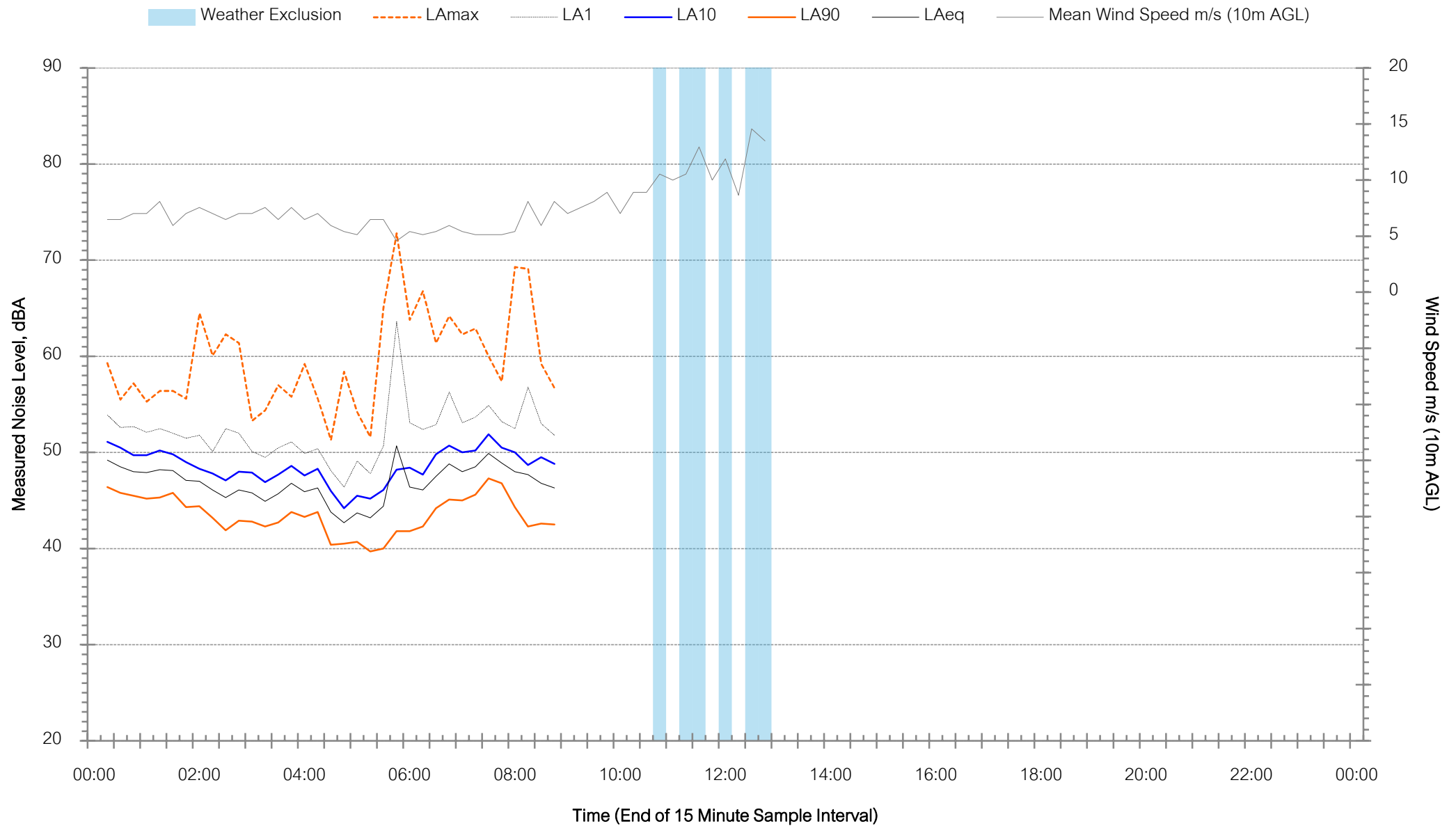
Background Noise Levels

Collector Road - Wednesday 18 September 2024



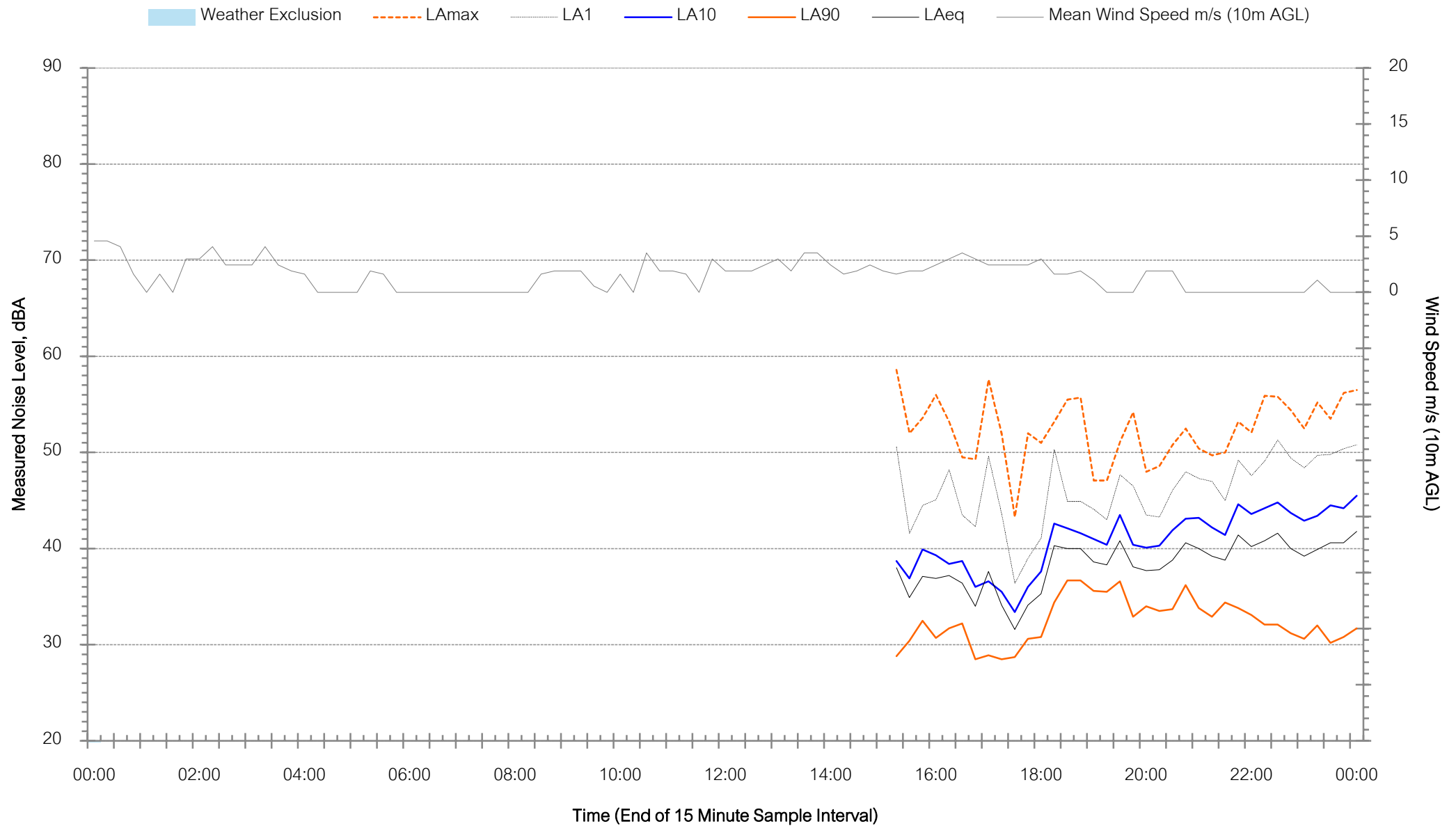
Background Noise Levels

Collector Road - Thursday 19 September 2024



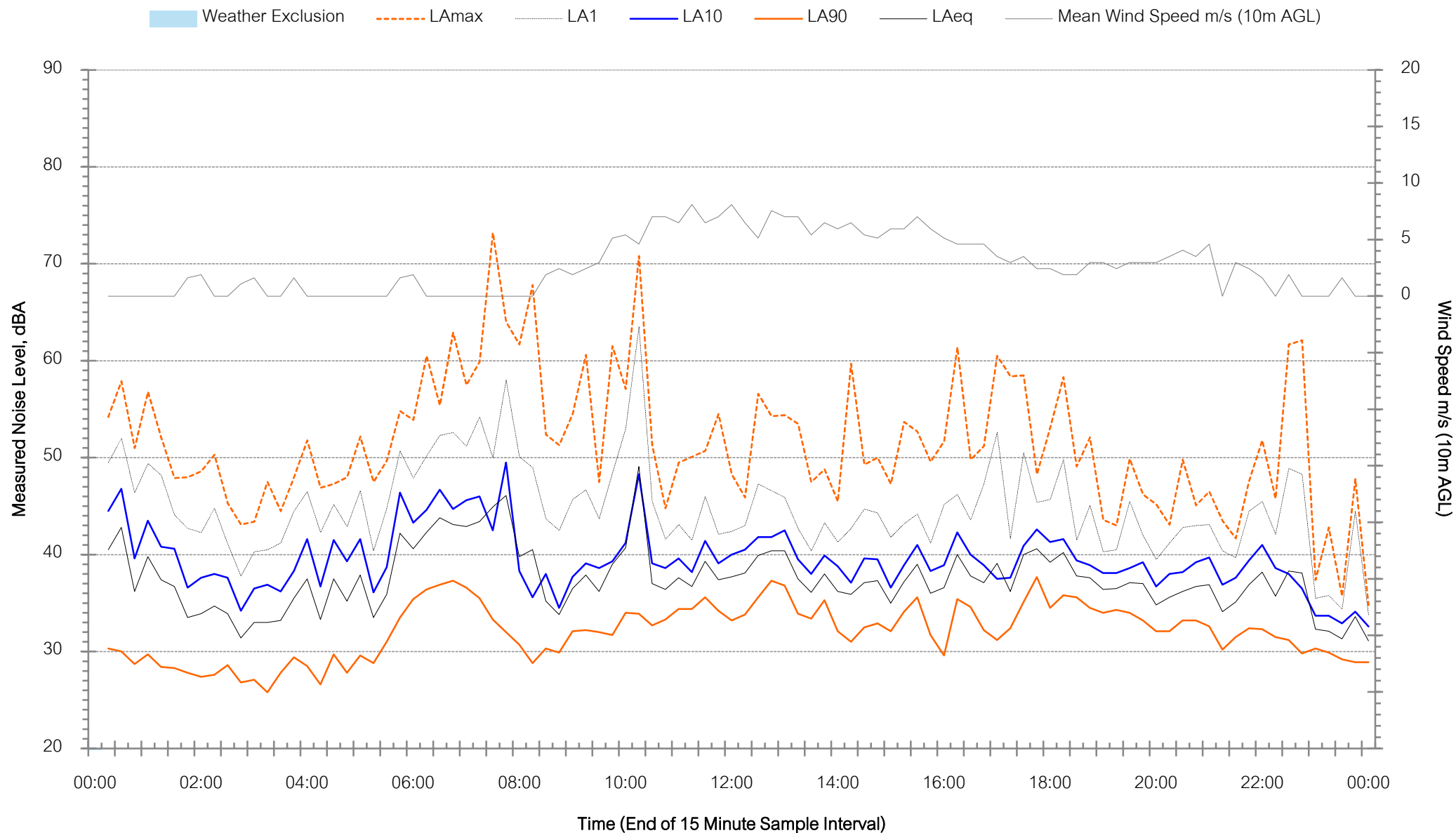
Background Noise Levels

Mays Lane - Tuesday 10 September 2024



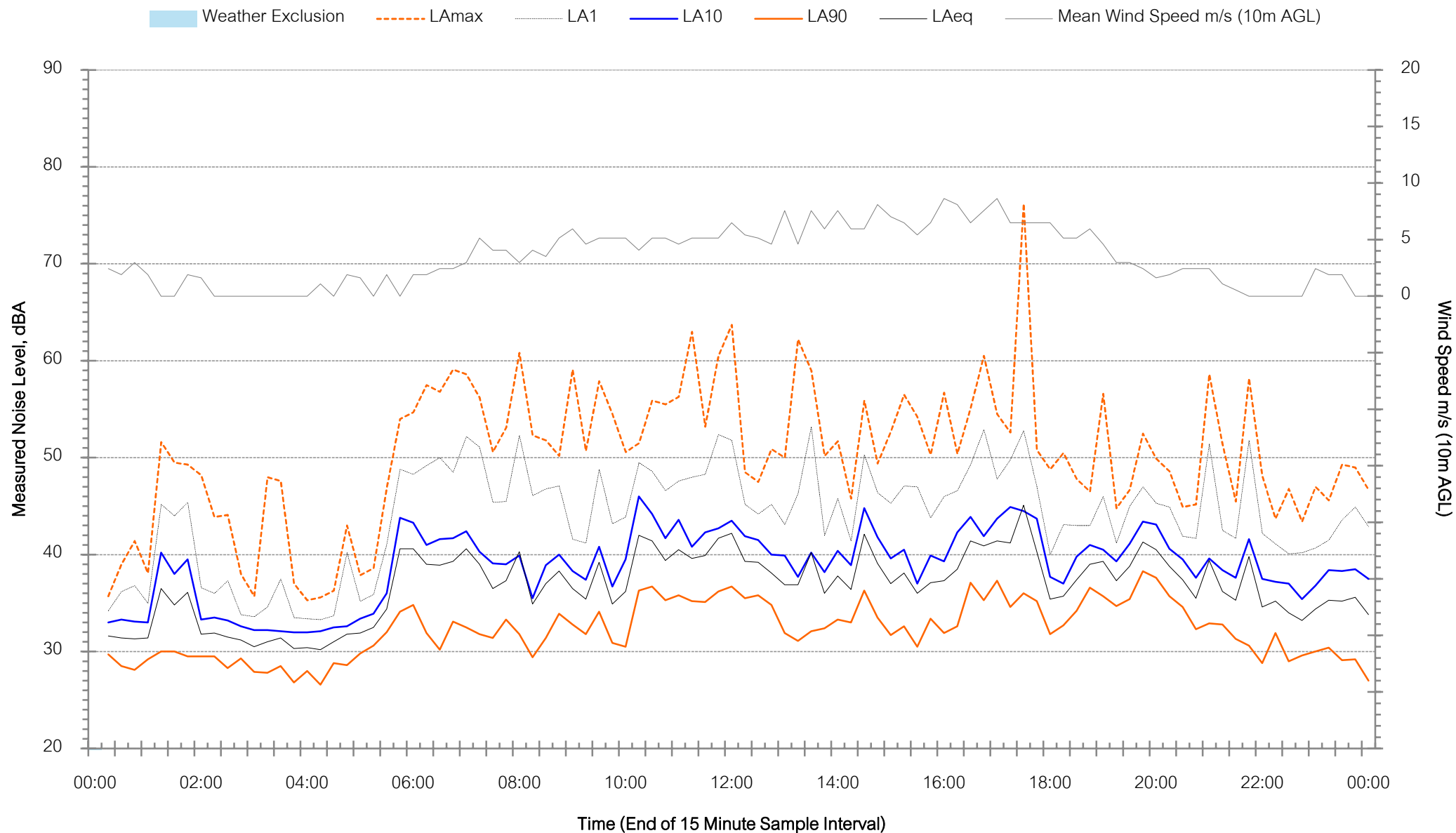
Background Noise Levels

Mays Lane - Wednesday 11 September 2024



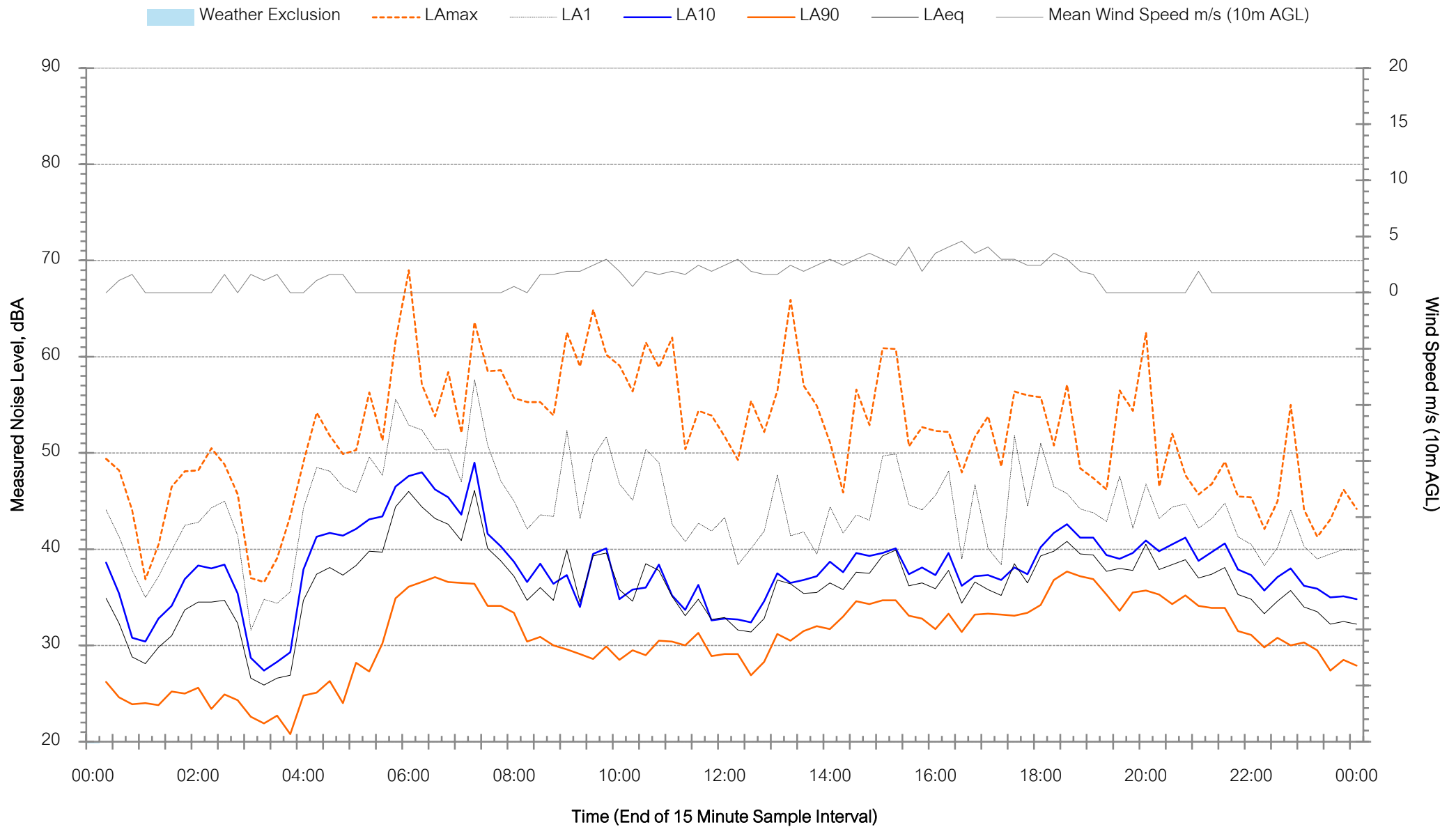
Background Noise Levels

Mays Lane - Thursday 12 September 2024



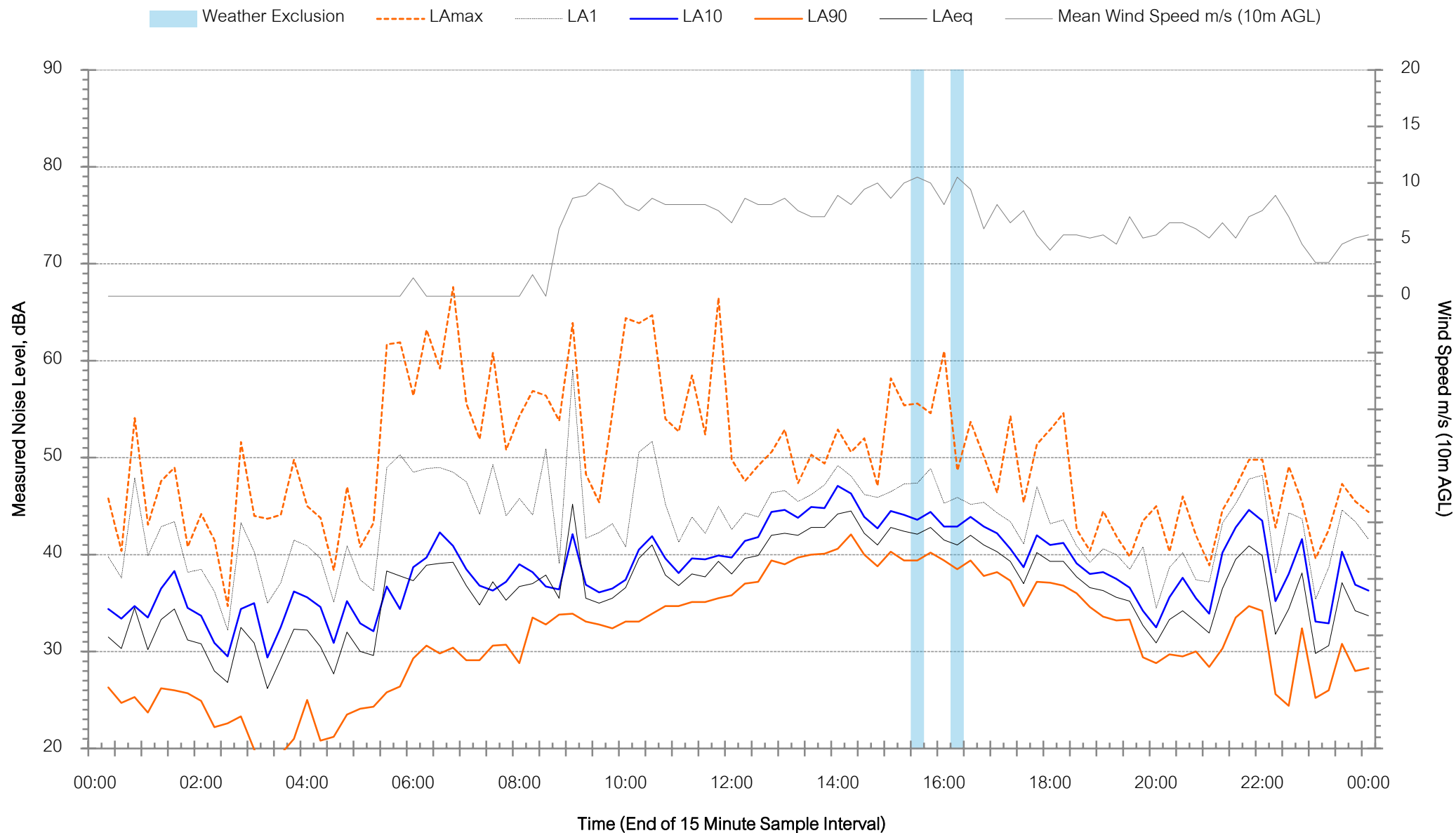
Background Noise Levels

Mays Lane - Friday 13 September 2024



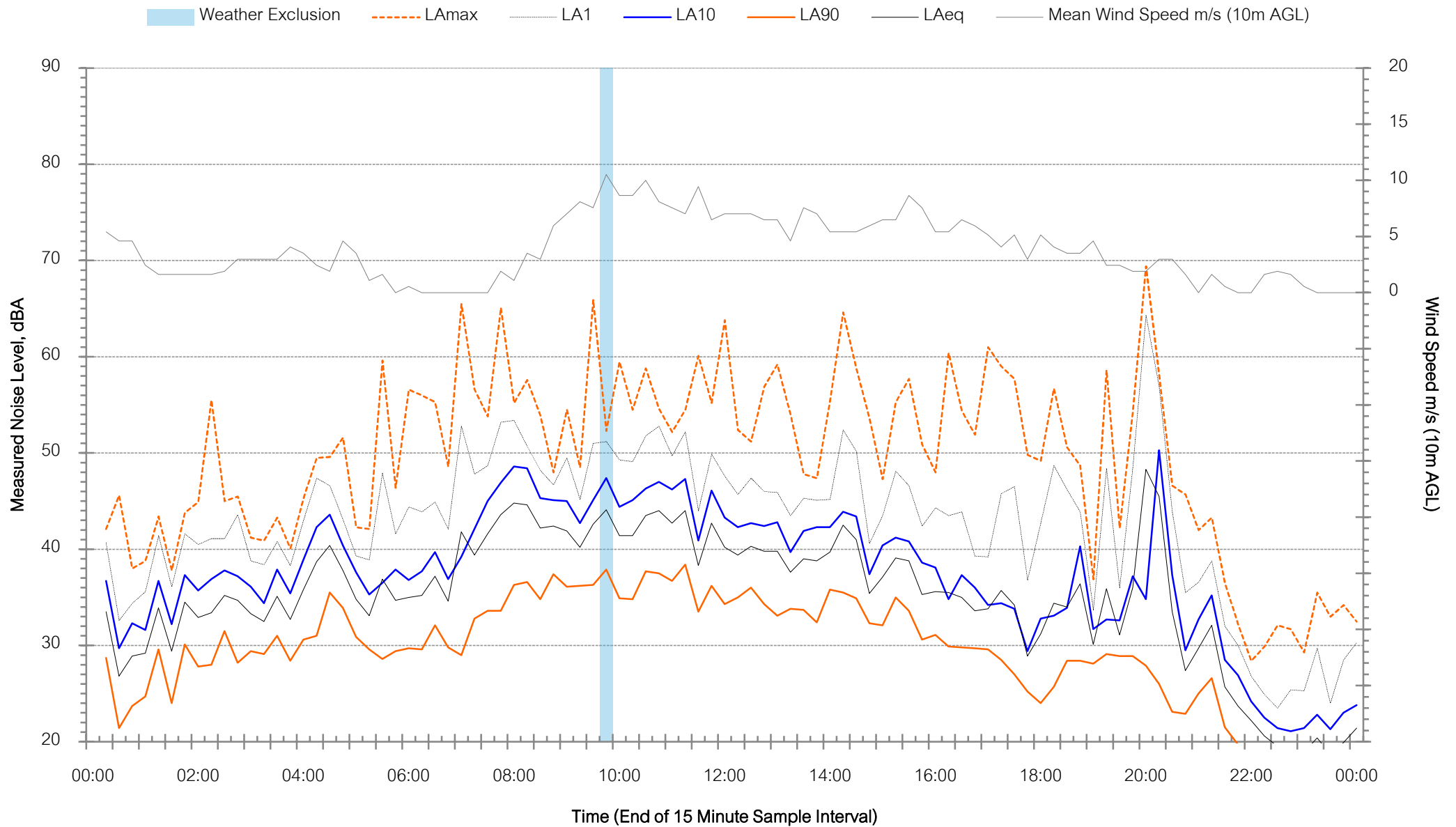
Background Noise Levels

Mays Lane - Saturday 14 September 2024



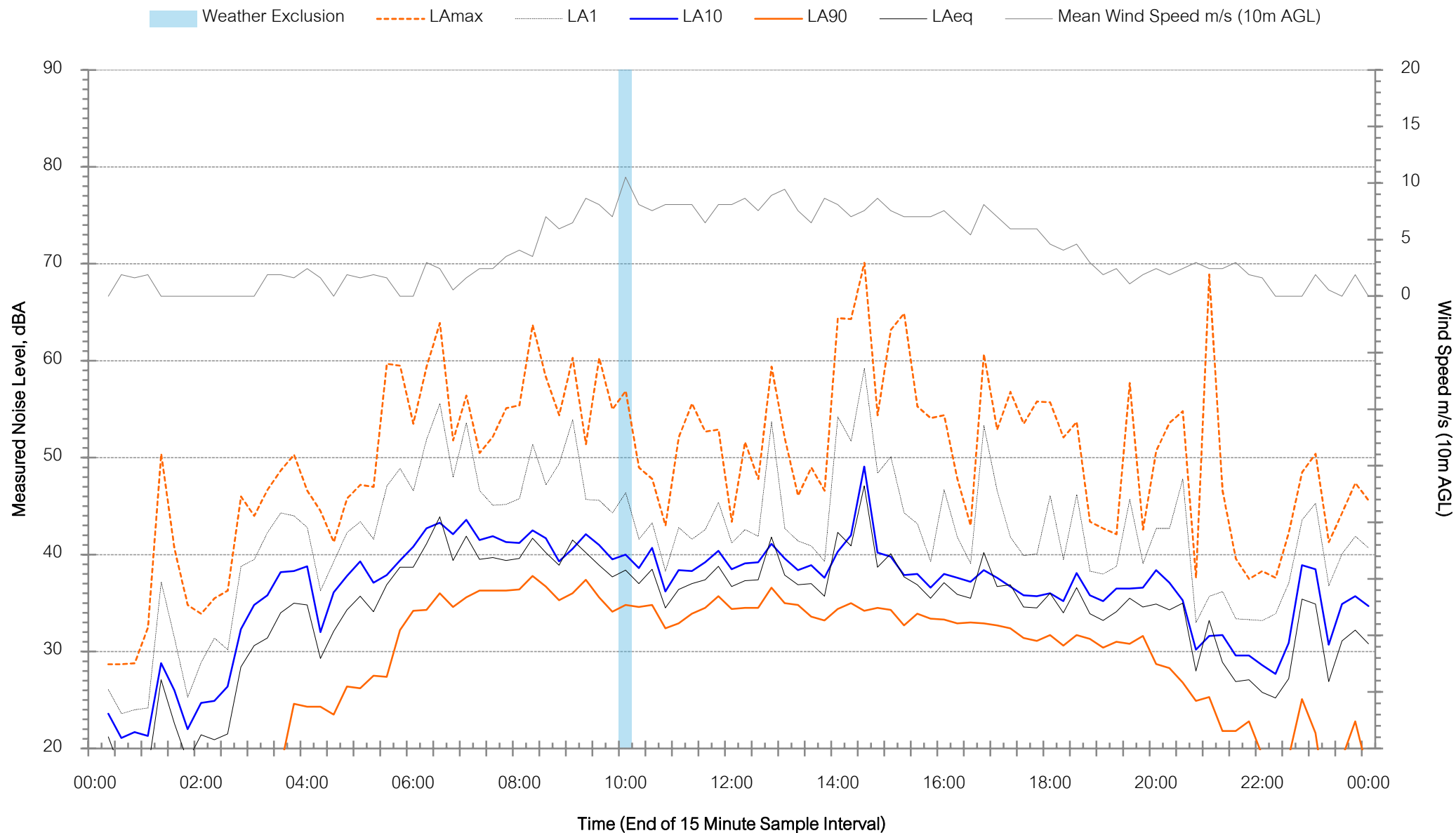
Background Noise Levels

Mays Lane - Sunday 15 September 2024



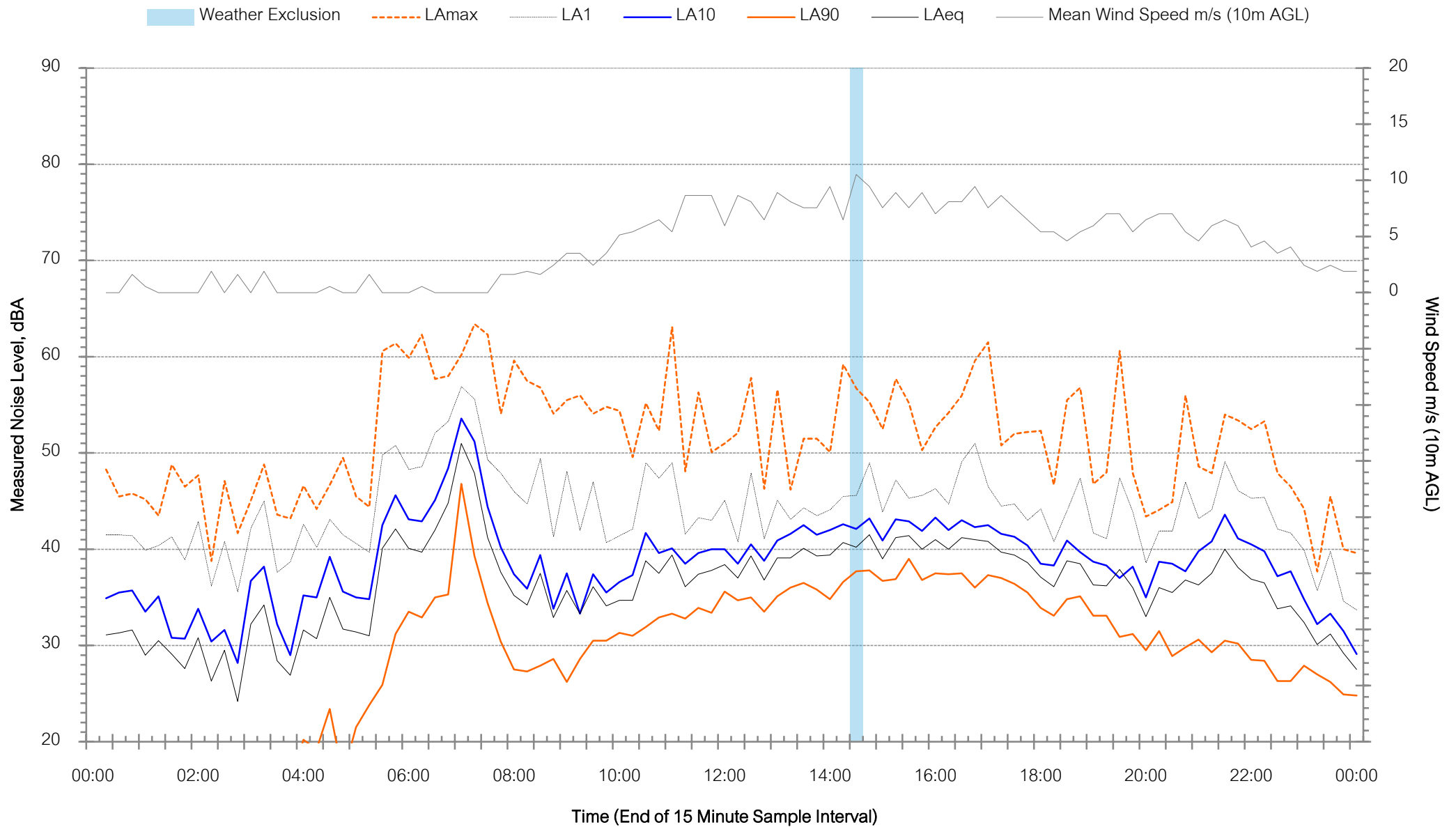
Background Noise Levels

Mays Lane - Monday 16 September 2024



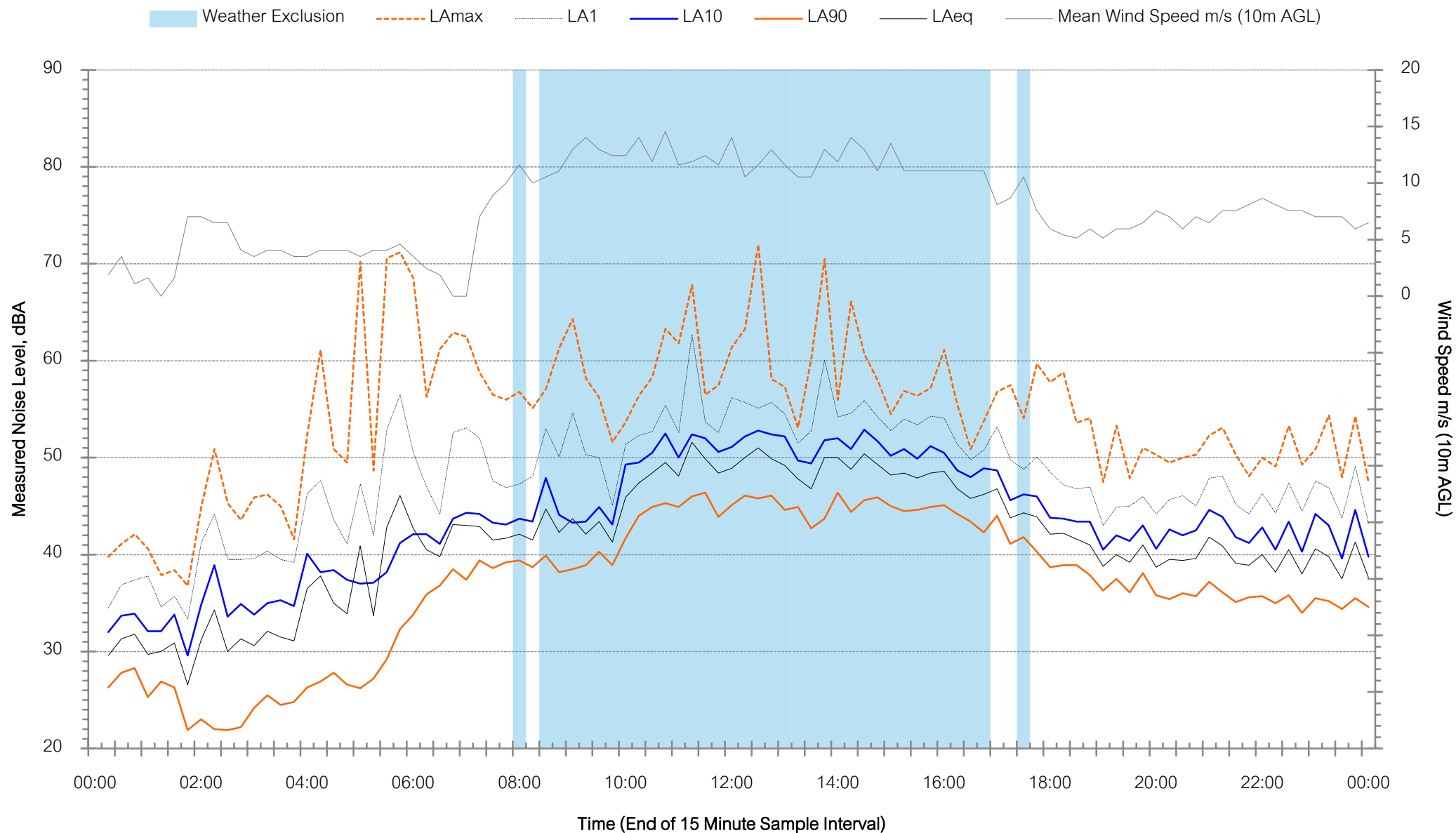
Background Noise Levels

Mays Lane - Tuesday 17 September 2024



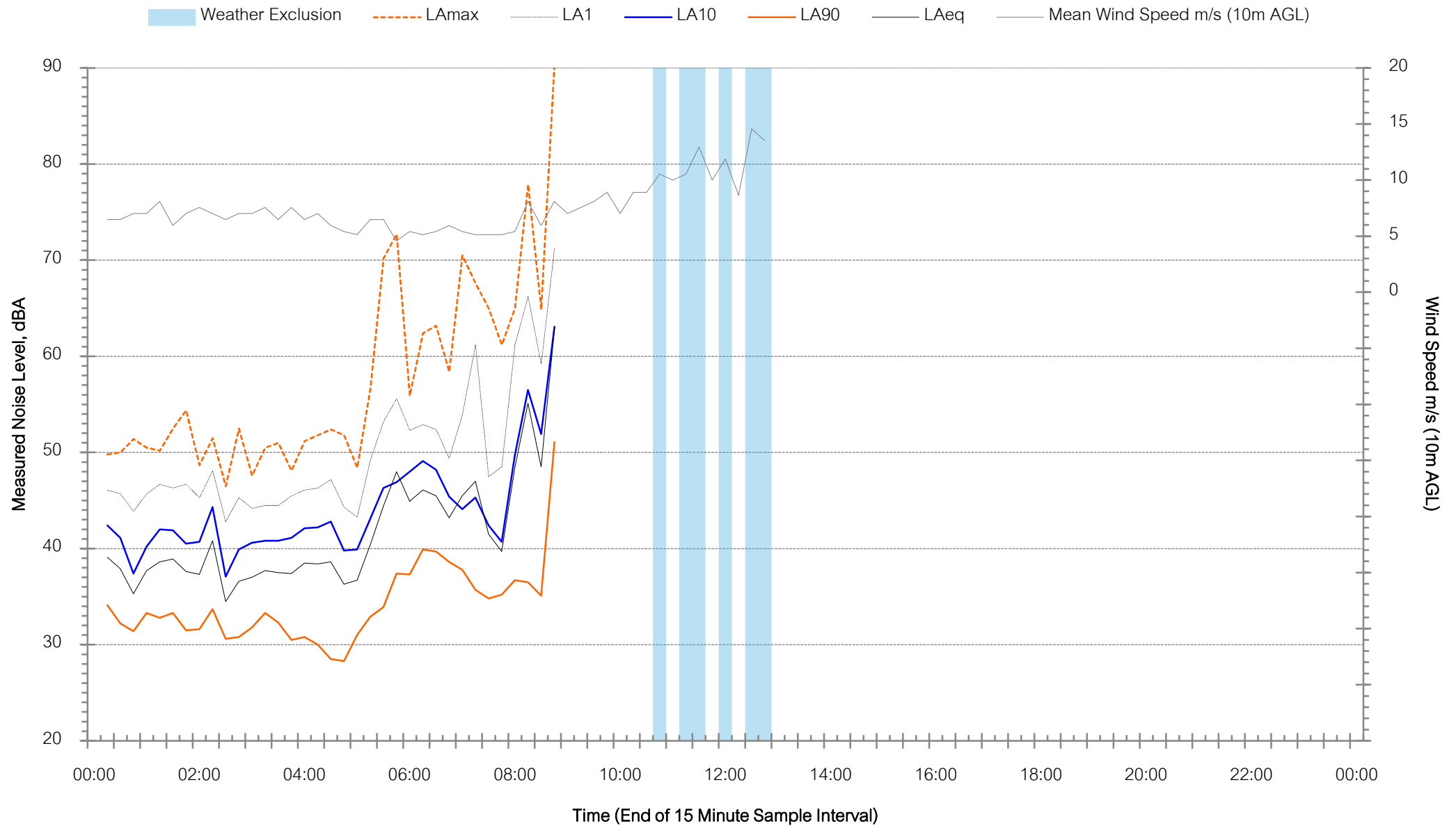
Background Noise Levels

Mays Lane - Wednesday 18 September 2024



Background Noise Levels

Mays Lane - Thursday 19 September 2024



This page has been intentionally left blank

Appendix C – NEWA Meteorological Data

Table C1 NEWA Analysed Daytime Meteorological Conditions, Goulburn Airport AWS NSW

