



View to the southwest of the study area.

## **REVISED ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT**

---

### **STAGE 4, LAKESIDE ESTATE, LAKE WYANGAN**

GRIFFITH LOCAL GOVERNMENT AREA, NSW

MARCH 2024

Report prepared by  
OzArk Environment & Heritage  
for LWLE Pty Ltd

**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](mailto:enquiry@ozarkehm.com.au)  
[www.ozarkehm.com.au](http://www.ozarkehm.com.au)

This page has intentionally been left blank.



Heritage NSW



## ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

Report Title	Revised Aboriginal Cultural Heritage Assessment Report: Stage 4, Lakeside Estate, Lake Wyangan
Author(s) Name	Dr Jodie Benton
Author(s)' Organisation Name (if applicable)	OzArk Environment & Heritage
Author(s) contact details	145 Wingewarra St DUBBO NSW 2830 Email: jodie@ozarkehm.com.au Phone: 02 6882 0118
Address of Subject Area	Address: South Lake Drv Lakeside Estate at Lake Wyangan Title Reference: Lot 146 DP1214737 Local Government Area: Griffith
Report prepared for	Company Name: LWLE Pty Ltd Contact Person: Andrew Corry Address: 21 Bennu Circuit (PO Box 7285) Albury NSW 2640 Email: Andrew.corry@davissandershomes.com.au Phone: 02 6057 4726
Date of Report	March 2024
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 2024 and © LWLE Pty Ltd 2024
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 &amp; 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 and LWLE Pty Ltd 2024
- 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.

Dr Jodie Benton, OzArk Environment & Heritage Director

This page has intentionally been left blank.

## DOCUMENT CONTROLS

Proponent	LWLE Pty Ltd
Document Description	Revised Aboriginal Cultural Heritage Assessment Report: Stage 4, South Lake Drive Lakeside Estate, Lake Wyangan
File Location	OzArk Job No.
Clients\Lakeside Estate\ACHAR	3260
Heritage NSW reference	Griffith City Council Development Approval reference
#DOC22/687984	DA172/2022
Document Status: FINAL	Date: 7 March 2024
OzArk internal edits	V1.0 BF author, CJ & BC edit: 8/2/22–4/7/22
OzArk and client edits	V2.0 OzArk to client 5/7/22 V2.1 OzArk amends 6/7/22
Final document	V3.0-V3.7 OzArk edits 5/8/22 to 8/11/23 V3.8 OzArk response to RAP comments 16/2/24 V3.9 OzArk amends 3/3/24 V4.0 OzArk finalises 7/3/24
Prepared for	Prepared by
Andrew Corry Project Manager LWLE Pty Ltd 21 Bennu Circuit (PO Box 7285) Albury NSW 2640 P: 02 6057 4777 Andrew.corry@davissandershomes.com.au	Dr Jodie Benton Director OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 jodie@ozarkehm.com.au
<p style="text-align: center;"><b>COPYRIGHT</b></p> <p style="text-align: center;">© OzArk Environment &amp; Heritage 2024 and © LWLE Pty Ltd 2024</p> <p style="text-align: center;">All intellectual property and copyright reserved.</p> <p>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.</p> <p style="text-align: center;">Enquiries should be addressed to OzArk Environment &amp; Heritage.</p>	

### **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.
AHIMS	Aboriginal Heritage Information Management System. Administered by Department of Planning and Environment, 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.
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.
PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects are visible.

**RAP** Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.



## EXECUTIVE SUMMARY

---

OzArk Environment & Heritage (OzArk) has been engaged by LWLE Pty Ltd (the proponent) to complete an Aboriginal Cultural Heritage Assessment Report (ACHAR) of approximately 31.3 hectares (ha) of land within Lot 146 DP1214737 near Lake Wyangan in Griffith, New South Wales (NSW), which has the potential to be impacted by the proposed Stage 4 Lakeside Estate residential subdivision (the proposal). All impacts associated with the proposal are located within the study area. The proposal is in the Griffith Local Government Area.

### Initial survey results

The initial study area was surveyed on 27 January 2022 by a team consisting of one archaeologist and two representatives from the Registered Aboriginal Parties (RAPs). The initial study area was surveyed by pedestrian transects with the archaeologist and two RAP representatives spread approximately 10 metres (m) apart.

One additional Aboriginal site 49-2-0187 (Lake Wyangan OS-1) was recorded during the survey and a previously recorded site 49-1-0044 (LW2) was located. A second previously recorded site (49-2-0165 [LW8]) was visited to ground-truth that no surface artefacts are present.

These three sites were the only known sites in the initial study area at the time of the survey. However, as is described below, the initial study area was expanded following the initial survey and the current revised study area now includes a further three previously recorded sites.

### Subsurface potential

No test excavation was undertaken for this assessment. Barber (2000) and NGH (2018b) conducted extensive test excavations across the lunette landform and concluded that there was low potential for subsurface deposits. No evidence of human remains was uncovered during the test excavations.

### Possible burial

The possibility of an Aboriginal burial has been noted by two of the RAPs consulted for the proposal. The location of this burial is unverified; however, it is unlikely to exist within the study area due to:

- The proponent has alerted the design of the proposal to exclude most of the landform that the RAP identified as likely to contain the burial
- No evidence of human remains have been recorded during extensive archaeological testing within the study area
- The high degree of previous ground surface disturbance that is documented to have taken place in the study area, particularly in the south-western portions.

### Revision of study area

In late 2022, Griffith City Council reviewed a copy of this ACHAR and noted that the study area could include additional portion of land to the west as it includes artificial mounds of dirt formed by heavy machinery in 2007. Therefore, the initial study area was expanded to include this portion of land.

The additional land contains three previously recorded sites, 49-2-0027 (LW1), 49-1-0043 (LW4), and 49-2-0186 (LW Artefact Reburial 1) which have not been visited to inform of this ACHAR. However, as 49-2-0186 (LW Artefact Reburial 1) is an artefact reburial site registered by OzArk (2020), all details and location of the site are known.

The additional land is currently inundated, and as it is unknown when it will be dry enough to undertake a survey. As such, the survey results from NGH (2018b) completed over this land, which included site visits to 49-2-0027 (LW1) and 49-1-0043 (LW4), will be extrapolated to inform this ACHAR.

In total, six extant previously recorded sites are located within the study area including artefact scatters, an isolated find, and an artefact reburial: 49-2-0027 (LW1), 49-1-0043 (LW4), 49-1-0044 (LW2), 49-2-0165 (LW8), 49-2-0186 (LW Artefact Reburial 1), and 49-2-0187 (Lake Wyangan OS-1). Site 49-2-0165 (LW8) is a low-density subsurface scatter identified as part of the NGH 2018b test excavation program.

An additional two previously recorded sites, 49-1-0042 (LW3) and 49-2-0168 (LW5), are located within the southern boundary of the study area. However, both these sites are listed as 'destroyed' on the AHIMS register having been salvaged by OzArk in 2021.

### Proposal impacts

Should the proposal be approved, sites 49-1-0043 (LW4) and 49-2-0165 (LW8) will be totally harmed by the proposal. Site 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) will be partially harmed by the proposal.

The proponent will need to apply to Heritage NSW for an AHIP to harm these sites.

### Recommendations

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

1. An Aboriginal Heritage Impact Permit (AHIP) application must be sought to permit harm to four Aboriginal objects. Further details on the AHIP application are provided in **Section 10**. The sites that are likely to be harmed by the proposal are:
  - 49-1-0043 (LW4) (total harm)
  - 49-1-0044 (LW2) (partial harm)

- 49-2-0165 (LW8) (total harm)
  - 49-2-0187 (Lake Wyangan OS-1) (partial harm).
2. It is recommended that the following measures will be carried out prior to the commencement of works under the authority of an approved AHIP:
    - a) 49-1-0044 (LW2; part), 49-1-0044 (LW4), 49-2-0165 (LW8), 49-2-0186 and 49-2-0187 (Lake Wyangan OS-1; part) will undergo a community collection of visible artefacts in the AHIP area before works commence as set out in **Section 9.2**
    - b) 49-2-0165 (LW8) does not have a manifestation of surface artefacts, although the site location should be visited at the time of the salvage to ensure that this remains the case. If surface artefacts are visible, they will be collected using the same methodology as set out in **Section 9.2**
    - c) The 'heritage exclusion zone' shown on **Figure 9-1** will be fenced to ensure that there are no inadvertent impacts to the Aboriginal sites within this area and the relatively undisturbed portions of the lunette landform
    - d) An Aboriginal site monitor will be present during initial ground disturbing works in the area within the site extent of 49-1-0044 (LW2) designated here as the 'monitoring zone' on **Figure 9-2**. This will ensure any Aboriginal objects are recovered from this area and placed with any other artefacts recovered from the AHIP salvage program
    - e) Topsoil retained from within the development footprint will be stockpiled on site and used for revegetation works within the development footprint following works.
  3. All works must be confined to the development footprint. For any works proposed outside this area, further archaeological assessment will be required.
  4. Inductions for all construction crew members must include a cultural heritage awareness procedure to ensure awareness of the protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and to learn basic stone artefact identification (**Appendix 3**).
  5. An *Unanticipated Finds Protocol* such as that set out in **Section 10.2** must be adhered to by all site personnel for all proposed construction works.

## CONTENTS

<b>ABBREVIATIONS AND GLOSSARY.....</b>	<b>IV</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>VI</b>
<b>1 INTRODUCTION .....</b>	<b>1</b>
1.1 Description of the proposal .....	1
1.2 Background.....	1
1.3 Proposed works .....	3
1.4 Study area .....	4
<b>2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT .....</b>	<b>6</b>
2.1 Relevant legislation.....	6
2.1.1 Commonwealth legislation .....	6
2.1.1.1 Commonwealth Environment Protection and Biodiversity Conservation Act 1999.	6
2.1.1.2 Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984	6
2.1.2 State legislation .....	7
2.1.2.1 NSW Environmental Planning and Assessment Act 1979.....	7
2.1.2.2 NSW National Parks and Wildlife Act 1974 .....	7
2.2 Assessment approach .....	8
2.3 Purpose and objectives.....	8
2.4 Report compliance with the Code of Practice.....	9
2.5 Date of archaeological assessment .....	10
2.6 OzArk involvement.....	10
2.6.1 Field survey .....	10
2.6.2 Reporting .....	10
<b>3 ABORIGINAL COMMUNITY CONSULTATION .....</b>	<b>11</b>
3.1 Introduction to cultural values .....	11
3.2 Aboriginal community consultation.....	11
3.2.1 ACHCRs Stage 1 .....	12
3.2.2 ACHCRs Stages 2 .....	12
3.2.3 ACHCRs Stage 3.....	12
3.2.4 ACHCRs Stage 4.....	13
3.2.5 Project update letter (16 December 2022) .....	13
3.2.6 Stage 4 (second round) .....	13
3.2.7 Project update letter (7 March 2024).....	15

3.3	Aboriginal community involvement in the assessment .....	15
3.4	Cultural values identified throughout the ACHCR process .....	15
<b>4</b>	<b>LANDSCAPE CONTEXT .....</b>	<b>16</b>
4.1	Topography.....	16
4.1.1	Survey units.....	16
4.2	Geology and soils .....	18
4.3	Hydrology .....	19
4.4	Vegetation .....	19
4.5	Land use history and existing levels of disturbance.....	20
4.6	Conclusion .....	21
<b>5</b>	<b>ARCHAEOLOGICAL CONTEXT .....</b>	<b>23</b>
5.1	Ethno-historic sources of regional Aboriginal culture.....	23
5.2	Regional archaeological context .....	23
5.3	Local archaeological context.....	25
5.3.1	Desktop database searches conducted .....	25
5.3.2	Archaeological investigations near or within the study area .....	28
5.4	Archaeological context: Conclusion .....	32
5.5	Predictive model for site location.....	32
5.5.1	Site types in the region of the study area .....	33
5.5.2	Landform modelling of archaeological potential .....	34
5.5.3	Conclusion .....	35
5.6	Research questions .....	36
<b>6</b>	<b>RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT .....</b>	<b>38</b>
6.1	Sampling strategy and field methods .....	38
6.2	Project constraints .....	39
6.3	Effective survey coverage .....	40
6.4	Aboriginal sites recorded.....	41
	Lake Wyangan OS-1 (49-2-0187).....	42
6.5	Previously recorded Aboriginal sites investigated .....	44
6.6	Portion of the study area not surveyed .....	46
6.7	Subsurface potential .....	47
6.8	Aboriginal community comments on the survey .....	48
6.9	Summary of survey results.....	48
6.9.1	Discussion .....	49

6.9.2	Responses to the research questions .....	50
<b>7</b>	<b>SIGNIFICANCE ASSESSMENT .....</b>	<b>52</b>
7.1	Introduction to significance assessment.....	52
7.1.1	Identifying cultural significance .....	52
7.1.1.1	Social or cultural value .....	52
7.1.1.2	Scientific (archaeological) value.....	53
7.1.1.3	Aesthetic value .....	53
7.1.1.4	Historic value .....	53
7.2	Assessed significance of the recorded sites.....	54
7.2.1	Statement of significance .....	55
<b>8</b>	<b>ASSESSING HARM .....</b>	<b>57</b>
8.1	Avoiding and minimising harm .....	57
8.1.1	Conserving significant Aboriginal cultural heritage .....	57
8.1.2	Opportunities to conserve Aboriginal cultural heritage values .....	57
8.2	Likely harm to Aboriginal heritage from the proposal.....	57
8.3	Ecologically sustainable development principles.....	58
8.3.1	Intergenerational equity .....	58
8.3.2	The precautionary principle.....	58
8.3.3	Principle of Integration .....	59
8.3.4	Applicability to the proposal .....	59
<b>9</b>	<b>MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES.....</b>	<b>60</b>
9.1	General management principles .....	60
9.2	Management and mitigation of recorded Aboriginal sites .....	60
9.2.1	Management of potentially impacted Aboriginal sites.....	60
9.2.2	Management of Aboriginal objects not being harmed.....	62
9.2.2.1	Fencing.....	62
9.2.2.2	Monitoring by an Aboriginal site officer .....	62
9.2.2.3	Project controls .....	62
<b>10</b>	<b>AHIP APPLICATION DETAILS.....</b>	<b>65</b>
10.1	AHIP details .....	65
10.1.1	Background .....	65
10.1.2	Proposed work.....	65
10.1.3	Proposed term .....	65
10.1.4	AHIP area .....	66

10.1.5	Cadastral details .....	67
10.1.6	Descriptions of 'harm' .....	67
10.1.6.1	Community collection .....	67
10.1.6.2	Harm to certain Aboriginal objects through the proposed works.....	68
10.1.6.3	Areas where Aboriginal objects will not be harmed .....	68
10.2	Heritage contingency protocols for unanticipated finds .....	68
<b>11</b>	<b>RECOMMENDATIONS .....</b>	<b>70</b>
	<b>REFERENCES .....</b>	<b>72</b>
	<b>PLATES.....</b>	<b>74</b>
	<b>APPENDIX 1 COMMUNITY CONSULTATION LOG.....</b>	<b>77</b>
	Appendix 1 Figure 1: Community consultation log .....	77
	Appendix 1 Figure 2: Stage 1 advertisement. ....	80
	Appendix 1 Figure 3: Stage 1 letters to agencies.....	81
	Appendix 1 Figure 4: Stage 1 replies from agencies.....	83
	Appendix 1 Figure 5: Stage 1 expressions of interest to Aboriginal community stakeholders. 84	
	Appendix 1 Figure 6: Stage 2/3 letters to RAPs.....	86
	Appendix 1 Figure 7: Stage 2/3 comments. ....	87
	Appendix 1 Figure 8: Stage 4 cover letter (sample) .....	88
	Appendix 1 Figure 9: Stage 4 RAP response (Neal Cranston).....	89
	Appendix 1 Figure 10: Project update letter (16 December 2022).....	90
	Appendix 1 Figure 11: Correspondence with Neal Cranston following project update.....	92
	Appendix 1 Figure 12: Stage 4 (second round) cover letter for revised ACHAR .....	95
	Appendix 1 Figure 13: RAP comments on the revised ACHAR .....	96
	Appendix 1 Figure 14: Emails to Neal Cranston and Will Carter advising of Stage 4 (second round) RAP comments being addressed in the final ACHAR.....	97
	Appendix 1 Figure 15: Project update letter (7 March 2024).....	99
	<b>APPENDIX 2: AHIMS SEARCH.....</b>	<b>104</b>
	<b>APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION.....</b>	<b>107</b>

## FIGURES

Figure 1-1: Map showing the location of the proposal. ....	1
Figure 1-2: Initial study area assessed in 2022 in relation to the current revised study area.....	3
Figure 1-3: Proposed subdivision plan. ....	4

Figure 1-4: Aerial showing the study area. ....	5
Figure 4-1: Survey Units in the study area. ....	17
Figure 4-2: Aerial of the study area showing the location of the survey units.....	18
Figure 4-3: Lake Wyangan in relation to the study area. ....	19
Figure 4-4: 1958 aerial with overlay of study area. ....	20
Figure 4-5: Extensive earthwork disturbance from 2007 in relation to the study area. ....	21
Figure 5-1: AHIMS sites in relation to the study area.....	27
Figure 5-2: Barber 2000 test pit locations (NGH 2018b).....	29
Figure 5-3: NGH 2018b test pit locations (NGH 2018b).....	31
Figure 5-4: AHIMS sites in relation to landforms in the study area. ....	35
Figure 6-1: Pedestrian transects captured during the survey.....	39
Figure 6-2: Aerials of the initial and revised study area in wet and dry conditions. ....	40
Figure 6-3: Aerial showing the location and extent of 49-2-0187 (Lake Wyangan OS-1). ....	42
Figure 6-4: 49-2-0187 (Lake Wyangan OS-1). View of site and selection of recorded artefacts. .....	43
Figure 6-5: View of artefacts recorded in the site extent of 49-1-0044 (LW2) during the 2022 survey. ....	45
Figure 6-6: 49-1-0044 (LW2). View of site and selection of recorded artefacts.....	45
Figure 6-7: Views of site locations over time (1958–2023). ....	47
Figure 9-1: ‘Heritage exclusion area’ and area requiring fencing ....	63
Figure 9-2: Portion of LW2 site extent requiring monitoring.....	64
Figure 10-1: The AHIP area in relation to AHIP C0004458.....	66
Figure 10-2: The proposed AHIP area and the application Aboriginal sites. ....	67

## TABLES

Table 2-1: Report compliance with the Code of Practice. ....	9
Table 3-1: Responses to RAP correspondence on the revised ACHAR. ....	14
Table 5-1: Aboriginal cultural heritage: desktop-database search results. ....	25
Table 5-2: AHIMS site types and frequencies.....	26
Table 5-3: Site types recorded in the region of the study area.....	33
Table 5-4: Likelihood of landforms within the study area to contain Aboriginal objects. ....	35
Table 5-5: Likelihood of certain site types being present in the study area. ....	36
Table 6-1: Effective survey coverage. ....	41
Table 6-2: Effective survey coverage and incidences of site recording.....	41
Table 6-3: Aboriginal cultural heritage sites recorded during the survey.....	41
Table 6-4: 49-2-0187 (Lake Wyangan OS-1) artefact attributes. ....	44
Table 6-5: 2022 reassessment of previously recorded Aboriginal sites inspected. ....	44



Table 7-1: Aboriginal cultural heritage: significance assessment.....	55
Table 8-1: Aboriginal cultural heritage - impact assessment.....	57
Table 8-2: Application of ESD principles to the proposal. ....	59
Table 10-1: Cadastral details for the AHIP area. ....	67
Table 10-2: Aboriginal objects subject to community collection. ....	68

## PLATES

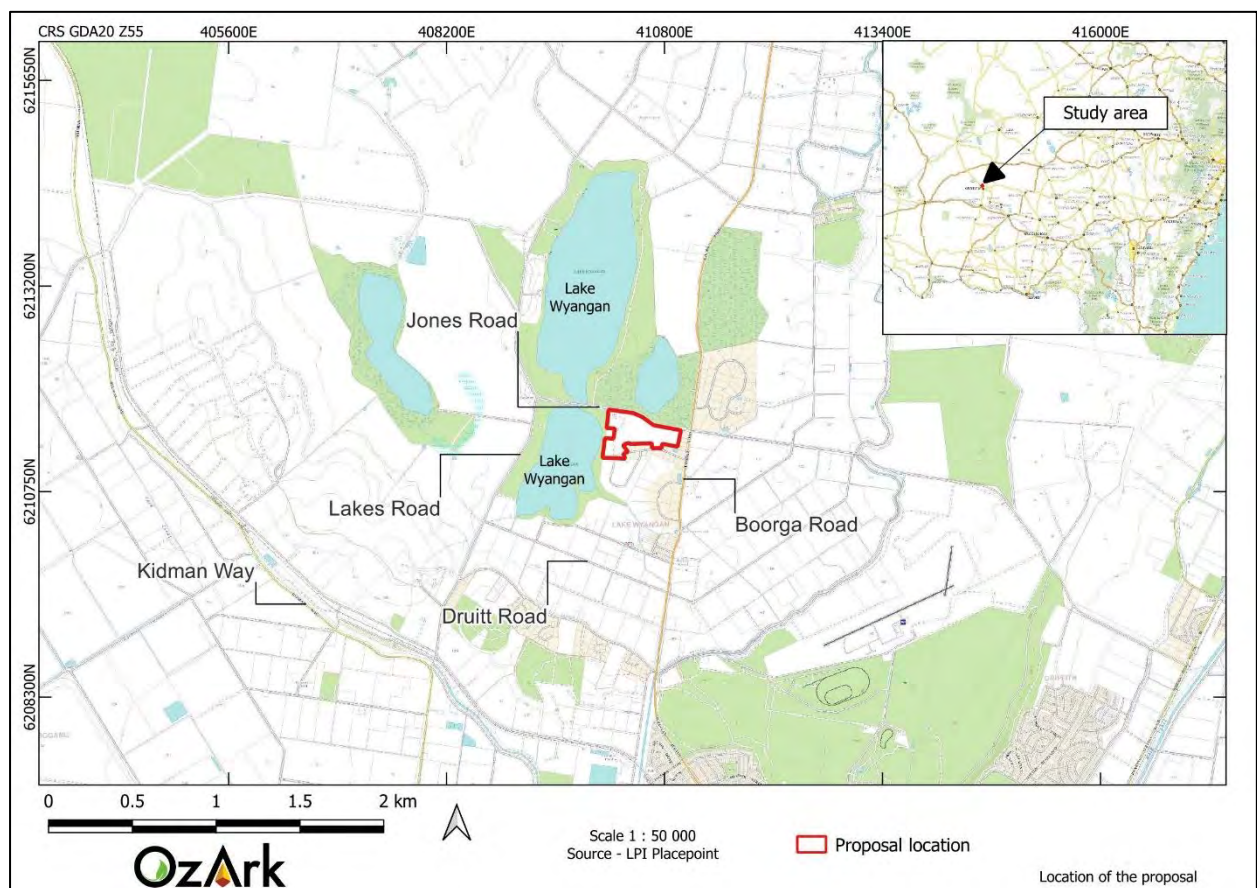
Plate 1: View to the north of the study area within the site extent of 49-1-0044 (LW2) showing the extensive reed cover. ....	74
Plate 2: View to the north of the study area showing dense grass and weed cover. ....	74
Plate 3: View to the east of the study area showing dense grass and weed cover. ....	75
Plate 4: View to the north towards Jones Road showing the dirt track that provided visibility. ...	75
Plate 5: View of 100% GSV provided on a dirt track.....	76
Plate 6: View to the west of the study area showing a stockpile from the extensive earthworks in 2008.....	76

# 1 INTRODUCTION

## 1.1 DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by LWLE Pty Ltd (the proponent) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) of Lot 146 DP1214737 which has the potential to be impacted by the fourth stage of the proposed Lakeside Estate residential subdivision (the proposal). The proposal is near Lake Wyangan in Griffith, New South Wales (NSW), in the Griffith Local Government Area (LGA) (**Figure 1-1**).

**Figure 1-1: Map showing the location of the proposal.**



## 1.2 BACKGROUND

In 2018, an ACHAR was prepared by NGH Environmental (NGH) for the proposed continuation and development of the housing subdivision referred to as Lakeside Estate at Lake Wyangan in the Griffith LGA (NGH 2018b). In 2021, OzArk completed the salvage and reburial for the Aboriginal objects listed within Aboriginal Heritage Impact Permit (AHIP) #C0004458 associated with Stages 2 and 3 of the subdivision (OzArk 2021). The proponent is now proposing to proceed with Stage 4 of the housing subdivision.

This ACHAR examines any potential impacts to Aboriginal cultural heritage associated with Stage 4 of the subdivision.

In late 2022, Griffith City Council reviewed a copy of the ACHAR prepared for the proposal and noted that the study area could include additional land to the west as it includes artificial mounds of dirt formed by heavy machinery in 2007. Griffith City Council proposed that this area should be included in the proposal and the proponent should level the mounds so that purchasers of the lots (once subdivided) can use this portion of land. Therefore, the initial study area assessed in the 2022 ACHAR was expanded to include this portion of land (**Figure 1-2**).

The additional land contains three previously recorded sites, 49-2-0027 (LW1), 49-1-0043 (LW4), and 49-2-0186 (LW Artefact Reburial 1) which have not been visited to inform of this revised ACHAR. However, as 49-2-0186 (LW Artefact Reburial 1) is an artefact reburial site registered by OzArk (2020), all details and location of the site are known.

The additional land, and the recorded sites within it, have not been revisited because following Griffith City Council's decision to have this area included, it has been inundated and survey has not been possible. This floodwater is unlikely to recede for some time, and as such, the survey results from NGH (2018b) completed over this land, which included site visits to 49-2-0027 (LW1) and 49-1-0043 (LW4), have been extrapolated to inform this revised ACHAR.

In total, six extant previously recorded sites are located within the revised study area including artefact scatters, an isolated find, and an artefact reburial: 49-2-0027 (LW1), 49-1-0043 (LW4), 49-1-0044 (LW2), 49-2-0165 (LW8), 49-2-0186 (LW Artefact Reburial 1), and 49-2-0187 (Lake Wyangan OS-1). Site 49-2-0165 (LW8) is a low-density subsurface scatter identified as part of the NGH 2018b test excavation program.

An additional two previously recorded sites, 49-1-0042 (LW3) and 49-2-0168 (LW5), are in the southwest. However, both these sites are listed as 'destroyed' on the AHIMS register having been salvaged by OzArk in 2021 under AHIP #C0004458.

This aspect of the assessment is discussed further in **Section 6.6**.