Direction ± 45°	Season	Day	Direction	Season	Day
		Percentage Occurrence %			Percentage Occurrence %
0	Summer	7	180	Summer	5
0	Autumn	8	180	Autumn	5
0	Winter	8	180	Winter	6
0	Spring	7	180	Spring	5
22.5	Summer	7	202.5	Summer	4
22.5	Autumn	8	202.5	Autumn	4
22.5	Winter	7	202.5	Winter	5
22.5	Spring	7	202.5	Spring	4
45	Summer	8	225	Summer	4
45	Autumn	7	225	Autumn	4
45	Winter	5	225	Winter	6
45	Spring	7	225	Spring	5
67.5	Summer	8	247.5	Summer	4
67.5	Autumn	7	247.5	Autumn	4
67.5	Winter	5	247.5	Winter	7
67.5	Spring	7	247.5	Spring	6
90	Summer	7	270	Summer	4
90	Autumn	7	270	Autumn	5
90	Winter	5	270	Winter	6
90	Spring	7	270	Spring	5
112.5	Summer	8	292.5	Summer	4
112.5	Autumn	8	292.5	Autumn	6
112.5	Winter	6	292.5	Winter	7
112.5	Spring	7	292.5	Spring	6
135	Summer	7	315	Summer	5
135	Autumn	8	315	Autumn	7
135	Winter	7	315	Winter	9
135	Spring	5	315	Spring	7
157.5	Summer	5	337.5	Summer	7
157.5	Autumn	5	337.5	Autumn	8
157.5	Winter	5	337.5	Winter	9
157.5	Spring	4	337.5	Spring	7

Appendix D – Sound Power Data

The noise emission levels used in modelling are summarised in **Table D-1**. Noise emission data were obtained from manufacturer's specifications or the MAC noise database, which is a compilation of measurements undertaken at quarries, mine sites and construction sites across NSW.

Table D1 Single Octave Equipment Sound Power Levels, dB LAeq(15min) (<i>re 10⁻¹² W</i>)									
Noise Source/Item	Octave Band Centre Frequency, Hz								Total, dBA
	63	125	250	500	1000	2000	4000	8000	
Jaw Crusher (Astec)	85	91	96	103	106	105	102	94	111
Cone Crusher (Astec) (x2)	73	92	97	102	106	103	98	92	110
Screen Decks (Astec) (x2)	81	92	98	103	104	99	94	86	108
Washing Circuit	82	90	93	102	101	100	96	89	107
Roller	73	86	100	102	102	99	92	81	107
Grader	84	84	86	98	104	103	93	84	107
Bulldozer (D8)	90	95	100	106	106	104	98	87	111
Wheeled loader (WA480)	79	92	95	101	104	101	100	87	108
Wheeled loader (WA500)	83	101	102	103	103	100	94	86	109
Excavator (PC55MR)	71	85	87	92	91	86	73	62	96
Excavator (PC200)	75	89	91	96	94	89	77	66	100
Excavator (PC300LC)	79	94	95	100	99	94	82	70	104
Excavator (PC450LC)	87	100	102	101	99	98	91	83	107
Haul Truck (x3 CAT785)	72	97	104	113	110	107	104	97	116
Water Cart (Hino)	75	79	88	94	98	95	88	81	101
Drill Rig	81	103	104	106	109	108	100	92	114
Product Truck	82	90	92	97	95	95	91	80	102

Appendix E – Annoying Characteristics Assessment

Table APP-1 Tonality & Low Frequency Noise Assessment							
Frequency (Hz)	Values (dBZ)	A-wt Spectrum	C-wt Spectrum	1/3 Octave Tonality Test	1/1 Octave Tonality Test	LFN Present (Table C1 -NPI 2017)	NPI LFN Criteria (dBZ)
10		0	0			FALSE	92
12.5		0	0			FALSE	89
16		0	0			FALSE	86
20		0	0			FALSE	77
25	56	11.7	52.0			FALSE	69
31.5	51	11.7	48.1	FALSE	FALSE	FALSE	61
40	46	11.7	44.3	FALSE		FALSE	54
50	53	23.0	51.9	FALSE		FALSE	50
63	49	23.0	48.4	FALSE	FALSE	FALSE	50
80	46	23.0	45.0	FALSE		FALSE	48
100	48	28.6	47.4	FALSE		FALSE	48
125	45	28.6	44.5	FALSE	FALSE	FALSE	46
160	42	28.6	41.9	FALSE		FALSE	44
200	41	29.6	40.5	FALSE			
250	38	29.6	38.2	FALSE	FALSE		
315	36	29.6	36.2	FALSE			
400	38	33.7	37.9	FALSE			
500	37	33.7	36.9	FALSE	FALSE		
630	36	33.7	35.6	FALSE			
800	34	33.1	33.9	FALSE			
1000	33	33.1	33.1	FALSE	FALSE		
1250	32	33.1	32.5	FALSE			
1600	28	28.9	27.8	FALSE			
2000	28	28.9	27.5	FALSE	FALSE		
2500	28	28.9	27.3	FALSE			
3150	14	15.2	13.5	FALSE			
4000	14	15.2	13.4	FALSE	FALSE		
5000	15	15.2	13.4	FALSE			
6300	-10	0	0	FALSE			
8000	-9	0	0	FALSE	FALSE		
10000	-8	0	0				
12500		0	0				
16000		0	0				
20000		0	0				
		Total dBA	Total dBC	C-A			
Total SPL		43	58	15			
Assessment							
Low Frequency Noise Present				No			
Tonal Noise Present				No			

Appendix F – Noise Contour Plots

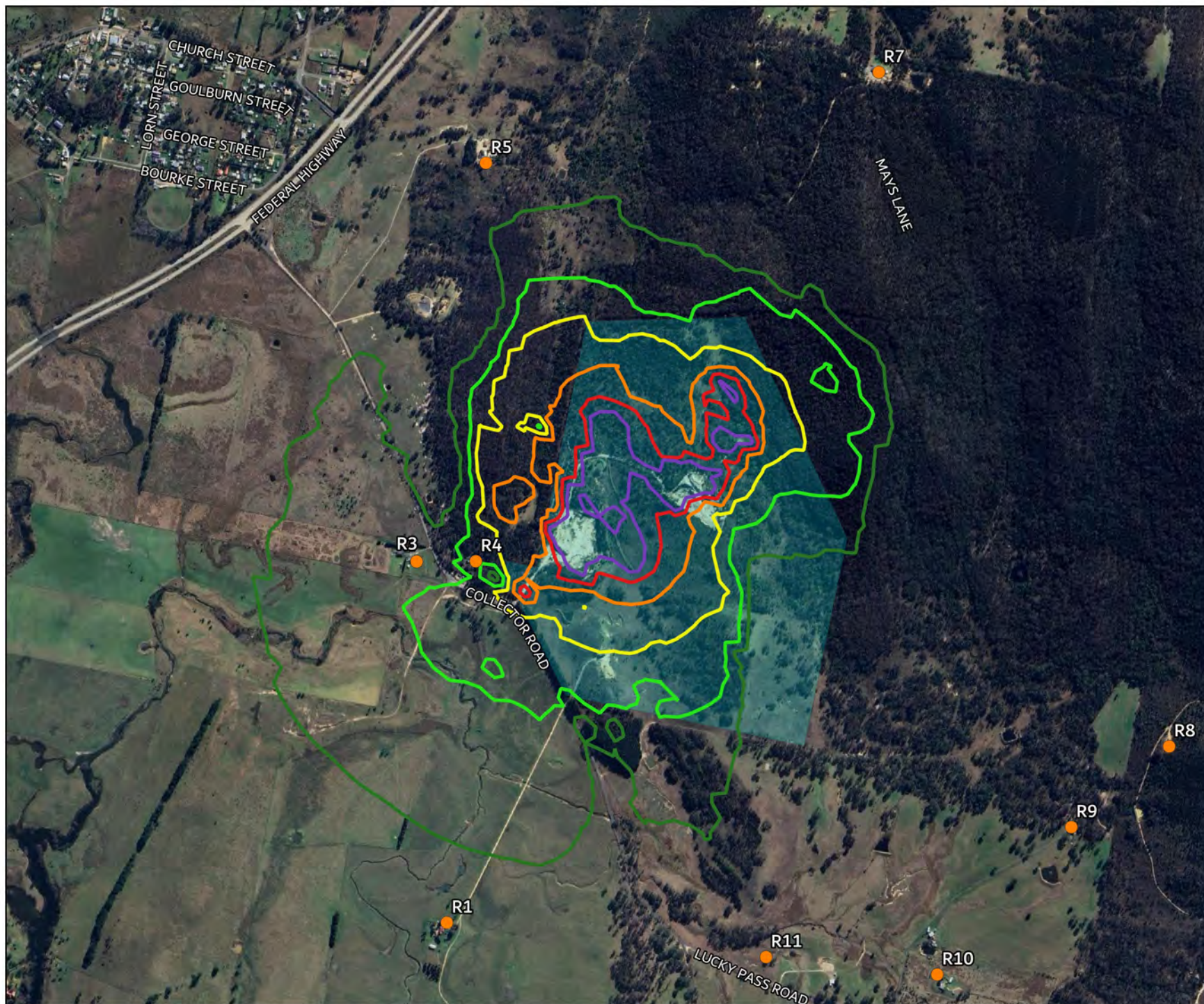


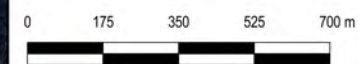
FIGURE F1
Operational Noise Contours
 Scenario 1 - Day Period
 MAC211420-02
 Barina Quarry

KEY

- Project Area
- Receiver Location

LAeq(15min) Noise Contours

- 35dB
- 40dB
- 45dB
- 50dB
- 55dB
- 60dB



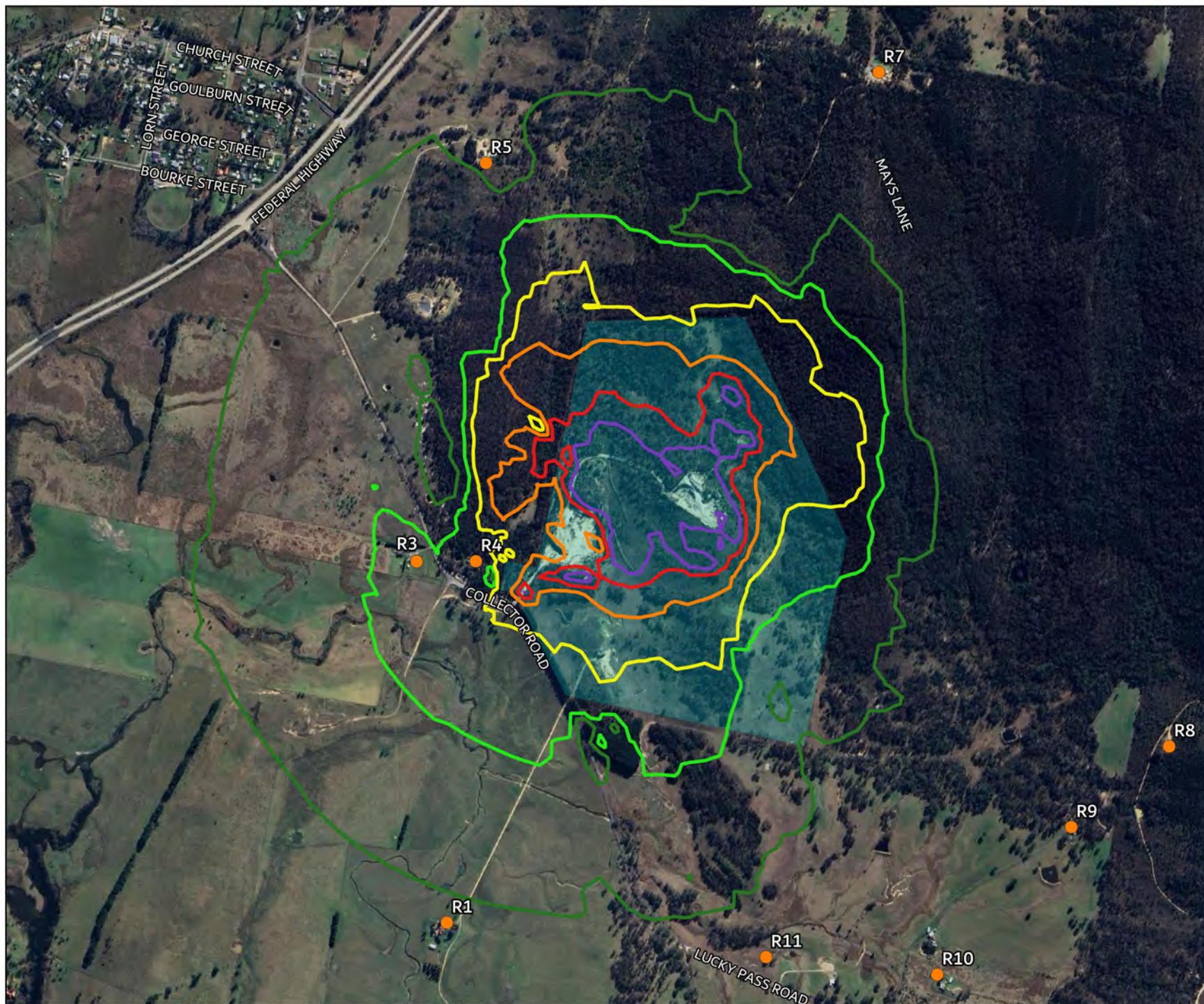


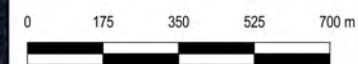
FIGURE F2
Operational Noise Contours
Scenario 2 - Day Period
MAC211420-02
Barina Quarry

KEY

- Project Area
- Receiver Location

L_{Aeq}(15min) Noise Contours

- 35dB
- 40dB
- 45dB
- 50dB
- 55dB
- 60dB



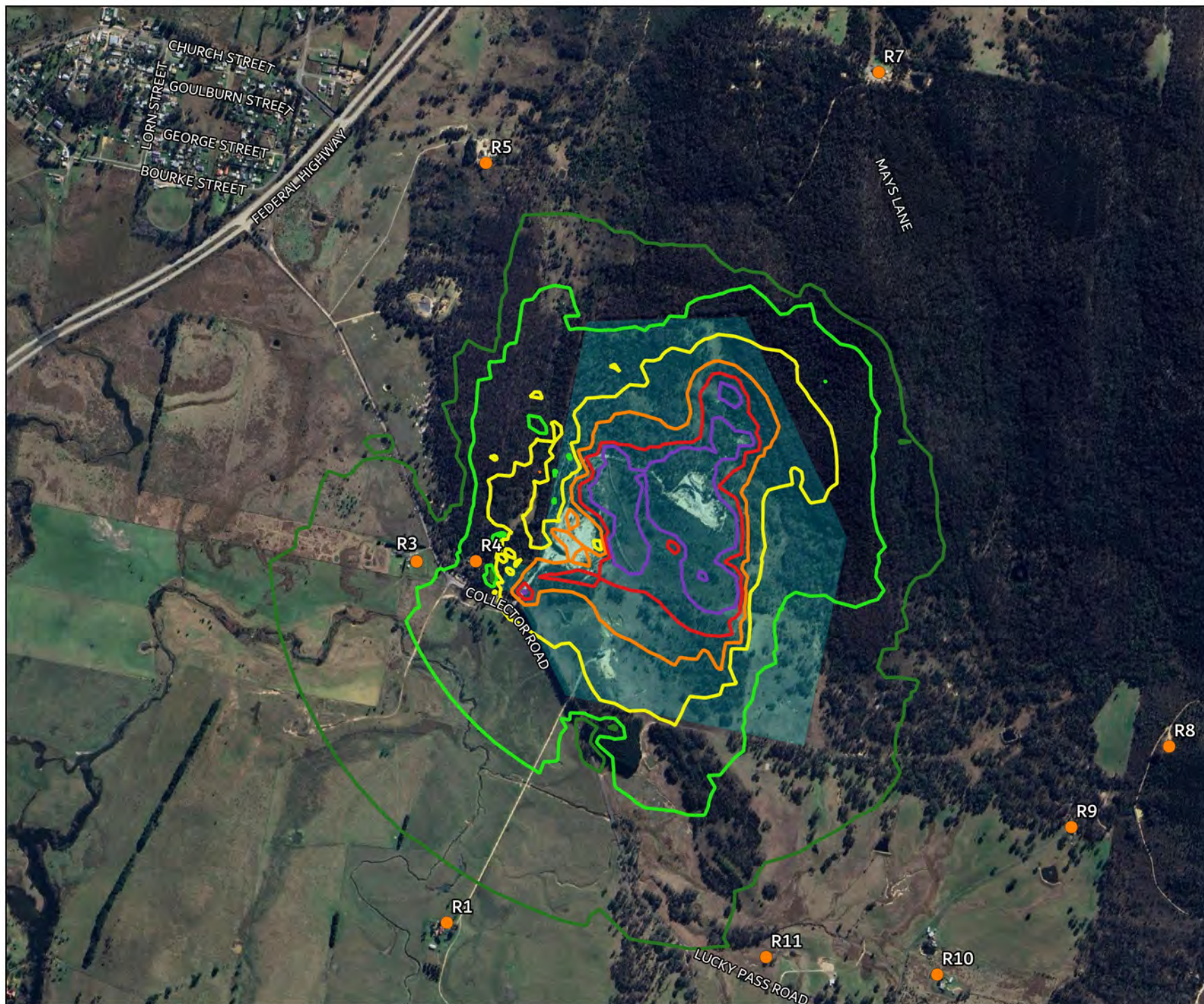


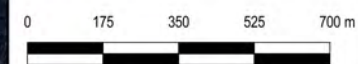
FIGURE F3
Operational Noise Contours
Scenario 3 - Day Period
MAC211420-02
Barina Quarry

KEY

- Project Area
- Receiver Location

L_{Aeq}(15min) Noise Contours

- 35dB
- 40dB
- 45dB
- 50dB
- 55dB
- 60dB



This page has been intentionally left blank

Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

Ph: +61 2 4920 1833

www.mulleracoustic.com



Appendix 6 Aboriginal Cultural Heritage Assessment Report

This page is intentionally blank





View across the central portion of the study area.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

MODIFICATION TO THE BARINA HARD ROCK QUARRY

COLLECTOR, NSW

OCTOBER 2025

Report prepared by
OzArk Environment & Heritage
for Collector Resources Pty Limited

OzArk

**OzArk
Environment & Heritage**

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

This page has intentionally been left blank.



Heritage NSW



ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

Report Title	Aboriginal Cultural Heritage Assessment Report: Modification to the Barina Hard Rock Quarry
Author(s) Name	Kelsey Bennett
Author(s)' Organisation Name (if applicable)	OzArk Environment & Heritage
Author(s) contact details	145 Wingewarra St DUBBO NSW 2830 Email: kelsey@ozarkehm.com.au Phone: 02 6882 0118
Address of Subject Area	Address: Collector Road, Collector Title Reference: Lot 3, DP1177623 Local Government Area: Queanbeyan-Palerang Regional
Report prepared for	Company Name: Irwin Environmental Management Limited Contact Person: Alex Irwin Email: alex@irwinenviro.com.au Phone: 0412 107 657
Date of Report	October 2025
Use of Report/ Confidentiality	This report is not confidential This report may be used by Heritage NSW in a number of ways including: placing it in a database generally making hard and electronic copies available to the public and communicating the report to the public.
Copyright owner of the report	© OzArk Environment & Heritage 2025, Irwin Environmental Management Pty Limited 2025 and Collector Resources Pty Limited
Indemnity	If the person/entity who claims to be the copyright owner of the report is not entitled to claim copyright in the report, he/she/it indemnifies all persons using the report in accordance with the <i>National Parks & Wildlife Act 1974</i> , against any claim, action, damage, or loss in respect of breach of copyright

I hereby confirm:

- That this report does not contain confidential information
- That copyright is held jointly by OzArk Environment & Heritage, Collector Resources Pty Limited and Irwin Environmental Management Pty Limited 2025
- That the copyright owners indemnify all persons using the report in accordance with the *National Parks & Wildlife Act 1974*, against any claim, action, damage, or loss in respect of breach of copyright.

Stephanie Rusden, OzArk Environment & Heritage Principal Archaeologist.

This page has intentionally been left blank.

DOCUMENT CONTROLS

Applicant	Collector Resources Pty Limited	
Client	Irwin Environmental Management Pty Limited	
Document Description	Aboriginal Cultural Heritage Assessment Report: Modification to the Barina Hard Rock Quarry.	
File Location	OzArk Job No.	
Clients\Irwin Environmental Management\Barina Quarry Modification_Aboriginal heritage_2024	4632	
Document Status: V3.1 FINAL		Date: 17 October 2025
OzArk internal edits		V1.0 KB author 21/11/24 V1.1 SR review 15/12/24
OzArk and client edits		V2.0 OzArk to client 16/12/24 V2.1 OzArk addresses client edits 19/12/24
Final document		V3.0 OzArk finalises 31/01/25
Prepared for		Prepared by
Alex Irwin Director / Principal Irwin Environmental Management Pty Limited 0412 107 657 alex@irwinenviro.com.au		Kelsey Bennett Project Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 kelsey@ozarkehm.com.au
COPYRIGHT		
© OzArk Environment & Heritage 2025 and © Collector Resources Pty Limited 2025		
All intellectual property and copyright reserved.		
Apart from any fair dealing for private study, research, criticism, or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system, or adapted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without written permission.		
Enquiries should be addressed to OzArk Environment & Heritage.		

Acknowledgement

OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

ABBREVIATIONS AND GLOSSARY

ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> , all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Guidelines for conducting Aboriginal community consultation for developments where harm to Aboriginal objects is likely.
ACHMP	Aboriginal Cultural Heritage Management Plan. A requirement of SSDs. An ACHMP both manages impacts to Aboriginal cultural heritage within approved disturbance areas (AHIPs are not required), as well as management of Aboriginal cultural heritage sites and values outside of approved impact areas but within land able to be managed by a proponent.
AHIMS	Aboriginal Heritage Information Management System. Administered by the DCCEEW, AHIMS is the central register of all Aboriginal sites within NSW.
AHIP	Aboriginal Heritage Impact Permit. Issued by Heritage NSW to allow harm to Aboriginal objects.
ASIRF	Aboriginal Site Impact Recording Form. A standardised form for recording authorised impacts to Aboriginal sites. Only with a completed ASIRF can a site be listed as 'destroyed' on the AHIMS.
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 NPW Act. Issued by DECCW in 2010, the Code of Practice is a set of guidelines that allows limited test excavation without the need to apply for an AHIP.
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water. DCCEEW contains the Environment and Heritage Group including Heritage NSW.
DPHI	NSW Department of Planning, Housing and Infrastructure. DPHI contains the Planning agency.
GSE	Ground surface exposure. A measure of factors that may reveal surface artefacts such as erosion scalds.
GSV	Ground surface visibility. A measure of factors that may obscure the detection of surface artefacts such as leaf litter.

Heritage NSW	Government department tasked with ensuring compliance with the NPW Act. Heritage NSW is advised by the Aboriginal Cultural Heritage Advisory Committee (ACHAC).
NPW Act	<i>National Parks and Wildlife Act 1974</i> . Primary legislation governing Aboriginal cultural heritage within NSW.
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.
SSD	State Significant Development

EXECUTIVE SUMMARY

Collector Resources (the Applicant) owns and operates the Barina Quarry, located on Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP1177623, Collector Road, Collector NSW, within the Queanbeyan-Palerang Regional Council (QPRC) Local Government Area (LGA).

The operations are approved under a State Significant Development (SSD) consent approved by Orders of the Land & Environment Court on 28 May 2001 (DA1-01-2000). The Applicant now intends to submit a development application to modify DA1-01-2000 under Section 4.56 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) to extend the duration of the development consent referenced in Condition 1.3(a) by 15 years.

OzArk Environment & Heritage (OzArk) has been engaged by Irwin Environmental Management Pty Limited on behalf of the Applicant to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed modification.

The *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010a) commenced in 2022 and were reinitiated in 2024 for the project.

A search of the Aboriginal Heritage Information Management System (AHIMS) database returned 23 records for Aboriginal heritage sites within the designated search area. One previously recorded site, 51-5-0063 (CL1), is located approximately 95 metres (m) from the northern part of the study area.

The field survey was undertaken by OzArk on 19 January 2023. No Aboriginal sites were recorded during the assessment. Further, due to the sloping nature of the landform, the observed thin soils and the levels of previous disturbance across parts of the study area, it is assessed that there is a low probability for there to be further, undetected, subsurface sites.

Recommendations concerning Aboriginal cultural values within the study area are as follows:

1. Following development consent of the project, the proposed work may proceed with caution. In the unlikely event that unexpected Aboriginal heritage items are encountered during work, the *Unanticipated Finds Protocol* in **Appendix 4** must be implemented. **Appendix 5** provides the appropriate procedure to be undertaken in the unlikely event that human remains are encountered.
2. This ACHAR concludes that the project may proceed without further archaeological investigation under the following conditions:
 - a. All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to potential Aboriginal objects in adjacent landforms. Should the parameters of the project extend beyond the assessed study area, then further archaeological assessment may be required.

- b. All staff and contractors involved in the proposed work should undergo a cultural heritage induction to ensure they can recognise Aboriginal artefacts (see **Appendix 6**), and are aware of the legislative protection requirements for all Aboriginal sites and objects under the *National Parks and Wildlife Act 1974* and are familiar with the *Unanticipated Finds Protocol* and the skeletal remains protocol.

Contents

ABBREVIATIONS AND GLOSSARY.....	V
EXECUTIVE SUMMARY.....	VII
1 INTRODUCTION	1
1.1 Approved Development	1
1.2 Operational history and current status.....	1
1.3 The proposed modification.....	2
1.4 Study area	3
1.5 Purpose of this assessment and background.....	3
2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT	8
2.1 Relevant legislation.....	8
2.1.1 Commonwealth legislation	8
2.1.2 State legislation	8
2.2 Assessment approach	10
2.3 Purpose and objectives.....	10
2.4 Report compliance with the Code of Practice.....	11
2.5 Date of archaeological assessment	12
2.6 OzArk involvement.....	12
2.6.1 Field survey	12
2.6.2 Reporting	12
3 ABORIGINAL COMMUNITY CONSULTATION	13
3.1 Introduction to cultural values	13
3.2 Aboriginal community consultation.....	13
3.2.1 ACHCRs Stage 1.....	14
3.2.2 ACHCRs Stage 2.....	16
3.2.3 ACHCRs Stage 3.....	16
3.2.4 ACHCRs Stage 4.....	17
3.2.5 Post Stage 4	17
3.3 Cultural values identified throughout the ACHCR process	17
4 LANDSCAPE CONTEXT	18
4.1 Topography and geology	18
4.1.1 Survey units.....	19
4.2 Soils.....	19
4.3 Hydrology	20

4.4	Vegetation	20
4.5	Land use history and existing levels of disturbance.....	20
4.6	Conclusion	21
5	ARCHAEOLOGICAL CONTEXT	22
5.1	Ethno-historic sources of regional Aboriginal culture	22
5.2	Regional archaeological context	22
5.3	Local archaeological context.....	23
5.3.1	Desktop database searches conducted	23
5.3.2	Archaeological investigations within and near the study area.....	28
5.4	Predictive model for site location.....	29
5.4.1	Site types in the region of the study area	29
5.4.2	Landform modelling of archaeological potential	30
5.4.3	Conclusion	30
6	RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT	32
6.1	Sampling strategy and field methods	32
6.2	Effective survey coverage	34
6.3	Survey results	36
6.4	Discussion	36
7	SIGNIFICANCE ASSESSMENT	37
7.1	Introduction to significance assessment.....	37
7.1.1	Identifying cultural significance	37
7.2	Assessed significance.....	39
8	ASSESSING HARM	40
8.1	Avoiding and minimising harm	40
8.1.1	Conserving significant Aboriginal cultural heritage	40
8.1.2	Opportunities to conserve Aboriginal cultural heritage values	40
8.2	Ecologically sustainable development principles.....	40
8.2.1	Intergenerational equity	40
8.2.2	The precautionary principle.....	41
8.2.3	Principle of Integration	41
8.2.4	Applicability to the project	41
9	MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES.....	43
9.1	General management principles	43
9.2	Management and mitigation of recorded Aboriginal sites	43

10 RECOMMENDATIONS	44
REFERENCES	45
APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION	47
Appendix 1 Figure 1: Aboriginal Consultation Log	47
Appendix 1 Figure 2: Stage 1 Round 1 advertisement	60
Appendix 1 Figure 3: Stage 1 Round 1 agency letter (sample)	61
Appendix 1 Figure 4: Stage 1 Round 1 community letter (sample)	65
Appendix 1 Figure 5: Stage 1 Round 2 advertisement	69
Appendix 1 Figure 6: Stage 1 Round 2 agency letter (sample)	70
Appendix 1 Figure 7: Stage 1 Round 2 community letter	72
Appendix 1 Figure 8: Letter to existing RAPs	74
Appendix 1 Figure 9: Stage 2/3 Round 1 cover letter	83
Appendix 1 Figure 10: Stage 2/3 Round 1 response	91
Appendix 1 Figure 11: AFGM invitation	92
Appendix 1 Figure 12: Stage 2/3 Round 2 cover letter	94
Appendix 1 Figure 13: Stage 2/3 Round 2 responses	96
Appendix 1 Figure 14: Stage 4 cover letter	97
Appendix 1 Figure 15: Stage 4 responses	99
Appendix 1 Figure 16: Project update	100
APPENDIX 2: ASSESSMENT METHODOLOGY	101
APPENDIX 3: AHIMS SEARCH RESULT	129
Appendix 3 Figure 1: 3 October 2025 result	129
Appendix 3 Figure 2: 17 October 2025 result	131
APPENDIX 4: UNANTICIPATED FINDS PROTOCOL	132
APPENDIX 5: UNANTICIPATED SKELETAL REMAINS PROTOCOL	133
APPENDIX 6: ABORIGINAL ARTEFACT IDENTIFICATION	134

FIGURES

Figure 1-1: Map showing the location of the project.	4
Figure 1-2. Approved quarry layout.	5
Figure 1-3. Proposed impact footprint.	6
Figure 1-4. Aerial of the study area.	7
Figure 4-1: Topography and drainage of the study area.	18
Figure 4-2: Aerial of the study area showing the location of survey units.	19

Figure 4-3: 1977 aerial with overlay of study area (source: SS 2022).....	21
Figure 5-1: Location of previously recorded AHIMS sites in relation to the study area.....	25
Figure 5-2: Aerial of the study area showing the various locations for site 51-5-0073.....	26
Figure 5-3: Site location of 51-5-0063 (CL1) (red square) from the original assessment in original EIS.....	27
Figure 6-1: Pedestrian tracks of the OzArk Archaeologist across the study area.....	33
Figure 6-2: Area surveyed across the study area taking into consideration all surveyors.	33
Figure 6-3: View of the secondary study area to the east not subject to survey.	34
Figure 6-4: Views of the survey units.	35

TABLES

Table 2-1: Report compliance with the Code of Practice.	11
Table 5-1: Aboriginal cultural heritage: desktop-database search results.	23
Table 5-2: AHIMS site types and frequencies	24
Table 5-3: Site types recorded in the region of the study area.....	29
Table 5-4: Likelihood of certain site types being present in the study area.	30
Table 6-1: Effective survey coverage within the study area.	35
Table 6-2: Effective survey coverage and incidences of site recording.....	35
Table 8-1: Application of ESD principles to the project.	42

1 INTRODUCTION

1.1 APPROVED DEVELOPMENT

Collector Resources (the Applicant) owns and operates the Barina Quarry (the Quarry), located on Lot 3 DP1177623, Lot 33 DP750008 and Lot A DP1177623, Collector Road, Collector NSW, within the Queanbeyan-Palerang Regional Council (QPRC) Local Government Area (LGA) (refer to **Figure 1-1**).

The operations are approved under a State Significant Development (SSD) consent approved by Orders of the Land & Environment Court on 28 May 2001 (DA1-01-2000). The approval permits a production of up to 300,000 tonnes per annum (tpa) with a maximum monthly production of 40,000 tonnes.

The approved activities are summarised as follows.

- Completion of extraction from an initial open cut (Pit 1) to a floor elevation of 716 metres (m) Australian Height Datum (AHD) and floor area of 1.5 hectares (ha)
- Extraction by drill and blast methods from a second open cut (Pit 2) to a maximum depth of 714 mAHD.
- Delivery and disposal of overburden to emplacements north of Pit 1 and 2.
- In-pit crushing and screening operations utilising a primary jaw crusher, one or more cone crushers and a variety of stationary and vibrating screens.
- Transport from the Quarry of up to 134 vehicle movements per day and 20 vehicle movements per hour.
- Hours of operation commencing at 7.00 am to 6.00 pm Monday to Saturday.