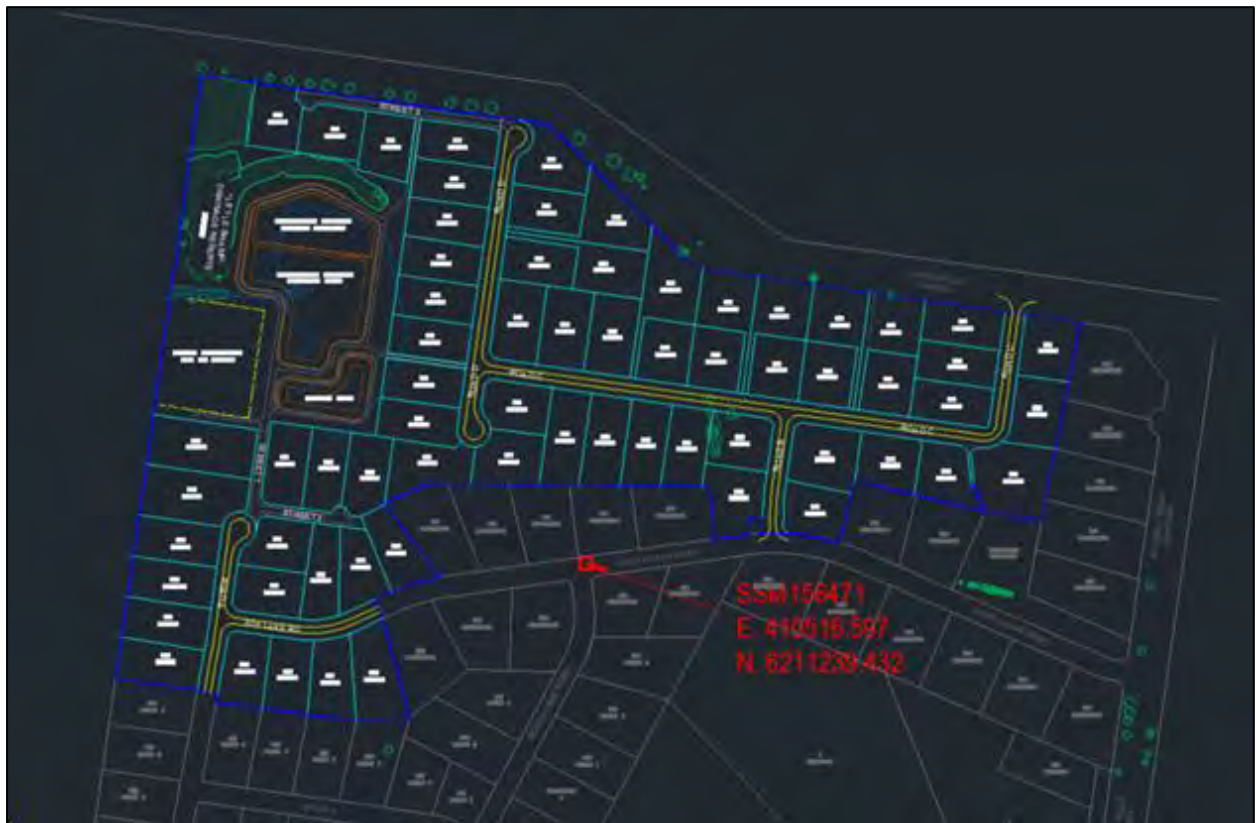
**Figure 1-2: Initial study area assessed in 2022 in relation to the current revised study area.**



### 1.3 PROPOSED WORKS

The proposal seeks approval to subdivide the study area into sixty-seven (67) residential lots and carry out associated civil construction works including the creation of internal roads and infrastructure (**Figure 1-3**). The proposal will also include a drainage reserve located towards the northwestern boundary of the study area.



**Figure 1-3: Proposed subdivision plan.**

## 1.4 STUDY AREA

The proposal is located at Lake Wyangan, approximately six kilometres (km) northwest of Griffith in south-western NSW (**Figure 1-1**).

The study area describes the area in which all impacts associated with the proposal will be located (**Figure 1-4**) and is entirely within Lot 146 DP1214737. The study area covers approximately 31.3 hectares (ha) within land that has been previously cleared and is predominantly a flat lunette, with a gentle depression situated in the central western portion.

Figure 1-4: Aerial showing 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 2013). 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 *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*

The 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.

##### 2.1.1.2 *Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* is aimed at the protection from injury and desecration of areas and objects that are of significance to Aboriginal Australians. This legislation has usually been invoked in emergency and conflicted situations.

#### Applicability to the proposal

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 *NSW 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 Minister responsible for the Act is the Minister for Planning.

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

#### **Applicability to the proposal**

The current proposal will be assessed under Part 4 of the EP&A Act.

### **2.1.2.2 *NSW 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 indigenous and non-European 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 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 Department of 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 proposal

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

Under Section 89A of the NPW Act, it is a requirement to notify the Secretary of DCCEEW of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on AHIMS that is administered by Heritage NSW.

## **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 2010).

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 *Aboriginal cultural heritage consultation requirements for proponents* (ACHCRs) (DECCW 2010b).

## **2.3 PURPOSE AND OBJECTIVES**

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

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 study area. 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	<b>Section 5</b>
Requirement 1b	Review AHIMS searches	<b>Section 5.3.1</b>
Requirement 2	Review the landscape context	<b>Section 4</b>
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	<b>Section 5.2 and Section 5.3</b>
Requirement 4a	Develop predictive model	<b>Section 5.5</b>
Requirement 4b	Present predictive model results	<b>Section 5.5.3</b>
Requirement 5a	Archaeological survey sampling strategy	<b>Section 6.1</b>
Requirement 5b	Archaeological survey requirements	This Requirement was fulfilled during the undertaking of the survey
Requirement 5c	Archaeological survey units	<b>Section 4.1.1</b>
Requirement 6	Site definition	<b>Section 5.5.1</b>
Requirement 7a	Site recording information to be recorded	<b>Section 6.4</b>
Requirement 7b	Site recording: scales for photography	All artefact photographs employed a centimetre scale bar.
Requirement 8a	Geospatial information	All artefact locations were logged using a non-differential handheld GPS.
Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA Zone 55.
Requirement 9	Record survey coverage data	<b>Section 6.1</b>
Requirement 10	Analyse survey coverage	<b>Section 6.3</b>
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.
Requirement 13a	Notifying Heritage NSW of breaches	Not applicable

Code of practice requirement	Context of the requirement	Concordance in this report
Requirement 13b	Providing Heritage NSW with information	Not applicable
Requirement 14-17	Test excavation which is not excluded from the definition of harm	Test excavation did not take place.
Requirement 18-20	Artefact recording and analysis	The recording of Aboriginal objects during this assessment followed these requirements.

## 2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The field survey was undertaken by OzArk Archaeologist, Brendan Fisher, on 27 January 2022. Ms Roslyn Simpson from Griffith Local Aboriginal Land Council (LALC) and Neal Cranston also attended the survey.

## 2.6 OZARK INVOLVEMENT

### 2.6.1 Field survey

The fieldwork survey was undertaken by:

- Brendan Fisher (OzArk Archaeologist, B Arts Archaeology, The University of Sydney).

### 2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Brendan Fisher
- Contributor: Yekun Zhang (OzArk Archaeologist, MSc and PhD Australian National University)
- Reviewers: Ben Churcher (OzArk Principal Archaeologist; BA [Hons], Dip Ed) and Chelsea Jones (OzArk Senior Archaeologist, BA [Hons] University of Queensland).

### 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 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.

#### 3.2 ABORIGINAL COMMUNITY CONSULTATION

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 proposal's management recommendations.

The Aboriginal cultural heritage assessment of the proposal has followed the ACHCRs (DECCW 2010b). 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

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

An advertisement was placed in the *Griffith Area News* on Monday 15 November 2021 to seek expressions of interest (**Appendix 1 Figure 2**).

A letter seeking information from various agencies was sent on 19 October 2021 (**Appendix 1 Figure 3**). These agencies were: Office of the Registrar, *Aboriginal Land Rights Act 1983*; Heritage NSW; National Native Title Tribunal; National Native Title Services Corporation Ltd (NTSCORP); Griffith Local LALC, Griffith City Council, and the Griffith Local Land Services. Responses were received from all agencies, including the Griffith LALC shown in **Appendix 1 Figure 4**.

Letters were sent to individuals and groups whose contact details had been provided by the government agencies (**Appendix 1 Figure 5**).

By the closing date for registration concerning this project, three groups or individuals registered to be consulted as RAPs:

- Griffith LALC
- Will Carter
- Neal Cranston.

### 3.2.2 ACHCRs Stages 2

The aim of Stages 2 is to provide information about the proposal to the RAPs.

Detailed information was provided in the assessment methodology that was issued to all RAPs for their consideration on 14 December 2021 (**Appendix 1 Figure 6**).

### 3.2.3 ACHCRs Stage 3

The aim of Stage 3 is to acquire information regarding Aboriginal cultural values associated with the proposal either through consultation and/or field work.

On 14 December 2021, all RAPs were sent a draft of the assessment methodology (**Appendix 1 Figure 6**). RAPs were provided the stipulated 28 days in which to review and comment on these documents as per Stage 3 of the ACHARs. The closing date for comment was 11 January 2022.

Neal Cranston phoned the OzArk office on 17 January 2022 to discuss his comments and feedback on the assessment methodology. He wished for the western boundary moved further east, to exclude part of the lunette (sand dune) landform from being impacted. It is Neal

Cranston's belief that this is where a burial may be located. Neal Cranston also disagrees with the Tindale map representing 'tribal' boundaries, and that the Native Title should be incorporated here instead (**Appendix 1 Figure 7**).

#### 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 and cover letter was distributed to all RAPs for review on 8 July 2022 with a 28-day review period, closing 5 August 2022 (**Appendix 1 Figure 8**).

Neal Cranston provided comments to OzArk Archaeologist Brendan Fisher on the draft ACHAR over the phone on 11 July 2022. Mr Cranston noted that the information on the possible burial near Lake Wyangan has been orally passed down from Jack Harris. This has been incorporated into relevant sections of the ACHAR. Mr Cranston also emailed a link to a website outlining the history of Lake Wyangan on 12 July 2022 (**Appendix 1 Figure 9**).

#### 3.2.5 Project update letter (16 December 2022)

On 16 December 2022, an update on the proposal was sent to all RAPs (**Appendix 1 Figure 10**). This letter advised on changes to the initial study area based on conversations between the proponent and Griffith City Council.

Correspondence with one of the RAPs, Neal Cranston, following the project update is included in **Appendix 1 Figure 11**.

#### 3.2.6 Stage 4 (second round)

A copy of the revised ACHAR was distributed to the RAPs on 9 November 2023 with a 28-day review period, closing 7 December 2023 (**Appendix 1 Figure 12**).

Two comments were received, one from Neil Cranston and another from Will Carter (**Appendix 1 Figure 13**). OzArk's responses to these comments are detailed in **Table 3-1**.

**Table 3-1: Responses to RAP correspondence on the revised ACHAR.**

RAP	Issue or query raised	OzArk response
Will Carter	<i>We disagree [with the statement that there is a low potential for burials within the study area, <b>Section 6.9.2</b>] and say there is still a higher potential for burials than the low potential stated. The lunettes which burials are usually contained within are largely un-disturbed on the sub-surface. The regional context (Lake Wyangan being in between Koonadan Aboriginal Place and a burial site in lunettes situated beside an ephemeral wetland on Barber Rd, Warrawidgee NSW) would suggest a higher chance of burials within the context of Lake Wyangan.</i>	<p>It is agreed that lunettes, including the lunette at Lake Wyangan, are landforms with high archaeological sensitivity and these types of landforms have increased potential to contain burials (see <b>Table 5-5</b>).</p> <p>The statement in <b>Section 6.9.2</b> that there is low potential for burials is specific to the southwest of the study area. The potential for burials to be present in this area has been reduced by extensive landscape modification since the early 20<sup>th</sup> century as evidenced by <b>Figure 4-5</b>.</p> <p>Additionally, as summarised in <b>Section 5.3.2</b>, the archaeological resource within the study area has been well characterised by multiple test excavation programs.</p> <p>It is also acknowledged that there is oral history of burial/s being present within the lunette and management measures are presented in <b>Section 9.2.2</b> which take into consideration the sensitivity of the landform. Management measures include fencing off the 'heritage exclusion area' which includes much of the undisturbed land in the western extent of the study area and monitoring in the southwest of the study area.</p>
Neal Cranston	<p><i>I disagree with the statement that there is no evidence of human remains in the study area...the AIMS records don't go back far enough...We have Orally history of this burial past down through our family the Harris family.</i></p> <p><i>The earth works done in the 2007/2008?... that the Griffith Council talks about, they where done for a reason....?...I would like to know what that reason was ..any leveling of mounds of sand/soil need to be monitored and sieved by Senior Qualified Professionals....?...A sign that was on the fenced area stating.. something like "Aboriginal Protected Site" needs to be investigated..this was told to us by people who back onto the stage 4 estate...they said there was a sign there but it disappeared...???... these sites need to be protected and if people can just cover-up and truck in heaps of soil to cover our sites... this has already happened on the southern side of Pelican Shores....this new study area is now a flood zone...I hope Heritage has a long hard look at this but everyone has their price..</i></p>	<p>The statement provided in <b>Section 6.9.2</b> and elsewhere in the ACHAR is referring to archaeological evidence, which is only one aspect of the assessment. However, the oral evidence of potential burial/s within the lunette landform and the study area is documented throughout the ACHAR and was carefully considered during the assessment.</p> <p>Comprehensive test excavation has already been completed (<b>Section 5.3.2</b>). The results of these investigations indicate that the subsurface deposits within and near the study area has been disturbed and there is lower potential for burial/s to be present.</p> <p>It is however acknowledged that there is oral history of a burial/s being present within the lunette and management measures are presented in <b>Section 9.2.2</b> which take into consideration the sensitivity of the landform. Management measures include fencing off the 'heritage exclusion area' which includes much of the undisturbed land in the western extent of the study area and monitoring in the southwest of the study area.</p> <p>OzArk cannot comment on the nature of the earthworks undertaken in the west of the revised study area as they occurred around 2007 prior to OzArk' involvement in the area.</p> <p>It seems likely that the 'Aboriginal Protected Site' signs were in reference to the previously recorded sites that are present within the study area (Barber 1998, Barber 2000 and / or NGH 2018a or 2018b).</p>

### **3.2.7 Project update letter (7 March 2024)**

On 7 March 2024, a letter was sent to all RAPs advising of recent changes to the proposed AHIP area for the proposal which has resulted in two Aboriginal sites 49-2-0027 (LW1) and 49-2-0186 (LW Artefact Reburial 1) now being avoided by the proposal, and part of site 49-2-0187 (Lake Wyangan OS-1) also being avoided from harm. The letter also advised that due to concerns regarding a potential burial in the lunette, the development footprint in the west of the study area has been reduced. As a result, the previously disturbed portion in the southwest will still be impacted, but the less disturbed portion in the northwest will form part of the 'heritage exclusion area' (**Appendix 1 Figure 15**).

The letter advised that all management measures in the revised ACHAR have been amended to reflect this change.

A copy of the final revised ACHAR was issued with the update letter for the RAPs records.

## **3.3 ABORIGINAL COMMUNITY INVOLVEMENT IN THE ASSESSMENT**

The field survey was undertaken on 27 January 2022 by OzArk Archaeologist, Brendan Fisher, in the company of Ms Roslyn Simpson from Griffith LALC and Neal Cranston.

## **3.4 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS**

Throughout the ACHCRs, Neal Cranston has raised concerns of a possible burial in the area surrounding the southern Lake of Lake Wyangan. This was further reiterated by Neal during the survey and was also mentioned by Will Carter following Stage 4 review of the revised ACHAR.

This significant cultural value raised regarding the potential burial was noted and forwarded to the proponent. The proponent has enacted measures to preserve the less disturbed landforms Neal was most concerned about, however, the part of this landform has now been included in the development footprint at the request of Griffith City Council (see **Section 1.2**).