The approved disturbance area of the Quarry incorporates additional features in the form of stripped and excavated land, drainage lines, dams, bunds and cut batters associated with the operations on the existing Quarry site preceding DA 1-01-2000. These areas have been included within the approved disturbance footprint of the Quarry (refer to **Figure 1-2**).

1.2 OPERATIONAL HISTORY AND CURRENT STATUS

Operations under DA 1-01-2000 commenced in 2005, with extraction in Pit 1 completed before transitioning to Pit 2 from which extraction was undertaken intermittently for several years. Crushing and screening was undertaken within Pit 1 with products stockpiled within Pit 1 and on lands to the immediate north of Pit 1. Extraction and other operations effectively ceased in 2008, with Pit 2 approximately 2 ha in area and maximum depth of 778 mAHD, and the Quarry was placed into care & maintenance since. The extents of disturbance compared to the approved disturbance footprint are identified on **Figure 1-2**.

Collector Resources acquired the property and DA 1-01-2000 in 2016, however, operational control only reverted to the Applicant in 2019. While initially intending to recommence extraction operations in 2020, these plans were postponed pending the completion of further feasibility and quarry planning work.

A modification to DA 1-01-2000 was approved in November 2023 under Section 4.56 of the *Environmental Planning & Assessment Act 1979* for a 12-month extension to operations. DA 1-01-2000 (MOD 2) made no change to the overall operations of the Quarry, however, introduced conditions requiring satisfactory completion of road upgrades and an independent environmental audit prior to recommencement.

1.3 THE PROPOSED MODIFICATION

A second modification (the project) is proposed to allow for continuation of operations. These modifications, which are identified on **Figure 1-3**, are as follows.

- An extension to operations for 15 years (excluding rehabilitation which could be completed beyond the term of extended operations).
- Establishment of additional stockpiling areas.
 - o South Stockpile Area. A new stockpiling area between Pits 1 and 2. This area has been the subject of ancillary activities associated with the Quarry (by a previous owner and operator) and ongoing property management. The area is considered modified and of low biodiversity value.
 - o North Stockpile Area. Conversion of an area allocated to overburden emplacement (to the north of Pit 1) along with a small extension to the north and east.
 - o Overburden Emplacement Stockpile Area. Modification to the Pit 2 Overburden Emplacement to allow for supplementary stockpiling of Quarry product.
- Importation of clean fill materials for use as engineered fill for the construction of internal roads and stockpiling areas, and possible backfill of the extraction areas.
- Relocation of mobile and modular crushing and screening operations to either Pit 2 (preferred option) or the new Stockpile area (secondary option). It is also proposed to add a small washing circuit for the production of manufactured sand products.
- Removal of the distinction between laden and unladen movements (allowing for laden trucks to enter the Quarry site with clean fill and leave with quarry products).
- Relocation of the Quarry office, weighbridge and amenities onto the South Stockpile Area, inclusion of workshops and a small laydown area on Lot A DP86342, and realignment of some internal roads between the Quarry entrance, relocated facilities and stockpile areas.

1.4 STUDY AREA

The study area describes the area of additional impacts (to those approved by DA 1-01-2000) associated with the proposed modification (**Figure 1-4**). The study area is located at the Quarry, off Collector Road and includes approximately 7 ha of land.

1.5 PURPOSE OF THIS ASSESSMENT AND BACKGROUND

OzArk Environment & Heritage (OzArk) has been engaged by Irwin Environmental Management Pty Limited on behalf of the Applicant to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed modification.

OzArk was previously engaged in 2022/2023 to undertake the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010a) and prepare an ACHAR for the project. In 2022, the ACHCRs were initiated. Survey across the current study area was completed on 19 January 2023. No Aboriginal sites were recorded during the assessment. Following the field assessment and prior to the preparation of the ACHAR, the project was placed on hold. OzArk also previously completed the ACHCRs for another project on the property in 2018 before that proposal was placed on hold.

Irwin Environmental Management Pty Limited has now been commissioned by the Applicant to prepare a Modification Report and has engaged OzArk to provide the assessment of Aboriginal cultural heritage impacts through the preparation of an ACHAR, utilising the results of the previous 2023 survey.

Figure 1-1: Map showing the location of the project.

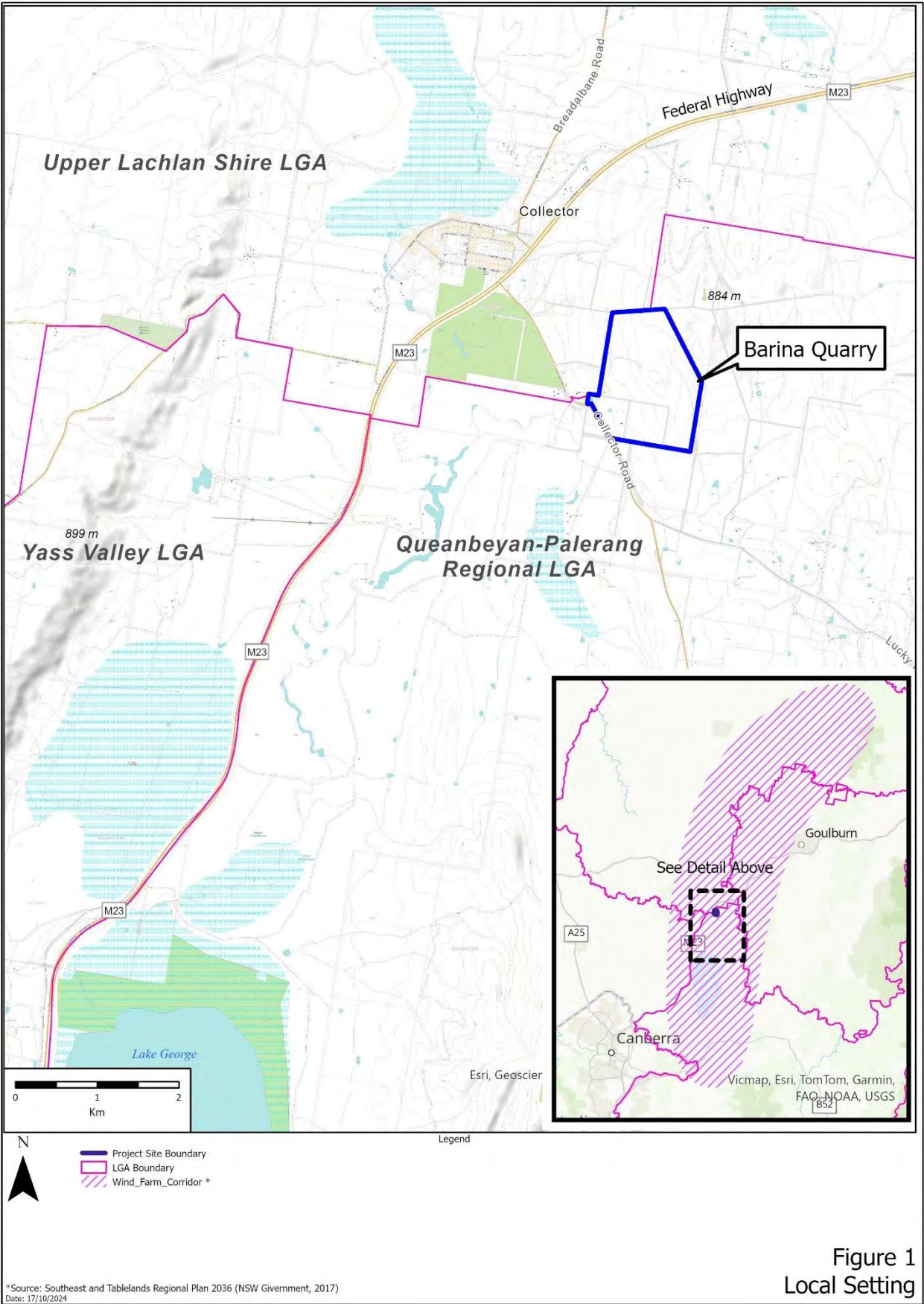


Figure 1-2. Approved quarry layout.

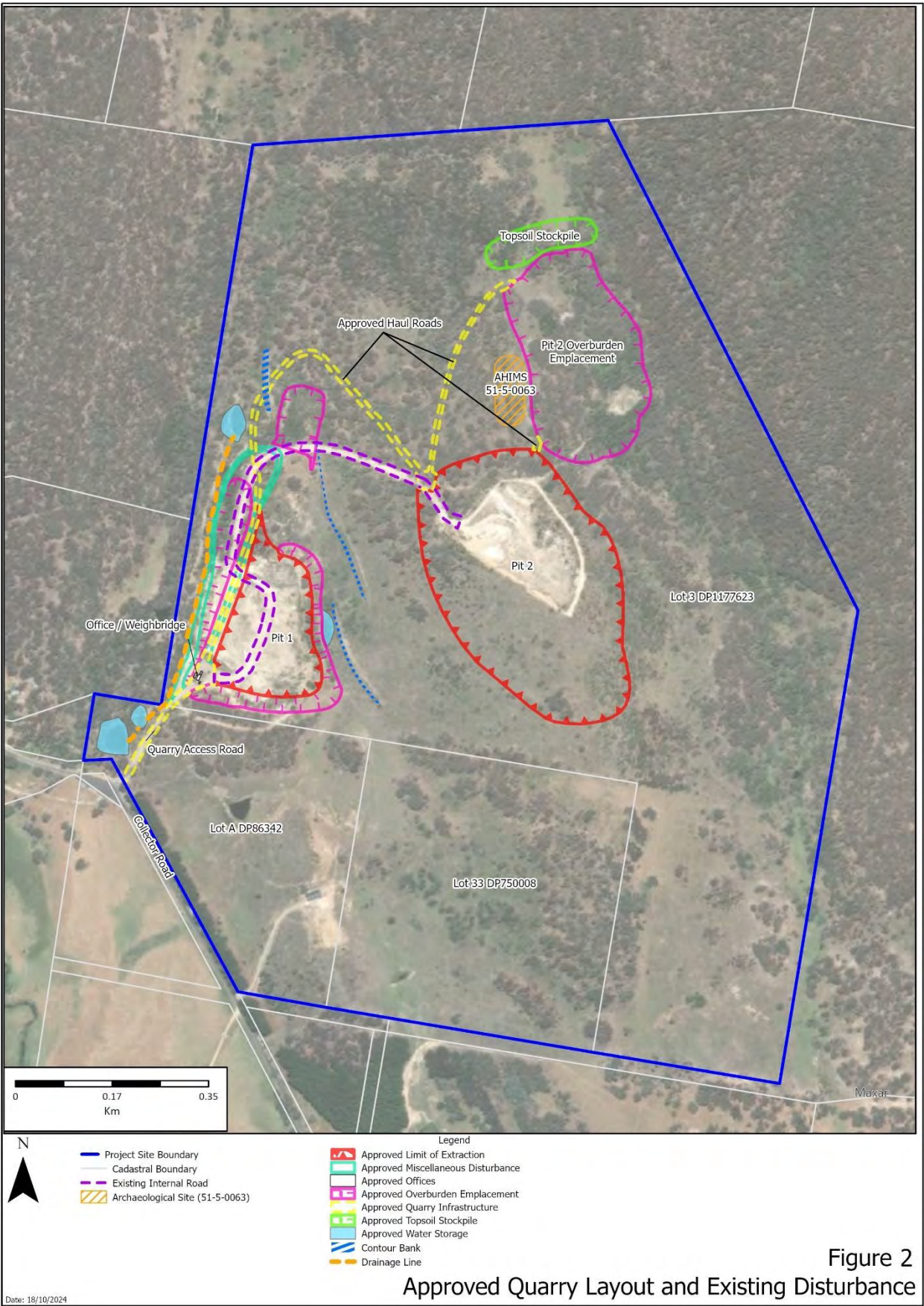


Figure 1-3. Proposed impact footprint.

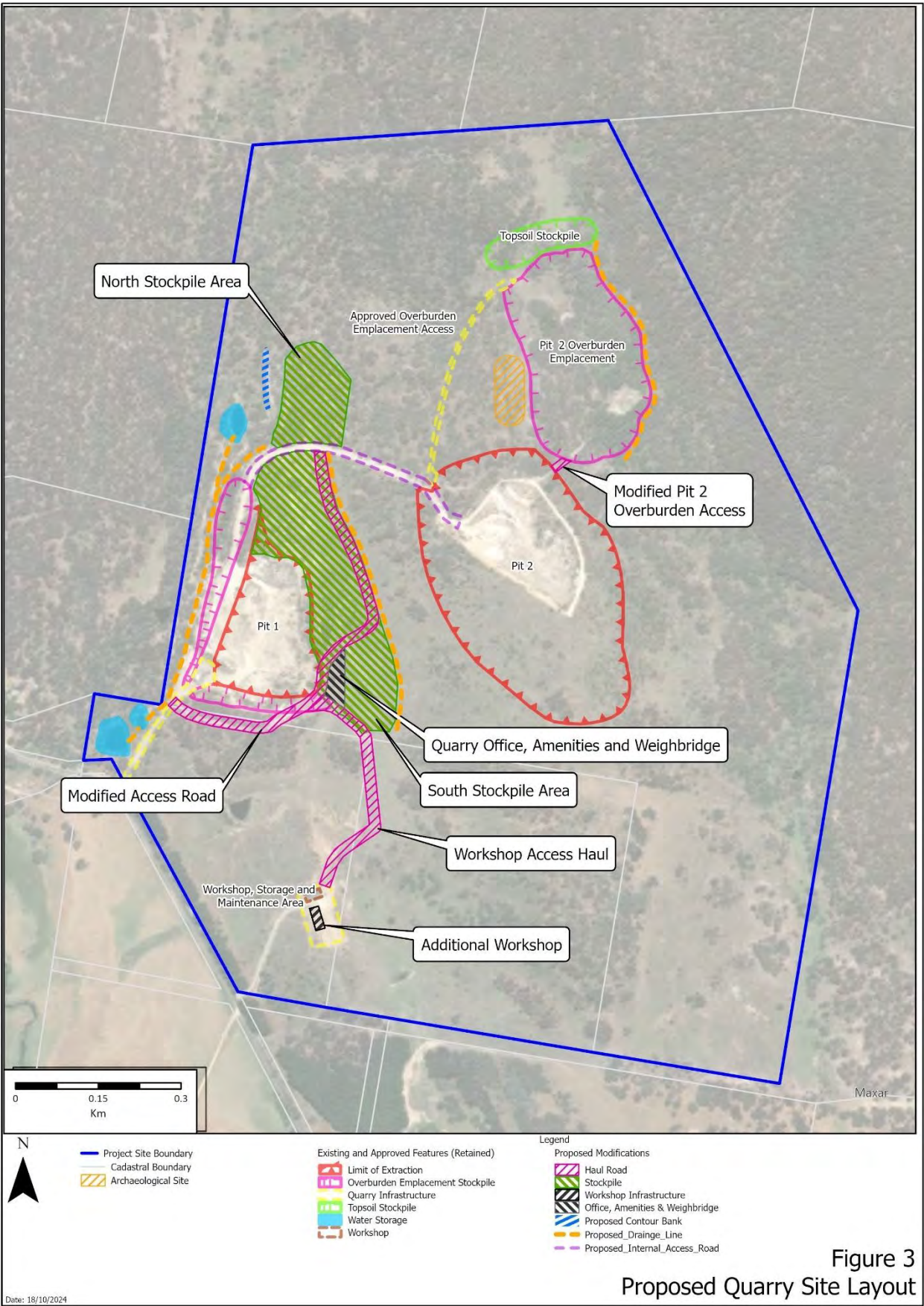
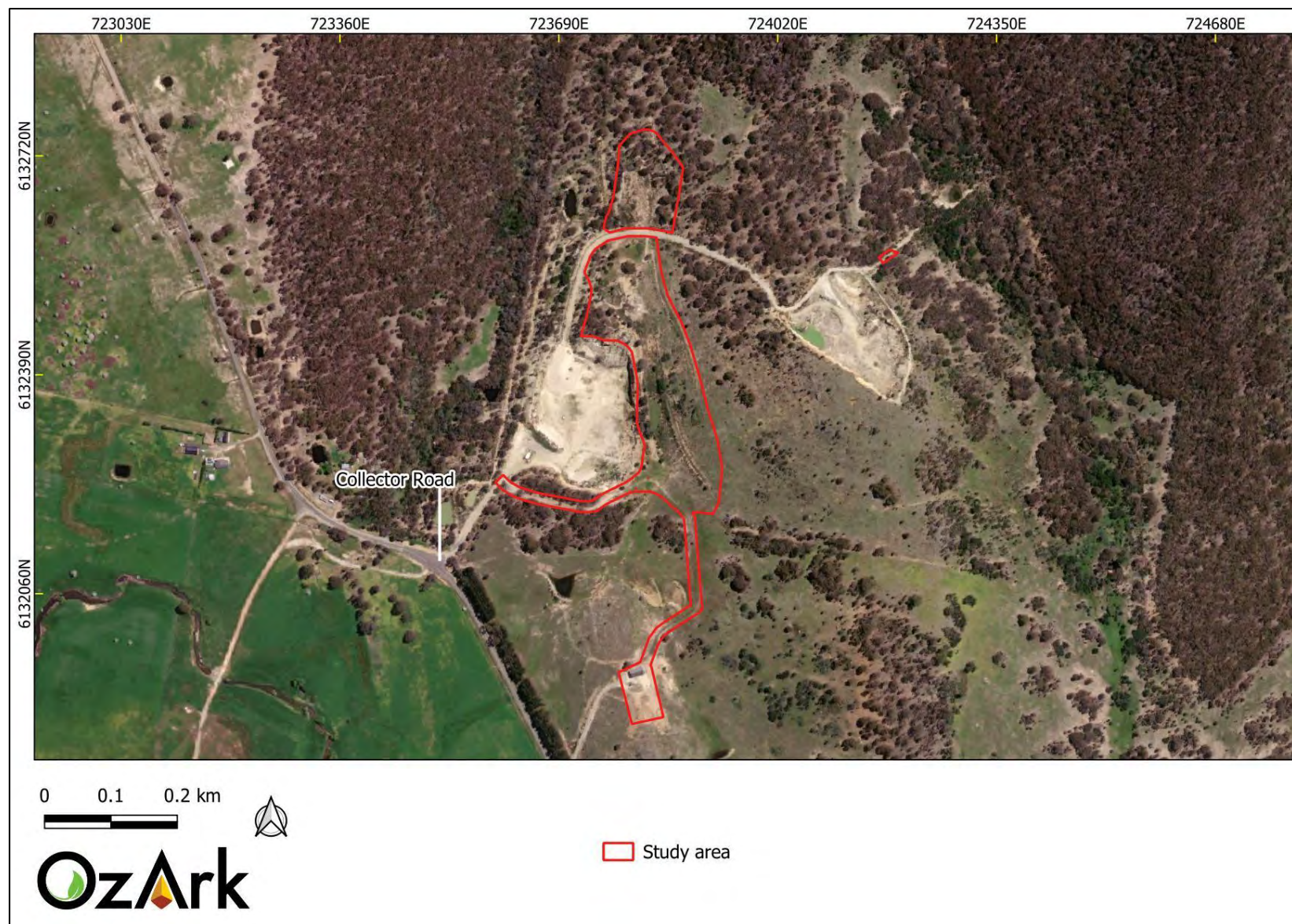


Figure 1-4. Aerial of the study area.



2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

2.1 RELEVANT LEGISLATION

Cultural heritage is managed by several state and national Acts. Baseline principles for the conservation of heritage places and relics can be found in the *Burra Charter* (Burra Charter). The *Burra Charter* has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The *Burra Charter* generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a state level.

Several Acts of parliament provide for the protection of heritage at various levels of government.

2.1.1 Commonwealth legislation

2.1.1.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water, provides a framework to protect nationally significant flora, fauna, ecological communities, and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to national/commonwealth heritage places.

Applicability to the project

It is noted there are no Commonwealth or National heritage listed places within the study area, and as such, the heritage provisions of the EPBC Act and other Commonwealth Acts do not apply.

2.1.2 State legislation

2.1.2.1 *Environmental Planning and Assessment Act 1979*

The *Environmental Planning and Assessment Act 1979* (EP&A Act) established requirements relating to land use and planning. The main parts of the EP&A Act that relate to development assessment and approval are Part 4 (development assessment) and Part 5 (environmental assessment). The purpose of the Part 5 assessment system is to ensure public authorities fully

consider environmental issues before they undertake or approve activities that do not require development consent from a council or the Minister. The Minister responsible for the Act is the Minister for Planning and Public Spaces.

The EP&A Act currently provides the primary legislative basis for planning and environmental assessment in NSW. The objects of the EP&A Act include encouragement of:

- The proper management, development, and conservation of natural resources
- The provision and coordination of the orderly and economic use and development of land
- Protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats
- Ecologically sustainable development.

The objects also provide for increased opportunity for public involvement and participation in environmental planning and assessment.

The EP&A Act includes provisions to ensure that the potential environmental impacts of a development or activity are rigorously assessed and considered in the decision-making process.

The framework governing environmental and heritage assessment in NSW is contained within the following parts of the EP&A Act:

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items
 - o Division 4.56: Modification by consent authorities of consents granted by the Court.

Applicability to the project

The current project will be assessed under Part 4 Division 4.56 of the EP&A Act.

As the project is a modification to an SSD, if approved, Section 4.41 of the EP&A Act would apply and therefore an AHIP under section 90 of the NPW Act to harm Aboriginal objects would not be required. Instead, all management related to Aboriginal cultural heritage within the study area would be governed by the policies within an approved *Aboriginal Cultural Heritage Management Plan* (ACHMP). However, neither will be necessary due to the lack of Aboriginal objects and values identified during survey (see **Section 0**).

2.1.2.2 *National Parks and Wildlife Act 1974*

The *National Parks and Wildlife Act 1974* (NPW Act) provides for the protection of Aboriginal objects (sites, objects, and cultural material) and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object, or material evidence (not being a handicraft

for sale) relating to Aboriginal habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction and includes Aboriginal remains.

An Aboriginal place is defined under the NPW Act as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

It is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, such as:

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit* (AHIP) under Section 90 of the Act
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

Under Section 89A of the Act, it is a requirement to notify the Secretary of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on Aboriginal Heritage Information Management System (AHIMS) that is administered by Heritage NSW.

Applicability to the project

Any Aboriginal sites within the study area are afforded legislative protection under the NPW Act.

The Secretary of DCCEEW will be notified of the location of an Aboriginal object recorded by sending the relevant details to the AHIMS register.

2.2 ASSESSMENT APPROACH

The archaeological assessment followed the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010b).

The Aboriginal cultural heritage assessment followed the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (the Guide; OEH 2011) and the ACHCRs.

2.3 PURPOSE AND OBJECTIVES

The purpose of this study is to identify and assess heritage constraints relevant to the project.

The study will apply the Code of Practice, the Guide, and the ACHCRs in the completion of the Aboriginal cultural heritage assessment to meet the following objectives:

- Objective One:** Undertake background research on the study area to formulate a predicative model for site location within the study area
- Objective Two:** Identify and record Aboriginal cultural heritage values within the survey areas. This includes intangible cultural values, Aboriginal objects, and any landforms likely to contain further archaeological deposits
- Objective Three:** To assess the significance of any recorded Aboriginal cultural values, Aboriginal objects, or sites in consultation with Registered Aboriginal Parties (RAPs)
- Objective Four:** Assess the likely impacts of the proposed work to Aboriginal cultural heritage values and provide management recommendations.

2.4 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

The Code of Practice establishes requirements that should be followed by all archaeological investigations where harm to Aboriginal objects may be possible. **Table 2-1** tabulates the compliance of this report with the requirements established by the Code of Practice.

Table 2-1: Report compliance with the Code of Practice.

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 1a	Review previous archaeological work	Section 5.3.2
Requirement 1b	Review AHIMS searches	Section 5.3.1
Requirement 2	Review the landscape context	Section 4
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	Section 0
Requirement 4a	Develop predictive model	Section 5.4
Requirement 4b	Present predictive model results	Section 5.4.3
Requirement 5a	Archaeological survey sampling strategy	Section 6.1
Requirement 5b	Archaeological survey requirements	This Requirement was fulfilled during the undertaking of the survey
Requirement 5c	Archaeological survey units	Section 6.1
Requirement 6	Site definition	Sections 5.4.1 and 5.4.2
Requirement 7a	Site recording information to be recorded	Not applicable to this report as no new sites were recorded.
Requirement 7b	Site recording: scales for photography	Not applicable to this report as no new sites were recorded.
Requirement 8a	Geospatial information	Not applicable to this report as no new sites were recorded.
Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA Zone 55.
Requirement 9	Record survey coverage data	Section 6.1
Requirement 10	Analyse survey coverage	Section 6.2
Requirement 11	Archaeological Report content and format	This report adheres to this Requirement.
Requirement 12	Records	OzArk undertakes to maintain all survey records for at least five years.

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 13a	Notifying Heritage NSW of breaches	Not applicable
Requirement 13b	Providing Heritage NSW with information	Not applicable
Requirement 14	Test excavation which is not excluded from the definition of harm	The test excavation did not take place in any of the landforms identified in Requirement 14.
Requirement 15a	Consultation regarding test excavation	Not applicable to this report as no test excavation necessary
Requirement 15b	Developing a test excavation sampling strategy	Not applicable to this report as no test excavation necessary
Requirement 15c	Providing Heritage NSW with notification of the test excavation	Not applicable to this report as no test excavation necessary
Requirement 16a	Test excavation that can be carried out in accordance with the Code of Practice	Not applicable to this report as no test excavation necessary
Requirement 16b	Objects recovered during test excavations	Not applicable to this report as no test excavation necessary
Requirement 17	When to stop test excavations	Not applicable to this report as no test excavation necessary
Requirement 18–20	Artefact recording	The procedures for artefact recording were adhered to during the investigation.

2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The field survey was undertaken by OzArk on the 19 January 2023.

2.6 OZARK INVOLVEMENT

2.6.1 Field survey

The fieldwork survey was undertaken by:

- Senior Archaeologist: Stephanie Rusden (BA Archaeology, University of New England, BSc Land and Heritage Management, University of Wollongong).

2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Kelsey Bennett (OzArk Project Archaeologist, MA Classical Archaeology, BA (Hons) Classical Archaeology, The University of Kent).
- Reviewer: Stephanie Rusden.

3 ABORIGINAL COMMUNITY CONSULTATION

3.1 INTRODUCTION TO CULTURAL VALUES

No matter who you are, we all have culture. Each person's culture is important; it's part of what makes us who we are.

australianstogether.org.au

Many Aboriginal people in Australia have a unique view of the world that's distinct from the mainstream. Land, family, law, ceremony, and language are five key interconnected elements of Aboriginal culture. For example, families are connected to the land through the kinship system, and this connection to land comes with specific roles and responsibilities which are enshrined in the law and observed through ceremony. In this way, the five elements combine to create a way of seeing and being in the world that is distinctly Aboriginal.

Aboriginal and Torres Strait Islander peoples are connected to Country through lines of descent (paternal and maternal), as well as clan and language groups. Territory is defined by spiritual as well as physical links. Landforms have deep meaning, recorded in art, stories, songs, and dance. Songlines or Dreaming Tracks as well as kinship structures link Aboriginal peoples to the territories of other groups. In the past, these links were also used for trade.

Living on this land for more than 50,000 years, Aboriginal and Torres Strait Islanders established effective ways to use and sustain resources. One important aspect is the right of certain people to control the use of resources in a particular area, as well as cultural and spiritual values like totemism that were fundamental in resource management. There was a wide range of traditional methods for gathering food including fish traps, subsistence agriculture, hunting and harvesting a wide range of natural fruits and vegetables. Some groups of people would stay in one place, while others moved around the land according to the seasons, to ensure sustainable and rich food supplies, and to fulfil their spiritual and cultural obligations.

In much of eastern Australia, Aboriginal communities live their lives like most Australians. However, in certain crucial areas, particularly associated with family, leadership roles and caring for Country, Aboriginal lore continues, even in the most urbanised communities.

3.2 ABORIGINAL COMMUNITY CONSULTATION

A major aim of this assessment is to identify any cultural values within the landscape in which the project is located so that those values can be recognised and incorporated into the project's management recommendations.

The Aboriginal cultural heritage assessment of the project has followed the ACHCRs (DECCW 2010a). As noted in **Section 1.5**, the ACHCRs for the project were originally initiated in 2022, but were placed on hold in early 2023 following the completion Stage 2/3. Given the time that had lapsed, the ACHCRs for this ACHAR have recommenced at Stage 1.

A log and copies of correspondence with Aboriginal community stakeholders is presented in **Appendix 1 Figure 1**.

The ACHCRs include four main stages, and these will be detailed in the following sections.

3.2.1 ACHCRs Stage 1

3.2.1.1 Round 1

The aim of Stage 1 is to identify the RAPs who wish to be consulted about the project.

On 20 and 21 September 2022 an advertisement was placed in the Goulburn Post and Queanbeyan Age by Umwelt Australia Pty Ltd (Umwelt) requesting expressions of interest in being consulted about the project (**Appendix 1 Figure 2**). In addition, the following agencies were contacted by Umwelt to identify potential stakeholders for the area: Gulgunya Ngunawal Heritage Aboriginal Consultancy; Local Land Services – Southeast; National Native Title Tribunal; Native Title Services Corporation Limited (NTSCORP); Onerwal Local Aboriginal Land Council (LALC); Pejar LALC and Office of the Registrar, *Aboriginal Land Rights Act 1983* (**Appendix 1 Figure 3**).

Letters were sent to the listed on the Heritage NSW stakeholder list on 6 October 2022 (**Appendix 1 Figure 4**).

As a result, the following individuals/groups registered to be consulted:

- Shayne Dickson
- Robert Young
- Dean Delponte
- Jesse Carroll Johnson
- Ryan Johnson
- Tyronne Bell & Bronwyn
- Steven Johnson
- Merekai Bell
- Rebecca Ingram
- Lavinus Ingram
- Lavina Singleton.

In addition, Pejar LALC, Onerwal LALC, Thunderstone Aboriginal Culture and Land Management Services Aboriginal Corporation and Gulgunya Ngunawal Heritage Aboriginal Consultancy were added to the RAPs as they constituted the RAPs identified following ACHCRs completed in 2018.

3.2.1.2 Round 2

As noted in **Section 1.2** and **3.2**, the project went on hold in 2023. Given the lapse in time since RAPs were contacted regarding the project, the ACHCRs recommenced with an advertisement placed in the *Goulburn Post* on 18 September 2024 (**Appendix 1 Figure 5**) and the statutory government agencies contacted (**Appendix 1 Figure 6**). Letters were sent to the listed on the Heritage NSW stakeholder list on 2 October 2024 (**Appendix 1 Figure 4**).

All previous RAPs were contacted, with the option provided to no longer be consulted regarding the project (**Appendix 1 Figure 8**).

Following this, an additional ten individuals/groups have registered to be consulted over the project.

The following individuals/groups form the RAP group for the project:

- Adrian Brown
- Brindabella Dreaming
- Dean Delponte
- Didge Ngunawal Clan
- Djirringanj Elders Federation
- Ginninderra Aboriginal Corporation
- Gulgunya Ngunawal Heritage Aboriginal Consultancy
- Gundungurra Tribal Council Aboriginal Corporation
- Gunjeewong Aboriginal Corporation
- Guntawang Aboriginal Resources Incorporated
- Konanggo Aboriginal Cultural Heritage Services
- Lavina Singleton
- Lavinus Ingram
- Merekai Bell (Yurwang Gundana Cultural Heritage Services)
- Mura Culture services
- Muragadi Heritage Indigenous Corporation
- Murra Bidgee Mullangari
- Onerwal Local Aboriginal Land Council
- PD Ngunawal Consultancy

- Pejar Local Aboriginal Land Council
- Rebecca Ingram
- Sonione Wakabut Rogers
- Stakeholder 1¹
- Tyronne & Bronwyn Bell
- Woka Aboriginal Corporation.

3.2.2 ACHCRs Stage 2

The aim of Stage 2 is to provide information about the project to the RAPs.

3.2.2.1 Round 1

Detailed project information for the initial proposed works was provided in the assessment methodology that was issued to the initial fifteen RAPs for their consideration on 13 December 2022 (**Appendix 1 Figure 9**).

3.2.2.2 Round 2

The assessment methodology outlining the current proposed project was provided to all RAPs on 21 October 2024 (**Appendix 1 Figure 12** and **Appendix 2**).

3.2.3 ACHCRs Stage 3

The aim of Stage 3 is to acquire information regarding Aboriginal cultural values associated with the project through RAP consultation and field work.

3.2.3.1 Round 1

To inform the RAPs of the assessment, an assessment methodology was issued to the initial fifteen RAPs for their consideration on 13 December 2022 with comments requested by 13 January 2023 (**Appendix 1 Figure 9**). This document provided the archaeological context of the study area, outlined the proposed sampling strategy for the survey, and asked whether there were any cultural values that should be considered in the assessment.

Two responses were received from Muragadi Heritage Indigenous Corporation on 13 December 2022 and Dean Delponte on 21 December 2022 advising that they had reviewed and supported the methodology (**Appendix 1 Figure 10**).

¹ Group has requested their details not be disclosed.

3.2.3.1.1 Aboriginal Focus Group Meeting

During the initial round of the ACHCRs, the initial 15 RAPs were invited to attend an Aboriginal Focus Group Meeting held on 20 December 2022 (**Appendix 1 Figure 11**). None of the RAPs attended the AFGM.

3.2.3.2 Round 2

The assessment methodology outlining the current project was provided to all RAPs on 21 October 2024 with comments requested by 18 November 2024 (**Appendix 1 Figure 12** and **Appendix 2**). This document provided the archaeological context of the study area, a summary of the survey previously undertaken, and asked whether there were any cultural values that should be considered in the assessment.

One response was received from Murra Bidgee Mullangari on 21 October 2024 advising that they had reviewed and supported the methodology (**Appendix 1 Figure 13**).

3.2.4 ACHCRs Stage 4

Stage 4 involves the production of a draft ACHAR that is issued to all RAPs for their consideration. The ACHAR will document the results of the assessment, outline opportunities for the conservation of Aboriginal cultural values, and suggest recommendations for the management of Aboriginal objects should impacts to these objects be unavoidable.

A copy of the draft ACHAR was distributed to the RAPs for review on 19 December 2024 (**Appendix 1 Figure 14**). The review period closed on the 21 January 2025.

Responses were received from Yurwang Gundana Cultural Heritage Services and Guntawang Aboriginal Resources Incorporated advising that they support the recommendations in the ACHAR (**Appendix 1 Figure 15**).

3.2.5 Post Stage 4

An email was sent to all RAPs on 17 October 2025 providing an update on the project and the status of the ACHAR following public exhibition (**Appendix 1 Figure 16**).

3.3 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS

No specific cultural values were identified by the RAPs regarding the study area to date, however, the strong cultural values of Aboriginal communities towards landscapes and cultural heritage sites are recognised.

4 LANDSCAPE CONTEXT

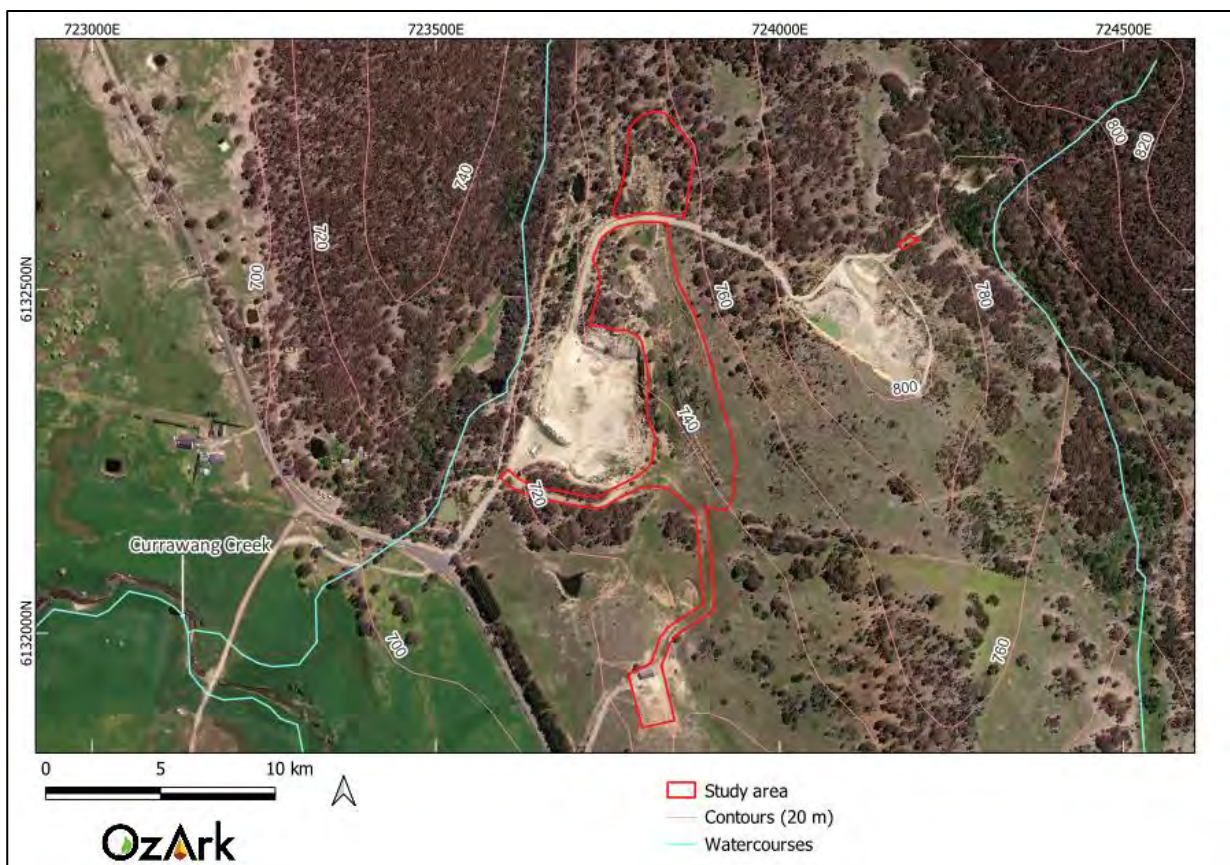
An understanding of the environmental context of a study area is requisite in any Aboriginal archaeological investigation (DECCW 2010b). It is a particularly important consideration in the development and implementation of survey strategies for the detection of archaeological sites. In addition, natural geomorphic processes of erosion and/or deposition, as well as human-activated landscape processes, influence the degree to which the remains of material culture are retained in the landscape as archaeological sites; and the degree to which they are preserved, revealed and/or conserved in present environmental settings.

4.1 TOPOGRAPHY AND GEOLOGY

The study area is located in the South East Highlands Bioregion, specifically, within the Monaro sub-bioregion. The study area is within the Gundary Plains landscape as characterised by Mitchell (2002). This landscape type is characterised by wide open valleys with abandoned terraces and quaternary lakebeds on lower Devonian siltstone sandstone, andesite and quartz felspar porphyry.

The topography of the study area itself is primarily undulating lower slope landforms that rise eastwards towards a locally prominent hill (850 m above sea level), located 930 m northeast of the study area (see **Figure 4-1**).

Figure 4-1: Topography and drainage of the study area.



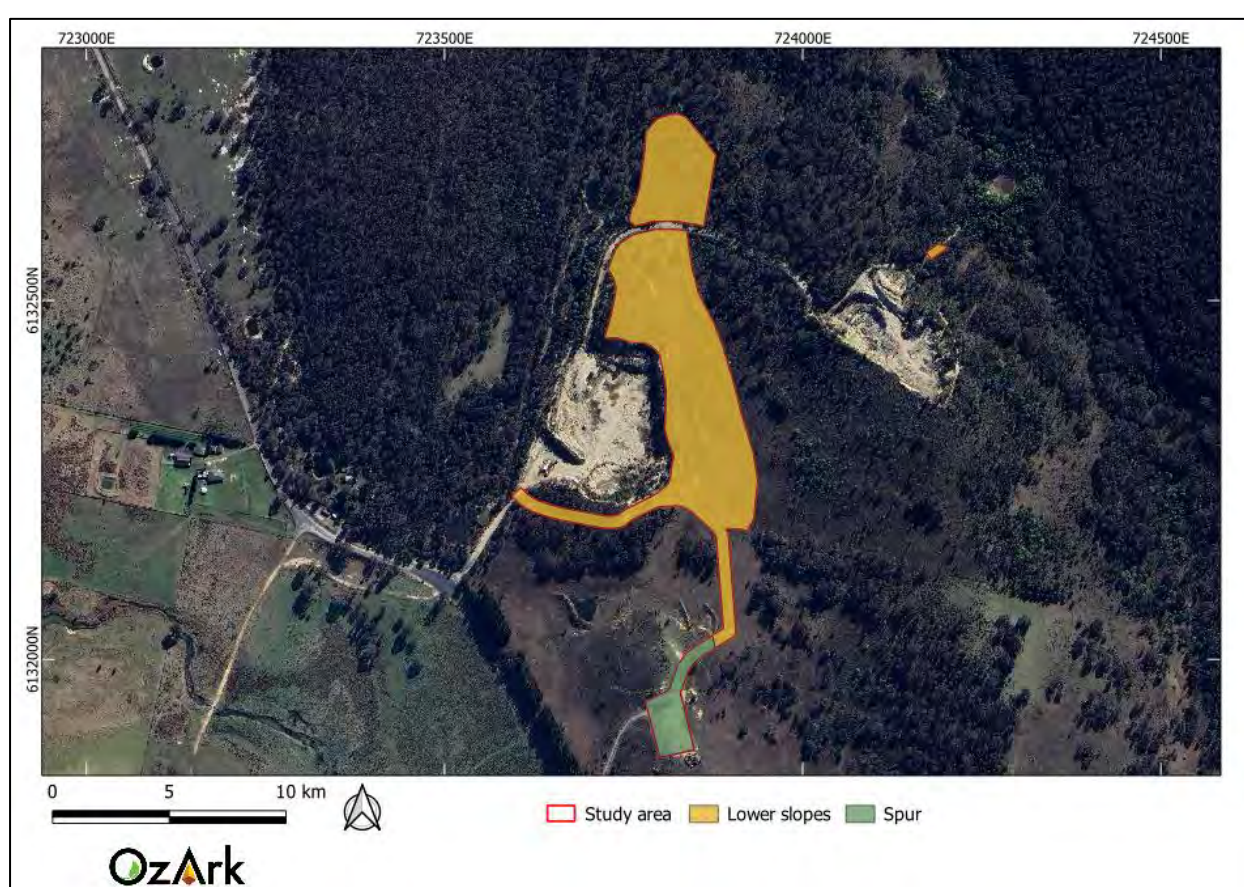
4.1.1 Survey units

Based on the topography of the study area, survey units were identified to capture the major topographical features of the study area. The designation of survey units will allow a comparison of the archaeological potential of each major topographical feature within the project area to understand whether certain landform types are more likely to contain Aboriginal objects than others.

Description of the survey units (**Figure 4-2**):

- Survey Unit 1: undulating lower slopes
- Survey Unit 2: spur.

Figure 4-2: Aerial of the study area showing the location of survey units.



4.2 SOILS

Soil analysis has important ramifications for archaeological research through the potential impact of different soils on human activity (such as agricultural exploitation) and the impact of the soils on archaeological evidence (such as post-depositional movement).

In the Soil Landscapes of the Goulburn 1:250,000 Sheet (Hird 1991), there are two Soil Landscapes within the study area. The Midgee soil landscape covers most of the study area and includes stony and acid yellow earths and yellow podzolic soils. The Collector Creek soil

landscape occurs in the southwest of the study area and includes soils consisting of moderately deep, grey and yellow mottled duplex soils with bleached A2 horizons. Yellow podzolic soils are found on higher ground (Hird 1991).

4.3 HYDROLOGY

Currawang Creek is the closest semi-permanent watercourse and is located approximately 465 m southwest of the study area at the closest point, with most of the study area being over 500 m away. An ephemeral drainage feature is located immediately west of the study area which drains into Currawang Creek to the south, although it would only flow during significant rain events (see **Figure 4-1**).

4.4 VEGETATION

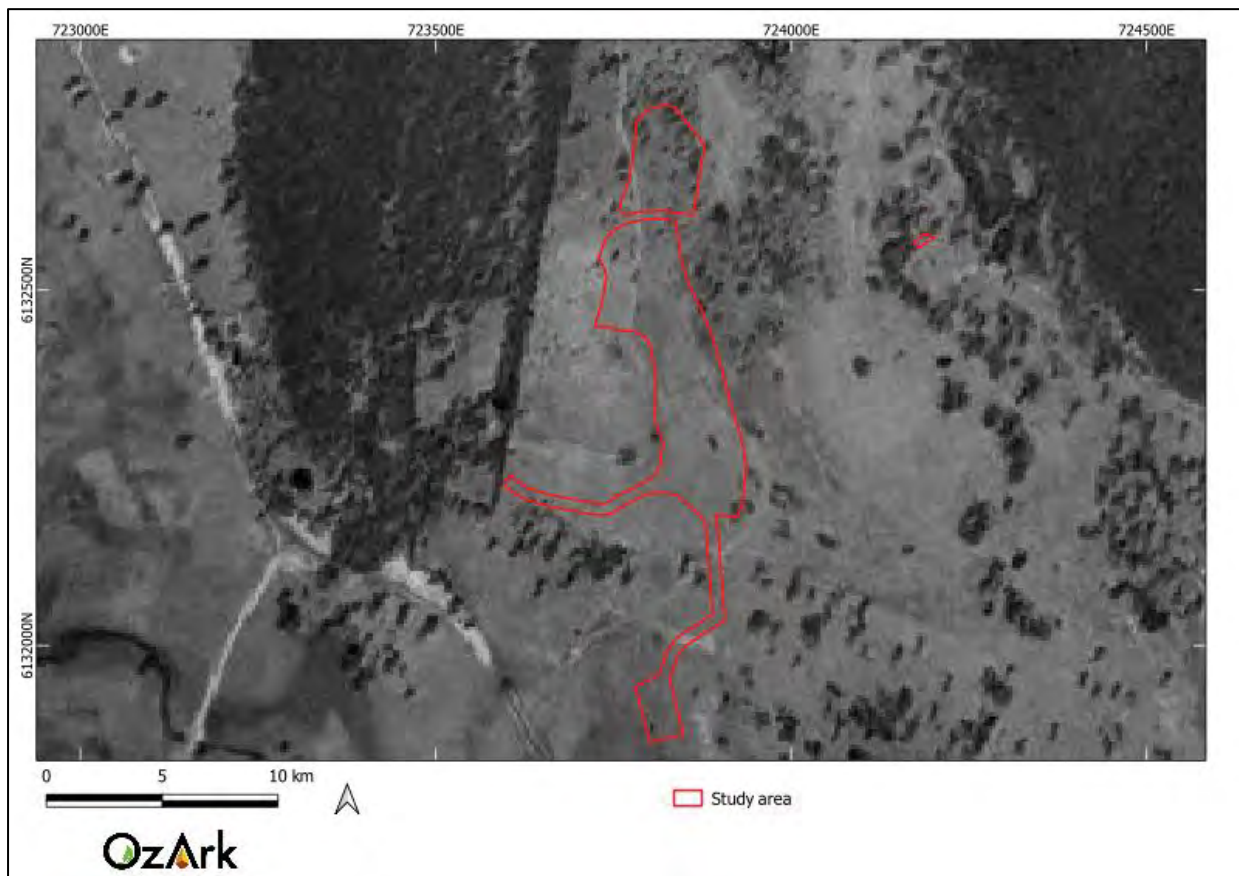
Mitchell (2002) notes that Gundary Plains landscapes would have once supported grasslands of *Stipa* sp. and kangaroo grass with small clumps of sparse snow gum on rounded rocky hills and sandy lunettes of former lakes.

4.5 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

Historic aerial imagery from 1977 (**Figure 4-3**) shows the original vegetation cover of eucalypt forest has been mostly cleared. Inspection of modern aerial imagery shows areas of sparse regrowth cover parts of the study area.

The southwest of the study area has undergone surface disturbance because of the approved quarry operations. Notably, the excavated void of Pit 1 has zero potential for Aboriginal sites, but it can also be maintained that the amount of ground surface disturbance around the void, which includes partially constructed bund walls and overburden stockpiles, will also have impacted significantly on the potential for this land to contain extant Aboriginal sites, should they have existed here in the first place.

Figure 4-3: 1977 aerial with overlay of study area (source: SS 2022).



4.6 CONCLUSION

With the study area being made up primarily of slopes, a degrading landform prone to erosion, the potential for intact archaeological deposits is low. Artefactual material may have eroded out of the slopes and could therefore be present at the base of slopes, or along benches and spurs, however much of the once forested landscape has been historically cleared and disturbance within the study area is high. Most of the study area is over 500 m away from semi-permanent water, no permanent water remains nearby, and there are no instances of outcropping rock so it is unlikely that this area would have been suitable for long term Aboriginal occupation.

5 ARCHAEOLOGICAL CONTEXT

5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

Tindale (1974) loosely assigns the area demarcated by the towns Tumut to the southwest, Boorowa to the northwest, Queanbeyan to the southeast and Goulburn in the northeast corner to the Ngunnawal people. This assignation is given support by the work of the earlier anthropologist R.H. Mathews who describes the same area as belonging to the Ngunnawal; in his account he uses the term Ngunnawal to describe both a “tribe” and a language (Mathews in Flood 1996: 5). Gillespie (1984; 1992) and Flood (1996) also consider this area to have been occupied by the Ngunnawal. Juxtaposed to this is Jackson-Nakano’s (2001: 4) reading of historical sources that suggests that several specific groups using Gundungurra or dialects thereof (though also speaking Ngunnawal) occupied and shared the lands on the eastern bank and to the southeast of Lake George. These included the Gundungurra-speaking Parramarragoo and Mulwaree, the Walgalu speaking Kamberri and the Ngarigo-speaking Moolinggoolah.

It is important to exercise caution in using the above sources yet the close correlation between Tindale’s and Mathews’ accounts combined with the fact that Mathews was drawing information directly from local Aboriginal groups (Flood 1996: 5) means that anthropological sources form a firm basis of evidence.

5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Regional studies indicate that the most encountered archaeological sites in the region are open campsites represented by scatters of stone artefacts (Paton 1998).

Based on an assessment of site size, context and location, a model of site patterning is suggested for the area by Paton (1998):

- Large sites (containing several thousand artefacts over several hectares) will be found on alluvial flats along major water courses or water bodies, particularly on sandy deposits near water. These sites are large, comparatively dense and close to permanent water sources. It is thought that they represent focal points for Aboriginal activity and would have been camped at regularly, and probably by larger groups than average.
- Smaller sites are found on undulating hills. These comprise most sites in the region. The largest of them (and the majority) are found close to water sources. Sites become fewer in number and smaller away from water, and where ground is steeply sloping, such as hillsides. These sites probably represent small camps occupied when ephemeral water sources are full, and only used for short periods.
- A small number of sites are located on hilltops. Some of these sites are larger than those found on undulating hills, but smaller than those on the alluvial flats. These camps may represent ephemeral camps like those described above, although there is some historical evidence to suggest they may be associated with ceremonial activities.

The Goulbourn-Mulwaree LGA lies approximately 6 km to the east of the study area. In 2012, Australian Museum Business Services (AMBS 2012) undertook an Aboriginal heritage study for the Goulbourn Mulwaree Council that highlighted the following relevant regional trends:

- Alluvial flats and lower slopes adjacent to watercourses are both likely to have high archaeological sensitivity, whilst gently undulating land, hills and plains are likely to have low archaeological sensitivity.
- Artefact scatters were the most common type of site identified in the region, found in all environmental contexts but most likely to occur on lower slopes within 100 m of water. Types of stone used in the area includes chert, silcrete, quartz, quartzite and fine-grained volcanic rocks.
- Both modified trees and bora grounds are rare at a regional level.

5.3 LOCAL ARCHAEOLOGICAL CONTEXT

5.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any previously recorded heritage within the study area. The results of this search are summarised in **Table 5-1**.

Table 5-1: Aboriginal cultural heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	25/11/24	Queanbeyan-Palerang Regional LGA Upper Lachlan Shire LGA	No places listed on either the National or Commonwealth heritage lists are located within the study area
National Native Title Claims Search	25/11/24	NSW	No Native Title Claims cover the study area.
AHIMS	3/10/2024 17/10/2025	10 x 10 km centred on the study area	23 AHIMS sites within the search area, but none within the study area.
Local Environmental Plan (LEP)	25/11/24	Queanbeyan-Palerang Regional LEP 2022 Upper Lachlan LEP 2010	None of the Aboriginal places noted occur near the study area.

A search of the AHIMS database returned 23 records for Aboriginal heritage sites within the designated search area (**Appendix 3**).

Table 5-2 lists the site types and frequencies of the search result and **Figure 5-1** shows the location of previously recorded sites in the vicinity of the study area.

Stone artefact sites (isolated finds, artefact scatters and areas of potential archaeological deposit (PAD) are the most frequently recorded site types in the vicinity of the study area (**Table 5-2**). One other site type, quarry, is recorded in the region but to a lesser extent and in association with PAD.

Artefact scatters are a relatively stable indicator of past Aboriginal occupation. Sites in this category are less ambiguous to recognise and can remain close to their original deposition context despite disturbances.

Table 5-2: AHIMS site types and frequencies

Site Type	Number	% Frequency
Artefact scatter	15	65.22
Isolated find	5	21.74
Isolated find & PAD	1	4.35
Artefact scatter & PAD	1	4.35
Quarry & artefact scatter	1	4.35
Total	23	100

Figure 3-1 shows that one site, 51-5-0063 (CL1), is located near the northern part of the study area. Site 51-5-0063 was recorded by Paton (1998) during his assessment for an expansion of the existing Barina Quarry. The site is described as consisting of three stone artefacts across a 50 m by 150 m area. Artefact materials consist of quartz and silcrete.

There remains some confusion over the location of 51-5-0073. As shown on **Figure 5-2**, the AHIMS location, when converted from AGD to GDA, places the site to the east of Pit 2. This location somewhat conforms to Paton's observation that the site is "about 500 m east of the existing hard rock quarry", i.e. Barina Quarry Pit 1 (see **Figure 5-3**). However, the site description of it being located on a track, and where it is shown on Paton 1998 Figure 2, places the site to the north of Barina Quarry Pit 2. This area is also fenced to prevent impact to the site (OzArk 2018). On the balance of the evidence, the fenced location is considered to be where the site is located.

Figure 5-1: Location of previously recorded AHIMS sites in relation to the study area.

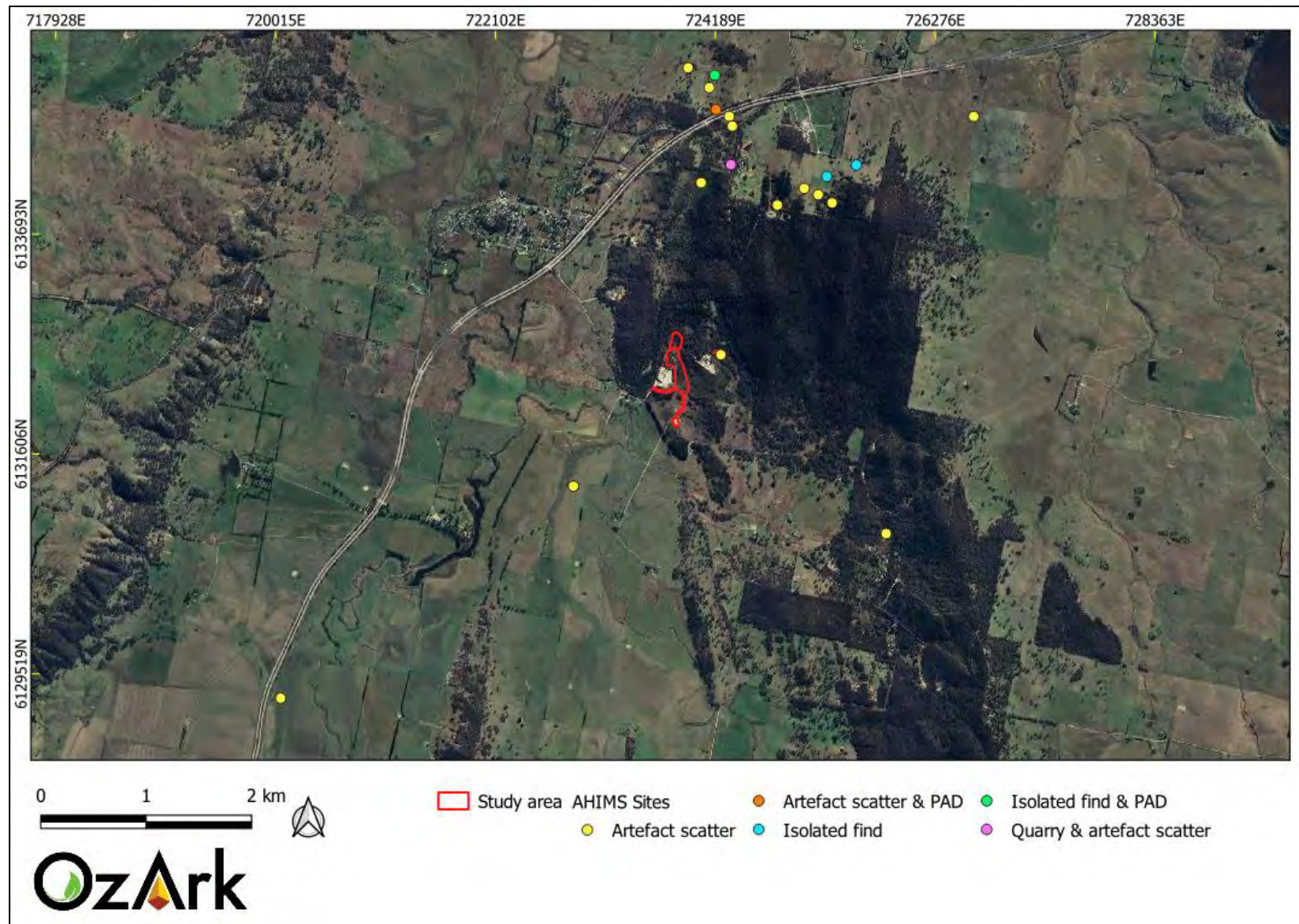
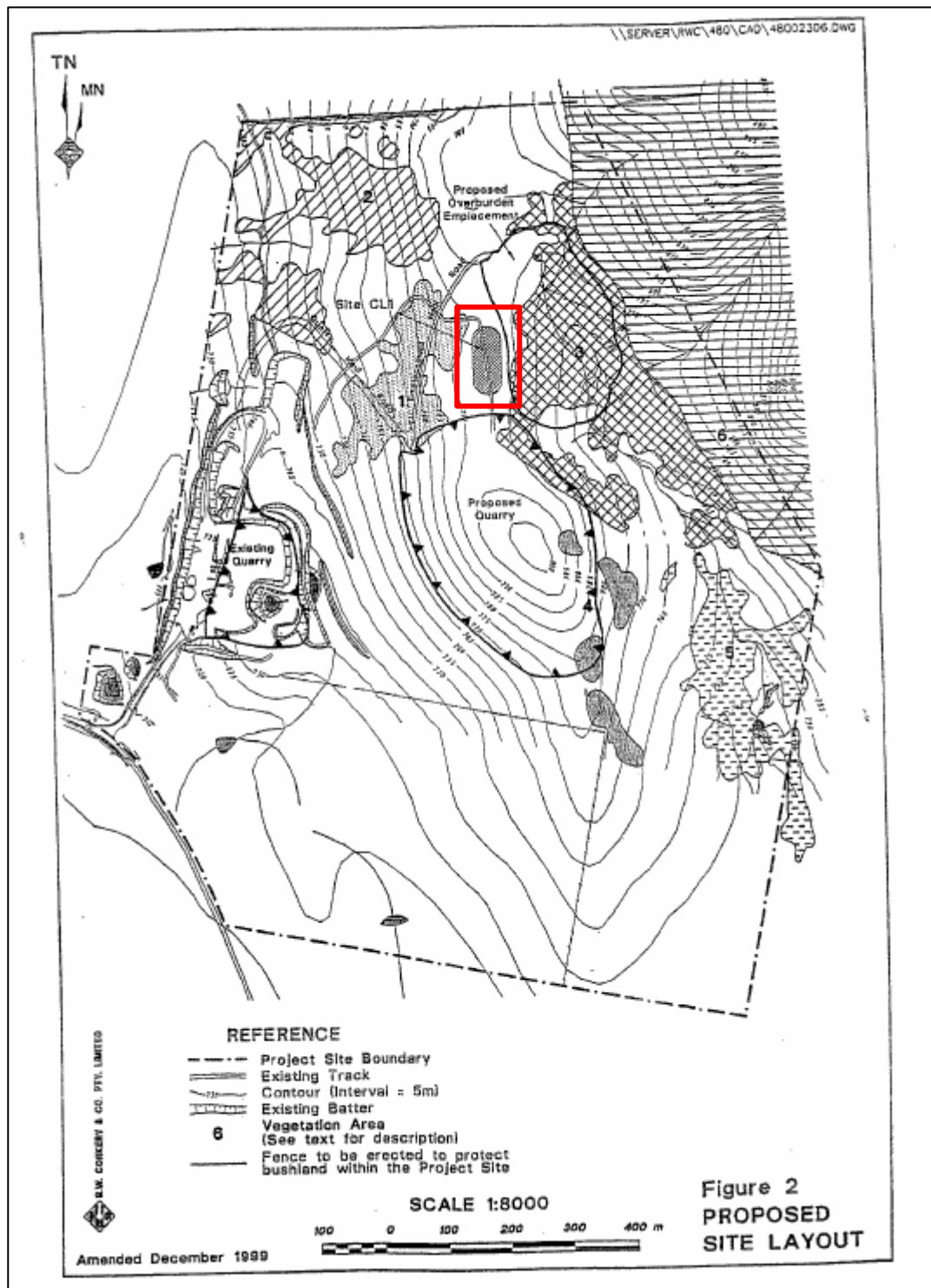


Figure 5-2: Aerial of the study area showing the various locations for site 51-5-0073.



Figure 5-3: Site location of 51-5-0063 (CL1) (red square) from the original assessment in original EIS.



5.3.2 Archaeological investigations within and near the study area

In 1998, Paton assessed 117 ha of land for the expansion of the Barina Quarry including most of the current study area. One Aboriginal archaeological site (51-5-0073) was recorded during the assessment (see **Figure 5-2** and **Figure 5-3**). Site 51-5-0073 was recorded as an artefact scatter consisting of three stone artefacts (one quartz and two silcrete flakes) exposed over an area of approximately 150 by 50 m. Paton found site 51-5-0073 to be of low to moderate scientific significance.

In 2004, Biosis assessed heritage and archaeological impacts of the proposed Woodlawn wind farm located 17 km southeast of the study area (Biosis as reported in URS 2004). The assessment covered approximately 5 ha and found 15 previously unrecorded Aboriginal sites, all artefact scatters. Thirteen of the 15 sites were found to have low archaeological significance and possess low archaeological potential.

New South Wales Archaeology (2012) undertook an Aboriginal cultural heritage assessment of modifications to the proposed Collector Wind Farm in 2012, located 5.5 km northwest of the study area. During the assessment, three Aboriginal sites were recorded which all consisted of isolated finds. The three isolated finds consisted of three silcrete flakes and one quartz flake. All three sites were assessed to be of low archaeological significance. NSW Archaeology concluded the landscape is comprised of very large amorphous landforms which are not archaeologically sensitive and do not contain micro-topographic features likely to have been targeted by Aboriginal people for activities other than low intensity use such as hunting and gathering and travel etc.

In 2018, OzArk prepared an ACHAR for the Collector Waste Resource Facility which included 10.8 ha of land and partly overlapped with the current study area. No Aboriginal sites were recorded during the assessment due to high levels of disturbance.

In 2017, Way undertook a test pit sample program in two areas approximately 30 km southeast of the study area. Digging 57 test pits of 0.25 m², Way noted how artefact densities in subsurface deposits are often misrepresented in test-pit data from excavations where test pits are spaced more than 5-20 m apart. Most artefacts excavated were flakes, followed by cores. Quartz was by far the predominant raw material, which seems to follow the pattern of raw materials across the region. Way's excavation took place near to Lake George and its tributary creeks, being much closer to water than the current study area.

In 2022, EMM prepared an ACHAR for the Veolia Woodlawn Advanced Energy Recovery Centre, located approximately 16 km southeast of the current study area. Field survey was undertaken in late 2021 and archaeologists noted the significant ground disturbance from prior mining and water management activity across their entire study area. As such no Aboriginal objects or areas of potential were identified.

In 2024, Artefact prepared an ACHAR for the Veolia Woodlawn Bio Reactor expansion. Artefact undertook a sample survey, noting certain areas of heavy disturbance caused by historic mining activity. In these areas, no Aboriginal archaeological potential was determined. The assessment area consisted of grass plains that hosted a few rocky outcrops. Two ephemeral creeks passed through the study area. One PAD was identified on a ridgeline between two minor creeks during the survey which was noted as having moderate research significance.

5.4 PREDICTIVE MODEL FOR SITE LOCATION

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including plant and animal foods, stone and ochre resources and rock shelters, as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes, or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally, it is the more durable materials such as stone artefacts, stone hearths, shells, and some bones that remain preserved in the current landscape. Even these, however, may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport, both over short- and long-time scales, or (b) the historical impacts associated with the introduction of European farming practices including grazing and cropping, land degradation, and farm related infrastructure. Scarred trees, due to their nature, may survive for up to several hundred years but rarely beyond.

5.4.1 Site types in the region of the study area

The site types listed in **Table 5-3** are present in the region of the study area. The likelihood of these sites being present in the study area is discussed in **Section 5.4.3**.

Table 5-3: Site types recorded in the region of the study area.

Site type	Site description
Isolated finds	May be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or subsurface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
Open artefact scatters	Artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 m away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short- or long-term camps, and the manufacture and maintenance of stone tools. Artefact

Site type	Site description
	scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of a background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'. Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources. Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Quarry sites	Typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically, these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

5.4.2 Landform modelling of archaeological potential

Previous studies across the study area (Patton 1998, OzArk 2018) indicate that stone artefact sites are the most likely site type to be recorded in the study area, however, approved activities associated with the operation of the Barina Quarry may have removed any evidence of past Aboriginal occupation. An ephemeral watercourse, Currawang Creek is located 465 m southwest of the study area. This suggests the landform of the study area would not have been suitable to Aboriginal occupation, but more likely utilised by smaller groups for short periods of time.

Crucial for the preservation of archaeological deposits is the history of past land use in an area. Most of the study area has been cleared of native vegetation prior to any quarrying activities. This has resulted in the widespread disturbance of the ground surface which accelerates soil loss. Erosional processes within the study area would be exacerbated by the large clearing of vegetation. The consequence of this is that artefact scatters are generally located within secondary contexts.

5.4.3 Conclusion

Based on knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning what types of sites may be present within the study area (**Table 5-4**).

Table 5-4: Likelihood of certain site types being present in the study area.

Site type	Likelihood of being present in the study area
Isolated finds	As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area.
Open artefact scatters	As most of the study area is within sloping landforms distant to permanent water, this site type is not predicted to be common. It is likely that any sites associated with the landform present will be low density scatters and is a displaced context.

Site type	Likelihood of being present in the study area
Quarry sites	This site type could be recorded within the study area should suitable materials be available however previous assessments across the study area (Paton 1998 and OzArk 2018) indicate that outcropping rock consists of granite which is not suitable for manufacturing stone tools.
Bora/Ceremonial sites	This site type does not necessarily follow landform predictability and are, overall, a rare site type with a low likelihood of being present and remaining extant. These sites are generally identified through consultation with the RAPs.

6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

6.1 SAMPLING STRATEGY AND FIELD METHODS

The archaeological methods utilised in the Aboriginal archaeological assessment followed the Code of Practice. Standard archaeological field survey and recording methods were employed (Burke and Smith 2004). The aims of the survey were to:

- Conduct pedestrian transects across all landforms so that their archaeological potential could be determined
- Evaluate whether the predictive model set out in **Section 5.4** is valid
- Determine if any portions of the study area require test excavation to understand the archaeological potential at a particular location.

Sample survey was completed across the study area in accordance with the assessment methodology and Requirement 5a of the Code of Practice. Both survey units 1 and 2 were surveyed selectively as to best understand the archaeological potential of the study area. 'Sample survey' refers to transects walked by surveyors spaced approximately 20 m apart that will not cover the entire area but instead focus on understanding the archaeological potential of the sloping landforms which dominate the study area.

Survey in 2023 was completed by an OzArk Archaeologist and a representative of two RAPs. **Figure 6-1** shows the tracks of the OzArk Archaeologist during the survey in 2023. **Figure 6-1** also shows the tracks of an OzArk Archaeologist for an assessment completed within the study area dating to 2018 (refer to **Section 1.5**) which was also undertaken with the assistance of two representatives of the RAPs. **Figure 6-1** also shows the survey tracks in relation to the areas of the study area already subject to approval for disturbance as shown on **Figure 1-2**.

Figure 6-2 shows the survey coverage across the study area based on the 20 m spacing between the surveyors during the 2023 survey.

Figure 6-3 shows a view of the secondary study area to the east not subject to survey. Survey across this area measuring 0.026 ha was deemed not warranted as the area has already been subject to disturbance and the proposed works will be limited to areas already disturbed.

Figure 6-1: Pedestrian tracks of the OzArk Archaeologist across the study area.

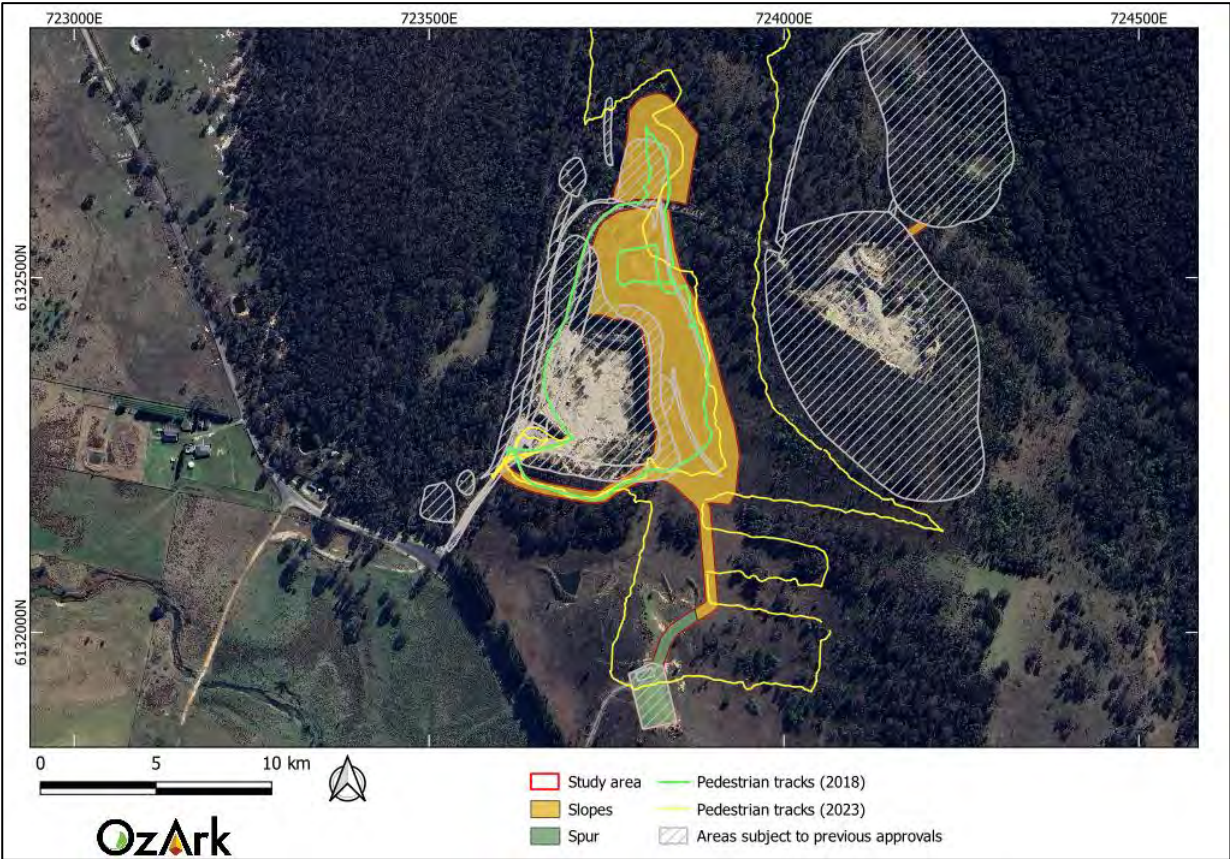


Figure 6-2: Area surveyed across the study area taking into consideration all surveyors.



Figure 6-3: View of the secondary study area to the east not subject to survey.



6.2 EFFECTIVE SURVEY COVERAGE

Two of the key factors influencing the effectiveness of archaeological survey are ground surface visibility (GSV) and ground surface exposure (GSE). These factors are quantified to ensure that the survey data provides adequate evidence for the evaluation of the archaeological materials across the landscape. For the purposes of the current assessment, these terms are used in accordance with the definitions provided in the Code of Practice.

GSV is defined as:

... the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stone ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals' (DECCWb 2010: 39).

GSE is defined as:

... different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals' (DECCWb 2010: 37).

Table 6-1 calculates the effective survey coverage within the study area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within specific landform units. Exposures present across the lower slopes were afforded by sheet wash erosion and previous disturbances associated with the existing quarry. In areas of exposure, GSV was generally hampered by the amount of gravels formed from weathered bedrock, as well as leaf litter. The spur landform displayed much greater areas of exposure, averaging 40 with GSV averaging 70%.

View of the landforms across the study area are shown in **Figure 6-2**.

Table 6-1: Effective survey coverage within the study area.

Survey Unit	Landform	Survey Unit Area (sq m)	Visibility %	Exposure %	Effective Coverage Area (sq m)	Effective Coverage %
1	Lower slopes	65483 m ²	60	20	7858	12
2	Spur	5674 m ²	70	40	3242	57

Table 6-2 records that despite the reasonably effective survey coverage, no Aboriginal sites were recorded.

Table 6-2: Effective survey coverage and incidences of site recording.

Landform	Landform area (sq m)	Area Effectively Surveyed	% of Landform Effectively Surveyed	Number of Sites	Number of Artefacts or Features
Lower slopes	65483 m ²	7858	12	0	0
Spur	5674 m ²	3242	57	0	0

Figure 6-4: Views of the survey units.