## 4 LANDSCAPE CONTEXT

An understanding of the environmental context of a study area is requisite in any Aboriginal archaeological investigation (DECCW 2010). 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

The township of Griffith is situated at the confluence of four bioregions, the Murray Darling Depression, Cobar Peneplain, South Western Slopes, and the Riverina. The study area is located within the Cobar Peneplains bioregion, which is a large bioregion extending from Griffith in the south to Gongolgon in the northeast (NPWS 2003). The Cobar Peneplains are typically characterised by low undulating plains, with some sandplains and dune fields to the south (NPWS 2003).

#### 4.1.1 Survey units

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

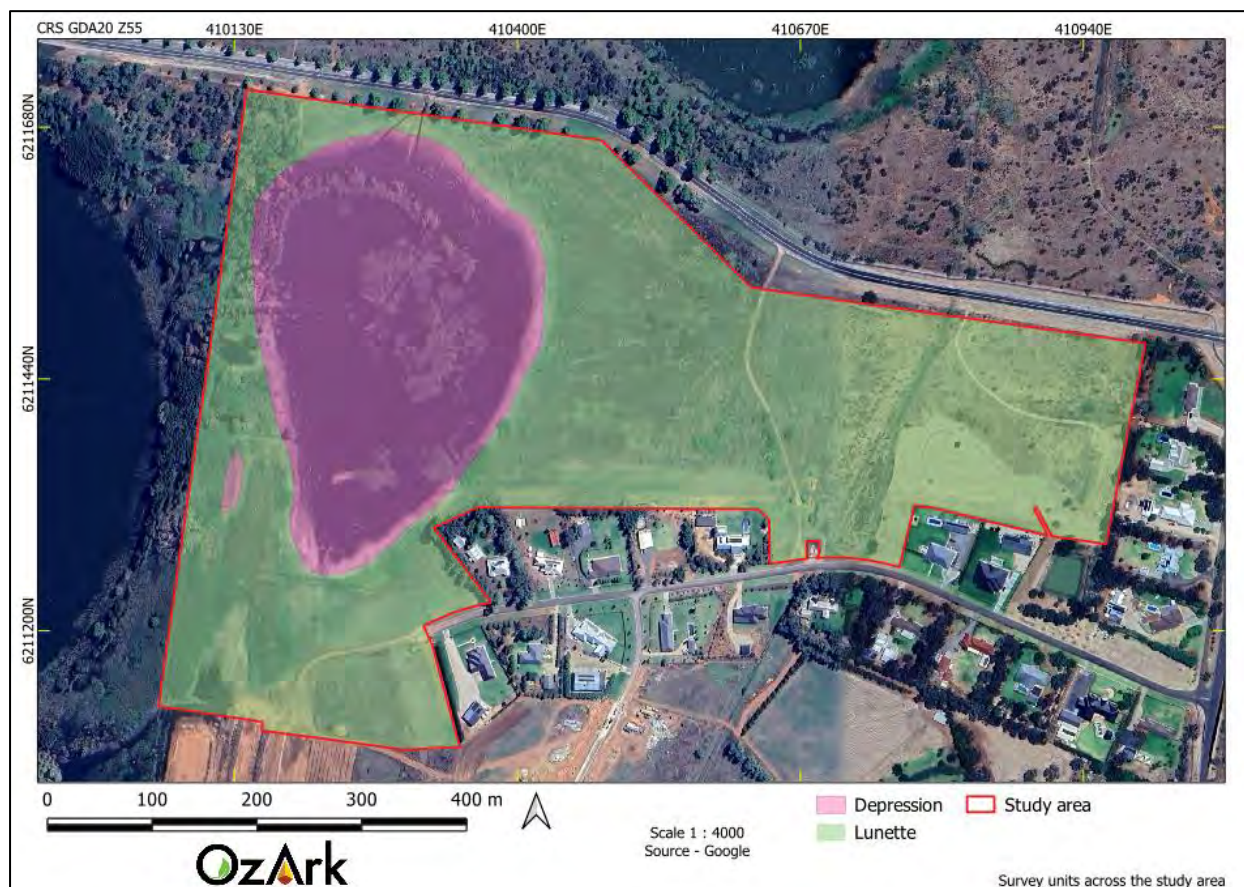
The study area can be divided into two landform units that have been used as survey units for this assessment (**Figure 4-2**):

- Survey Unit 1: Depression – includes all landforms that are currently inundated and are typically lower in elevation than surrounding landforms.
- Survey Unit 2: Lunette - sandy landforms that surround Lake Wyangan, in this case, this landform occupies most of the study area.

**Figure 4-1: Survey Units in the study area.**

	
<p>1. View to the north in the southwest portion showing Survey Unit 2 in the west and Survey Unit 1 in the east.</p>	<p>2. View to the south in the northern portion showing Survey Unit 2.</p>
	
<p>3. View to the south in the northern portion showing Survey Unit 2.</p>	<p>4. View to the north in the central portion showing Survey Unit 1.</p>

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



## 4.2 GEOLOGY AND 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).

The Cobar Peneplain bioregion is based on Palaeozoic rocks largely within the Lachlan Fold Belt. The base geology of the Lachlan Plains subregion comprises Ordovician to Devonian granites, quartzose sandstones, phyllites, slates and acid volcanics. Quaternary colluvial slope mantles and alluvium clays and silts are also present along waterways and lake systems (NPWS 2003).

According to Mitchells landscape classification (2002), the study area is situated within the Lachlan Lakes, Swamps and Lunettes, and the Hillston Sandplains. As these landscapes have a low elevation, the frequency of rocky outcrops decreases that impedes soil drainage. Red sands and earthy sands are the predominant soil type within the sandplains and lunettes, which are present within the study area.

Therefore, the geology and soils of the study area can be ideal for the retention of Aboriginal material.



### 4.3 HYDROLOGY

Although no drainage lines intersect the study area, it is located directly adjacent to Lake Wyangan (**Figure 4-3**), which is a recreational lake that was constructed over an existing swamp and gypsum mine in 1950. The study area also contains a depression which holds water. The previous swamp would have supported a variety of resources for Aboriginal occupation, such as wetland birds and fish species, and it is likely that the water body would have been a permanent water source. Thus, the landforms surrounding Lake Wyangan are likely to have attracted long term Aboriginal occupation.

**Figure 4-3: Lake Wyangan in relation to the study area.**



### 4.4 VEGETATION

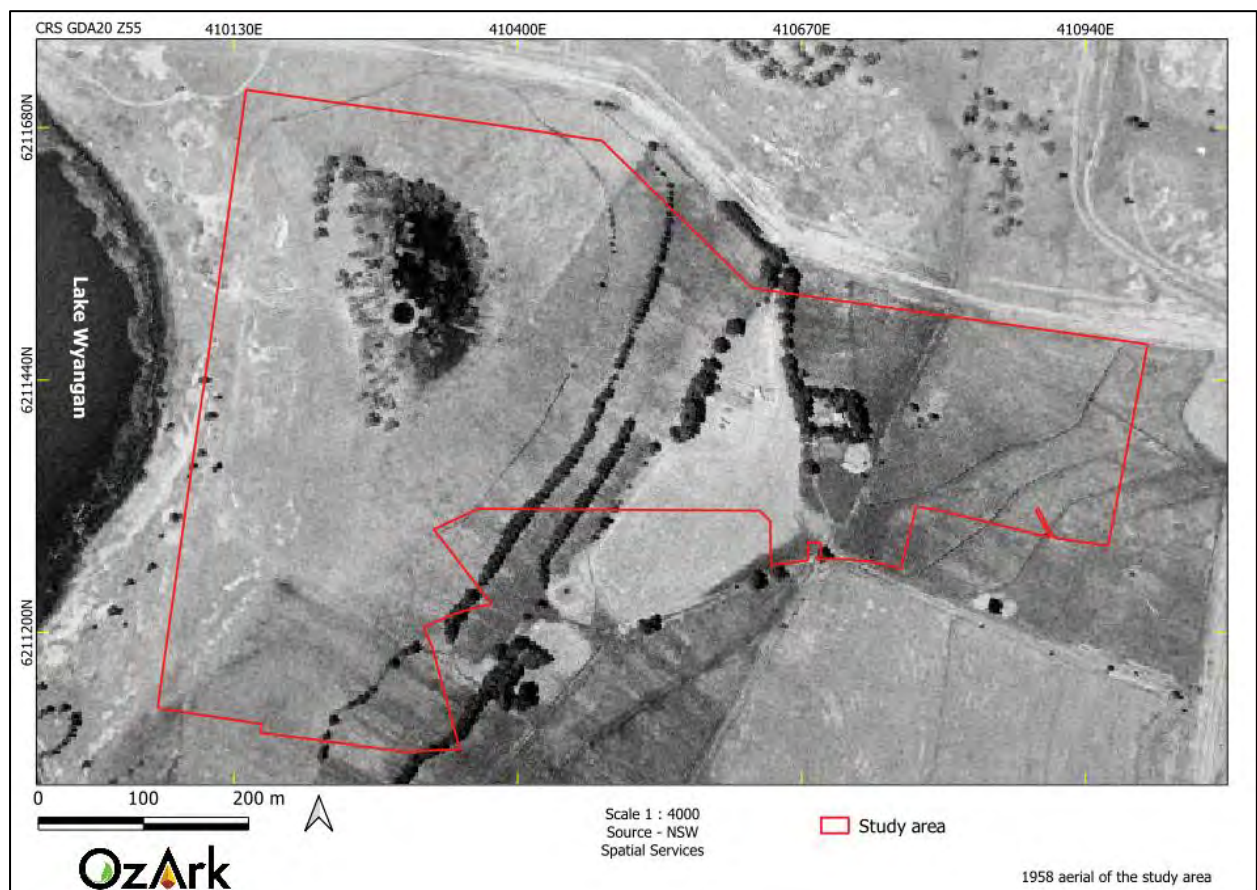
Although most of the study area has been previously cleared, analysis of the aerial imagery indicates that there are scattered groupings of trees along the northern boundary and a grouping of trees in the northwest of the study area. The natural vegetation of the area would most likely have consisted of Black Box stands in swampy depressions with dense mallee and broom bush communities on the crests and slopes.

#### 4.5 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The study area is primarily classified as being used for grazing on modified pastures since British colonisation in the district. However, there is a small portion defined as grazing on native vegetation in the north-western corner. Aerial imagery of the area in 1958 (**Figure 4-4**) shows the agricultural and pastoral land use of the study area.

In 2007, the study area was subject to extensive earthworks from heavy machinery. These works caused subsurface disturbance, particularly in the south-western portion of the study area (**Figure 4-5**). Following these works, the spoil mounds were formed in the south-western portion of the study area and can be clearly seen on **Figure 4-5**. Thus, the study area has been subject to agricultural, pastoral, and earthwork related ground surface for at least the last 60 years, and probably a lot longer.

**Figure 4-4: 1958 aerial with overlay of study area.**





**Figure 4-5: Extensive earthwork disturbance from 2007 in relation to the study area.**



## 4.6 CONCLUSION

The review of the environmental factors associated with the study area allows the following conclusions to be drawn in terms past Aboriginal occupation:

- **Topography and hydrology:** low undulating plains, with some sandplains and dune field landforms which dominate the study area would have been hospitable to Aboriginal people. Although no drainage lines intersect the study area, the previous swamp would have supported a variety of resources for Aboriginal occupation, such as wetland birds and numerous fish species, as the water body would have likely been a permanent water source. Thus, the landforms surrounding Lake Wyangan are likely to have attracted long term Aboriginal occupation.
- **Geology and soils:** landforms which typically comprise outcropping rock, i.e., hills, are not present within the study area, and therefore sources of stone procurement for tool manufacture will not be present. Red sands and earthy sands are the predominant soil type within the sandplains and lunettes, which are present within the study area. It is considered to have higher potential to recover Aboriginal burials in the sand dune areas.
- **Vegetation:** the study area would have once supported an open woodland with bush which would have provided some resources for Aboriginal subsistence in the past. Areas directly associated with water and or elevated ground appear to have the greatest potential for identification of Aboriginal cultural material. The broad-scale vegetation clearance which has taken place across the study area for agricultural purposes reduces the likelihood that

any culturally modified trees remain present, however, should mature native vegetation remain, culturally modified trees may be present.

- Land use: ground surface disturbances such as vegetation clearance and grazing exist across most of the study area. In addition, parts of the study area have been impacted by earthmoving in the past 15 years. These activities may have displaced Aboriginal objects and are likely to have reduced the potential for subsurface archaeological material. There is a small portion of the study area that is defined as grazing on native vegetation in the northwestern corner of the study area, however, this is likely a mapping error as this portion of the study area is similarly disturbed.

Disturbance at a given location does not necessarily mean that there will be no cultural material present, as often a disturbed context will reveal objects which may have previously been subsurface. However, initial vegetation clearing has significantly reduced the likelihood of culturally modified trees remaining.

## 5 ARCHAEOLOGICAL CONTEXT

### 5.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

The study area is located within the southern extent of the Wiradjuri tribal and linguistic group (Tindale 1974); however, it is noted that this is only an interpretation and is not a definitive boundary marker. The Wiradjuri tribal area is in the Murray Darling Basin and extends across three general physiographic regions: the highlands or central tablelands in the east, riverine plains in the west, and the transitional western slope zone in between (White & Cane 1986). The Wiradjuri is one of the largest language groups in NSW, extending across the districts of Mudgee, Bathurst, Dubbo, Parks, West Wyalong, Forbes, Orange, Junee, Cowra, Young, Holbrook, Wagga Wagga, Narrandera, Griffith, and Mossgiel (Tindale 1974). Although the area was noted to have a single basic language, various dialects were found throughout the region (Tindale 2000).

At the beginning of the nineteenth century the Wiradjuri group occupied the area to the south of the Murrumbidgee River and east of the Lachlan River (Kass 2003:10). The woodland communities of the region provided habitat for possums (used for meat and fur) including many reptiles and birds (Kabaila 1995). The Murrumbidgee River was a source of mussels and fish, including the Murray cod. The country between the rivers provided seasonal plants, tubers, nuts, seeds, and daisy yams. Larger game such as kangaroos and emus were hunted to make up an overall nutritious and varied diet. Small groups moved around regularly according to seasonal resource fluctuations and ritual obligations (Kass 2003). A relatively large number of carved trees are associated with important sites marked out by clans, including burial sites (Kass 2003:10).