	
3. View east across the sloping landform in the north of the study area.	4. View south across the sloping landform in the central portion of the study area.

6.3 SURVEY RESULTS

No Aboriginal sites were recorded during the assessment. Quartz fragments were frequent across areas of exposure but did not contain attributes characteristic of flaking. There were several outcrops of quartzite in the study area, and these were inspected for evidence of quarrying, but no indication of past quarrying activities was noted.

Due to the sloping nature of much of the study area, the observed thin soils and the high degree of disturbance, it is assessed that there is a low probability for there to be further, undetected, subsurface sites within the study area.

6.4 DISCUSSION

The predictive model set out in **Section 5.4**, indicated that stone artefact sites would be the most likely site type recorded in the study area and that, of these, isolated finds would be the most likely site type. However, due to the relatively small amount of unmodified land within the study area, it is not surprising that no Aboriginal sites were recorded. If such sites had ever existed in the study area, recent activities associated with the operation of the hard rock quarry have undoubtedly removed any evidence of past Aboriginal occupation.

7 SIGNIFICANCE ASSESSMENT

7.1 INTRODUCTION TO SIGNIFICANCE ASSESSMENT

7.1.1 Identifying cultural significance

The concept of cultural significance is used in Australian heritage practice and legislation to encompass all the cultural values and meanings that might be recognised in a place. The Burra Charter's definition of cultural significance is broad and encompasses places that are significant to Indigenous cultures.

The Burra Charter definition of 'place' is also broad and encompasses Indigenous places of cultural significance. 'Place' includes locations that embody spiritual value (such as Dreaming places, sacred landscapes, and stone arrangements), social and historical value (such as massacre sites), as well as scientific value (such as archaeological sites). In fact, one place may be all these things or may embody all these values at the same time.

In some cases, the find-spot of a single artefact may constitute a 'place'. Equally, a suite of related locations may together comprise a single 'place', such as the many individual elements that make up a Songline. These more complex places are sometimes called a cultural landscape or cultural route.

The Guide notes that cultural significance is comprised of an assessment of social values, scientific values, aesthetic values, and historic values. These values are described below.

7.1.1.1 *Social or cultural value*

Social or cultural value refers to the spiritual, traditional, historical, or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them (Articles 1.1, 1.2, 1.12, 5, and 8–11: Burra Charter).

Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities can experience a sense of loss should a place of social or cultural value be damaged or destroyed.

There is not always consensus about a place's social or cultural value. Because people experience places and events differently, expressions of social or cultural value do vary and, in some instances, will be in direct conflict. When identifying values, it is not necessary to agree with or acknowledge the validity of each other's values, but it is necessary to document the range of values identified.

Social or cultural value can only be identified through consultation with Aboriginal people. This could involve a range of methodologies, such as cultural mapping, oral histories, archival

documentation, and specific information provided by Aboriginal people specifically for the investigation.

Cultural value involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

7.1.1.2 *Scientific (archaeological) value*

This refers to the importance of a landscape, area, place or object because of its rarity, representativeness, and the extent to which it may contribute to further understanding and information (Articles 1.2, 5, and 8: Burra Charter).

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of value relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether a site can contribute to current research also involves defining 'research potential'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region?

Information about scientific values will be gathered through any archaeological investigation undertaken. Archaeological investigations must be carried out according to Heritage NSW's Code of Practice.

Often scientific values are informed by social values that allow a contemporary understanding of the archaeological data to be understood.

7.1.1.3 *Aesthetic value*

This refers to the sensory, scenic, architectural, and creative aspects of the place (Articles 1.12 and 8: Burra Charter). It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use.

7.1.1.4 *Historic value*

Historic value refers to the associations of a place with a historically important person, event, phase, or activity in an Aboriginal community. Historic places do not always have physical

evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities (Articles 1.12–1.16: Burra Charter).

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain enough understanding of historic values.

7.2 ASSESSED SIGNIFICANCE

No Aboriginal sites or cultural values have been identified within the study area, as such, the significance assessment completed assesses the values of the study area.

Social or Cultural Value

There may be places with intangible cultural significance within the study area, although no specific locations have so far been identified by the Aboriginal community.

Archaeological/Scientific Value

No Aboriginal sites have been identified in the study area therefore there are no known places with archaeological significance.

Aesthetic Value

There are no known places with identified aesthetic values identified in the study area.

Historic Value

There are no known places with identified historic values identified in the study area.

8 ASSESSING HARM

8.1 AVOIDING AND MINIMISING HARM

8.1.1 Conserving significant Aboriginal cultural heritage

An object of the NPW Act is the '*conservation of objects places and features... of cultural value within the landscape, including... places, objects and features of significance to Aboriginal people*' (s.2A(1(b)(i)).

As heritage professionals, OzArk, strives for good conservation outcomes. In particular, OzArk is primarily concerned with the conservation and protection of Aboriginal cultural heritage that is of significance to Aboriginal people.

Two primary objectives when managing harm to an Aboriginal object are:

- Impacts to significant Aboriginal objects and places should always be avoided wherever possible
- Where impacts to Aboriginal objects and places cannot be avoided, projects should be amended to reduce the extent and severity of impacts to significant Aboriginal objects and places using reasonable and feasible measures.

8.1.2 Opportunities to conserve Aboriginal cultural heritage values

No Aboriginal sites or cultural values have been identified in the study area.

Only one previously site is listed as nearby, approximately 95 m from the study area, which is fenced (OzArk 2018) and will not be harmed by the project.

8.2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

Ecologically sustainable development principles (ESD) (defined in s.6 of the *Protection of the Environment Administration Act 1991*) requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. Regarding Aboriginal cultural heritage, ESD can be achieved by applying the principle of intergenerational equity and the precautionary principle.

8.2.1 Intergenerational equity

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity, and productivity of the environment for the benefit of future generations.

In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region (for example, because of impacts under previous permits), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, will be relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of the project.

Where there is uncertainty, the precautionary principle should also be followed.

8.2.2 The precautionary principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In relation to Aboriginal cultural heritage values, the precautionary principle should be applied if:

- The project involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places
- There is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.

8.2.3 Principle of Integration

The Plan of Implementation of the World Summit on Sustainable Development held in Johannesburg, 2002, noted the need to “*promote the integration of the three components of sustainable development- economic development, social development and environmental protection- as interdependent and mutually reinforcing pillars*”.

The principle of integration ensures mutual respect and reciprocity between economic and environmental considerations:

- Environmental considerations are to be integrated into economic and other development plans, programs, and projects
- Development needs are to be considered in applying environmental objectives.

8.2.4 Applicability to the project

There is no impact to Aboriginal cultural heritage values as no Aboriginal sites were recorded, and no intangible heritage values have been identified within the study area. The results of the surface survey indicate that significant Aboriginal cultural heritage values will not be harmed within the study area.

Table 8-1 examines the application of ESD principles to the project.

Table 8-1: Application of ESD principles to the project.

ESD principle	Response
Avoiding and minimising harm	Section 9 sets out mechanisms by which to avoid and minimise harm. As no Aboriginal sites are present, these mechanisms will not be employed.
The integration principle	The project presents a strong case for the broader environmental benefits arising from environmentally responsible development. The environmental consequences of the project have been carefully assessed.
The precautionary principle	The Aboriginal cultural heritage investigation has followed the precautionary principle though undertaking a robust Aboriginal cultural heritage assessment to ensure that harm to Aboriginal objects and values is minimised. The survey adopted a precautionary principle when it came to describing and assessing landforms within the study area.
The intergenerational equity principle	It is assessed that the project will not harm significant Aboriginal cultural heritage values and that there will be a manageable diminution of intergenerational equity.

9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

9.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the project. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- Avoid impact by altering the project to avoid impact to a recorded Aboriginal site. If this can be done, then a suitable curtilage around the site must be provided to ensure its protection both during the short-term construction phase of development and in the long-term use of the area. If plans are altered, care must be taken to ensure that impacts do not occur to areas not previously assessed.

As no Aboriginal cultural heritage values have been identified within the study area, alteration to the proposed project design is unnecessary in terms of Aboriginal cultural heritage.

- If impact is unavoidable then approval to disturb sites/cultural values under the authority of an ACHMP must be sought from DPHI. Normally the management recommendations contained in the ACHAR become policies of the ACHMP.

As no Aboriginal cultural heritage values have been identified within the study area, an ACHMP is not warranted. Instead, the management of any unanticipated finds can be managed by an unanticipated finds protocol and a skeletal remains protocol.

9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

There is no specific management to be applied to the project as no Aboriginal sites or values have been identified.

In the unlikely event that Aboriginal objects are noted during construction or operation of the project, the *Unanticipated Finds Protocol* in **Appendix 4** will be an appropriate management protocol. If human remains were to be encountered, then the procedure in **Appendix 5** is an example of a human skeletal remains protocol that would be followed.

10 RECOMMENDATIONS

Under Section 89A of the NPW Act it is mandatory that all newly recorded Aboriginal sites be registered with AHIMS. As a professional in the field of cultural heritage management it is the responsibility of OzArk to ensure this process is undertaken.

To this end it is noted that no Aboriginal sites were recorded during the assessment.

The following recommendations are made based on these impacts and with regard to:

- Legal requirements under the terms of the NPW Act whereby it is illegal to damage, deface or destroy an Aboriginal place or object without an approved ACHMP.
- The findings of the current investigations undertaken within the study area
- The interests of the Aboriginal community.

Recommendations concerning Aboriginal cultural values within the study area are as follows:

1. Following approval of the project modification, the proposed work may proceed with caution. In the unlikely event that unexpected Aboriginal heritage items are encountered during work, the *Unanticipated Finds Protocol* in **Appendix 4** must be implemented. **Appendix 5** provides the appropriate procedure to be undertaken in the unlikely event that human remains are encountered.
2. This ACHAR concludes that the project may proceed without further archaeological investigation under the following conditions:
 - a. All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to potential Aboriginal objects in adjacent landforms. Should the parameters of the project extend beyond the assessed study area, then further archaeological assessment may be required.
 - b. All staff and contractors involved in the proposed work should undergo a cultural heritage induction to ensure they can recognise Aboriginal artefacts (see **Appendix 6**), and are aware of the legislative protection requirements for all Aboriginal sites and objects under the NPW Act and are familiar with the *Unanticipated Finds Protocol* and the skeletal remains protocol.

REFERENCES

- AMBS 2012 Australian Museum Business Services. 2012. *Goulburn Mulwaree LGA Aboriginal Heritage Study*. Prepared for Goulburn Mulwaree Council.
- Artefact 2024 Artefact. 2024. Veolia Woodlawn Bioreactor- Modification 7, Aboriginal Cultural Heritage Assessment Report. Prepared for Veolia on behalf of Element Environment Pty Ltd.
- Biosis 2004 Biosis 2004. *An Archaeological Survey of the proposed Woodlawn Wind Farm, Tarago, New South Wales*, Report to EHN (Oceania) Australia & URS Australia Pty Ltd.
- Burra Charter *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. International Council on Monuments and Sites 2013.
- DECCW 2010a *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. Department of Environment, Climate Change and Water 2010.
- DECCW 2010b *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water 2010.
- EMM 2022 EMM. 2022. Woodlawn Advanced Energy Recovery Centre, Aboriginal Cultural Heritage Assessment Report. Prepared for Veolia Environmental Services (Australia) Pty Ltd.
- Flood 1980 Flood, J. 1980. *The Moth Hunters: Aboriginal prehistory of the Australian Alps*, Australian Institute of Aboriginal Studies, Canberra.
- Gillespie 1984 Gillespie, L. 1984. *Aborigines of the Canberra Region*. Lyall Gillespie, Canberra.
- Gillespie 1992 Gillespie, L. 1992. *Ginninderra: Forerunner to Canberra*. Lyall Gillespie, Canberra.
- Hird 1991 Hird, C. 1991. *Soil Landscapes of the Goulburn 1:250,000 Sheet map and report*, Soil Conservation Service of NSW, Sydney.
- Jackson-Nakano 2001 Jackson-Nakano A. 2001. *The Kamberri: a history from the records of Aboriginal families in the Canberra-Queanbeyan district and surrounds*.
- Mitchell 2002 Mitchell, Dr. Peter. 2002. Description for NSW (Mitchell) Landscapes Version 2. Department of Environment and Climate Change NSW.

NSW Archaeology 2012	New South Wales Archaeology Pty Limited. 2012. <i>Proposed Collector Wind Farm Aboriginal Cultural Heritage Assessment Report</i> . A report to RATCH-Australia Corporation.
OEH 2011	<i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i> . Office of Environment and Heritage 2011.
OzArk 2018	OzArk Environment & Heritage Management. 2018. <i>Aboriginal Cultural Heritage Assessment Report, Collector Waste Resource Facility</i> . A report to RW Corkery and Co. Pty Limited.
Paton 1998	Paton, R. 1998. <i>An Archaeological Investigation of a Proposed Quarry Extension near Collector, New South Wales</i> . A Report to RW Corkery and Co. Pty Limited.
Tindale 1974	Tindale N.1974. <i>Aboriginal Tribes of Australia</i> . ANU Press, Canberra.
URS 2004	URS 2004. <i>Environmental Impact Statement – Woodlawn Wind Farm</i> . A report to Woodlawn Wind Energy.
Way 2017	Way, A.M. (2017) 'Test-pitting and the detection of sub-surface sites: an example from Lake George, NSW, <i>Australian Archaeology</i> .

APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

Appendix 1 Figure 1: Aboriginal Consultation Log

Date	Organisation	Comment	Method
17.9.22	Umwelt	Goulburn Post and the Queanbeyan Age ad published 20.9.22 and 21.9.22 closing date 5.10.22	Email
21.9.22	Gulgunya Ngunawal Heritage Aboriginal Consultancy	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	Local Land Services - Southeast	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	National Native Title Tribunal	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	NTSCORP Limited	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	Onerwal Local Aboriginal Land Council	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	Office of the Registrar, Aboriginal Land Rights Act 1983 (NSW)	Umwelt sent agency letters closing date 5.10.22	Email
21.9.22	Pejar Local Aboriginal Land Council	Umwelt sent agency letters closing date 5.10.22	Email
6.10.22	Little Gudgenby River Tribal Council	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Lyndsay Urquhart	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Maree Moore	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Maria Williams	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Matilda House (on behalf of Williams, Freeman and Simpson-Wedge families)	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Oak Hill Enterprises	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Merrigarn Indigenous Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Mundawari Heritage Consultants	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Munyunga	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Mura Indigenous Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Muragadi Heritage Indigenous Corporation	Umwelt sent community letters closing date 21.10.22	Email

Date	Organisation	Comment	Method
6.10.22	Murri Bidgee Mullangari Aboriginal Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Murrumbul	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngambri Local Aboriginal Land Council	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngunawal Consultancy	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngunawal Heritage Aboriginal Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngunnawal Elders Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngunnawal Pajong Wallabalooa Descendants	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Ngurambang	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Noel Butler	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Nundagurri Aboriginal Corporation	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Pemulwuy	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Thomas Brown	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Thoorga Nura	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Thunderstone Aboriginal Cultural and Land Management Services Aboriginal	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Tina Brown	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Walbunja	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Walgau	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Wingikara	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Wullung	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Yerramurra	Umwelt sent community letters closing date 21.10.22	Email
6.10.22	Yurwang Gundana Consultancy Cultural Heritage Services	Umwelt sent community letters closing date 21.10.22	Email

Date	Organisation	Comment	Method
24.10.22	David McQueeney - Umwelt	SB received email advising advertising and ACHA commenced with notification letters, community and publishing ad on 20.9.22 & 21.9.22.	Email
7.10.22	Shayne Dickson	Umwelt were advised to register RAP for the project	
8.10.22	Robert Young	Umwelt were advised to register RAP for the project	
10.10.22	Dean Delponte	Umwelt were advised to register RAP for the project	
7.10.22	Jesse Carroll Johnson	Umwelt were advised to register RAP for the project	
7.10.22	Ryan Johnson	Umwelt were advised to register RAP for the project	
27.9.22	Tyronne Bell & Bronwyn	Umwelt were advised to register RAP for the project	
11.10.22	Steven Johnson	Umwelt were advised to register RAP for the project	
7.10.22	Merekai Bell	Umwelt were advised to register RAP for the project	
7.10.22	Rebecca Ingram	Umwelt were advised to register RAP for the project	
7.10.22	Lavinus Ingram	Umwelt were advised to register RAP for the project	
7.10.22	Lavina Singleton	Umwelt were advised to register RAP for the project	
13.12.2022	Lavina Singleton	Imogen Crome (IC) called as no email or home address on file and OzArk wanting to email Barina Quarry & Collector Waste Facility. Left voicemail to email us or call us back	Mobile
13.12.2022	Shayne Dickson	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Robert Young	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Dean Delponte	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Jesse Carroll Johnson	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Ryan Johnson	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Tyronne Bell & Bronwyn	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Steven Johnson	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Merekai Bell	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email

Date	Organisation	Comment	Method
13.12.2022	Rebecca Ingram	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Lavinus Ingram	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Lavina Singleton	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Pejar Local Aboriginal Land Council	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Onerwal Local Aboriginal Land Council	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Gundungurra Tribal Council Aboriginal Corporation	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
13.12.2022	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	IC emailed all RAPS the Stage 2/3 assessment methodology and invitation to the AFGM	Email
14.12.2022	Jesse Carroll Johnson	IC received email stating agreement with the assessment methodology	email
19.12.2022	Shayne Dickson	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Robert Young	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Dean Delponte	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Jesse Carroll Johnson	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Ryan Johnson	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Tyronne Bell & Bronwyn	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Steven Johnson	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Merekai Bell	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Rebecca Ingram	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Lavinus Ingram	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Lavina Singleton	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Pejar Local Aboriginal Land Council	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Onerwal Local Aboriginal Land Council	IC followed up for RSVPs to the AFGM	Email

Date	Organisation	Comment	Method
19.12.2022	Gundungurra Tribal Council Aboriginal Corporation	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	IC followed up for RSVPs to the AFGM	Email
19.12.2022	Jesse Carroll Johnson	IC called to follow up AFGM email. Went to voicemail	Mobile
19.12.2022	Ryan Johnson	IC called follow up AFGM email. Directed to call office (Darlene) and reforwarded email to email.	Mobile
19.12.2022	Steven Johnson	IC called to follow up AFGM email. Going to see if anyone is able to attend but Steven himself will not	Mobile
19.12.2022	Rebecca Ingram	IC called to follow up AFGM email, voicemail	Mobile
19.12.2022	Pejar Local Aboriginal Land Council	IC called to follow up AFGM email, voicemail	landline
19.12.2022	Gundungurra Tribal Council Aboriginal Corporation	IC called. Not in service	mobile
19.12.2022	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	IC called. Not in service	mobile
19.12.2022	Ryan Johnson	IC received email stating no one would be able to attend AFGM	email
19.12.2022	Pejar Local Aboriginal Land Council	IC received email stating no one would be able to attend AFGM as LALC is on leave	email
21.12.22	Dean Delponte	IC received email -After review we support the survey aims and methodology for the Barina Quarry and Collector Waste Facility.	Email
11.1.23	Thunderstone Aboriginal Cultural and Land Management Services Aboriginal Corporation	CB sent fieldwork invite closing date 16.1.23	Email
11.1.23	Pejar Local Aboriginal Land Council	CB sent fieldwork invite closing date 16.1.23	Email
1.2.23	Heritage NSW	IC sent letter advising of registered RAPs for the project	Email
1.2.23	Pejar Local Aboriginal Land Council	IC sent letter advising of registered RAPs for the project	Email
5.6.23	Shayne Dickson	CB emailed project update	Email
5.6.23	Robert Young	CB emailed project update	Email
5.6.23	Dean Delponte	CB emailed project update	Email
5.6.23	Jesse Carroll Johnson	CB emailed project update	Email
5.6.23	Ryan Johnson	CB emailed project update	Email
5.6.23	Tyronne Bell & Bronwyn	CB emailed project update	Email

Date	Organisation	Comment	Method
5.6.23	Steven Johnson	CB emailed project update	Email
5.6.23	Merekai Bell	CB emailed project update	Email
5.6.23	Rebecca Ingram	CB emailed project update	Email
5.6.23	Lavinus Ingram	CB emailed project update	Email
5.6.23	Lavina Singleton	CB called and left voicemail update	Phone
5.6.23	Pejar Local Aboriginal Land Council	CB emailed project update	Email
5.6.23	Onerwal Local Aboriginal Land Council	CB emailed project update	Email
5.6.23	Gundungurra Tribal Council Aboriginal Corporation	CB emailed project update	Email
5.6.23	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	CB emailed project update	Email
11.9.24	Paper	CB emailed classifieds.southern@austcommunitymedia.com.au requesting correct paper to advertise near Collector NSW	Email
12.9.24	Goulburn Post	Catherine Burrowes (CB) had confirmation - newspaper will be published on 18 September 2024 Closing Date 2 October 2024.	phone/email
17.9.24	Heritage NSW	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	Pejar LALC	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	Office of The Registrar, ALRA	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	National Native Title Tribunal	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	NTSCORP	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	Queanbeyan Palerang Regional Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	Upper Lachlan Shire Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
17.9.24	South East Local Land Services	CB sent stage 1 agency letter requesting potential stakeholders. Closing Date 2 October 2024.	Email
2.10.24	Shayne Dickson	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Robert Young	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Dean Delponte	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Jesse Carroll Johnson	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Ryan Johnson	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email

Date	Organisation	Comment	Method
2.10.24	Tyronne Bell & Bronwyn	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Steven Johnson	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Merekai Bell	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Rebecca Ingram	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Lavinus Ingram	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Pejar Local Aboriginal Land Council	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Onerwal Local Aboriginal Land Council	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Gundungurra Tribal Council Aboriginal Corporation	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	CB emailed project update to existing RAPs for project - Closing date 17.10.24	Email
2.10.24	Adrian Brown	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Badu (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Batemans Bay Local Aboriginal Land Council	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Bilinga (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Buru Ngunawal Aboriginal Corporation (BNAC)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Clive Freeman	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Clorine Lyons	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Stakeholder 1	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Didge Ngunawal Clan	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Djirringanj Elders Federation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ellen Mundy	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Gadhu Dreaming	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ginninderra Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Goobah Development PTY LTD (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Goodradigbee Cultural & Heritage Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Guntawang Aboriginal Resources Incorporated	CB emailed community letter - Closing date 17.10.24	Email

Date	Organisation	Comment	Method
2.10.24	Gunyuu (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Iris White	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Janine Thompson	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Jason Davison	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Jerringong (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Kamilaroi Yankuntjatjara Working Group	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Karrial (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Little Gudgenby River Tribal Council	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Lyndsay Urquhart	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Maria Williams	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Merrigarn Indigenous Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Munyunga (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Mura Indigenous Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Murrumbul (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngambri Local Aboriginal Land Council	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngunawal Consultancy	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngunawal Heritage Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngunnawal Elders Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngunnawal Pajong Wallabalooa Descendants	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Ngurambang	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Noel Butler	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Nundagurri Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Oak Hill Enterprises	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Pemulwuy (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Thomas Dahlstrom	CB emailed community letter - Closing date 17.10.24	Email

Date	Organisation	Comment	Method
2.10.24	Thoorga Nura	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Tina Brown	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Walbunja (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Walgalu (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Wingikara (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Wullung (Murrin Clan/Peoples)	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Yerramurra (Murrin Clan/Peoples) and Taste of Tradition Native Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Yukumbruk	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Bradley Bell	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Mura Culture Services	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Sonione Wakabut Rogers	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Girragirra Murun Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Wingarra Wilay Aboriginal Corporation	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	MAH	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Gadu chts	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Mirriwarr Holdings PTY Ltd	CB emailed community letter - Closing date 17.10.24	Email
2.10.24	Matilda House (on behalf of Williams, Freeman and Simpson-Wedge families)	CB emailed community letter - Closing date 17.10.24	Post
2.10.24	Thomas Brown	CB emailed community letter - Closing date 17.10.24	Post
2.10.24	Adrian Brown	CB received email registering for the project	Email
2.10.24	Didge Ngunawal Clan	CB received email registering for the project	Email
2.10.24	Sonione Wakabut Rogers	CB received email registering for the project	Email
2.10.24	Stakeholder 1	CB received email registering for the project	Email
3.10.24	Djirringanj Elders Federation	CB received email registering for the project	Email
3.10.24	Pejar LALC	CB received email registering for the project	Email

Date	Organisation	Comment	Method
3.10.24	Konanggo Aboriginal Cultural Heritage Services	CB received email registering for the project	Email
3.10.24	Konanggo Aboriginal Cultural Heritage Services	CB replied with thanks	Email
3.10.24	Pejar LALC	CB replied with thanks	Email
3.10.24	Djirringanj Elders Federation	CB replied with thanks	Email
3.10.24	Didge Ngunawal Clan	CB replied with thanks	Email
3.10.24	Adrian Brown	CB replied with thanks	Email
3.10.24	Sonione Wakabut Rogers	CB replied with thanks	Email
3.10.24	Stakeholder 1	CB replied with thanks	Email
3.10.24	Mura Indigenous Corporation	CB received email registering for the project	Email
9.10.24	Mura Indigenous Corporation	CB replied with thanks	Email
9.10.24	PD Ngunawal Consultancy	CB received email registering for the project	Email
9.10.24	PD Ngunawal Consultancy	CB replied with thanks	Email
11.10.24	Guntawang Aboriginal Resources Incorporated	CB received email registering for the project	Email
15.10.24	Guntawang Aboriginal Resources Incorporated	CB replied with thanks	Email
16.10.24	Brindabella Dreaming	CB received email registering for the project	Email
16.10.24	Ginninderra Aboriginal Corporation	CB received email registering for the project	Email
17.10.24	Brindabella Dreaming	CB replied with thanks	Email
17.10.24	Ginninderra Aboriginal Corporation	CB replied with thanks	Email
21.10.24	Adrian Brown	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Brindabella Dreaming	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Dean Delponte	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Didge Ngunawal Clan	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Djirringanj Elders Federation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Ginninderra Aboriginal Corporation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email

Date	Organisation	Comment	Method
21.10.24	Gundungurra Tribal Council Aboriginal Corporation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Gunjeewong Aboriginal Corporation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Guntawang Aboriginal Resources Incorporated	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Konanggo Aboriginal Cultural Heritage Services	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Lavina Singleton	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Lavinus Ingram	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Merekai Bell	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Mura Culture services	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Muragadi Heritage Indigenous Corporation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Murra Bidgee Mullangari	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Onerwal Local Aboriginal Land Council	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	PD Ngunawal Consultancy	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Pejar Local Aboriginal Land Council	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Rebecca Ingram	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Sonione Wakabut Rogers	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Stakeholder 1	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Tyronne Bell & Bronwyn	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
21.10.24	Woka Aboriginal Corporation	CB emailed draft Stage 2-3 methodology - closing date 18.11.24	Email
6.11.24	Murra Bidgee Mullangari	CB received email - I have read the project information and draft methodology for the above project, and I endorse the recommendations	Email
7.11.24	Murra Bidgee Mullangari	CB replied with thanks	Email
19.12.24	Adrian Brown	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Brindabella Dreaming	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Dean Delponte	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Didge Ngunawal Clan	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Djirringanj Elders Federation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email

Date	Organisation	Comment	Method
19.12.24	Ginninderra Aboriginal Corporation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Gundungurra Tribal Council Aboriginal Corporation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Gunjeewong Aboriginal Corporation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Guntawang Aboriginal Resources Incorporated	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Konanggo Aboriginal Cultural Heritage Services	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Lavina Singleton	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Lavinus Ingram	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Merekai Bell	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Mura Culture services	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Muragadi Heritage Indigenous Corporation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Murra Bidgee Mullangari	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Onerwal Local Aboriginal Land Council	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	PD Ngunawal Consultancy	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Pejar Local Aboriginal Land Council	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Rebecca Ingram	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Sonione Wakabut Rogers	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Stakeholder 1	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Tyrone Bell & Bronwyn	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
19.12.24	Woka Aboriginal Corporation	CB emailed Stage 4 Draft ACHAR - Closing date 21.1.2025	Email
28.12.24	Yurwang Gundana	CB received email - We agree with the report and have no issues with it	Email
7.1.25	Yurwang Gundana	CB replied with thanks	Email
22.1.25	Guntawang Aboriginal Resources Incorporated	CB received email - Guntawang Aboriginal Resources Incorporated agrees and supports the Draft ACHA methodology for Stage 4 of Barina Hard Rock Quarry.	Email
29.1.25	Guntawang Aboriginal Resources Incorporated	CB replied with thanks	Email
17.10.25	Adrian Brown	SR emailed project update	Email

Date	Organisation	Comment	Method
17.10.25	Brindabella Dreaming	SR emailed project update	Email
17.10.25	Dean Delponte	SR emailed project update	Email
17.10.25	Didge Ngunawal Clan	SR emailed project update	Email
17.10.25	Djirringanj Elders Federation	SR emailed project update	Email
17.10.25	Ginninderra Aboriginal Corporation	SR emailed project update	Email
17.10.25	Gulgunya Ngunawal Heritage Aboriginal Consultancy.	SR emailed project update	Email
17.10.25	Gundungurra Tribal Council Aboriginal Corporation	SR emailed project update	Email
17.10.25	Gunjeewong Aboriginal Corporation	SR emailed project update	Email
17.10.25	Guntawang Aboriginal Resources Incorporated	SR emailed project update	Email
17.10.25	Konanggo Aboriginal Cultural Heritage Services	SR emailed project update	Email
17.10.25	Lavina Singleton	SR emailed project update	Email
17.10.25	Lavinus Ingram	SR emailed project update	Email
17.10.25	Merekai Bell	SR emailed project update	Email
17.10.25	Mura Culture services	SR emailed project update	Email
17.10.25	Muragadi Heritage Indigenous Corporation	SR emailed project update	Email
17.10.25	Murra Bidgee Mullangari	SR emailed project update	Email
17.10.25	Onerwal Local Aboriginal Land Council	SR emailed project update	Email
17.10.25	PD Ngunawal Consultancy	SR emailed project update	Email
17.10.25	Pejar Local Aboriginal Land Council	SR emailed project update	Email
17.10.25	Rebecca Ingram	SR emailed project update	Email
17.10.25	Sonione Wakabut Rogers	SR emailed project update	Email
17.10.25	Stakeholder 1	SR emailed project update	Email
17.10.25	Tyronne Bell & Bronwyn	SR emailed project update	Email
17.10.25	Woka Aboriginal Corporation	SR emailed project update	Email

Appendix 1 Figure 2: Stage 1 Round 1 advertisement

Advertisement placed in the Goulburn Post and Queanbeyan Age placed by Umwelt Australia Pty Ltd (Umwelt) on 20 and 21 September 2022.

**Notification for Registration of Interest
and Commencement of Aboriginal Party
Consultation for Barina Quarry**

Collector Resources Pty Limited has engaged Umwelt to commence consultation for an Aboriginal Cultural Heritage Assessment in relation to a proposed modification to operations at Barina Quarry, located on Collector Road, approximately 1.5km southwest of the township of Collector. The proposed modification comprises new disturbance in the form of new processing and stockpiling areas (involving the importation of clean engineered fill materials).

Umwelt invite Aboriginal people or groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the Project Area to register an interest in being consulted as part of the preparation of the ACHA for the Project. Consultation will assist Heritage NSW in its review of the assessment.

Stakeholders are asked to register their interest to be consulted by 5 October 2022 to:

Alex Irwin
E: airwin@umwelt.com.au
P: 0436 606 529

If you are registering an interest your contact details will be forwarded to NSW Heritage and Local Aboriginal Land Council unless you specify otherwise.

Appendix 1 Figure 3: Stage 1 Round 1 agency letter (sample)



21 September 2022

To Whom it May Concern,

RE: Notification of commencement of Aboriginal party consultation for an

Aboriginal Cultural Heritage Assessment for a proposed Modification to operations at Barina Quarry, near Collector, NSW

Umwelt (Australia) Pty Limited (Umwelt) has been engaged by Collector Resources Pty Limited (the Proponent) to commence the consultation process for an Aboriginal Cultural Heritage Assessment (ACHA) in relation to a proposed modification to operations at Barina Quarry, located on Lot 3 DP1177623 of Collector Road, Collector NSW (see **Figure 1.1**). The Project falls within the Queanbeyan Palerang Regional Local Government Area, immediately east of the LGA boundary with Upper Lachlan Shire (see **Figure 1.1**).

The Aboriginal Cultural Heritage Assessment will address the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010) (Consultation Requirements), *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

The ACHA will support the preparation of an EIS for the proposed modification of Barina Quarry, a quartzite mining operation, for the following (see also **Figure 1.2**):

1. an extension to the approved period of operations of 4 years (to approximately 2027)
2. an increase in the production rate from 300,000 to 400,000 tpa
3. establishment of additional processing and stockpiling areas
4. importation of up to 400,000 tonnes of clean fill to construct the new processing and stockpiling areas
5. realignment of the Site Access Road between Collector Road and the new processing area, and
6. minor changes to traffic operations to allow for an increase in the number of laden truck movements to and from the Quarry.

Inspired People.
Dedicated Team.
Quality Outcomes.

**Umwelt (Australia)
Pty Limited**

ABN 18 059 519 041

T | 1 300 793 267
E | info@umwelt.com.au

www.umwelt.com.au

20257_BarinaQuarry_GulgurinyanHACNnotification_itr

1



Notably, no changes to the size or design of the approved open cut or overburden emplacement are proposed.

The Aboriginal Cultural Heritage Assessment will address the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010), *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

It is intended that the ACHA will inform the EIS along with project design and construction. In preparing the ACHA, Umwelt (on behalf of the proponent, Collector Resources) will be undertaking Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010). This consultation will inform the ACHA and will assist Heritage NSW in consideration of the Project.

In accordance with Section 4.1.2 of Consultation Requirements, Umwelt is seeking to identify Aboriginal people or groups who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the project area. If your organisation is aware of Aboriginal people or groups who may hold such cultural knowledge, please forward the relevant contact details by no later than 14 days from date of correspondence, **5 October 2022** to:

Alex Irwin
Umwelt (Australia) Pty Ltd
Office 4, 3 Hampden Avenue
Orange NSW 2800
E: airwin@umwelt.com.au.

In compliance with the Consultation Requirements, the contact details for the proponent are as follows:

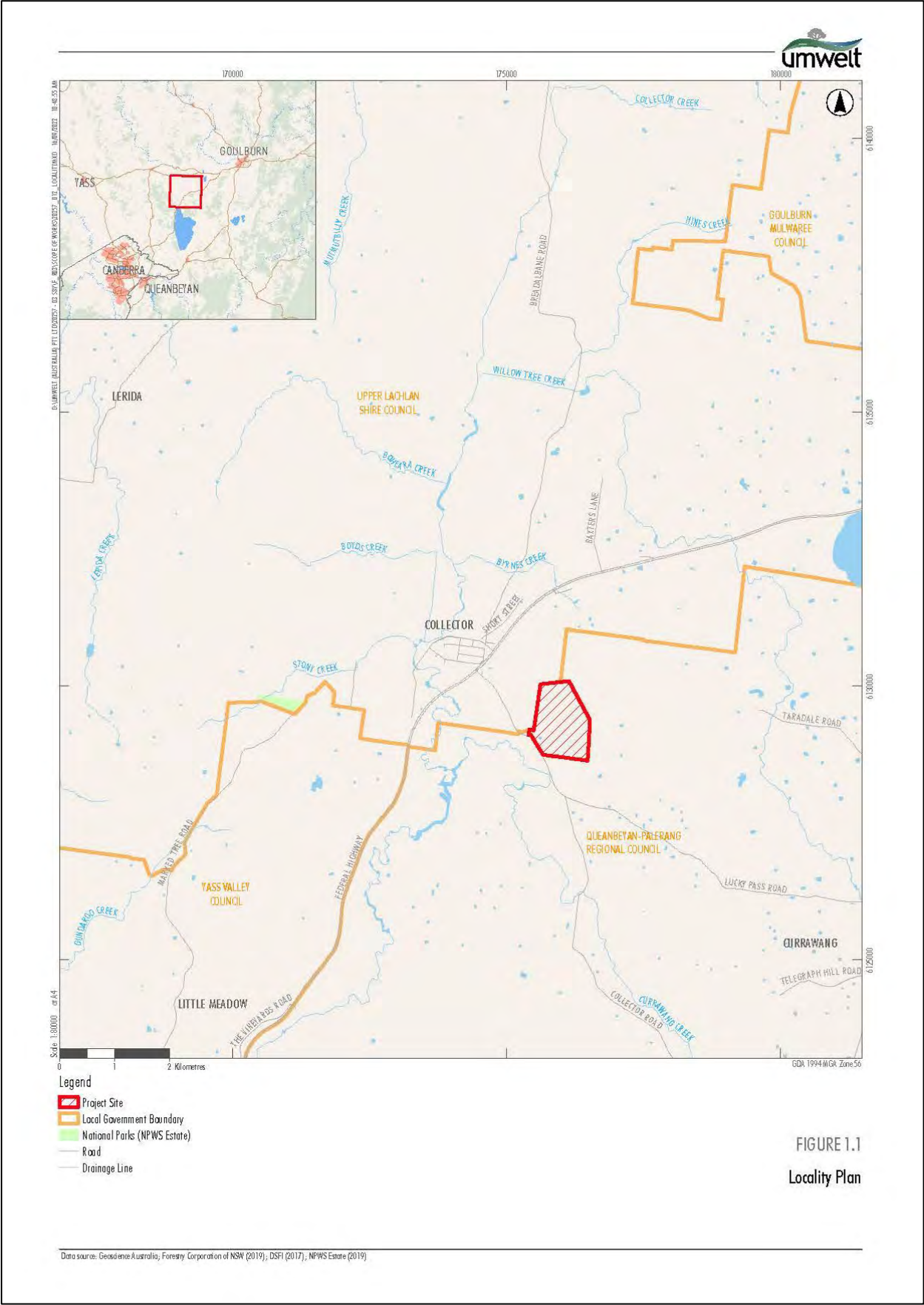
Lisa Polley
12 Common Street
Goulburn NSW 2580
P: 0419 483 273
E: admin@collectorresources.com.au.