Wiradjuri social organisation appears to have been based upon an extended kinship networks involving totemic designations and associations. The kinship system governed and controlled marriage and determined ceremonial obligations. Individual identity and clan affiliations were expressed partly through elaborate carvings on wooden implements and on skin cloaks (White & Cane 1986:61).

Common areas favoured by the local Wiradjuri (river and plains) also attracted colonial settlers and the *“frontier of European settler expansion swept into Wiradjuri country over the 1830s and 1840s at breakneck pace”* (Kabaila 1995:12). Diseases spread along the river systems decimating Aboriginal populations. By the time the British settlers arrived, the fabric of prehistoric Aboriginal life was no longer intact.

### 5.2 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).

There are several broad scale regional archaeological studies which either cover the study area itself or are in general proximity to it. These studies have been summarised below.

#### Witter 1980

An archaeological assessment was undertaken for a proposed pipeline between Wagga Wagga and Young approximately 150 km east of the study area. recorded 14 open camp sites, 21 isolated finds, a scarred tree, and a possible Aboriginal rock well. Some of these sites were recorded in landforms similar to those within the study area, such as depressions situated adjacent to waterways.

#### Hiscock 1983

After surveying the Wagga Wagga to Darlington Point 330kV electricity transmission line, Hiscock agreed with Witter (1980) as their results followed similar patterns. These patterns are that:

- Mounds, occupation debris of worked stone and scarred cypress pine may be located adjacent to major flood channels
- Scarred trees, fired clay hearths and occupation debris or worked stone, particularly where sand features are present, may be located adjacent to minor flood channels and temporary swamps
- Rare, isolated artefacts, flaked or abraded stone, and scarred trees can be found throughout the plains.

#### NSW NPWS 1996

South of Griffith in the Leeton area, Koonadan Historic Site is located adjacent to Tuckerbil Swamp, which encompasses part of a low dune. Aboriginal skeletal material has been recovered from the dune and local Aboriginal community members believe that this is an ancestral Wiradjuri burial ground. The dune landform was relatively undisturbed, with the only disturbances from natural process such as slope wash erosion. No signs of post-colonisation earthworks, infrastructure or development was evident.

#### OzArk 2013

OzArk undertook an archaeological survey for an upgrade to the Darlington Point levee and extension at Darlington Point, located along the lower reaches of the Murrumbidgee River. The area assessed comprised an approximately 5.8 km levee bank surrounding the township of Darlington Point. Three Aboriginal scarred tree sites were recorded in the vicinity of the levee and bank of the Murrumbidgee River. All three trees were in good condition, including two black box

and a river red gum, and all three were in the vicinity of the Murrumbidgee River and associated creek lines. One of the scarred trees (a river red gum) was situated along the bank of the Murrumbidgee River, while the two black box scarred trees were located 1 km to the west of the Murrumbidgee River.

### NGH 2016

NGH prepared an Aboriginal Cultural Heritage Assessment for the proposed Griffith Solar Farm, located 7 km southeast of Griffith, NSW. The proposal covered approximately 120 ha of land. Three Aboriginal sites were located within the assessment area. These included one artefact scatter consisting of 11 artefacts manufactured from silcrete quartzite, volcanic material and sandstone was recorded along with two isolated artefacts. The identification of these sites demonstrate surface artefact materials may still be retained within an agricultural landscape despite considerable ground disturbances associated with farming activity. However, owing to the highly modified context of these sites, low scientific value was attributed to the archaeological material. It was concluded that disturbed nature and limited distribution of low-density artefact finds was unlikely to reflect intact subsurface deposits.

## 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** and presented in detail in **Appendix 2**.

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

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	25/2/22	Griffith LGA	No places listed on either the National or Commonwealth heritage lists are located within the study area
National Native Title Claims Search	25/2/22	NSW	No Native Title Claims cover the study area.
AHIMS	6/12/21 <sup>1</sup>	10 x 10 km centred on the study area	Five extant previously recorded sites (49-2-0027, 49-1-0042, 49-1-0043, 49-1-0044, 49-2-0165, and 49-2-0168) are within the study area.
Local Environmental Plan (LEP)	25/2/22	Griffith LEP of 2014	None of the Aboriginal places noted occur near the study area.

A search of the AHIMS database on 6 December 2021 returned 53 results for Aboriginal sites within a 10 km<sup>2</sup> search area centred on the study area (GDA Zone 55 Eastings: 405510–415463; Northings: 6206382–6216376) (see **Table 5-2** for site types and frequencies).

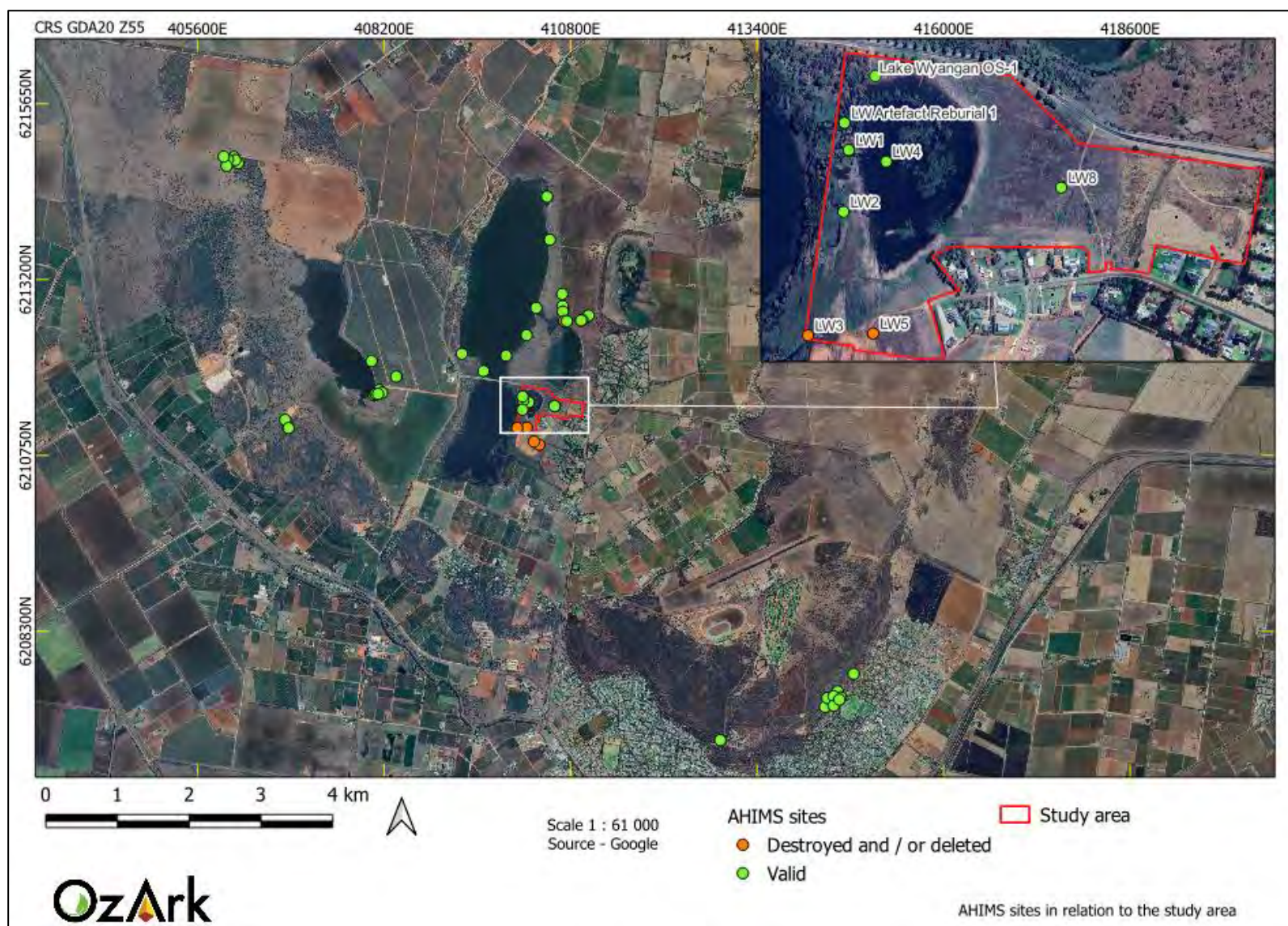
<sup>1</sup> An updated AHIMS search over the same area was completed on 9 November 2023 as the previous search was greater than 12 months old. This search returned 54 previously recorded sites (see **Appendix 2**). The additional site is 49-2-0187, registered as part of this assessment (see **Section 6.4**).

Five extant previously recorded sites have been recorded within the study area including artefact scatters, an isolated find, and an artefact reburial: 49-2-0027 (LW1), 49-1-0043 (LW4), 49-1-0044 (LW2), 49-2-0165 (LW8), and 49-2-0186 (LW Artefact Reburial 1) (**Figure 5-4**). Site 49-2-0165 (LW8) is a low-density subsurface scatter identified as part of the NGH 2018b test excavation program (see **Section 5.3.2**).

An additional two previously recorded sites, 49-1-0042 (LW3) and 49-2-0168 (LW5), are in the southwest of the study area. Both these sites are listed as 'destroyed' on the AHIMS register having been salvaged by OzArk in 2021 in accordance with AHIP #C0004458 (see **Section 5.3.2**).

**Table 5-2: AHIMS site types and frequencies.**

Site Type	Number	% Frequency
Artefact scatter	23	43.4
Isolated find	13	24.5
Modified tree (carved or scarred)	8	15.1
Artefact (quantity unspecified)	5	9.4
Artefact reburial	1	1.9
Art	1	1.9
Resource and gathering	1	1.9
Artefact scatter & hearth	1	1.9
<b>Total</b>	<b>53</b>	<b>100</b>

Figure 5-1: AHIMS sites in relation to the study area<sup>2</sup>.

<sup>2</sup> Note: Lake Wyangan OS-1 was recorded as part of this assessment but is shown on Figure 5-1 to ensure the most up to date AHIMS records are presented.



### 5.3.2 Archaeological investigations near or within the study area

#### Barber 1998

In 1998, Barber conducted an archaeological assessment of a proposed housing subdivision at Lake Wyangan, which encompassed the western, northern and southern portion of the study area. One isolated find, 49-2-0027 (LW1) was recorded, along with three artefact scatters 49-1-0044 (LW2), 49-1-0042 (LW3), and 49-1-0043 (LW4). 49-2-0027 (LW1), 49-1-0044 (LW2), and 49-1-0042 (LW3) were all recorded in a lunette landform, and 49-1-0043 (LW4) was recorded in a slight depression. In total, 47 artefacts were recording during the visual inspection for this due diligence assessment. Barber (1998) indicated there was potential for subsurface deposits, particularly in elevated portions of the lunette that surrounded the depression. As a result, subsurface testing for cultural material was recommended for the sites situated within the Lake Wyangan lunette: 49-2-0027 (LW1), 49-1-0044 (LW2), and 49-1-0042 (LW3).

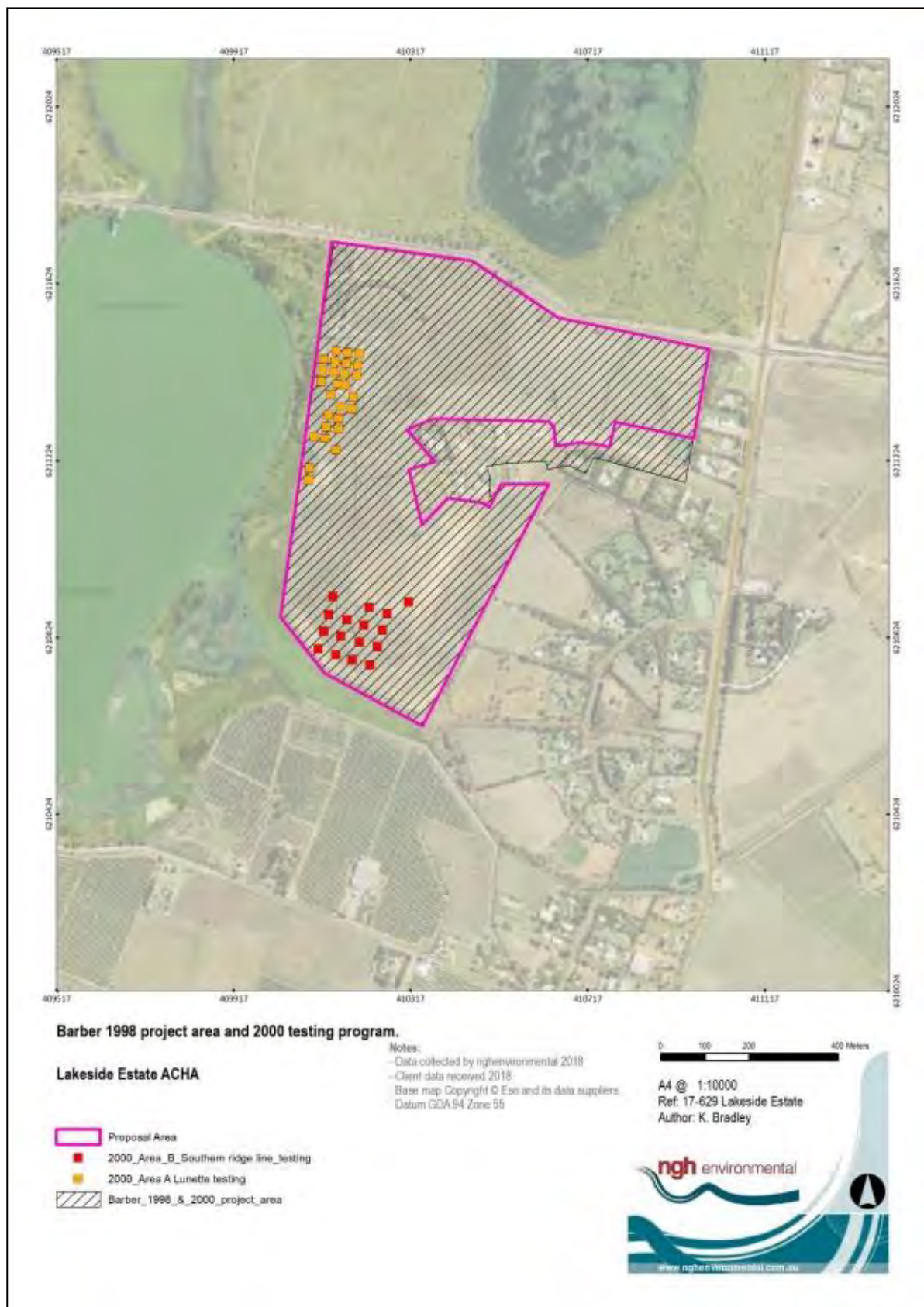
#### Barber 2000

Subsequently, a test excavation program was undertaken for the proposed subdivision at Lake Wyangan was conducted by Barber (2000). A total of 27 test units of various sizes and excavation methods were excavated across the lunette landform. These test units included 12 25 centimetres (cm) x 25 cm, four 50 x 50 cm, and three 100 x 50 cm test probes. These test units were excavated by hand. Eight 1200 cm to 1600 cm x 65 cm mechanical test units were also excavated. The various sized test pits excavated equate to 57.6 (14.4 square metres [m<sup>2</sup>]). Thus, 35 artefacts were recovered within these mechanical and hand excavated test units in the lunette landform, with silcrete being the dominant raw material, followed by volcanics, quartzite, and quartz. Most artefacts were recorded within the top 50 cm of the deposits, with the lowest artefacts recorded at a depth of 70 cm. Additional test units were also conducted further to the south along a ridgeline (outside the study area). Of the 16 test units excavated along the ridgeline, only one artefact was recovered at a depth of 20–30 cm. However, four additional artefacts were recovered on the surface whilst test excavations took place on the ridgeline. The location of test units associated with this test excavation program can be seen on **Figure 5-2**.

During this test excavation program, a representative of the Griffith LALC, Max Harris, noted that Aboriginal human remains were uncovered at Lake Wyangan in c.1935. Police were informed at the time, although as the remains were thought to date to the pre-European occupation of Australia, no crime investigation occurred. This information has been orally passed down from Jack Harris, who is the father of Max Harris. The location of this burial remains unknown and may have been reburied, however, it is believed to be situated on the eastern side of the southern lake (where the study area is located). Barber concluded that this burial discovery is a possible indication of the good preservation conditions in the local area and that caution must be

undertaken if excavating in the area, and that the lunettes are of higher sensitivity for burials to occur.

**Figure 5-2: Barber 2000 test pit locations (NGH 2018b).**



### NGH 2018a

In 2018, NGH conducted a due diligence assessment for a proposed housing subdivision, now known as Lakeside Estate. Previous assessment of the area (formerly known as Pelican Shores) and permit approval to impact the relevant sites had been undertaken by Barber (1998 and 2000)., However, no development proceeded for the Pelican Shores proposals and the permit approved had since expired.

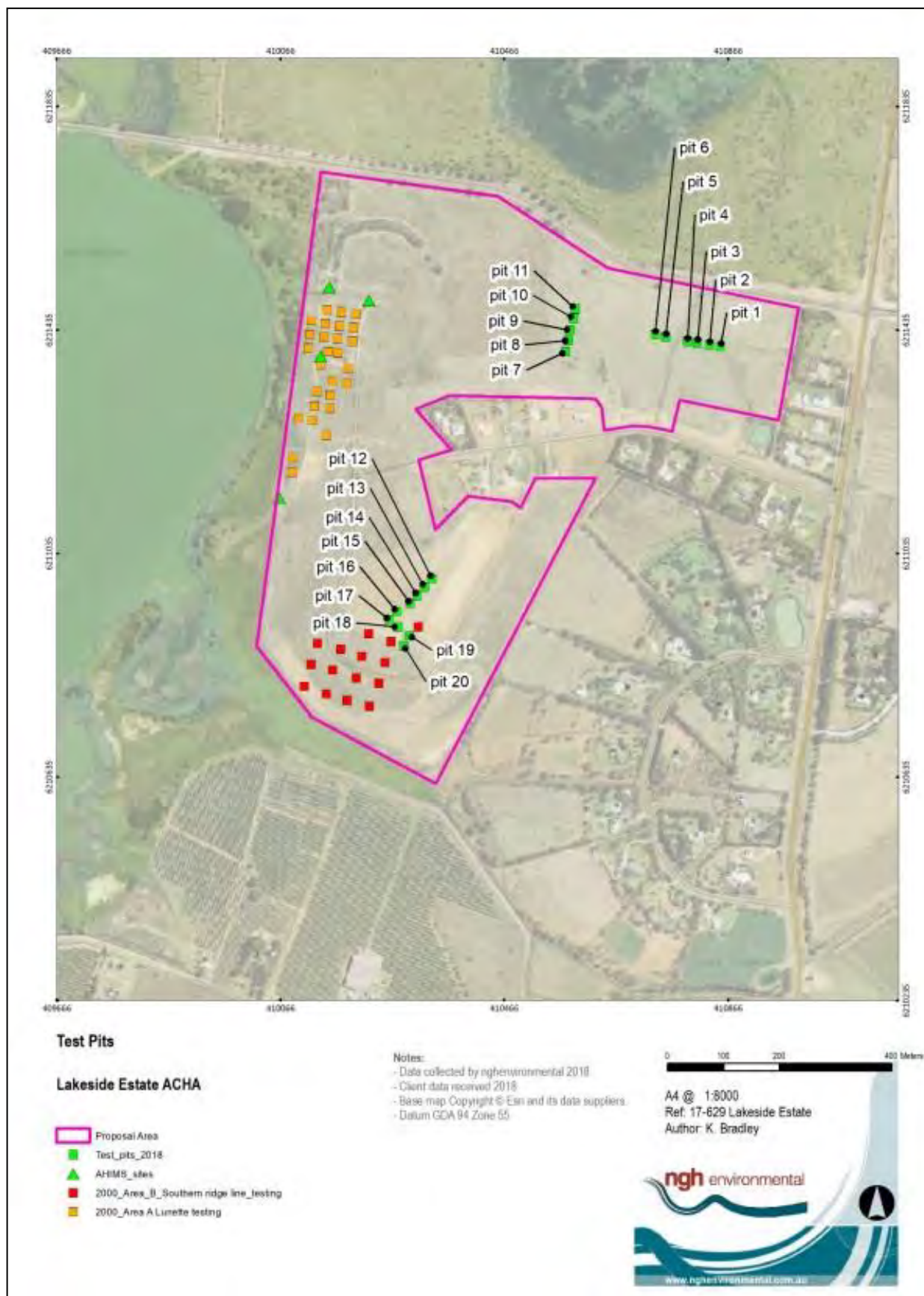
Following Aboriginal heritage regulation changes since 2000, additional assessment following the Due Diligence Code was undertaken by NGH. During the visual inspection, additional artefacts were recorded at 49-1-0044 (LW2) in the lunette landform. NGH (2000) concluded that although the area had since been disturbed by grading and land clearing activity by the previous landowners (not related to the proposal or the housing development), artefacts were still present and an AHIP was recommended. Due to this disturbance and the test excavation program conducted by Barber (2000), it was also concluded that no additional test excavation at 49-1-0044 (LW2) is necessary as the landform has already been characterised.

### NGH 2018b

NGH (2018) conducted an ACHAR for the first stages of the Lakeside Estate housing subdivision. During the survey, three additional Aboriginal sites were recorded: 49-2-0168 (LW5), 49-2-0167 (LW6), and 49-2-0166 (LW7). These included a range of low to high density artefact scatters. The assessment included test excavation program of those subsurface deposits identified in areas that had not been previously investigated by Barber (2000). A total of 20 test units were excavated across four transects (**Figure 5-3**). Six artefacts were recovered, with no more than one artefact recorded from any test unit. Four of the artefacts recorded were from test units located at 49-2-0167 (LW6), with two more artefacts recorded at an additional site, 49-2-0165 (LW8). NGH concluded that the landforms of the study area had low potential for subsurface deposits. NGH (2018b) recommended that an AHIP be sought to permit harm to the four sites, 49-1-0042 (LW3), 49-2-0168 (LW5), 49-2-0167 (LW6) and 49-2-0166 (LW7), located within the impact footprint of Stages 1 and 2 for the Lakeside Estate subdivision.



Figure 5-3: NGH 2018b test pit locations (NGH 2018b).





## OzArk 2021

In 2021, OzArk conducted a salvage program for the surface collection of the four sites 49-1-0042 (LW3), 49-2-0168 (LW5), 49-2-0167 (LW6) and 49-2-0166 (LW7) in accordance with AHIP #C0004458. A total of 68 artefacts were reburied as part of this salvage program. These included 53 artefacts from 49-2-0167 (LW6), six artefacts from 49-1-0042 (LW3), one isolated artefact from 49-2-0168 (LW5), one isolated artefact from 49-2-0166 (LW7). Additionally, the artefacts recovered from the test excavation program completed by NGH (NGH 2018b) were buried with the artefacts. These included an additional four artefacts from 49-2-0167 (LW6) and two artefacts from 49-2-0165 (LW8). These artefacts were reburied in an area where no future development is proposed (this has since changed) and was registered with AHIMS (49-2-0186). Aboriginal Site Impact Recording Forms (ASIRFs) for these sites were completed following the salvage program to update their status to 'destroyed' on AHIMS.

## **5.4 ARCHAEOLOGICAL CONTEXT: CONCLUSION**

The archaeological investigations surrounding the study area as summarised in **Sections 5.2** and **5.3** indicate that:

- The region of the study area has a high likelihood of recording stone artefact sites, although they are likely to be in secondary context
- Most sites in the region have been recorded adjacent to Lake Wyangan, typically on elevated terraces or banks
- Modified trees usually occur wherever appropriate mature aged trees are located
- The most likely indicator of potential sites is the presence of a permanent water source (i.e. the swamp land prior to Lake Wyangan's construction)
- Common stone utilised for stone tool manufacture in the district is silcrete, chert, and quartz.

## **5.5 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.

### 5.5.1 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 5.5.3**.

**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 scatters typically consist of surface scatters or subsurface 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.
Culturally modified trees	Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
Art sites	Rock art or engravings are often believed to be non-secular in nature. The term 'rock art site' generally refers to Aboriginal ochre paintings or ochre or charcoal drawings located on a rock slab (generally in a sheltered place like the floor of a cave or rock shelter), boulder, cliff-face, cave or rock shelter wall or roof, or wall of a rock overhang. Most rock art sites are found in locations that are sheltered from the elements. This observation, however, is probably biased to some extent, as rock art would not preserve well in open positions. Rock art sites are generally believed to be non-secular in nature.

Site type	Site description
Hearths/ovens	Features used by Aboriginal people for the preparation of food and would generally be in the vicinity of available resources, such as water sources to procure fish and shellfish, and on elevated ground to avoid impact from environmental threats.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of subsurface sediments or where some erosional process has exposed them.

### 5.5.2 Landform modelling of archaeological potential

The large number of archaeological studies undertaken within the vicinity of the study area provides information to obtain a sound understanding of the nature and distribution of archaeological sites within the area.

Typically, the previous studies in the region have demonstrated that stone artefact sites are common in landforms near Lake Wyangan. As most of the study area is situated within 500 m of Lake Wyangan, all landforms within the study area have an increased potential for archaeological material. This is reinforced by the AHIMS data shown on **Figure 5-4** as all five previously recorded sites within the study area occur in landforms within 500 m of Lake Wyangan. It appears that the study area has a higher potential to record stone artefact sites within lunette landforms, as the three of the previously recorded sites 49-2-0027 (LW1), 49-1-0044 (LW2), 49-1-0042 (LW3), 49-2-0168 (LW5) and 49-2-0165 (LW8) are within this landform.

Crucial for the preservation of archaeological deposits is the history of past land use in an area, and in the case of the study area, the past use for agricultural, pastoral and earthworks activities in conjunction with the construction of Lake Wyangan from the previous swampland and gypsum mine, is likely to have displaced many of the Aboriginal sites within the study area. Consequently, if any sites are recorded within the study area, it is likely that they will be in a secondary context.

**Figure 5-4: AHIMS sites in relation to landforms in the study area.**

### 5.5.3 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 the probability of landforms within the study area to contain Aboriginal objects (**Table 5-4**), and what types of sites may be present within the study area (**Table 5-5**).

**Table 5-4: Likelihood of landforms within the study area to contain Aboriginal objects.**

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Depression	As two previously recorded sites, 49-2-0027 (LW1) and 49-1-0043 (LW4) have been recorded within this landform, this landform has potential to contain additional Aboriginal objects, as the landform is within an archaeologically sensitive area (500 m from Lake Wyangan). However, the slightly lower elevation of these depressions would make them less suitable for occupation in comparison to the surrounding lunette, as lower areas can be subject to the pooling of water and displacement of artefacts from erosional processes of surrounding landforms. Nevertheless, if any Aboriginal objects are present within this landform, they would most likely be in secondary contexts because of natural disturbances (i.e. sheet wash erosion or slope wash erosion and inundation).
2	Lunette	Lunettes are typically highly sensitive landforms as they are usually associated with water (either currently or in the past). In conjunction with the two previously recorded sites 49-2-0027 (LW1), 49-1-0044 (LW2), 49-1-0042 (LW3), 49-2-0168 (LW5) and 49-2-0165 (LW8) located in a lunette landform in the study area <sup>3</sup> , the likelihood of additional Aboriginal objects being present in this landform increases. Lunettes also provide good conditions for the preservation of skeletal material, and as one possible unregistered Aboriginal burial may be in the district, there is an increased likelihood for this site type within the lunette

<sup>3</sup> Not including LW Artefact Reburial 1 (49-2-0186) which is an artefact reburial site.



Survey Unit	Landform type	Likelihood to contain Aboriginal objects
		landforms of the study area. However, portions of this landform have been heavily disturbed by earthworks and the potential for sites to remain intact in heavily disturbed areas is considered to be low.