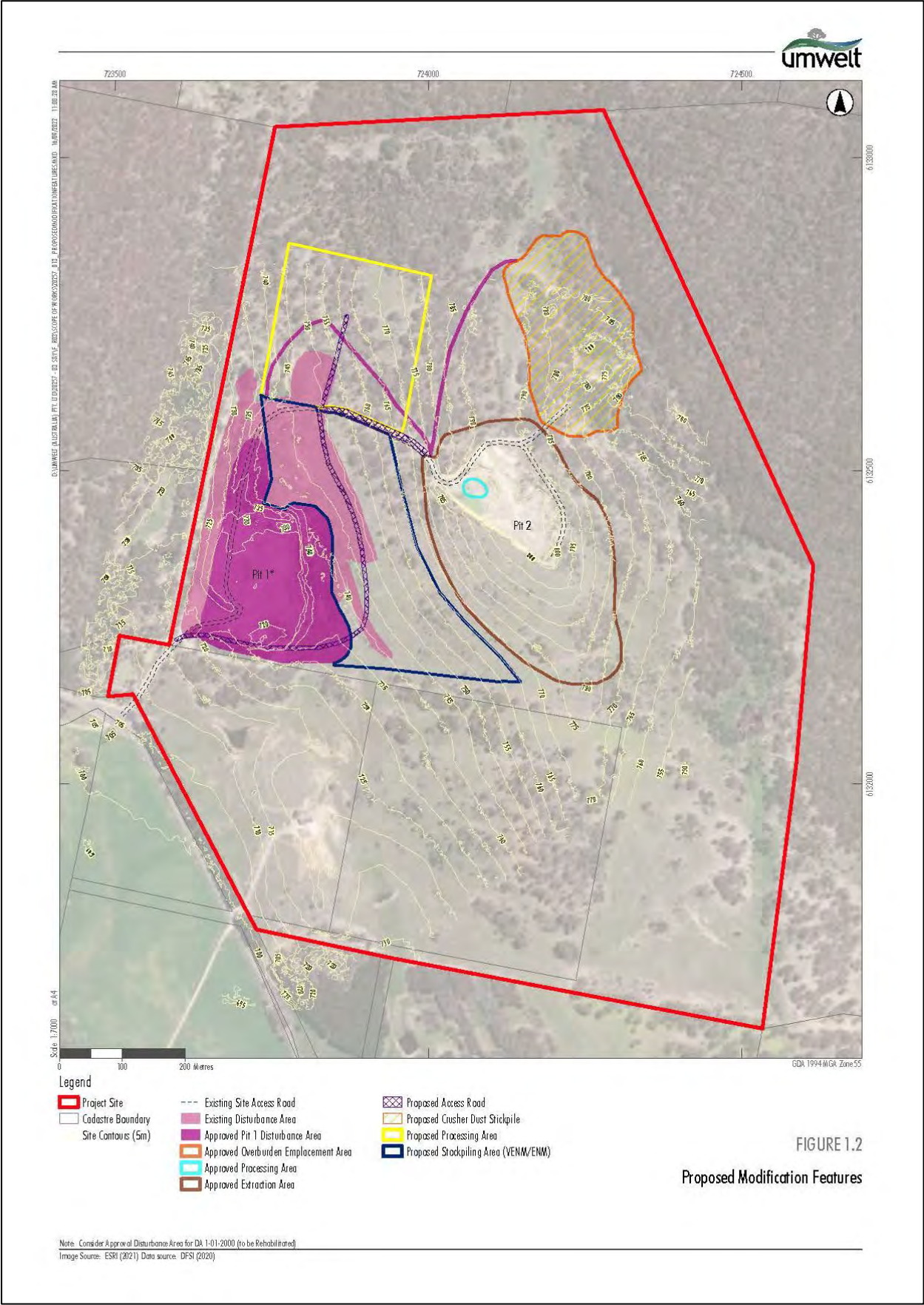
Umwelt will use these contact details to provide opportunity for the relevant Aboriginal parties to register an interest in a process of community consultation for the proposed modification.

If you have any questions regarding this correspondence or wish to discuss the project further, please do not hesitate to contact myself via email dmccqueeney@umwelt.com.au or on 1300 793 267.

Kind regards,

David McQueeney
Environmental Consultant
E| dmccqueeney@umwelt.com.au
M| 0432 719 213





Appendix 1 Figure 4: Stage 1 Round 1 community letter (sample)



6 October 2022

To Whom it May Concern,

RE: Notification of commencement of Aboriginal party consultation for an Aboriginal Cultural Heritage Assessment for a proposed Modification to operations at Barina Quarry, near Collector, NSW

Umwelt (Australia) Pty Limited (Umwelt) has been engaged by Collector Resources Pty Limited (the Proponent) to commence the consultation process for an Aboriginal Cultural Heritage Assessment (ACHA) in relation to a proposed modification to operations at Barina Quarry, located on Lot 3 DP1177623 of Collector Road, Collector NSW (see **Figure 1.1**). The Project falls within the Queanbeyan Palerang Regional Local Government Area, immediately east of the LGA boundary with Upper Lachlan Shire (see Figure 1.1).

The ACHA will support the preparation of an EIS for the proposed modification of Barina Quarry, a quartzite mining operation, for the following (see also **Figure 1.2**):

1. an extension to the approved period of operations of 4 years (to approximately 2027)
2. an increase in the production rate from 300,000 to 400,000 tpa
3. establishment of additional processing and stockpiling areas
4. importation of up to 400,000 tonnes of clean fill to construct the new processing and stockpiling areas
5. realignment of the Site Access Road between Collector Road and the new processing area, and
6. minor changes to traffic operations to allow for an increase in the number of laden truck movements to and from the Quarry.

The ACHA will address the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010) (Consultation Requirements), *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

Inspired People.
Dedicated Team.
Quality Outcomes.

**Umwelt (Australia)
Pty Limited**
ABN 18 059 519 041

T | 1300 793 267
E | info@umwelt.com.au

www.umwelt.com.au

20257_BarinaQuarry_Notification R3_template_ltr

1



In accordance with *Section 4.1.2 of Consultation Requirements*, Umwelt is seeking to identify Aboriginal people or groups who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places within the project area. After consulting with Heritage NSW of the Department of Planning and Environment, Maria Williams was identified as one who may hold such cultural knowledge.

If Maria Williams is aware of Aboriginal people or groups who may hold such cultural knowledge, please forward the relevant contact details by no later than 14 days from date of correspondence, **21 October 2022** to:

Alex Irwin
Umwelt (Australia) Pty Ltd
Office 4, 3 Hampden Avenue
Orange NSW 2800
E: airwin@umwelt.com.au.

In compliance with the Consultation Requirements, the contact details for the proponent are as follows:

Lisa Polley
12 Common Street
Goulburn NSW 2580
P: 0419 483 273
E: admin@collectorresources.com.au.

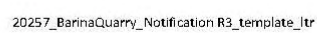
Umwelt will use these contact details to provide opportunity for the relevant Aboriginal parties to register an interest in a process of community consultation for the proposed modification.

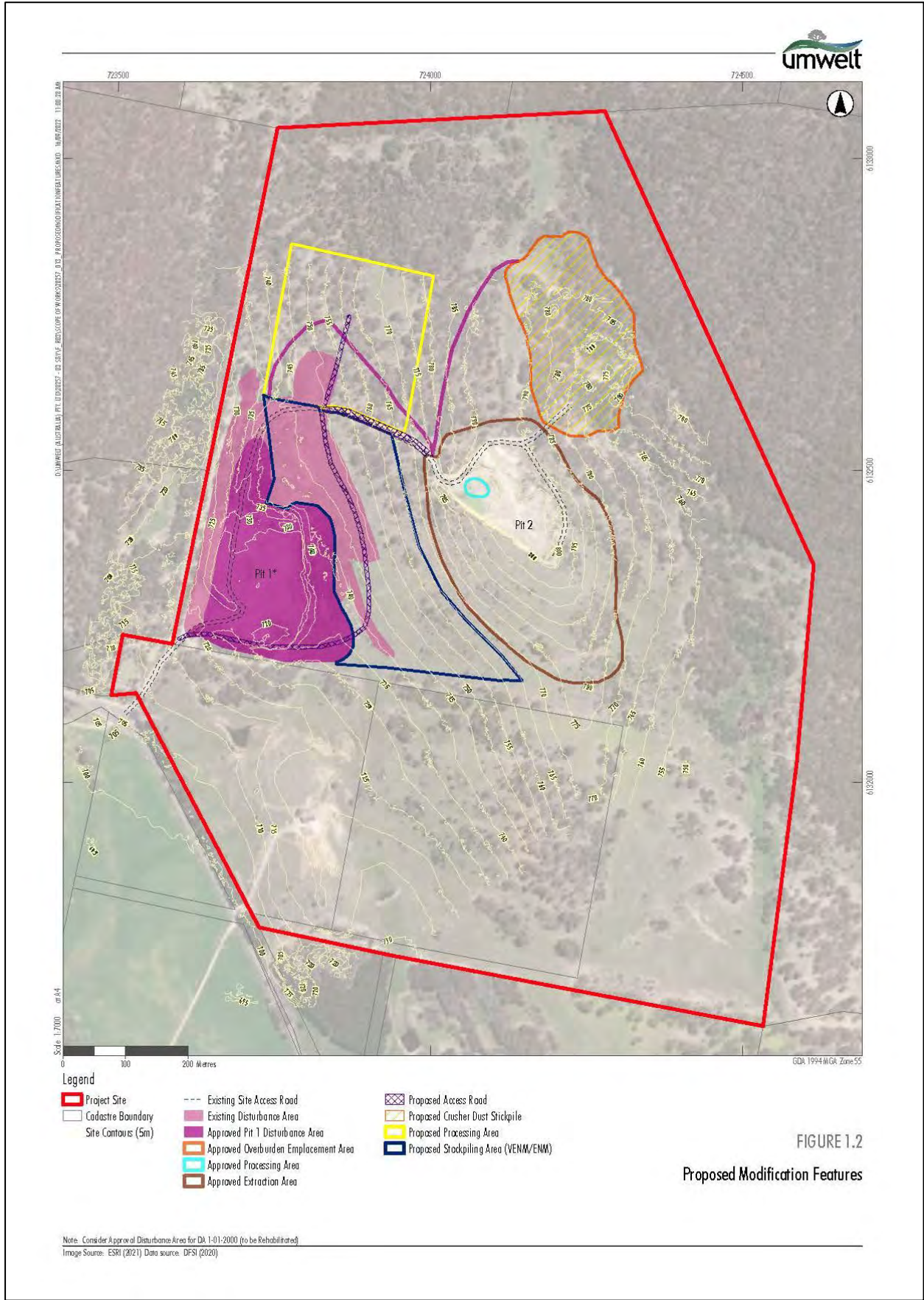
If you have any questions regarding this correspondence or wish to discuss the project further, please do not hesitate to contact myself via email dmcqueeney@umwelt.com.au or on 1300 793 267.

Kind regards,

A handwritten signature in dark ink, appearing to read 'David McQueeney'.

David McQueeney
Environmental Consultant
E| dmcqueeney@umwelt.com.au
M| 0432 719 213





Appendix 1 Figure 5: Stage 1 Round 2 advertisement

Advertisement placed in the Goulburn Post on 18 September 2024 by OzArk.

**Expression of Interest
Cultural Heritage Management**

OzArk Environment & Heritage has been engaged by Collector Resources (the proponent) to complete an Aboriginal cultural heritage assessment for the proposed modification to operations at Barina Quarry (the project), located on Collector Road, approximately 1.5 kilometres (km) southeast of the township of Collector. The project is in the Queanbeyan Palerang Regional Local Government Area (LGA), immediately east of the boundary of Upper Lachlan LGA.

OzArk is seeking Aboriginal persons and / or groups who wish to be consulted about the project. This consultation group will assist OzArk and the proponent in the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR). The ACHAR will assist Heritage NSW and the Department of Planning, Housing and Infrastructure and in their consideration and determination of the project.

If you hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the project area, please register your interest to be consulted.

Registrations can be made by post: OzArk PO Box 2069 Dubbo NSW 2830; email: catherine@ozarkehm.com.au or by phoning OzArk on 02 6882 0118. All submissions should be received no later than **2 October 2024**.

Appendix 1 Figure 6: Stage 1 Round 2 agency letter (sample)

	OzArk Environment & Heritage Dubbo Queanbeyan T: 02 6882 0118 Wollongong Newcastle enquiry@ozarkehm.com.au Katoomba www.ozarkehm.com.au	ABN 29 675 720 564 145 Wingewarra St PO Box 2069 DUBBO NSW 2830
---	---	--

17 September 2024

Heritage NSW
Department of Premier and Cabinet
heritagemailbox@environment.nsw.gov.au
Locked Bag 5020
Parramatta NSW 2124

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

MODIFICATION TO BARINA QUARRY, NEAR COLLECTOR NSW

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by Irwin Environmental Management Pty Limited on behalf of Collector Resources (the proponent) to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

The proponent is proposing a modification to operations at Barina Quarry (the project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**). The project falls within the Queanbeyan Palerang Regional Local Government Area (LGA), immediately east of the LGA boundary with Upper Lachlan Shire.

We are therefore seeking expressions of interest from relevant Aboriginal stakeholder groups and / or individuals in the area who hold cultural knowledge relevant to determining the significance of Aboriginal objects or places within the Collector area.

This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW and the Department of Planning, Housing and Infrastructure in their consideration and determination of the project.

If your organisation can recommend and provide contact details for any known Aboriginal groups or individuals with cultural knowledge relevant to determining the impacts to the cultural significance of the above-mentioned project, please advise our office.

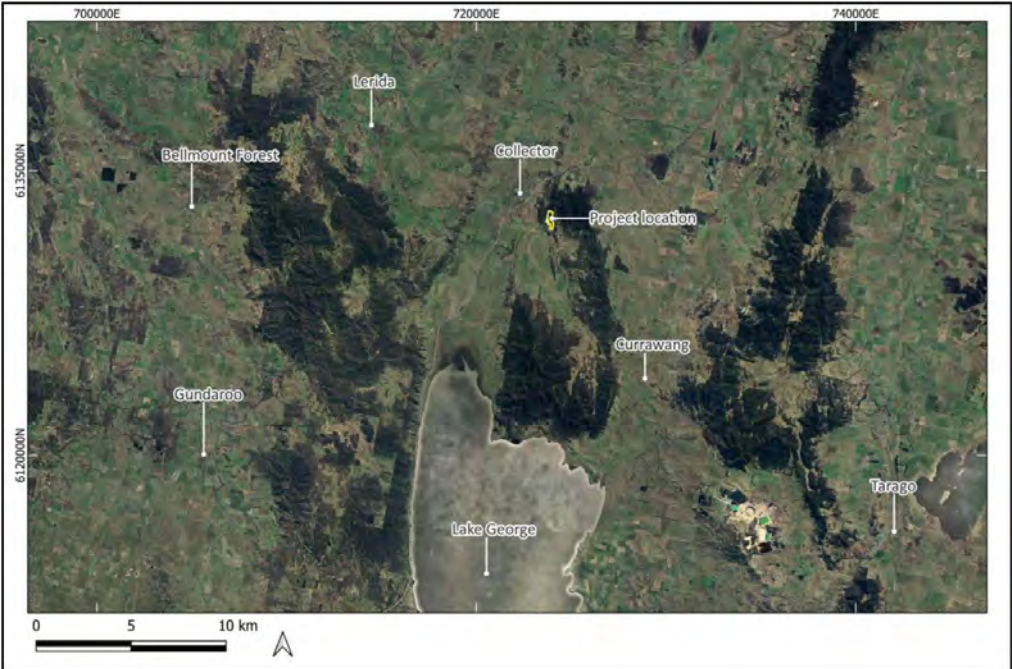
We would appreciate it if you could provide any feedback, by responding to this email catherine@ozarkehm.com.au, regarding these Aboriginal stakeholder groups by 2 October 2024 or sooner if possible.

Kind regards,



Catherine Burrowes
Office Manager/ Community Liaison

Figure 1: Location map.



Appendix 1 Figure 7: Stage 1 Round 2 community letter

	OzArk Environment & Heritage Dubbo Queanbeyan T: 02 6882 0118 Wollongong Newcastle enquiry@ozarkehm.com.au Katoomba www.ozarkehm.com.au	ABN 29 675 720 564 145 Wingewarra St PO Box 2069 DUBBO NSW 2830
---	---	---

2 October 2024

ABORIGINAL CULTURAL HERITAGE ASSESSMENT
MODIFICATION TO BARINA QUARRY, NEAR COLLECTOR NSW

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by Irwin Environmental Management Pty Limited on behalf of Collector Resources (the proponent) to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

The proponent is proposing a modification to operations at Barina Quarry (the project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**). The project falls within the Queanbeyan Palerang Regional Local Government Area (LGA), immediately east of the LGA boundary with Upper Lachlan Shire.

Accordingly, we are seeking Expressions of Interest from relevant Aboriginal groups and individuals in the Collector area, to form a consultation group. This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) to assist Heritage NSW and the Department of Planning, Housing and Infrastructure in their consideration and determination of the project.

If you hold cultural knowledge relevant to determining the impacts to the cultural significance of this project area, should you wish to register for the project please provide the following information:

- Group or individual name
- Contact name (if registering as a group)
- Email or postal address
- Contact number

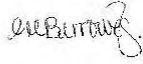
Please do this by contacting our office on (02) 6882 0118 or responding to this email catherine@ozarkehm.com.au. The closing date for expressions of interest is **17 October 2024**.

If you wish to register interest it is noteworthy that as per the Heritage NSW guidelines, we are required to provide your details to Heritage NSW and the Local Aboriginal Lands Council unless we are advised that you do not wish your details to be released.

OzArk Environment & Heritage

Once relevant groups and individuals have been identified, they will form part of the formal consultation process for the project.

Kind regards,



Catherine Burrowes
Office Manager/ Community Liaison

Figure 1: Location map.



Appendix 1 Figure 8: Letter to existing RAPs

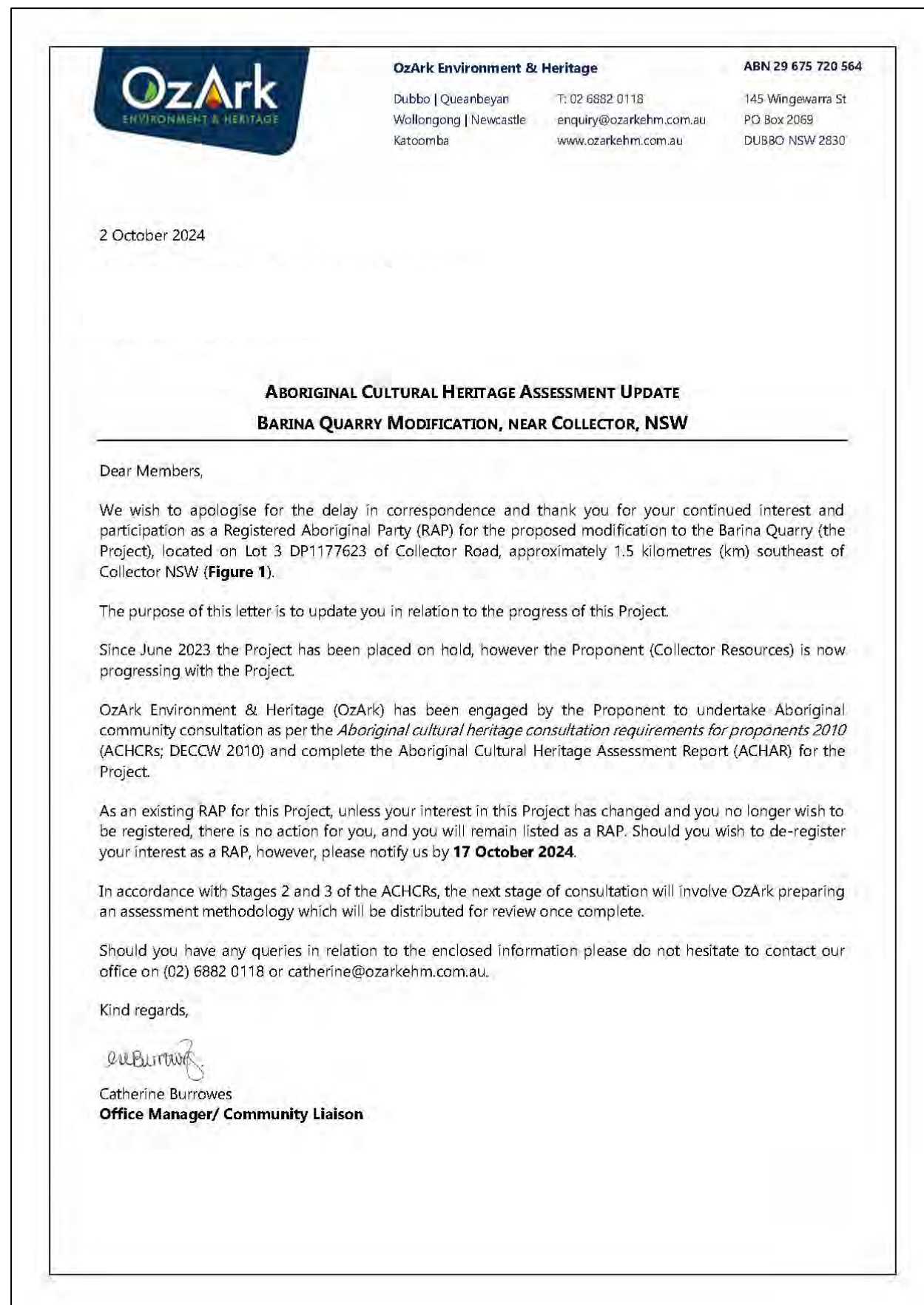


Figure 1: Location map.



ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: en@eddyneumann.com.au

Wed 2/10/2024 2:43 PM

Gundungurra Tribal Council Aboriginal Corporation

en@eddyneumann.com.au

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or cathe-rine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes

Office Manager/ Community Liaison

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: onerwal1@gmail.com

Wed 2/10/2024 2:43 PM

2 October 2024

Onerwal Local Aboriginal Land Council

onerwal1@gmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or cathe-rine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: pejar1@bigpond.com

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Pejar Local Aboriginal Land Council

pejar1@bigpond.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes

Office Manager/ Community Liaison

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: ringram6033@gmail.com

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Lavinus Ingram

ringram6033@gmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes

ACHA Update - Barina Quarry Modification

 Catherine Burrowes
To: ringram6033@gmail.com

2 October 2024

Rebecca Ingram

ringram6033@gmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,



ACHA Update - Barina Quarry Modification

 Catherine Burrowes
To: Yunwang.Gundana.C.H.S@outlook.com

2 October 2024

Merekai Bell

Yunwang.Gundana.C.H.S@outlook.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,



Catherine Burrowes
Office Manager/ Community Liaison

ACHA Update - Barina Quarry Modification



Catherine Burrowes
To: wokacorp@yahoo.com

Reply Reply All Forward ...

Wed 2/10/2024 2:43 PM

2 October 2024

Steven Johnson

wokacorp@yahoo.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes

ACHA Update - Barina Quarry Modification



Catherine Burrowes
To: thunderstonemg@gmail.com

Reply Reply All Forward ...

Wed 2/10/2024 2:43 PM

2 October 2024

Tyronne Bell & Bronwyn

thunderstonemg@gmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: murrabidgeemullangari@yahoo.com.au
[Reply](#) [Reply All](#) [Forward](#) [...](#)

Wed 2/10/2024 2:43 PM

2 October 2024

Ryan Johnson

murrabidgeemullangari@yahoo.com.au

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: muragadi@yahoo.com.au
[Reply](#) [Reply All](#) [Forward](#) [...](#)

Wed 2/10/2024 2:43 PM

2 October 2024

Jesse Carroll Johnson

muragadi@yahoo.com.au

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: mundawari.hc@gmail.com

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Dean Delponte

mundawari.hc@gmail.com**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: konanggo_consultancy@hotmail.com

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Robert Young

konanggo_consultancy@hotmail.com**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: Gunjeewongculturalheritage21@hotmail.com

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Shayne Dickson

Gunjeewongculturalheritage21@hotmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

ACHA Update - Barina Quarry Modification



Catherine Burrowes

To: 'GulgunyaNHAC@hotmail.com'

Reply

Reply All

Forward

...

Wed 2/10/2024 2:43 PM

2 October 2024

Gulgunya Ngunawal Heritage Aboriginal Consultancy

GulgunyaNHAC@hotmail.com

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT UPDATE
BARINA QUARRY MODIFICATION, NEAR COLLECTOR, NSW**

Dear Members,

We wish to apologise for the delay in correspondence and thank you for your continued interest and participation as a Registered Aboriginal Party (RAP) for the proposed modification to the Barina Quarry (the Project), located on Lot 3 DP1177623 of Collector Road, approximately 1.5 kilometres (km) southeast of Collector NSW (**Figure 1**).

The purpose of this letter is to update you in relation to the progress of this Project.

Since June 2023 the Project has been placed on hold, however the Proponent (Collector Resources) is now progressing with the Project.

OzArk Environment & Heritage (OzArk) has been engaged by the Proponent to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (ACHCRs; DECCW 2010) and complete the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Project.

As an existing RAP for this Project, unless your interest in this Project has changed and you no longer wish to be registered, there is no action for you, and you will remain listed as a RAP. Should you wish to de-register your interest as a RAP, however, please notify us by **17 October 2024**.

In accordance with Stages 2 and 3 of the ACHCRs, the next stage of consultation will involve OzArk preparing an assessment methodology which will be distributed for review once complete.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office on (02) 6882 0118 or catherine@ozarkehm.com.au.

Kind regards,

Catherine Burrowes
Office Manager/ Community Liaison

Appendix 1 Figure 9: Stage 2/3 Round 1 cover letter



OzArk Environment & Heritage		ABN 59 104 582 354
Dubbo	T: 02 6882 0118	145 Wingewarra St
Queanbeyan	enquiry@ozarkehm.com.au	PO Box 2069
Newcastle	www.ozarkehm.com.au	DUBBO NSW 2830

13 December 2022

Aboriginal Cultural Heritage Assessment Methodology:
Proposed Barina Quarry Modification and Collector Waste Management Facility

Dear Members,

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted regarding the proposed Barina Quarry Modification and Collector Waste Management Facility. The proposals are located 1.5 kilometres (km) southeast of Collector within the Queanbeyan Palerang Regional Council Local Government Area (LGA) and immediately adjacent to the Upper Lachlan Shire LGA. The projects will be assessed as a State Significant Development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this letter is to invite you to comment on the enclosed draft methodology for the Aboriginal cultural heritage assessment.

In addition to comments on the draft methodology, if you can share any Aboriginal cultural heritage knowledge relevant to the assessment areas, we welcome this input so as to improve our assessment outcomes and to ensure Aboriginal cultural values are considered.

OzArk Environment & Heritage is required to give you 28 days to supply feedback on the attached documents. This period closes 5pm on **Friday 13 January 2022**.

Please also find attached to my email an invite to attend AFGM next Tuesday 20th December.

If you need any help supplying feedback or have any queries in relation to the enclosed information, please do not hesitate to contact our office.

Kind regards,



Catherine Burrowes
Customer Liaison

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: Yurwang.Gundana.C.H.S@outlook.com

Bcc: Catherine Burrowes

Reply

Reply All

Forward

...

Tue 13/12/2022 1:34 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
360 KBStage 2 Cover Letter.docx
102 KB

V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.auISO 9001
Quality
ManagementISO 14001
Environmental
ManagementISO 45001
Health & Safety
Management

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication advising the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility

Imogen Crome <Imogen@ozarkehm.com.au>

To: thunderstonemg@gmail.com

Bcc: Catherine Burrowes

Reply

Reply All

Forward

...

Tue 13/12/2022 1:38 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
357 KBStage 2 Cover Letter.docx
99 KB

V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.auISO 9001
Quality
ManagementISO 14001
Environmental
ManagementISO 45001
Health & Safety
Management

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication advising the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome <Imogen@ozarkehm.com.au>

To: en@eddyneumann.com.au; shaun@gundungurra.org.au

Bcc: Catherine Burrowes

Reply

Reply All

Forward



Tue 13/12/2022 1:21 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
357 KBStage 2 Cover Letter.docx
99 KB

V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf ...

Good Afternoon Members,

Thank you for your registration as a RAP for the Collector Waste Management Facility. This project has been on hold for a couple of years but is now active again. We have also registered you for the Barina Quarry Modification which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist



OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.au



OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the discloser to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: onerwall1@gmail.com

Bcc: Catherine Burrowes

Reply

Reply All

Forward



Tue 13/12/2022 1:20 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
360 KBStage 2 Cover Letter.docx
102 KBV2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf
2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Collector Waste Management Facility. This project has been on hold for a couple of years but is now active again. We have also registered you for the Barina Quarry Modification which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist



OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.au



OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the discloser to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: GulgunyaNHAC@hotmail.com

Bcc: Catherine Burrowes

Reply Reply All Forward ...

Tue 13/12/2022 1:22 PM



Barina Quarry & Collector Waste facility- Invitation to AFGM.docx

360 KB



Stage 2 Cover Letter.docx

102 KB



V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Collector Waste Management Facility. This project has been on hold for a couple of years but is now active again. We have also registered you for the Barina Quarry Modification which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au



OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to the electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from this disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: shaun@gundungurra.org.au

Reply Reply All Forward ...

Tue 13/12/2022 1:24 PM



Barina Quarry & Collector Waste facility- Invitation to AFGM.docx

360 KB



Stage 2 Cover Letter.docx

102 KB



V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Collector Waste Management Facility. This project has been on hold for a couple of years but is now active again. We have also registered you for the Barina Quarry Modification which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au



OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to the electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from this disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: mundawari.hc@gmail.com

Bcc: Catherine Burrowes

Reply

Reply All

Forward

Tue 13/12/2022 1:31 PM



Stage 2 Cover Letter.docx

102 KB



V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

2 MB



Barina Quarry & Collector Waste facility- Invitation to AFGM.docx

361 KB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.auISO 9001
Quality
ManagementISO 14001
Environmental
ManagementISO 45001
Health & Safety
Management

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by anyone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



Imogen Crome

To: muragadi@yahoo.com.au

Reply

Reply All

Forward

Tue 13/12/2022 1:33 PM



Barina Quarry & Collector Waste facility- Invitation to AFGM.docx

360 KB



Stage 2 Cover Letter.docx

102 KB



V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf

2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.auISO 9001
Quality
ManagementISO 14001
Environmental
ManagementISO 45001
Health & Safety
Management

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by anyone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility

Imogen Crome
To: Yurwang.Gundana.C.H.S@outlook.com
Bcc: Catherine Burrowes

Tue 13/12/2022 1:34 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx 360 KB
Stage 2 Cover Letter.docx 102 KB
V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf 2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

 OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au



ISO 9001 Quality Management ISO 14001 Environmental Management ISO 45001 Health & Safety Management

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility

Imogen Crome
To: ringram6033@gmail.com
Bcc: Catherine Burrowes

Tue 13/12/2022 1:36 PM

Barina Quarry & Collector Waste facility- Invitation to AFGM.docx 360 KB
Stage 2 Cover Letter.docx 102 KB
V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf 2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

 OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au



ISO 9001 Quality Management ISO 14001 Environmental Management ISO 45001 Health & Safety Management

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



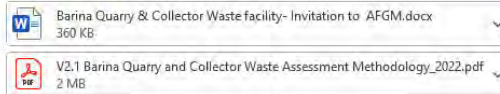
Imogen Crome

To: konanggo_consultancy@hotmail.com

Bcc: Catherine Burrowes

Reply Reply All Forward

Tue 13/12/2022 1:36 PM



Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.au

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility



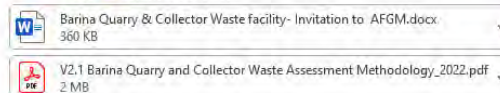
Imogen Crome

To: murrabidgeemullangari@yahoo.com.au

Bcc: Catherine Burrowes

Reply Reply All Forward

Tue 13/12/2022 1:37 PM



Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome

Archaeologist



OzArk Environment & Heritage

PO Box 2069 DUBBO 2830

02 6882 0118

imogen@ozarkehm.com.au; www.ozarkehm.com.au

OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from the disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility

 **Imogen Crome**
To:  Gunjeewongculturalheritage21@hotmail.com
Bcc:  Catherine Burrowes

Tue 13/12/2022 1:37 PM

 Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
360 KB

 Stage 2 Cover Letter.docx
102 KB

 V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf
2 MB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

 OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au



OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from this disclosure to anyone unless required to do so by law.

Stage 2 - methodology - Barina Quarry & Collector Waste facility

 **Imogen Crome**
To:  wokacorp@yahoo.com
Bcc:  Catherine Burrowes

Tue 13/12/2022 1:38 PM

 Stage 2 Cover Letter.docx
102 KB

 V2.1 Barina Quarry and Collector Waste Assessment Methodology_2022.pdf
2 MB

 Barina Quarry & Collector Waste facility- Invitation to AFGM.docx
360 KB

Good Afternoon Members,

Thank you for your registration as a RAP for the Barina Quarry Modification. We'd like to advise you that we have also registered you for the Collector Waste Management Facility which is proposed at the same location.

Please find attached Stage 2 information package for the Barina Quarry & Collector Waste facility project.

If you have any questions or feedback please email our Office Manager, Catherine Burrowes (catherine@ozarkehm.com.au).

Kind regards,

Imogen Crome
Archaeologist

 OzArk Environment & Heritage
PO Box 2069 DUBBO 2830
02 6882 0118
imogen@ozarkehm.com.au; www.ozarkehm.com.au

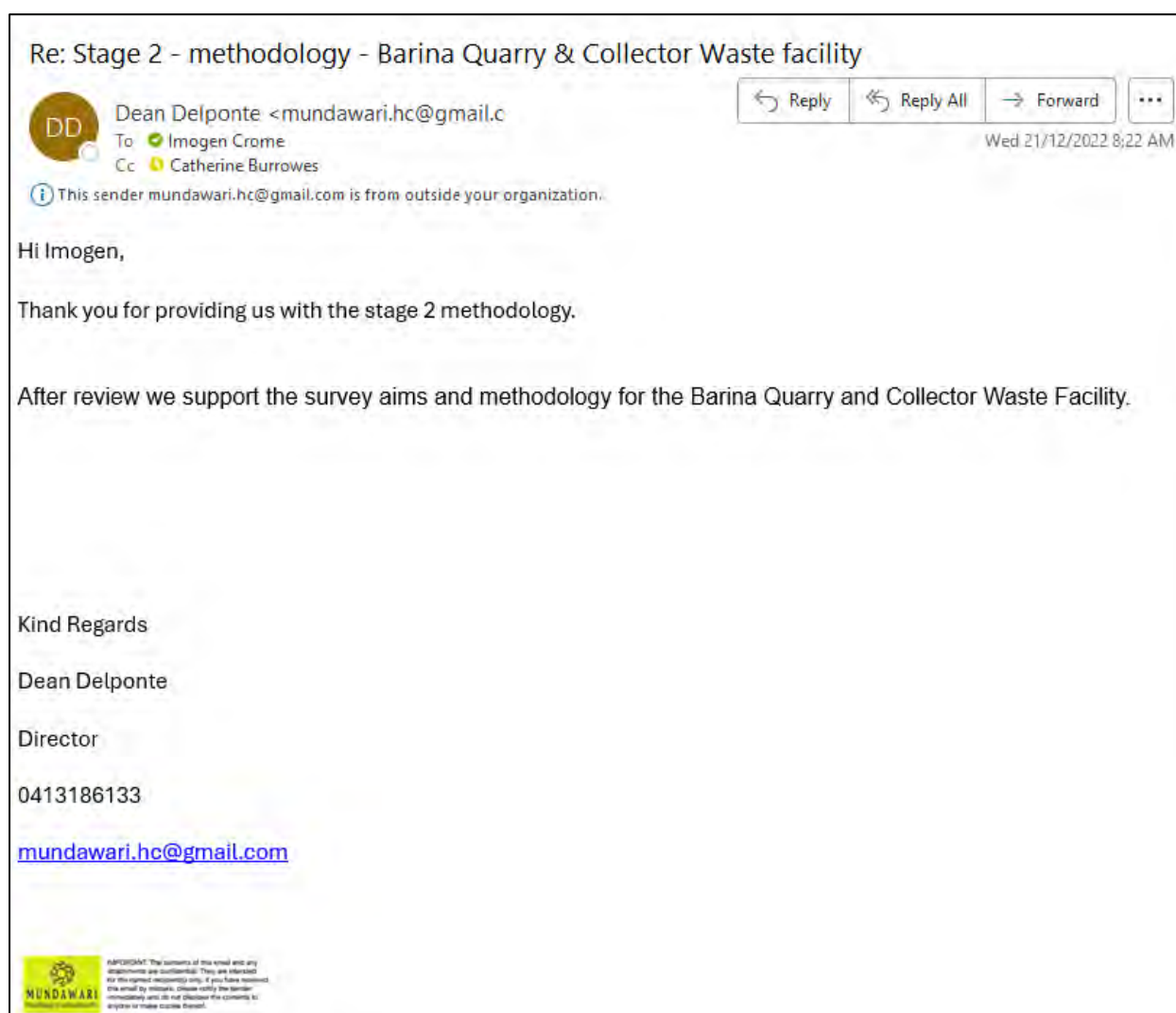


OzArk and staff respectfully acknowledge the traditional custodians and Elders of the Country on which we work.

LEGAL DISCLAIMER: The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient. If you have received this electronic communication in error please notify the sender by replying to this electronic communication inserting the word "misdirected" as the subject and delete this communication from your system. The recipient agrees not to disclose the confidential information obtained from this disclosure to anyone unless required to do so by law.

Appendix 1 Figure 10: Stage 2/3 Round 1 response



Appendix 1 Figure 11: AFGM invitation



[illegible]

FIGURE 1.1
Locality Plan

Appendix 1 Figure 12: Stage 2/3 Round 2 cover letter



Stage 2-3 Barina Quarry Modification -Draft Methodology



Catherine Burrowes

To

Bcc: adrianbrown.ngunnawal@hotmail.com; brindabelladreaming@outlook.com; Dean Delponte; lilly carroll; begadel@yahoo.com; Ginninderra Aboriginal Corporation; +18 others

Reply Reply All Forward

Mon 21/10/2024 3:47 PM

- Stage 2 Cover Letter.docx
.docx File
- V2.1 Barina Quarry Modification_Assessment Methodology_2024.pdf
.pdf File

Hello Members,

Please find attached stage 2 information package for the **Draft Methodology for the Barina Quarry Modification.**

I look forward to hearing from you with any feedback you may have by Monday 18 November 2024.

Regards, Catherine

Catherine Burrowes
OzArk Environment & Heritage
Office Manager
(02) 6882 0118

Appendix 1 Figure 13: Stage 2/3 Round 2 responses

Re: Stage 2-3 Barina Quarry Modification -Draft Methodology

DJ

Darleen Johnson <murrabidgeemullangari@yahoo.com.au>

To Catherine Burrowes

Reply

Reply All

Forward

...

Wed 6/11/2024 4:49 PM

Hi Catherine

I have read the project information and draft methodology for the above project, and I endorse the recommendations

Thanks

Darleen

Appendix 1 Figure 14: Stage 4 cover letter



OzArk Environment & Heritage		ABN 29 675 720 564
Dubbo Queanbeyan	T: 02 6882 0118	145 Wingewarra St
Wollongong Newcastle	enquiry@ozarkehm.com.au	PO Box 2069
Katoomba	www.ozarkehm.com.au	DUBBO NSW 2830

19 December 2024

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT
FOR THE MODIFICATION TO THE BARINA QUARRY**

Dear Members,

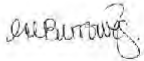
Thank-you for your continued participation as a Registered Aboriginal Party (RAP) and involvement in the above-mentioned project.

Collector Resources Pty Limited (the Proponent) would like to offer you the opportunity to provide feedback on the draft Aboriginal Cultural Heritage assessment Report (ACHAR) that has been undertaken in accordance with stage four (4) of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCR).

As per the ACHCRs we are required to give you twenty-eight (28) days to supply feedback on the attached draft ACHAR. This period closes on the **Tuesday 21 January 2025**. Should our office not be contacted within this time frame, we will presume that you are satisfied with the contents of the ACHAR as it stands.

If you need any help supplying feedback or have any queries, please do not hesitate to contact our office.

Kind regards,



Catherine Burrowes
Office Manager/ Community Liaison

Stage 4 Draft ACHAR Barina Quarry Modification

Catherine Burrowes

To

Bcc

adrianbrown.ngunnawal@hotmail.com; brindabelladreaming@outlook.com; mundawari.hc@gmail.com; didgengunawalclan@yahoo.com.au; +21 others

Reply

Reply All

Forward

Thu 19/12/2024 3:54 PM

W

Stage 4 Cover Letter.docx

.docx File

PDF

V2.1 Draft_Barina Hard Rock Quarry Modification_ACHAR_December2024.pdf

.pdf File

Hello Members,

Please find attached stage 4 information package for the Barina Quarry Modification.

I look forward to hearing from you with any feedback you may have by Tuesday 21 January 2025.

Regards, Catherine

Appendix 1 Figure 15: Stage 4 responses

Re: Stage 4 Draft ACHAR Barina Quarry Modification



yurwang gundana <Yurwang.Gundana.C.H.S@outlook.com>
To Catherine Burrowes

[Reply](#) [Reply All](#) [Forward](#) [...](#)

Sat 28/12/2024 11:49 AM

 You replied to this message on 7/01/2025 3:22 PM.

Yumalindi, I hope you are doing well

Yurwang Gundana loves the report and the Christmas photo.

We agree with the report and have no issues with it

Thanks
Merekai Bell
Yurwang Gundana Cultural heritage Services

Re: Stage 4 Draft ACHAR Barina Quarry Modification



Wendy Morgan <wenlissa01@hotmail.com>
To Catherine Burrowes

[Reply](#) [Reply All](#) [Forward](#) [...](#)

Wed 22/01/2025 4:34 PM

 Follow up. Completed on Wednesday, 29 January 2025.

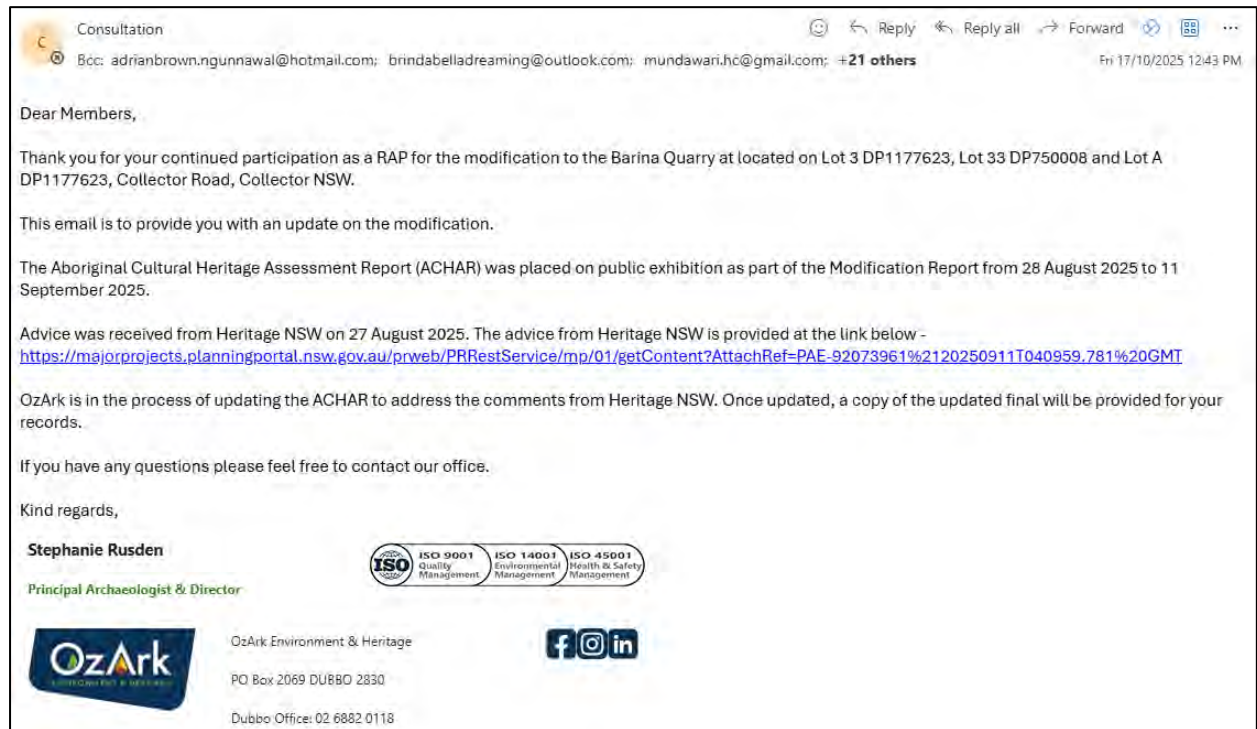
Hi Catherine,

Guntawang Aboriginal Resources Incorporated agrees and supports the Draft ACHA methodology for Stage 4 of Barina Hard Rock Quarry.

kind regards

Wendy Morgan
CEO GARI
0414 964 657

Appendix 1 Figure 16: Project update



APPENDIX 2: ASSESSMENT METHODOLOGY



View across the central portion of the study area.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY

BARINA QUARRY MODIFICATION

COLLECTOR, NSW

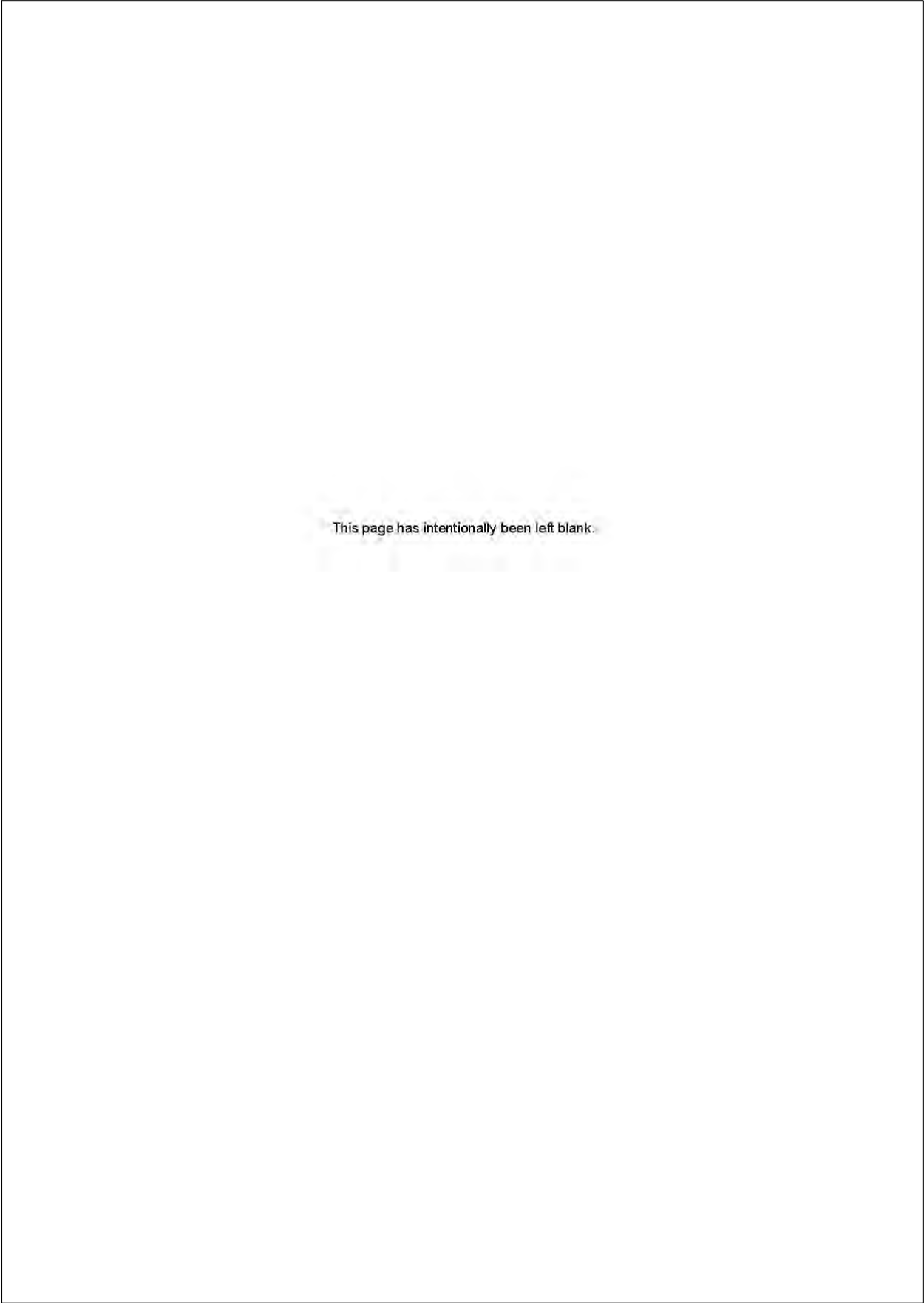
NOVEMBER 2024

Report prepared by
OzArk Environment & Heritage
for Collector Resources Pty Limited

OzArk

OzArk Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830
Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au



DOCUMENT CONTROLS

Applicant	Collector Resources Pty Limited
Client	Irwin Environmental Management Pty Limited
Document Description	Aboriginal Cultural Heritage Assessment Methodology: Barina Quarry Modification.
File Location	OzArk Job No.
Clients\Irwin Environmental Management\Barina Quarry Modification_Aboriginal heritage_2024	4632
Document Status: V3.0 FINAL	Date: 30 November 2024
OzArk internal edits	V1.0 SR author 14/10/24
OzArk and client edits	V2.0 OzArk to client 16/10/24 V2.1 OzArk updates 18/10/24
Final document	V3.0 OzArk finalises 30/11/24
Prepared for	Prepared by
Alex Irwin Director / Principal Irwin Environmental Management Pty Limited 0412 107 657 alex@irwinenviro.com.au	Stephanie Rusden Senior Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 stephanie@ozarkehm.com.au
COPYRIGHT © OzArk Environment & Heritage 2024 and © Irwin Environmental Management Pty Limited 2024 All intellectual property and copyright reserved. Apart from any fair dealing for private study, research, criticism, or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system, or adapted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without written permission. Enquiries should be addressed to OzArk Environment & Heritage.	

Acknowledgement

OzArk acknowledge the traditional custodians of the area on which this assessment will take place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

CONTENTS

1	INTRODUCTION	5
1.1	Overview	5
1.2	Background	5
1.3	Project overview	6
1.4	Study area	9
1.5	Consultation on this methodology	9
1.6	Landscape characteristics of the study area	11
2	CULTURAL VALUES.....	14
2.1	Introduction to cultural values	14
2.1.1	Connection to Country	14
2.1.2	Managing Country	15
2.1.3	Recognising lore	15
2.2	Identifying cultural values	15
2.2.1	Use of information collected	16
2.2.2	Public / confidential information	16
2.2.3	Copyright	16
3	ARCHAEOLOGICAL CONTEXT	17
3.1	Aboriginal people of the study area	17
3.2	Regional archaeological context	17
3.3	Local archaeological context	18
3.3.1	Archaeological investigations within and near the study area	21
3.3.1.1	An Archaeological Investigation of a Proposed Quarry Extension (Paton 1998)	21
3.3.1.2	Aboriginal Cultural Heritage Assessment – Proposed Collector Wind Farm (NSW Archaeology 2015)	22
3.3.1.3	Woodlawn Wind Farm – Environmental Impact Statement (Biosis as reported in URS 2004)	22
3.3.1.4	Collector Waste Resource Facility (OzArk 2018)	22
3.3.1.5	Barina Quarry Modification	22
4	ASSESSMENT METHODOLOGY	24
4.1	Assessment approach	24
4.2	Production of the ACHAR	24
	REFERENCES	25

FIGURES

Figure 1-1: Location of the project. 7

Figure 1-2. Proposed impact footprint. 8

Figure 1-3. Aerial of the study area. 9

Figure 1-4: Topography and drainage of the study area. 13

Figure 1-5: 1977 aerial with overlay of study area (source: SS 2022). 13

Figure 3-1: AHIMS sites in relation to the study area. 19

Figure 3-2. Aerial of the study area showing the various locations for site 51-5-0073. 20

Figure 3-3. Site location of 51-5-0063 (CL1) (red square) from the original assessment in original EIS.21

Figure 3-3. 2023 survey tracks across the study area. 23

TABLES

Table 3-1: AHIMS site types and frequencies 18

1 INTRODUCTION

1.1 OVERVIEW

OzArk Environment & Heritage (OzArk) has been engaged by Irwin Environmental Management Pty Limited on behalf of Collector Resources Pty Limited (the Applicant) to prepare an assessment methodology for the proposed Barina Quarry Modification (the project).

The project is located 1.5 kilometres (km) southeast of Collector in the Queanbeyan Palerang Regional Local Government Area (LGA) and immediately adjacent to the Upper Lachlan Shire LGA (**Figure 1-1**).

This methodology is in accordance with Stage 3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs; DECCW 2010a). The project information provided here also complies with Stage 2 of the ACHCRs.

The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, that exist in the study area. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

1.2 BACKGROUND

The Applicant received development consent from the Land and Environment Court in 2001 being DA 1-01-2000. Initially approved for a period of 20 years from the date of consent, i.e. to 28 March 2021, Condition 1.3(a) of DA 1-01-2000 was modified in November 2023 extending the term of the approval to 1 year from the date of determination of Modification 2, i.e. 2 November 2024.

DA 1-01-2000 approves the extraction (of quartzite) and rehabilitation of two pits.

- Pit 1: the extension of an existing pit to a depth of 716 m Australia Height Datum (mAHD) with an approximate area of 2.6 ha. Extraction of quartzite from Pit 1 has been completed and backfilled to a depth of between 720 and 725 mAHD.
- Pit 2: with an approximate area of 9.5 ha and depth to 714 mAHD containing an estimated quartzite resource of 9.4 million tonnes (Mt). The current extent of Pit 2 is approximately 2.0 ha to a maximum depth of between 780 and 785 mAHD. Of the initial resource of 9.4 Mt resource, less than 10% has been removed.

Processing operations, including crushing, separating, and blending of the hard rock materials to produce a variety of hard rock aggregates is approved within Pit 1.

Operations under DA 1-01-2000 commenced in 2005. Extraction was undertaken intermittently for several years, however, extraction operations effectively ceased in 2008 with the Quarry managed under care and maintenance since.

The Applicant intends to submit a development application to modify DA1-01-2000 under Section 4.56 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) to extend the duration

of the development consent referenced in Condition 1.3(a) by 15 years, extend the disturbance footprint of the Quarry and incorporate other minor modifications to improve the efficiency and sustainability of operations (refer to Section 1.3).

OzArk was previously engaged in 2022/2023 to undertake the ACHCRs and prepare an ACHAR for the project. Survey across the assessment area (including the current study area) was completed on 19 January 2023. No Aboriginal sites were recorded during the assessment. Further, due to the sloping nature of the landform, the observed thin soils and the high degree of disturbance, it is assessed that there is a low probability for there to be further, undetected, subsurface sites within the assessment area. Following the field assessment and prior to the preparation of the ACHAR, the project was placed on hold.

Irwin Environmental Management Pty Limited has now been commissioned by the Applicant to prepare a Modification Report and has engaged OzArk to provide the assessment of Aboriginal cultural heritage impacts through the preparation of an ACHAR.

1.3 PROJECT OVERVIEW

The modification includes modifications to operations at the quarry to improve efficiency of operations. The modification includes the following key components (**Figure 1-2**).

- Construction of additional stockpile areas between Pit 1 and Pit 2, and to the north of an existing haul road between Pit 1 and Pit 2, on land either approved for, or highly modified by Quarry related disturbance.
- Excavation and recovery of backfilled material from Pit 1, and importation of clean fill (Virgin Excavated Natural Materials or other material with an EPA approved Resource Recovery Exemption), for use as engineered fill in construction of the new stockpile areas.
- Relocation of processing operations from Pit 1, to Pit 2 or the new stockpile area, and incorporation of a washing circuit into the approved processing operations.
- Minor modifications to traffic operations to allow importation of additional laden trucks (no increase in truck movements)
- Realignment of internal roads and Quarry infrastructure, including the incorporation of a Workshop, Storage and Maintenance Area on cleared area to the southeast of Pit 1.

It is to be noted that there will be no changes to the extents of approved extraction areas or Pit 2 overburden emplacement.

The Applicant also intends on connecting of the Quarry to mains power by construction of an electricity transmission line (ETL) through a neighbouring property. This would be assessed and approved under Part 5 planning provisions of the EP&A Act.

Figure 1-1: Location of the project.

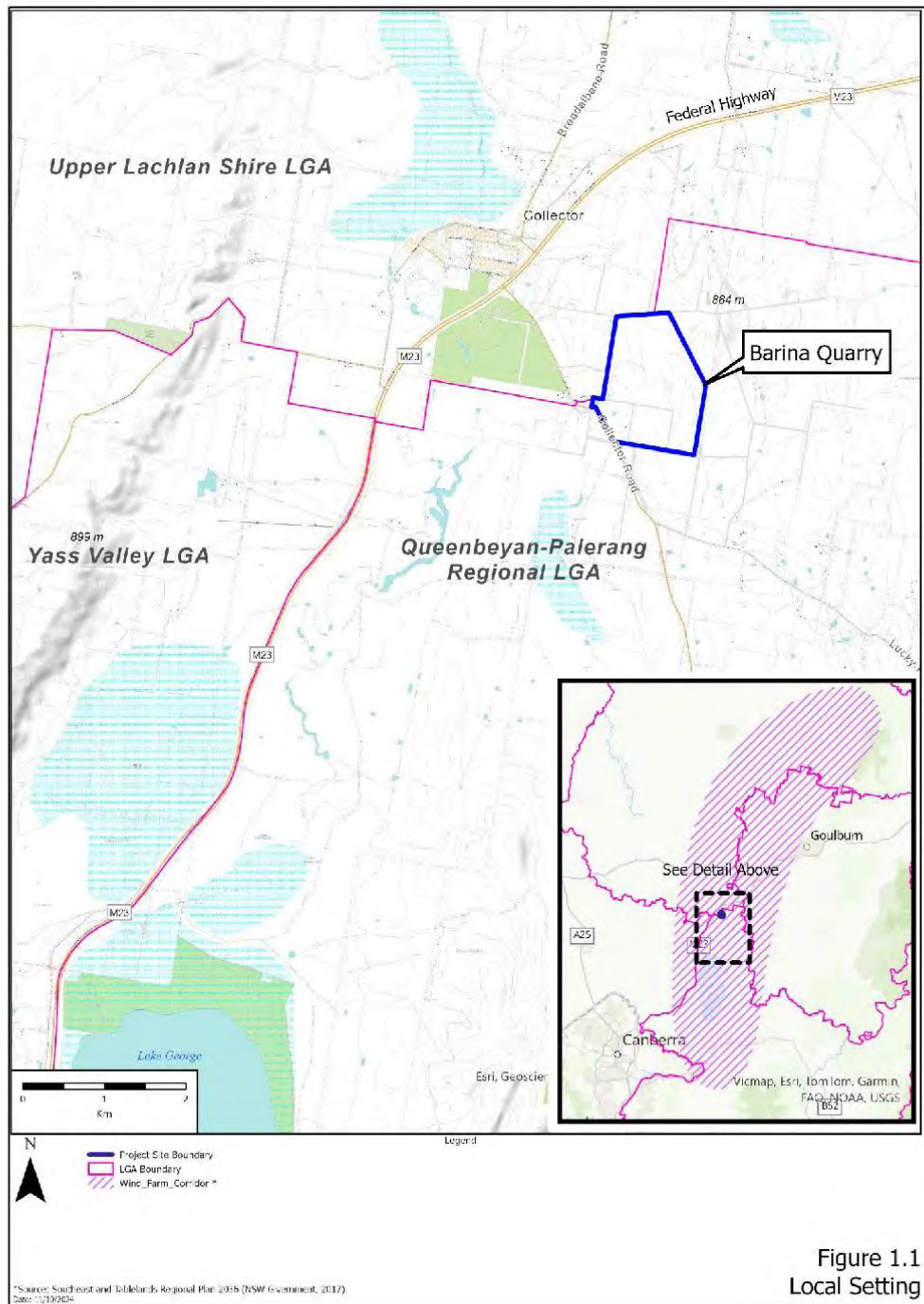
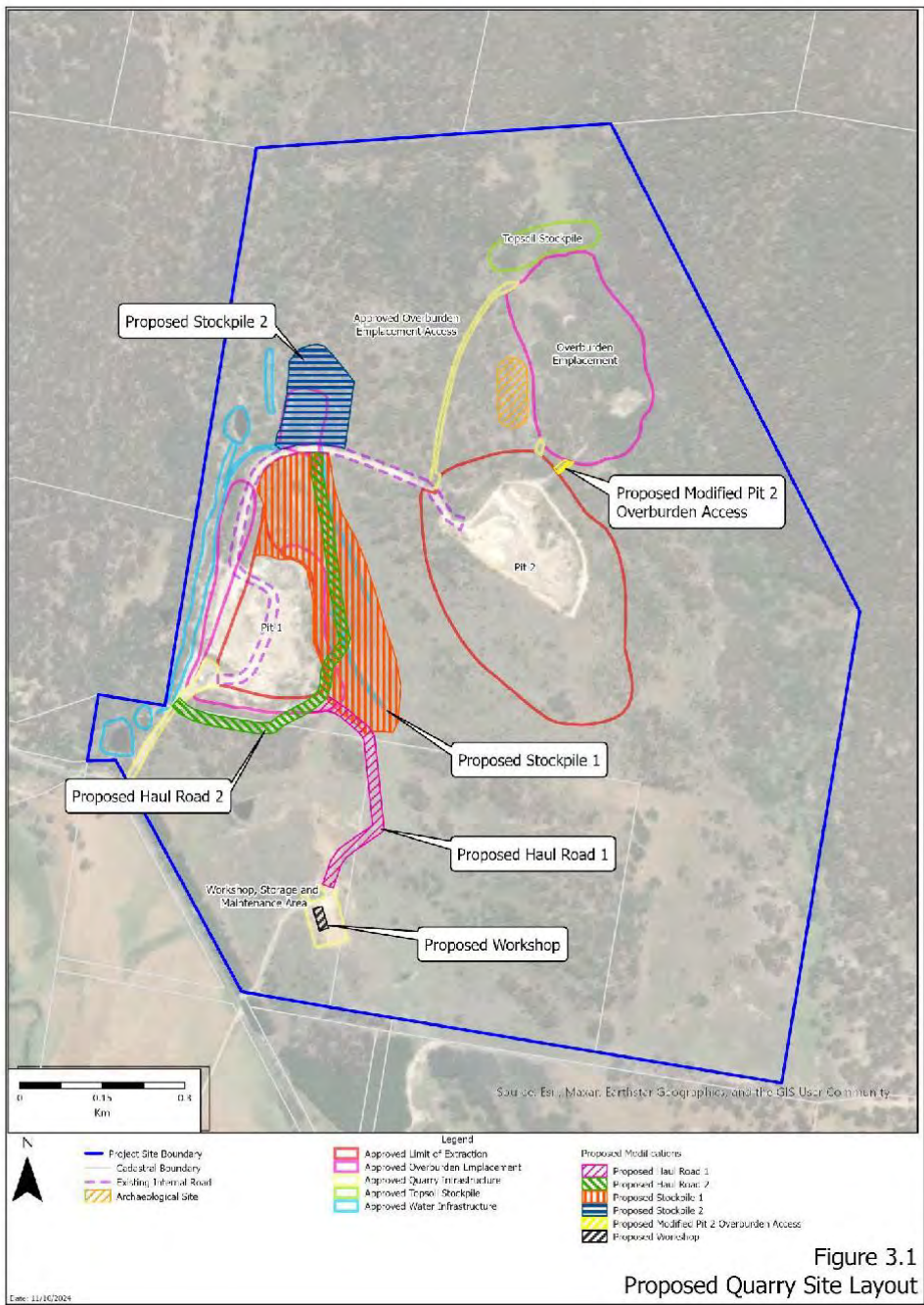


Figure 1.1
Local Setting

Figure 1-2. Proposed impact footprint.



1.4 STUDY AREA

The study area describes the area of additional impacts (to those approved by DA 1-01-2000) associated with the proposed modification (**Figure 1-3**). The study area is located at the Barina Quarry, off Collector Road and includes approximately 7 hectares (ha) of land.

Figure 1-3. Aerial of the study area.



1.5 CONSULTATION ON THIS METHODOLOGY

Consultation has followed the guidelines established in the ACHCRs (DECCW 2010a) whereby an advertisement was placed in the local press and relevant agencies were contacted to ascertain if they were aware of groups or individuals who may have cultural knowledge of the region containing the modification.

On 20 and 21 September 2022 an advertisement was placed in the Goulburn Post and Queanbeyan Age by Umwelt requesting expressions of interest in being consulted about the project. In addition, the following agencies were contacted by Umwelt to identify potential stakeholders for the area: Gulgunya Ngunawal Heritage Aboriginal Consultancy; Local Land Services – Southeast; National Native Title Tribunal; Native Title Services Corporation Limited (NTSCORP); Onerwal Local Aboriginal Land Council (LALC); Pejar LALC and Office of the Registrar, *Aboriginal Land Rights Act 1983*. Fifteen individuals/groups registered to be consulted regarding the project.

As noted in **Section 1.2**, the project went on hold in 2023. Given the lapse in time since RAPs were contacted regarding the project, the ACHCRs recommenced with an advertisement placed in the Goulburn Post on 18 September 2024 and the statutory government agencies contacted. All previous RAPs were contacted, with the option provided to no longer be consulted regarding the project.

An additional ten individuals/groups have registered to be consulted over the project.

The following individuals/groups form the RAP group for the project:

- Adrian Brown
- Brindabella Dreaming
- Dean Delponce
- Didge Ngunawal Clan
- Djirringanj Elders Federation
- Ginninderra Aboriginal Corporation
- Gulgunya Ngunawal Heritage Aboriginal Consultancy
- Gundungurra Tribal Council Aboriginal Corporation
- Gunjeewong Aboriginal Corporation
- Guntawang Aboriginal Resources Incorporated
- Konanggo Aboriginal Cultural Heritage Services
- Lavina Singleton
- Lavinus Ingram
- Merekai Bell
- Mura Culture services
- Muragadi Heritage Indigenous Corporation
- Murra Bidgee Mullangari
- Onerwal Local Aboriginal Land Council
- PD Ngunawal Consultancy
- Pejar Local Aboriginal Land Council
- Rebecca Ingram
- Sonione Wakabut Rogers

- Stakeholder 1¹
- Tyrone & Bronwyn Bell
- Woka Aboriginal Corporation.

1.6 LANDSCAPE CHARACTERISTICS OF THE STUDY AREA

The study area is located in the South East Highlands Bioregion, specifically, within the Monaro sub-bioregion. The study area is within the Gundry Plains landscape as characterised by Mitchell (2002). This landscape type is characterised by wide open valleys with abandoned terraces and quaternary lakebeds on lower Devonian siltstone sandstone, andesite and quartz felspar porphyry.

The topography of the study area is primarily undulating lower slope landforms that rise eastwards towards a locally prominent hill (850 m above sea level), located 930 m northeast of the study area (see **Figure 1-4**).

In the Soil Landscapes of the Goulburn 1:250,000 Sheet (Hird 1991), there are two Soil Landscapes within the study area. The Midgee soil landscape covers most of the study area and includes stony and acid yellow earths and yellow podzolic soils. The Collector Creek soil landscape occurs in the southwest of the study area and includes soils consisting of moderately deep, grey and yellow mottled duplex soils with bleached A2 horizons. Yellow podzolic soils are found on higher ground (Hird 1991).

Mitchell (2002) notes that Gundry Plains landscapes would have once supported grasslands of *Stipa* sp. and kangaroo grass with small clumps of sparse snow gum on rounded rocky hills and sandy lunettes of former lakes. Historic aerial imagery from 1977 (**Figure 1-5**) shows the original vegetation cover of eucalypt forest has been mostly cleared. Inspection of modern aerial imagery shows areas of sparse regrowth cover parts of the study area.

Currawang Creek is the closest semi-permanent watercourse and is located approximately 465 m southwest of the study area at the closest point, with most of the study area being over 500 m away. An ephemeral drainage feature is located immediately west of the study area which drains into Currawang Creek to the south, although it would only flow during significant rain events (see **Figure 1-4**).

The southwest of the study area has undergone surface disturbance because of the approved quarry operations. Notably, the excavated void of Pit 1 has zero potential for Aboriginal sites, but it can also be maintained that the amount of ground surface disturbance around the void, which includes partially constructed bund walls and overburden stockpiles, will also have impacted

¹ Group has requested their details not be disclosed.

significantly on the potential for this land to contain extant Aboriginal sites, should they have existed here in the first place.

Figure 1-4: Topography and drainage of the study area.

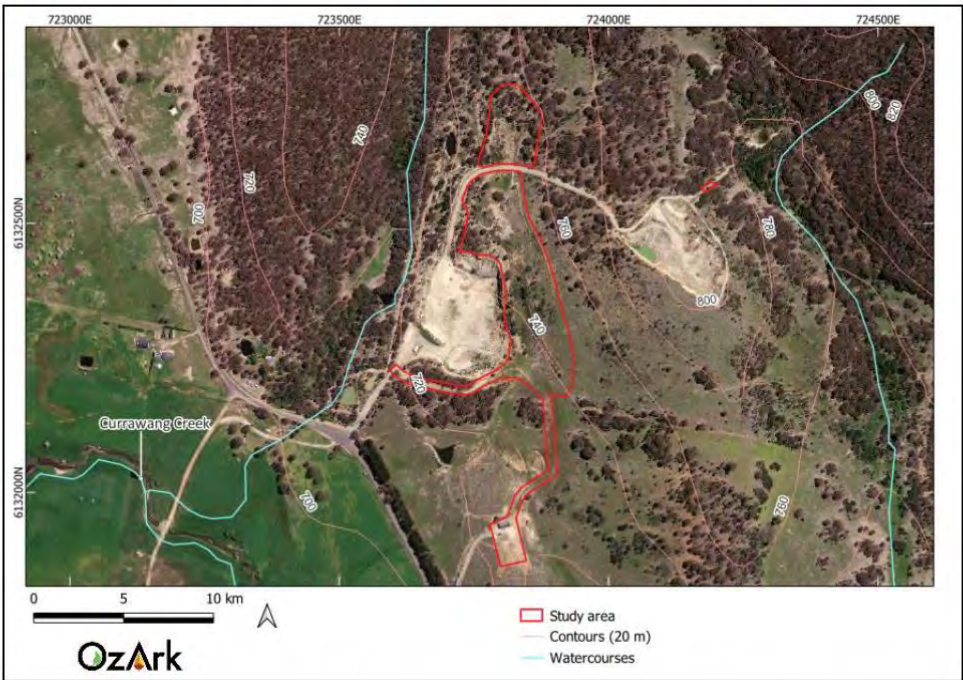
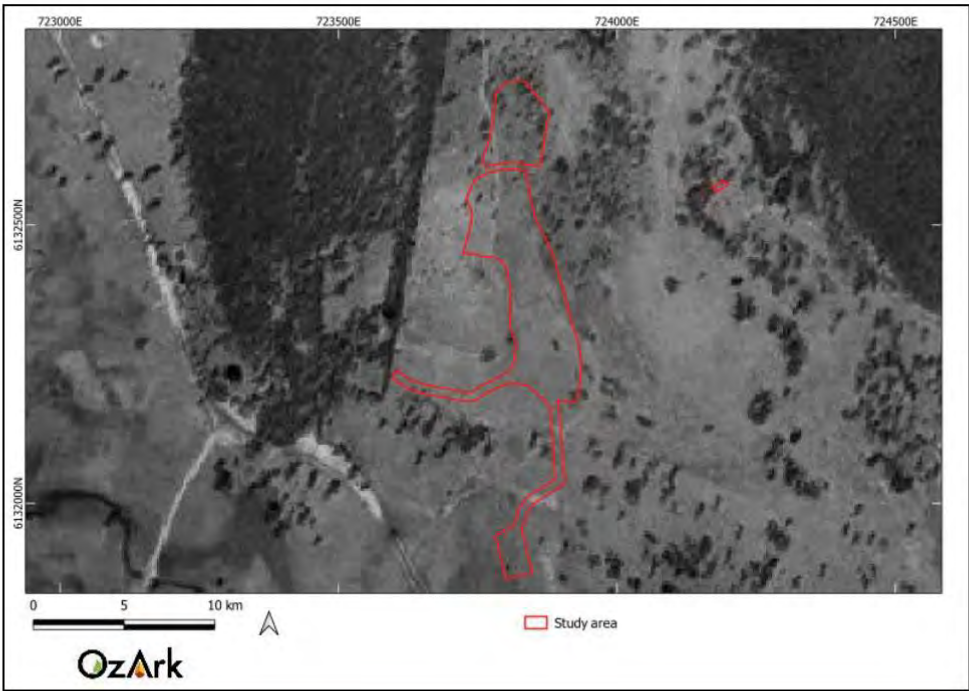


Figure 1-5: 1977 aerial with overlay of study area (source: SS 2022).



2 CULTURAL VALUES

2.1 INTRODUCTION TO CULTURAL VALUES

No matter who you are, we all have culture. Each person's culture is important; it's part of what makes us who we are.

Many Aboriginal people in Australia have a unique view of the world that's distinct from the mainstream. Land, family, law, ceremony and language are five key interconnected elements of Aboriginal culture. For example, families are connected to the land through the kinship system, and this connection to land comes with specific roles and responsibilities which are enshrined in the law and observed through ceremony. In this way, the five elements combine to create a way of seeing and being in the world that is distinctly Aboriginal.

Fundamentally, culture is living and is not static:

- Culture is acquired - we learn about culture from others in our community, including our parents
- Culture is shared - culture does not exist in a vacuum, it is shared amongst a group of people
- Culture defines core values - because we have been taught our culture and share it with our cultural group, we tend to form the same core values
- Cultures resist change but are not static - culture does and can change, but change is usually slow and gradual.

2.1.1 Connection to Country

Aboriginal and Torres Strait Islander peoples are connected to Country through lines of descent (paternal and maternal), as well as clan and language groups.