**Table 5-5: 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 as one previously recorded isolated find 49-2-0027 (LW1) is in within the study area.
Open artefact scatters	As the study area is located approximately adjacent to Lake Wyangan, a body of water with known associated Aboriginal stone artefact sites, this site type has a high likelihood of being recorded. In addition, three valid artefact scatters, 49-2-0027 (LW1), 49 1 0044 (LW2), and 49-2-0165 (LW8), are located within the study area and additional (now destroyed) sites have been recorded across this landform.
Culturally modified trees	Due to the near-total clearance of trees from within the study area, this site type is predicted to be very rare. It is also noted that this site type is not common in the region.
Art sites	It is unlikely to record this site type within the study area as no suitable landforms for large outcropping rocks or overhangs are present, as art sites typically occur in association with rock shelters. Further, only one art site has been recorded in the region, which also decreases the likelihood of recording this site type within the study area.
Hearths/ovens	This site type is considered possible in areas where A-Horizon soils are relatively undisturbed. However, given the high levels of disturbance across the study area the likelihood of identifying this site type <i>in situ</i> is significantly reduced.
Burials	Burials have increased potential to be recorded in lunettes as these offer ideal soils and general landscape conditions. As discussed in <b>Section 5.3.2</b> , the burials were situated within a lunette similar to the lunette along the banks of Lake Wyangan. As noted in <b>Section 3.2.2</b> and <b>Section 3.4</b> , a RAP has noted there is a possible burial within the lunette landform associated with Lake Wyangan, which increases the likelihood of this site type being present within the study area.

The archaeological studies undertaken near the study area provide insight into the nature and distribution of archaeological sites within the area. However, the location of sites can only reflect what has been identified, usually this has been because of infrastructure/development-driven studies, thus presenting the site data clustered. Generally, sites have been recorded in proximity to a recognised water source, in locations that have been subject to reduced landform disturbance, and within lunette landforms. However, landform disturbance may also explain why Aboriginal objects become revealed on the ground surface, such as a paddock that has been ploughed or stock trampled.

## 5.6 RESEARCH QUESTIONS

Several research questions can meaningfully be applied to the investigation of the study area, including:

- What resources were available to the Aboriginal people using the land within the study area (food, stone, and water) and what resources were transported to the area?
- Is there potential for burials to be present in the landscape?
- Is there potential for Aboriginal objects in currently inundated landforms?
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?

- Do the findings within the study area (if any) accord with the regional archaeological context examined in **Section 5.2**?
- Do the survey results support the predictive model set out in **Section 5.5.3**?

---

## 6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

---

### 6.1 SAMPLING STRATEGY AND FIELD METHODS

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The initial study area was inspected on foot to establish existing levels of disturbance and to assess landforms with increased archaeological potential. It must be noted that the survey occurred prior to the revision of the study area in late 2022, and as such, a portion of the current study area was not surveyed (see **Section 6.6**).

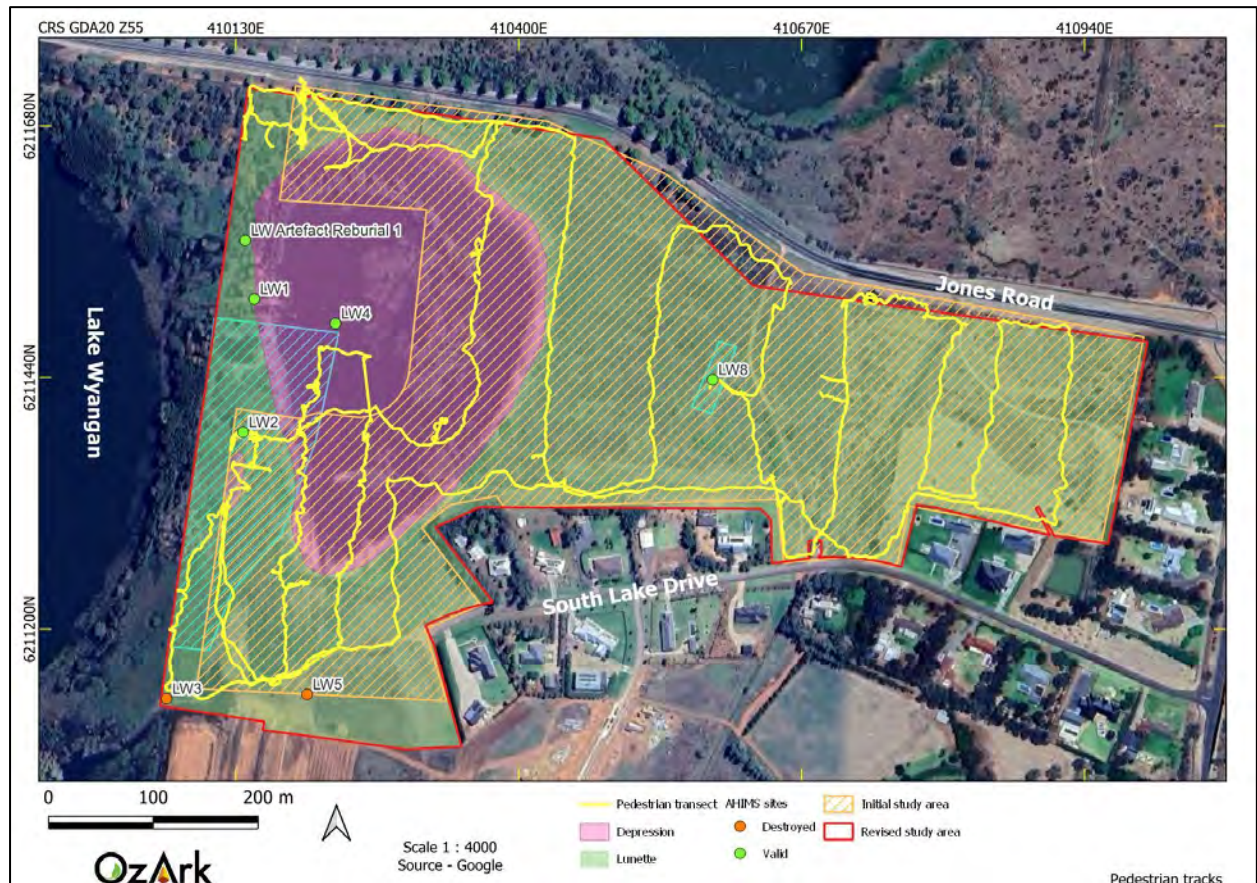
All mature native trees were inspected, and the location of 49-1-0044 (LW2) was ground truthed. Survey aimed to confirm absence of surface materials as indicated by previous assessments which had only identified two subsurface artefacts associated with 49-2-0165 (LW8). Features noted during the survey were recorded with digital photography and by GPS units. General notes pertaining to the survey and ground cover were also recorded.

The pedestrian survey of the initial study area was conducted on Thursday 27 January 2022 by OzArk Project Archaeologist Brendan Fisher and RAP representatives Roslyn Simpson (Griffith LALC) and Neal Cranston.

**Figure 6-1** illustrates the pedestrian coverage of the initial study area, encompassing both Survey Units 1 and 2. The survey strategy involved a series of 15 transects. Areas of exposure and previously recorded site locations were also examined. These transects were spaced at approximately 10 m between each of the three participants. It should be noted that **Figure 6-1** only displays transects of OzArk archaeologist.

As can be seen, portions of the additional land included in the study area were assessed in 2022, particularly those portions of the lunette landform in the west of the study area.

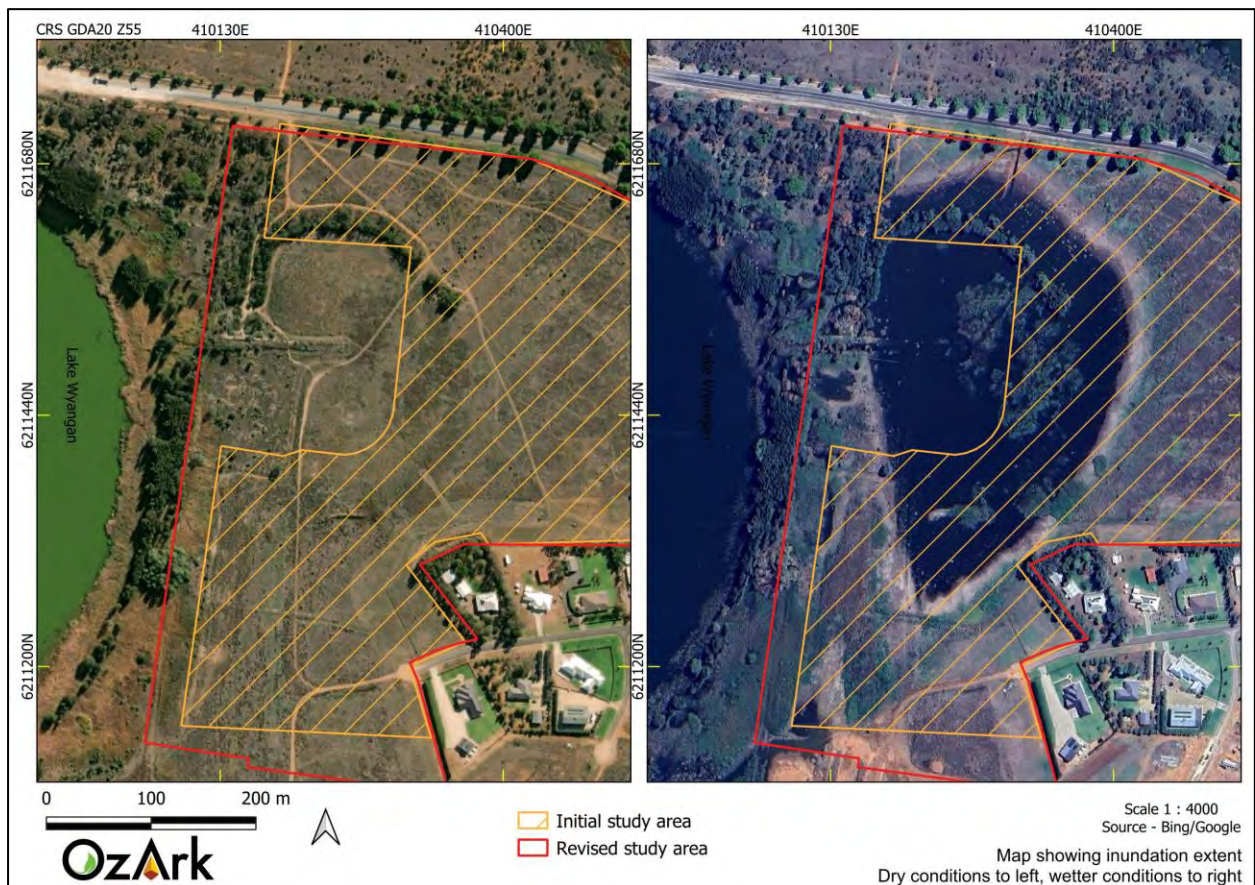


**Figure 6-1: Pedestrian transects captured during the survey.**

## 6.2 PROJECT CONSTRAINTS

There were no significant constraints to hamper the assessment of the survey area during the 2022 survey. Common constraints, such as extremely low ground surface visibility (GSV), were encountered across most of the area during the survey.

Portions of the study area were unable to be surveyed following the revision of the study area as the high-water level in Lake Wyangan has inundated most of Survey Unit 1 (depression) within the additional land included in the study area. The differences in water levels experienced in the study area between dry and wet conditions is shown on **Figure 6-2**. This figure illustrates that much of the additional area added to the study area is currently flooded and unable to be surveyed.

**Figure 6-2: Aerials of the initial and revised study area in wet and dry conditions.**

### 6.3 EFFECTIVE SURVEY COVERAGE

Two of the key factors influencing the effectiveness of archaeological survey are 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' (DECCW 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' (DECCW 2010:37).*

**Table 6-1** calculates the effective survey coverage. This table presents an approximation of the area of ground surface visible at any location within specific landform units. For example, at any one location within the lunette landform (Survey Unit 2) approximately 0.5% of the ground surface could be seen. Exposures in the lunette landform were confined to gravel vehicle tracks. GSE and GSV in the depression landform (Survey Unit 1) was lower with 0.25% of the ground surface being visible. Visibility within these landforms was hampered by leaf litter, weed cover, and dense reed cover in the western portion near Lake Wyangan.

**Table 6-1: Effective survey coverage.**

Survey Unit	Landform	Survey Unit Area (sq m)	Visibility %	Exposure %	Effective Coverage Area (sq m) (= Survey Unit Area x Visibility % x Exposure %)	Effective Coverage % (= Effective Coverage Area / Survey Unit Area x 100)
1	Depression	82000	5%	5%	205	0.25%
2	Lunette	208000	5%	10%	1040	0.5%

**Table 6-2** demonstrates that the survey efficacy within both landforms was low at 0.25% and 0.5%, suggesting site identification was likely hampered by visibility. Despite the low survey efficacy recorded for both landforms, a previously unidentified site was recorded within the lunette landform. Identification of this site likely relates to higher likelihood of intersecting with surface expressions of artefacts given the larger surface area of the lunette landform.

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

Landform	Landform area (sq m)	Area Effectively Surveyed (sq m) (= Effective Coverage Area)	% of Landform Effectively Surveyed (= Area Effectively Surveyed / Landform x 100)	Number of Sites	Number of Artefacts or Features
1	Depression	205	0.25%	0	0
2	Lunette	1040	0.5%	1	23

## 6.4 ABORIGINAL SITES RECORDED

**Table 6-3** summarises the Aboriginal cultural heritage site recorded during the survey. Further details on each site follows.

**Table 6-3: Aboriginal cultural heritage sites recorded during the survey.**

AHIMS ID	Site name	Site type	Coordinates (GDA 20 Zone 55) East	Coordinates (GDA Zone 55) North	Survey Unit
49-2-0187	Lake Wyangan OS-1	Artefact scatter	410203	6211667	1 and 2

## Lake Wyangan OS-1 (49-2-0187)

**Site type:** Artefact scatter

**GPS coordinates:** 410203E / 6211667N

**Location of site:** The site is a low-density artefact scatter located predominantly across a lunette landform on the north-eastern side of the south lake of Lake Wyangan. The site is also located approximately 950 metres (m) west of the Jones Road and Boorga Road intersection.

**Description of site:** The site consists of total of 23 artefacts primarily composed from silcrete, as well as chert and quartz materials (**Table 6-4** and **Figure 6-4**). Most of the artefacts were situated which along gravel access tracks extending south of Jones Road. The surface artefacts were identified on a slight slope with some juvenile regrowth apparent along the eastern and southern portions of the site extent. The site extent is approximately 80 x 85 m. Disturbances associated with water sheet erosion and vehicle movement were evident throughout the area. Due to the considerable level of disturbances observed, and in consideration of the limited subsurface materials recorded in the Barber (2000) and NGH (2018b) test excavations within the area; the site has low potential for subsurface deposits.