Although in the past (and sometimes into the present) there have been conflicts between different tribal groups, these were rarely over land. Aboriginal and Torres Strait Islander people have such a strong sense of belonging to country; they have no desire to own the land of others.

Territory is defined by spiritual as well as physical links. Landforms have deep meaning, recorded in art, stories, songs, and dance. Songlines or Dreaming Tracks as well as kinship structures link Aboriginal peoples to the territories of other groups. In the past, these links were also used for trade.

"When we say Country we might mean homeland, or tribal or clan area and in saying so we may mean something more than just a place; somewhere on the map. We are not necessarily referring to place in a geographical sense. But we are talking about the whole of the landscape, not just the places on it."

Professor Mick Dodson AM, August 2007

2.1.2 Managing Country

Living on this land for around 50,000 years, Aboriginal and Torres Strait Islanders established effective ways to use and sustain resources. One important aspect is the right of certain people to control the use of resources in a particular area. Aboriginal and Torres Strait Islander people don't see themselves as 'owning' land, animals, plants, or nature, but rather belonging with these things as equal parts of creation.

The rights of different groups to live in and manage certain areas of land are clear and recorded through art, stories, songs, and dance.

Deep cultural and spiritual values like totemism have also played an important part in Aboriginal and Torres Strait Islander resource management. Totemism is a belief and value system that connects human beings to other animals, plants, and aspects of nature. Groups and individuals are assigned a particular animal that they are related to and must care for. This gives them a profound sense of connection to and responsibility for the natural world.

Aboriginal and Torres Strait Islanders people have a wide range of traditional methods for gathering food including fish traps, subsistence agriculture, hunting and harvesting a wide range of natural fruits and vegetables. Some groups of people would stay in one place, while others moved around the land according to the seasons, to ensure sustainable and rich food supplies, and to fulfil their spiritual and cultural obligations.

Even before 1788 there were complex relationships for long distance trade between Aboriginal and Torres Strait Islander communities especially for coastal shells and stone hatchets. When people from different groups met socially to share resources, for ceremonies or to settle disputes, they brought items to exchange. Items included stones for hatchets, kangaroo skins, timber for spears, ochre or clay for paint and marine shells for decoration. The exchange of objects was not motivated by a desire for wealth accumulation but a social system to build connection between people and groups.

2.1.3 Recognising lore

In much of eastern Australia, Aboriginal communities live their lives like most Australians without resorting to tribal lore. However, in certain crucial areas, particularly associated with family, leadership roles, and caring for Country, Aboriginal lore continues, even in the most urbanised communities.

2.2 IDENTIFYING CULTURAL VALUES

A major aim of this assessment is to identify any cultural values within the landscape in which the proposal is located so that those values can be recognised and incorporated into the ACHAR's management recommendations.

Any cultural values relating to the proposal area will be captured by the OzArk archaeologists (if such information is provided by RAPs during the survey) and included in the ACHAR.

Understanding cultural landscapes can only come from the views of a particular community, in this case, the Aboriginal community. Unless informed, OzArk will not know of the community's feelings towards the cultural landscape in which the project will be located. Should any RAPs have knowledge of cultural values regarding the proposal area that they wish to share or that may affect the survey methodology set out in **Section 4**, OzArk invites them to contact us so that these values can be recorded and/or responded to in the methodology.

2.2.1 Use of information collected

An ACHAR will be prepared for the project which articulates Aboriginal cultural values and associated conservation methods across the proposal area, as identified during the consultations. The ACHAR will be circulated to all RAPs for comment as is set out in the ACHCRs. The ACHAR will be available to Heritage NSW for their consideration of the proposal and the report will be publicly available.

2.2.2 Public / confidential information

Information will be treated in accordance with instructions received by Aboriginal informants. Information described as confidential (culturally sensitive) will not be detailed in the publicly available report. Confidential information should be made available to the Applicant, its heritage consultants, and Heritage NSW so that significant cultural values can be conserved. On advice from the provider of the information, a redacted ACHAR would be made available to the wider public where any sensitive cultural information is removed.

2.2.3 Copyright

Information collected for this assessment remains the property of the Aboriginal informants and the author. Without written permission from individual informants and the author information may not be used for purposes other than those outlined above.

3 ARCHAEOLOGICAL CONTEXT

3.1 ABORIGINAL PEOPLE OF THE STUDY AREA

David Horton's 1994 map of Aboriginal linguistic boundaries places the study area on the border of the Ngunawal and Gundungurra language groups. In contrast, Tindale's 1974 map places the study area within the Ngunawal language group with the Gandangara (Gundungurra) linguistic group further north of Goulburn.

The study area is within the boundaries of the Pejar LALC.

3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The Aboriginal occupation of Australia begins prior to 40,000 BP (years before present) and possibly earlier than 50,000 BP. Dates exceeding 20,000 years occur in almost all parts of Australia resulting in the expectation that most areas should have a Pleistocene (>12,000 BP) occupational signature. However, such dates remain relatively rare due to a range of factors, both behavioural and post-depositional. These factors include a possible low density of occupation in the Pleistocene period and poor preservation of archaeological materials (particularly dateable organic materials).

Paton (1998) states that regional studies indicate that the most commonly encountered archaeological sites in the region are open campsites represented by scatters of stone artefacts.

Based on an assessment of site size, context and location, a model of site patterning is suggested for the area by Paton:

- Large sites (containing several thousand artefacts over several hectares) will be found on alluvial flats along major water courses or water bodies, particularly on sandy deposits near water. These sites are large, comparatively dense and close to permanent water sources. It is thought that they represent focal points for Aboriginal activity and would have been camped at regularly, and probably by larger groups than average.
- Smaller sites are found on undulating hills. These comprise the vast majority of sites in the region. The largest of them (and the majority) are found close to water sources. Sites become fewer in number and smaller away from water, and where ground is steeply sloping, such as hillsides. These sites probably represent small camps occupied when ephemeral water sources are full, and only used for short periods.
- A small number of sites are located on hilltops. Some of these sites are larger than those found on undulating hills, but smaller than those on the alluvial flats. These camps may represent ephemeral camps similar to those described above, although there is some historical evidence to suggest they may be associated with ceremonial activities.

3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the Aboriginal Heritage Information Management System (AHIMS) database on 1 November 2022 returned 23 results for Aboriginal sites within a 10 km radius of the study area (GDA Zone 55 Eastings: 718903–728903; Northings: 6127386–6137386).

Table 3-1 lists the site types and frequencies of the search result and **Figure 3-1** shows the location of previously recorded sites in the vicinity of the study area.

Stone artefact sites (isolated finds, artefact scatters and areas of potential archaeological deposit (PAD) are the most frequently recorded site types in the vicinity of the study area (**Table 3-1**). One other site type, quarry, is recorded in the region but to a lesser extent and in association with PAD.

Artefact scatters are a relatively stable indicator of past Aboriginal occupation. Sites in this category are less ambiguous to recognise and can remain close to their original deposition context despite disturbances.

Table 3-1: AHIMS site types and frequencies

Site Type	Number	% Frequency
Artefact scatter	15	65.22
Isolated find	5	21.74
Isolated find & PAD	1	4.35
Artefact scatter & PAD	1	4.35
Quarry & artefact scatter	1	4.35
Total	23	100

Figure 3-1 shows that one site, 51-5-0063 (CL1), is located near the study area. Site 51-5-0063 was recorded by Paton (1998) during his assessment for an expansion of the existing Barina Quarry. The site is described as consisting of three stone artefacts across a 50 m by 150 m area. Artefact materials consist of quartz and silcrete.

There remains some confusion over the location of 51-5-0073. As shown on **Figure 3-2**, the AHIMS location, when converted from AGD to GDA, places the site to the east of Pit 2. This location somewhat conforms to Paton's observation that the site is "about 500 m east of the existing hard rock quarry", i.e. Barina Quarry Pit 1 (see **Figure 3-3**). However, the site description of it being located on a track, and where it is shown on Paton 1998 Figure 2, places the site to the north of the eastern hard rock quarry. This area is also fenced to prevent impact to the site. On the balance of the evidence, the fenced location is considered to be where the site is located.

Figure 3-1: AHIMS sites in relation to the study area.

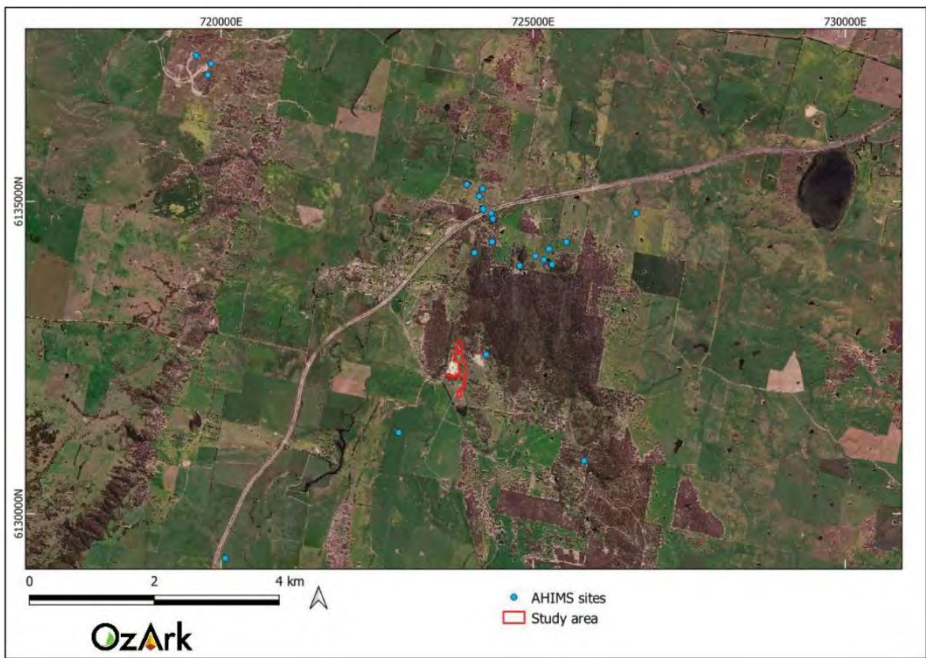


Figure 3-2. Aerial of the study area showing the various locations for site 51-5-0073.

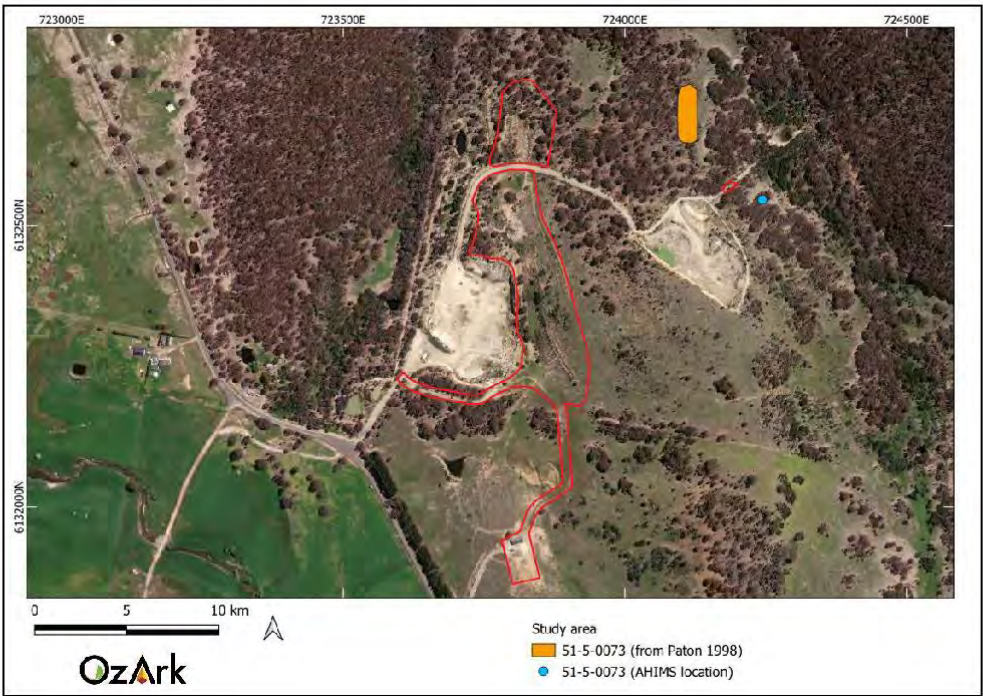
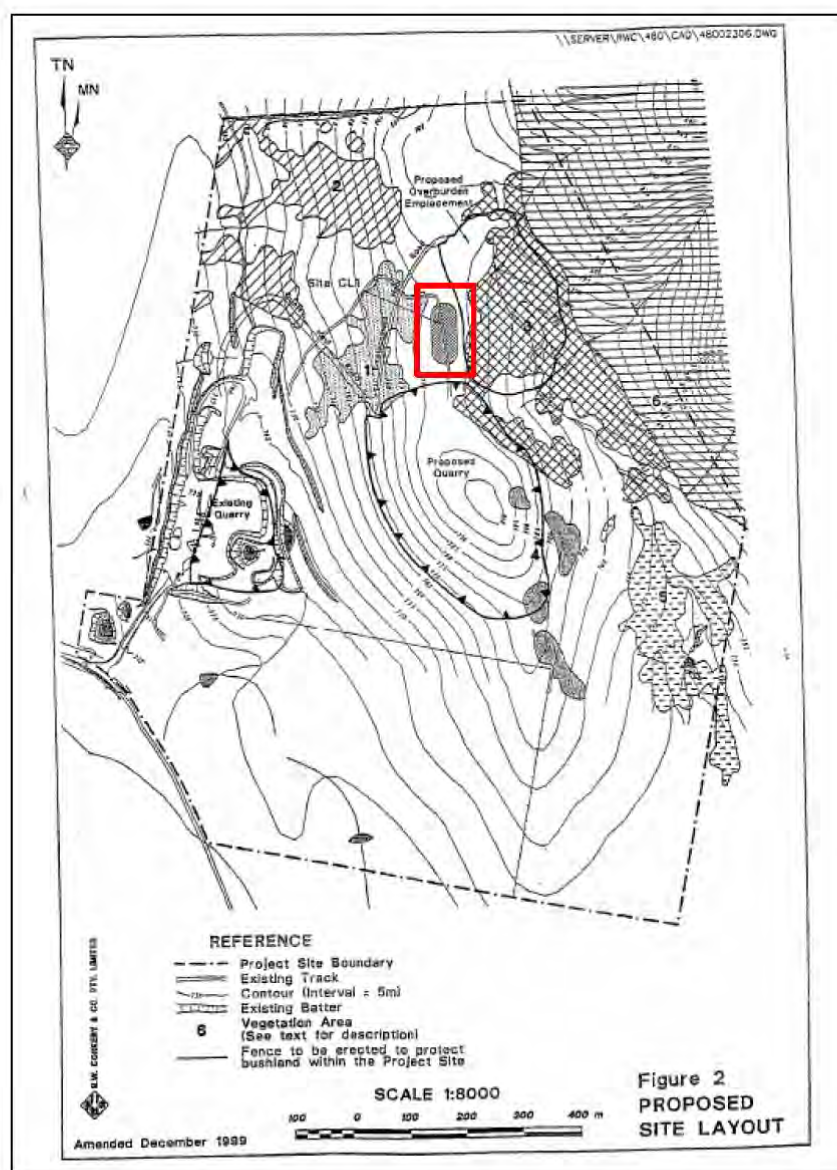


Figure 3-3. Site location of 51-5-0063 (CL1) (red square) from the original assessment in original EIS.



3.3.1 Archaeological investigations within and near the study area

3.3.1.1 *An Archaeological Investigation of a Proposed Quarry Extension (Paton 1998)*

In 1998, Robert Paton assessed 117 ha of land for the expansion of the Barina Quarry including the current study area. One Aboriginal archaeological site (51-5-0073) was recorded during the assessment (see **Figure 3-2** and **Figure 3-3**). Site 51-5-0073 was recorded as an artefact scatter

consisting of three stone artefacts (one quartz and two silcrete flakes) exposed over an area of approximately 150 by 50 m. Paton found site 51-5-0073 to be of low/moderate scientific significance.

Paton concluded that given the intensity of the study and that undertaken previously by the NSW National Parks and Wildlife Service archaeologist, it is unlikely that any other sites would be located by further archaeological work.

3.3.1.2 *Aboriginal Cultural Heritage Assessment – Proposed Collector Wind Farm (NSW Archaeology 2015)*

New South Wales Archaeology (2015) undertook an Aboriginal cultural heritage assessment of modifications to the proposed Collector Wind Farm in 2015, located 5.5 km northwest of the study area. During the assessment, three Aboriginal sites were recorded which all consisted of isolated finds. The three isolated finds consisted of three silcrete flakes and one quartz flake. All three sites were assessed to be of low archaeological significance.

NSW Archaeology concluded the landscape is comprised of very large amorphous landforms which are not archaeologically sensitive and do not contain micro-topographic features likely to have been targeted by Aboriginal people for activities other than low intensity use such as hunting and gathering and travel etc.

3.3.1.3 *Woodlawn Wind Farm – Environmental Impact Statement (Biosis as reported in URS 2004)*

In 2004, Biosis assessed heritage and archaeological impacts of the proposed Woodlawn wind farm located 17 km southeast of the study area (Biosis as reported in URS 2004). The assessment covered approximately 5 ha and found 15 previously unrecorded Aboriginal sites, all artefact scatters. Thirteen of the 15 sites were found to have low archaeological significance and possess low archaeological potential.

3.3.1.4 *Collector Waste Resource Facility (OzArk 2018)*

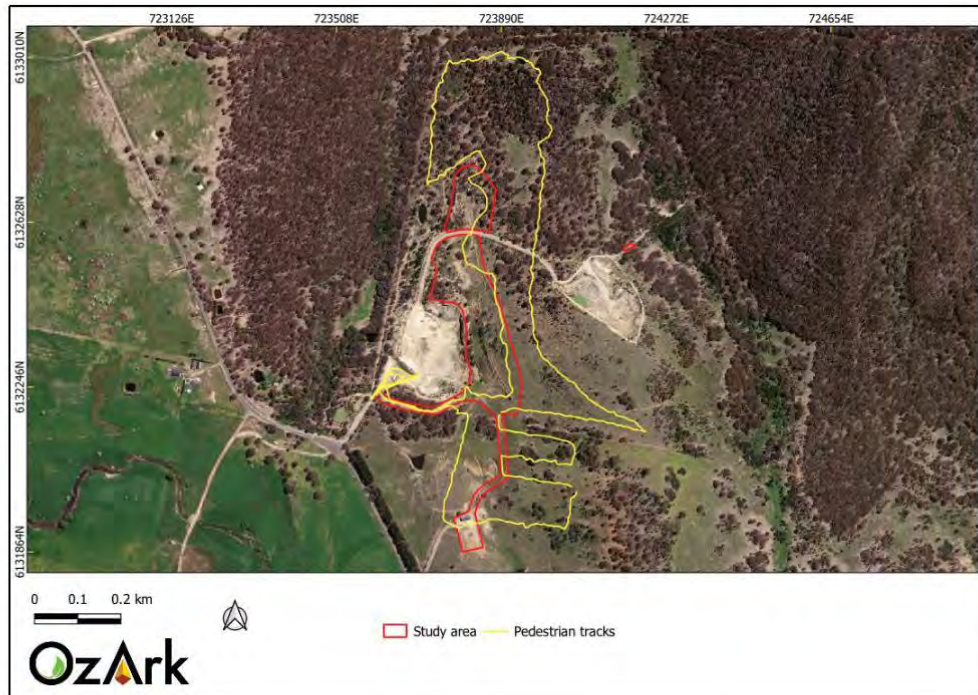
In 2018, OzArk prepared an ACHAR for the Collector Waste Resource Facility which included 10.8 ha of land and partly overlapped with the current study area. No Aboriginal sites were recorded during the assessment due to high levels of disturbance.

3.3.1.5 *Barina Quarry Modification*

As noted in **Section 1.2**, OzArk completed a survey for the project in 2023. The area assessed in 2023 was larger than the current study (see **Figure 3-4**). No Aboriginal sites were recorded during the assessment which was assisted by a representative from Pejar LALC and Tyrone Bell. No Aboriginal sites were recorded during the assessment. Further, due to the sloping nature of the landform, the observed thin soils and the high degree of disturbance, it is assessed that

there is a low probability for there to be further, undetected, subsurface sites within the assessment area.

Figure 3-4. 2023 survey tracks across the study area.



4 ASSESSMENT METHODOLOGY

4.1 ASSESSMENT APPROACH

The Aboriginal cultural heritage assessment of the study area will follow the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010b).

As highlighted in **Section 3.3**, the study area has been previously surveyed. This previous assessment has been able to successfully characterise the archaeological potential of the landforms present which precludes the need for any further archaeological survey. As such, no additional survey will be completed to inform the ACHAR.

4.2 PRODUCTION OF THE ACHAR

OzArk staff will prepare a draft ACHAR based on the previous field results, including comments from RAPs (if any are provided) and RAP assessments of the cultural significance of the study area. Critical timelines and milestones for the completion of the assessment and delivery of reports will adhere to the timeframes outlined in the ACHCRs.

OzArk staff understand that RAPs may not want culturally sensitive information to appear in the report. In these cases, we will need to work together to communicate information to the Applicant in a way that is culturally sensitive. As such, it will be beneficial for discussions to take place between the OzArk staff members drafting the report and knowledge holders with respect to the communication of culturally sensitive information.

Once approved for release, RAPs will be invited to review the draft report and provide formal comment within the ACHCR timeframes. Feedback will be incorporated into the final report and provided as an appendix for the determining authority to independently review. A copy of the final report will be provided to each stakeholder group prior to the Applicant submitting it to the relevant authorities.

REFERENCES

- Burke & Smith 2004 Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- DECCW 2010 DECCW. 2010. *Code of Practice for the Protection of Aboriginal Objects in NSW*. Department of Environment, Climate Change.
- DECCW 2010b DECCW. 2010. *Aboriginal cultural heritage consultation requirements for proponents*. Department of Environment, Climate Change and Water (now OEH).
- Hird 1991 Hird, C. 1991. *Soil Landscapes of the Goulburn 1:250,000 Sheet* map and report, Soil Conservation Service of NSW, Sydney.
- Horton 1994 Horton, D. 1994. *The Encyclopaedia of Aboriginal Australia*. Aboriginal Studies Press, Canberra.
- Mitchell 2002 Mitchell, Dr. Peter. 2002. Description for NSW (Mitchell) Landscapes Version 2. Department of Environment and Climate Change NSW.
- NSW Archaeology 2015 New South Wales Archaeology Pty Limited, 2015. *Proposed Collector Wind Farm Aboriginal Cultural Heritage Assessment Report*. A report to RATCH-Australia Corporation.
- OEH 2011 Office of Environment and Heritage 2011. Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW.
- OzArk 2018 OzArk Environment & Heritage Management 2018. *Aboriginal Cultural Heritage Assessment Report, Collector Waste Resource Facility*. A report to RW Corkery and Co. Pty Limited.
- Paton 1998 Robert Paton Archaeological Studies Pty Ltd. 1998. *An Archaeological Investigation of a Proposed Quarry Extension near Collector, New South Wales*. A Report to RW Corkery and Co. Pty Limited.
- SS 2021 Spatial Services. 2021. *Historical Imagery Viewer*. NSW Government. Online resource, accessed 1 September 2021: https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery
- Tindale 1974 Tindale N. *Aboriginal Tribes of Australia*. ANU Press, Canberra.
- URS 2004 URS 2004. *Environmental Impact Statement – Woodlawn Wind Farm*. A report to Woodlawn Wind Energy.

APPENDIX 3: AHIMS SEARCH RESULT

Appendix 3 Figure 1: 3 October 2025 result

 AHIMS Web Services (AWS) Extensive search - Site list report Your Ref/ID Number : Barina Q Client Service ID : 936508										
SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status **	Site Features	Site Types	Records
51-5-0000	Collector	AGD	55	724667	6133790	Open site	Valid	Artefact :-	Open Camp Site	490
	Contact	Records						Permits		
51-5-0079	CS1	AGD	55	725050	6133079	Open site	Valid	Artefact : 5		
	Contact T Russell	Records Archaeological Heritage Surveys						Permits		
51-5-0073	CL1	AGD	55	724180	6132360	Open site	Valid	Artefact : 9		99340
	Contact T Russell	Records Robert Pates						Permits		
51-5-0005	CS 5	AGD	55	725417	6134160	Open site	Valid	Artefact : 1		
	Contact Sarah Colley	Records Archaeological Heritage Surveys						Permits		
51-5-0301	Breadalbane AS2 - CDD4	GDA	55	724199	6134073	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		
	Contact	Records Ms Lyn O'Brien Past Traces Pty Ltd						Permits		
51-5-0001	WB 1	AGD	55	719950	6129106	Open site	Valid	Artefact :-	Open Camp Site	5078
	Contact	Records PM Hughes						Permits		
51-5-0090	CS 2	AGD	55	725156	6134052	Open site	Valid	Artefact : 1		
	Contact Sarah Colley	Records Archaeological Heritage Surveys						Permits		
51-5-0094	LEPA (Linky Pass Road 1)	AGD	55	710700	6130662	Open site	Valid	Artefact :-		
	Contact	Records Ms. Trish Saunders						Permits		
51-5-0302	Breadalbane AS2 - CDD5	GDA	55	724135	6135081	Open site	Valid	Artefact :-		
	Contact	Records Ms Lyn O'Brien Past Traces Pty Ltd						Permits		
51-5-0015	GAB5	AGD	55	724025	6134164	Open site	Valid	Artefact :- Stone Quarry :-	Open Camp Site	447
	Contact	Records ASRSYS						Permits		
51-5-0017	Wundermere 1	AGD	55	722730	6131112	Open site	Valid	Artefact :-	Open Camp Site	826
	Contact	Records R Baker						Permits		
51-5-0196	Lerida CWP SUE7/L2	GDA	55	719850	6127202	Open site	Valid	Artefact : 1		102043
	Contact	Records Mr. Andrew Pearce						Permits		
51-5-0237	Lerida CWP SUE4/L1	GDA	55	719600	6137333	Open site	Valid	Artefact : 1		
	Contact	Records Doctor Julie Didden NSW Archaeology Pty Ltd						Permits		
51-5-0013	CAB1	AGD	55	726532	6134621	Open site	Valid	Artefact :-	Open Camp Site	490,497
	Contact	Records ASRSYS						Permits		
51-5-0063	Byrnes Creek 2	AGD	55	724210	6134622	Open site	Valid	Artefact :-		98226
	Contact	Records Archaeological Risk Assessment Services (ARAS) Mr Giles (dup ID#12832) Hamm						Permits		
51-5-0014	CAB2	AGD	55	724230	6134530	Open site	Valid	Artefact :-	Open Camp Site	490,497
	Contact	Records ASRSYS						Permits		
51-5-0001	CS 3	AGD	55	724922	6133938	Open site	Valid	Artefact : 2		
	Contact Sarah Colley	Records Archaeological Heritage Surveys						Permits		

Report generated by AHIMS Web Service on 03/10/2024 for Stephanie Roden for the following area at Datum : GDA, Zone : 55, Eastings : 718903.0 - 728903.0, Northings : 6137386.0 - 6137386.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 23

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.

Page 1 of 2



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Barina Q
Client Service ID : 936508

SiteID	SiteName	Datum	Zone	Eastings	Northings	Contact	Site Status**	SiteFeatures	SiteTypes	Remarks
51-5-0303	Breadalbane IP - CDD2	GDA	55	724188	6135193	Open site	Valid	Archaeology, Potential Archaeological Deposit (RAD):		
	Contact							Permits		
51-5-0016	CAB4	AGD	55	725943	6133992	Open site	Valid	Artefact(s):	Open Camp Site	497
	Contact							Permits		
51-5-0032	Wearmouth J	AGD	55	722730	6131112	Open site	Valid	Artefact(s):	Open Camp Site	836
	Contact							Permits		
51-5-0197	Lerrida CWF-SHS7/L1	GDA	55	719787	6137022	Open site	Valid	Artefact(s):		102843
	Contact							Permits		
51-5-0002	CS4	AGD	55	725186	6133861	Open site	Valid	Artefact(s):		
	Contact							Permits		
51-5-0304	Breadalbane ASL - CDD1	GDA	55	723934	6135269	Open site	Valid	Artefact(s):		
	Contact							Permits		

** Site Status

Valid - The site has been received and accepted into the system as valid.

Destroyed - The site has been completely impacted or has been destroyed as a consequence of past activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or has been destroyed as a consequence of past activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground.

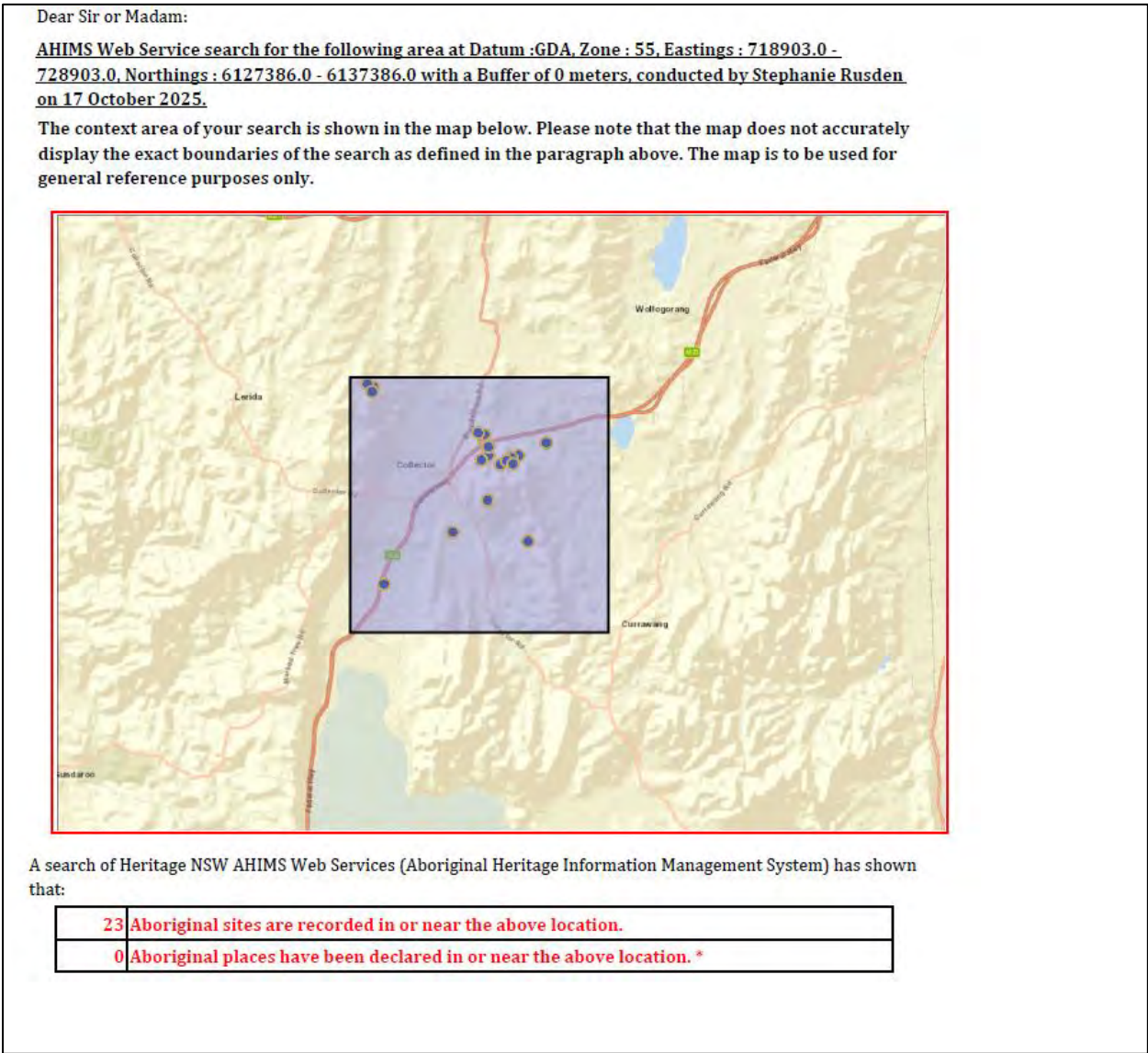
Not a site - The site has been originally entered and accepted into AHIMS as a valid site but after further investigations it was decided it is NOT an Aboriginal site. Impact of this type of site does not require permits but Heritage NSW should be notified.

Report generated by AHIMS Web Service on 03/10/2024 for Stephanie Rusden for the following area at Datum: GDA, Zone: 55, Eastings: 718903.0 - 728903.0, Northings: 6127386.0 - 6127386.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 23

This information is not guaranteed to be free from error or omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

PAGE 2 OF 3

Appendix 3 Figure 2: 17 October 2025 result



APPENDIX 4: UNANTICIPATED FINDS PROTOCOL

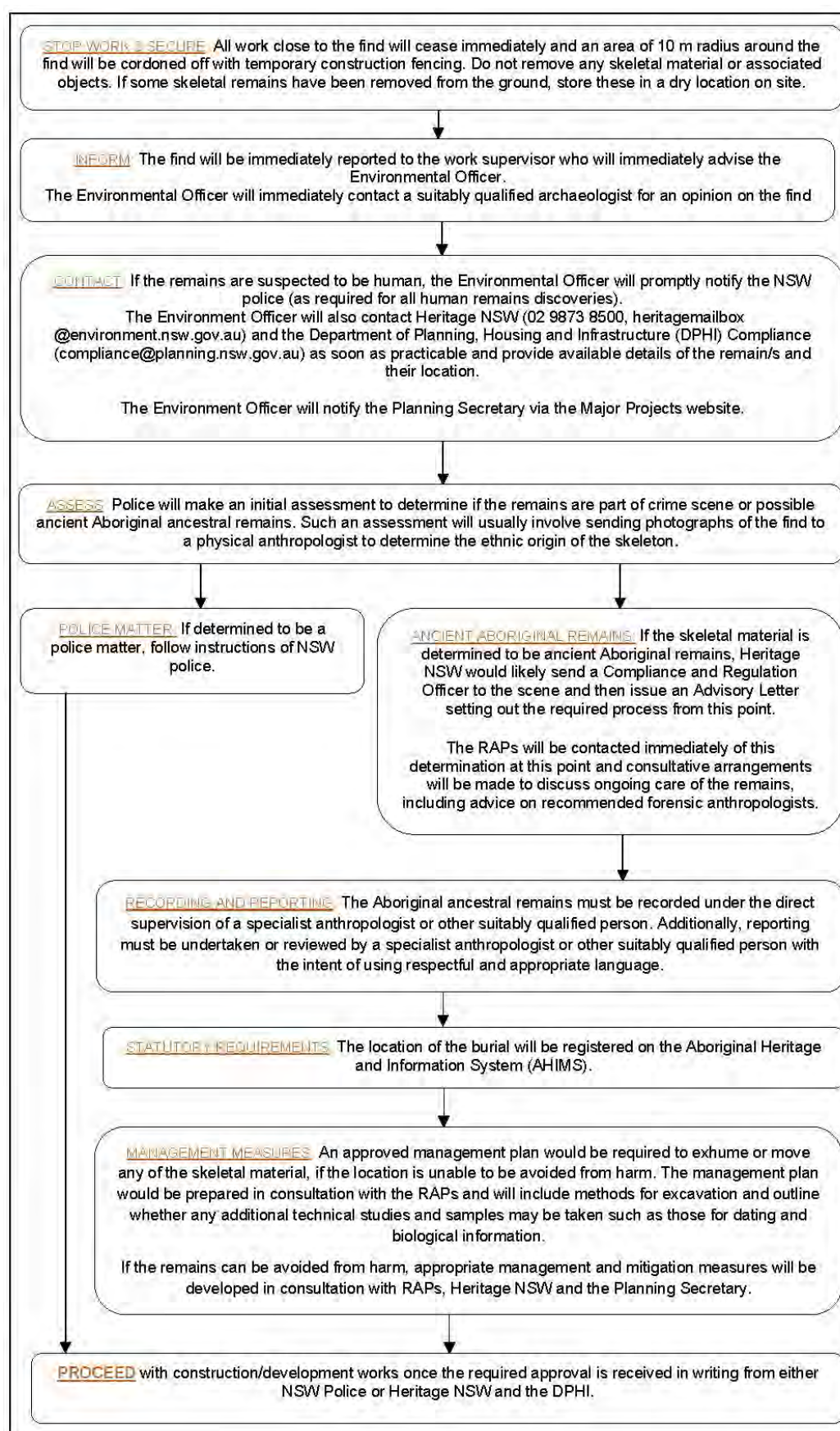
An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
 - a. Not further harm the object
 - b. Immediately cease all work at the particular location
 - c. Secure the area to avoid further harm to the Aboriginal object
 - d. Notify Heritage NSW on (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au) and the Department of Planning, Housing and Infrastructure (DPHI) Compliance (compliance@planning.nsw.gov.au) as soon as practical providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW and / or DPHI.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police, Heritage NSW and DPHI contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s)
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements, normally through the procedures of an approved ACHMP.

APPENDIX 5: UNANTICIPATED SKELETAL REMAINS PROTOCOL



APPENDIX 6: ABORIGINAL ARTEFACT IDENTIFICATION

	
A retouched silcrete flake	A quartz flake
	
Microliths (scale = 1 cm)	Volcanic flakes
	
Flake characteristics (scale = 1 cm)	A mudstone/tuff core from which flakes have been removed