**Figure 6-3: Aerial showing the location and extent of 49-2-0187 (Lake Wyangan OS-1).**





**Figure 6-4: 49-2-0187 (Lake Wyangan OS-1). View of site and selection of recorded artefacts.**

	
<p>1. View to the east of 49-2-0187 (Lake Wyangan OS-1) showing a selection of recorded artefacts flagged.</p>	<p>2. View to the west at the site showing a selection of recorded artefacts flagged.</p>
	
<p>3. View to the southeast of the site showing a selection of recorded artefacts flagged.</p>	<p>4. View to the west at the site showing the flagged location of a recorded grindstone fragment.</p>
	
<p>5. View of a grindstone fragment recorded at 49-2-0187 (Lake Wyangan OS-1).</p>	<p>6. View of a selection of artefacts recorded at 49-2-0187 (Lake Wyangan OS-1).</p>

**Table 6-4: 49-2-0187 (Lake Wyangan OS-1) artefact attributes.**

Artefact type	Raw material	Artefact integrity	Stage of reduction	Size (LxWxD) mm
Grindstone fragment	Sandstone	Fragment	N/A	50x35x15
Flake	Chert	Complete	Tertiary	20x22x8
Flake	Silcrete	Complete	Tertiary	10x17x3
Flake	Silcrete	Proximal fragment	Tertiary	14x18x5
Flake	Quartz	Medial break	Tertiary	22x15x5
Flake	Silcrete	Complete	Tertiary	20x30x6
Flake	Chert	Complete	Tertiary	16x14x4
Flake	Silcrete	Complete	Tertiary	15x32x10
Flake	Silcrete	Complete	Tertiary	8x5x2
Flake	Silcrete	Complete	Tertiary	15x30x6
Flake	Silcrete	Proximal fragment	Tertiary	18x10x3
Flake	Silcrete	Proximal fragment	Tertiary	16x18x6
Flake	Chert	Complete	Tertiary	12x32x10
Flake	Silcrete	Proximal fragment	Tertiary	16x13x3
Flake	Silcrete	Longitudinal break	Tertiary	20x23x10
Flake	Silcrete	Complete	Tertiary	24x25x15
Flake	Silcrete	Complete	Secondary	30x21x12
Flake	Chert	Complete	Tertiary	9x10x5
Flake	Silcrete	Distal fragment	Secondary	10x20x5
Flake	Silcrete	Complete	Tertiary	10x12x3
Flake	Silcrete	Complete	Tertiary	14x20x5
Flake	Silcrete	Complete	Tertiary	18x18x3
Flake	Silcrete	Complete	Tertiary	10x12x3

## 6.5 PREVIOUSLY RECORDED ABORIGINAL SITES INVESTIGATED

Two previously recorded Aboriginal sites were ground-truthed during the site inspection. A summary of the reinspection of the original recorded extent of 49-1-0044 (LW2) and 49-2-0165 (LW8) is included in **Table 6-5** and photographs of the sites are included on **Figure 6-5**.

**Table 6-5: 2022 reassessment of previously recorded Aboriginal sites inspected.**

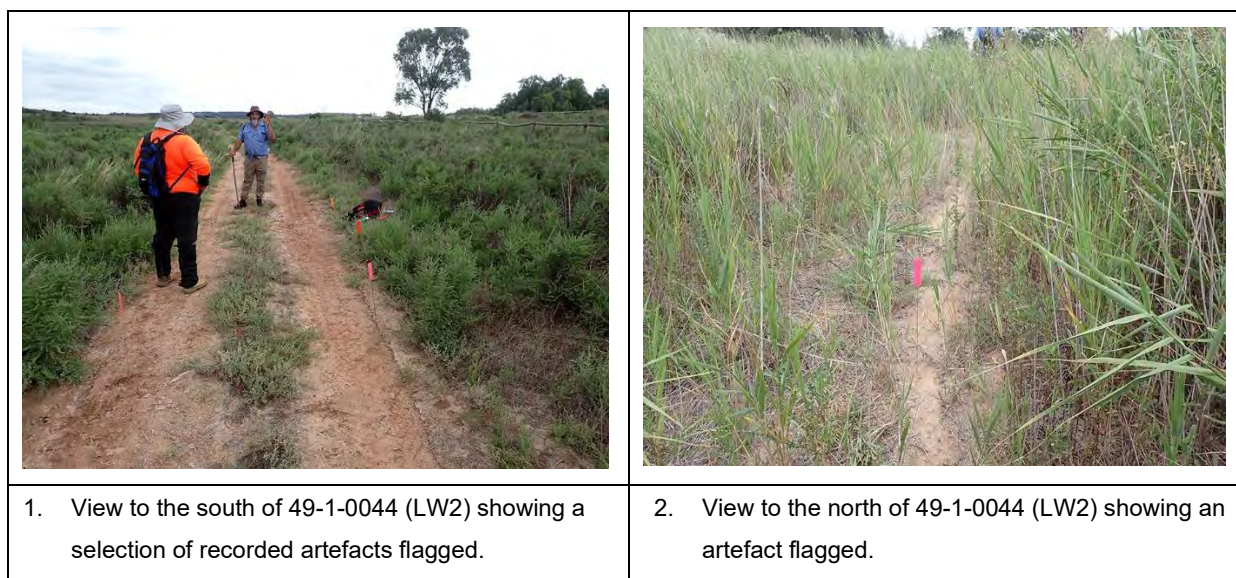
AHIMS ID	Site Name	Coordinates GDA 2020 Zone 55	Site type original recording	OzArk 2022 Investigation
49-1-0044	LW2	410137E / 6211388N	High density artefact scatter	This large artefact scatter was identified during the Barber (1999) assessment, and test excavated by Barber (2000). These test excavations indicated low potential for subsurface archaeological deposits, as only a few artefacts were recorded. Eight artefacts within the large 192 m x 50 m site extent were identified during the OzArk 2022 survey (see <b>Figure 6-5</b> and <b>Figure 6-6</b> ). Each of these artefacts were situated on gravel tracks that afforded GSV. The significant amount of disturbance from the extensive earthworks in the early 2000s was also noted at this site.
49-2-0165	LW8	410585E / 6211438N	Artefact scatter	Although no surface artefacts are present at LW8 (both artefacts were recorded during NGH 2018b test excavations), OzArk 2022 assessed the area to confirm that no surface artefacts were present. No surface artefacts were recorded.






**Figure 6-5: View of artefacts recorded in the site extent of 49-1-0044 (LW2) during the 2022 survey.**



**Figure 6-6: 49-1-0044 (LW2). View of site and selection of recorded artefacts.**





	
<p>3. View to the northeast showing a selection of artefacts flagged.</p>	<p>4. View of a selection of artefacts recorded at the site.</p>
	
<p>5. View of a silcrete proximal fragment flake recorded at 49-1-0044 (LW2).</p>	

## 6.6 PORTION OF THE STUDY AREA NOT SURVEYED

As the survey occurred prior to the revision of the study area in late 2022, a portion of the study area has remained unsurveyed (**Figure 6-1**). This portion contains three previously recorded sites, 49-2-0027 (LW1), 49-1-0043 (LW4), and 49-2-0186 (LW Artefact Reburial 1).

Following the revision of the study area in late 2022, it was discussed with Davis Sanders Homes as to whether OzArk, accompanied by RAP representatives, could survey the portion of land that remained unsurveyed. However, OzArk was advised that this portion of land is inundated and has been since October 2022 (see **Figure 6-2**). It is unknown when this portion of land will be dry enough to undertake a heritage survey. To inform this ACHAR, the survey data from NGH 2018b who assessed this area in 2018 when the lake waters were lower has been used to understand the archaeological potential of this unsurveyed portion.

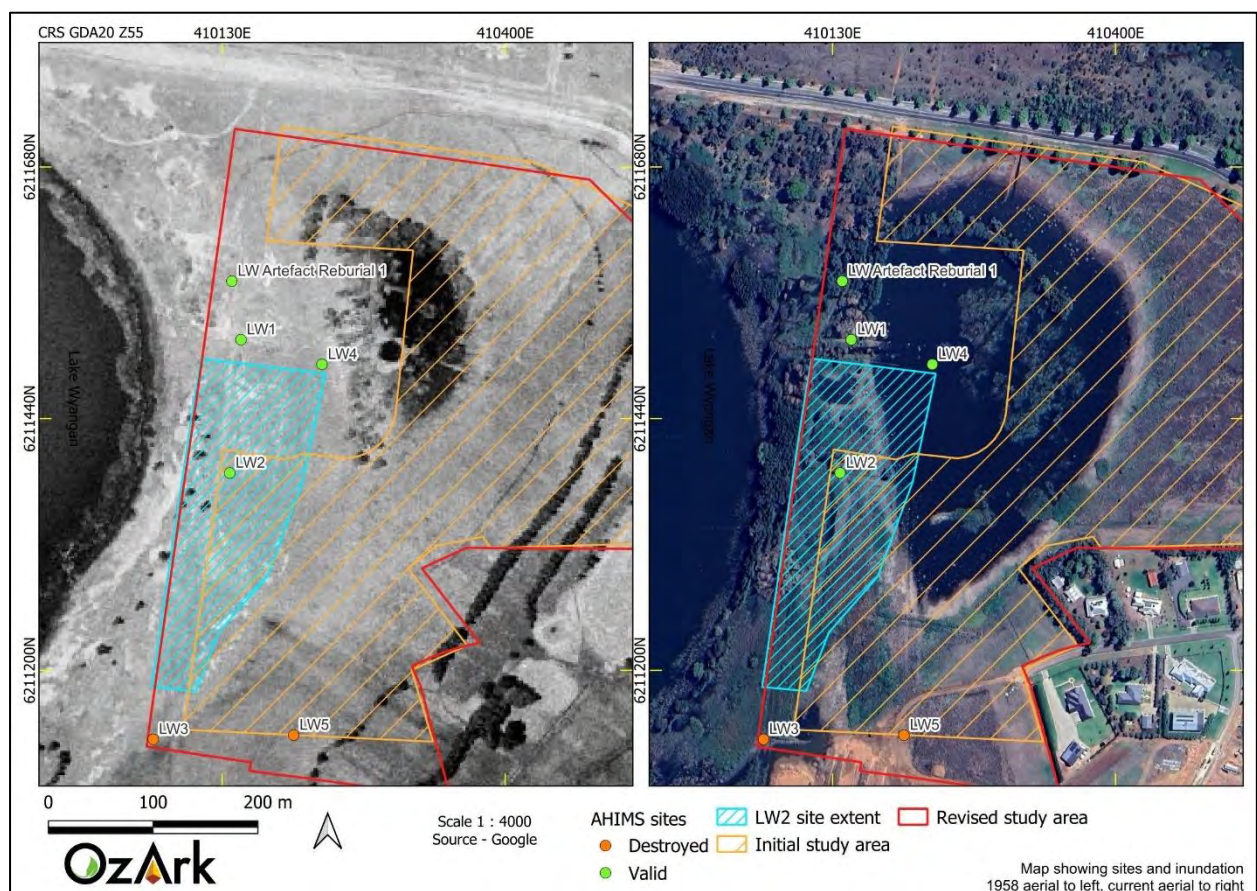
During the NGH 2018b survey, 49-2-0027 (LW1) and 49-1-0043 (LW4) were visited and attempts were made to locate the originally recorded artefacts, however, dense vegetation cover hindered GSV. In addition to the dense vegetation cover, NGH also noted that the artefacts are in a depressed landform subject to flooding, which has likely displaced the artefacts at both sites. This

is illustrated on **Figure 6-7** that shows 49-2-0027 (LW1) and 49-1-0043 (LW4) clearly within the inundation zone. While this may not remove these sites, there is a high chance that any artefacts may have been moved and/or covered with sediment.

49-2-0186 (LW Artefact Reburial 1) is an artefact reburial by OzArk in 2021, NGH2018b did not have survey data of this location, however, as the box containing artefacts was reburied at approximately 50 cm below the ground surface, it is likely that the site remains intact.

Although current aerial imagery (**Figure 6-7** [right]) shows that there is vegetation in the unsurveyed portion of the study area adjacent to Lake Wyangan, **Figure 6-7** shows that this is largely revegetation within the last 65 years.

**Figure 6-7: Views of site locations over time (1958–2023).**



## 6.7 SUBSURFACE POTENTIAL

No test excavation was undertaken for this assessment. Barber (2000) and NGH (2018b) conducted extensive test excavations across the lunette landform within the study area (**Section 5.3.2**, **Figure 5-2**, and **Figure 5-3**).

As discussed in **Section 5.3.2**, 35 artefacts were recorded across 57.6 test units (50 x 50 cm) during the Barber (2000) test excavation program. It was noted that the high level of past disturbances has changed the subsurface, resulting in the removal of artefacts from their primary contexts.

NGH (2018b) excavated a total of 20 test units and recorded six artefacts with no more than one artefact recorded from a test unit. It was noted that topsoil was absent at most of the test units, which is likely explained by the earthworks that have occurred in the area in the past 20 years. It was assessed that due to the high levels of disturbance, subsurface deposits were limited.

Both test excavation programs concluded that there is low potential for subsurface deposits, and intact subsurface material is absent. The test excavation programs have also sufficiently characterised the landform associated with Lake Wyangan and no evidence of human skeletal remains were noted.

## 6.8 ABORIGINAL COMMUNITY COMMENTS ON THE SURVEY

Discussions were held throughout the survey with the Aboriginal community in relation to the Aboriginal sites that were likely to be harmed by the proposal, as well as the possible burial that may be located near the southern lake of Lake Wyangan.

Neal Cranston reiterated that the area could likely contain an Aboriginal burial and that he wished the proponent would alter the development footprint to minimise the chance of encountering the burial. Neal provided a line where he wished the proponent to shift the western boundary, and Roslyn Simpson (Griffith LALC representative) agreed with that it would be a beneficial outcome for both the proponent and the Aboriginal community. Neal agreed that if the proponent moved the western boundary, that the removed area could be added to another location to maintain the total area. Neal stated this would be “...*like moving pieces of a jigsaw puzzle*”.

Although the study area initially excluded this area, following Griffith City Council’s review of the ACHAR, the current revised study area incorporates part of this land as it is Griffith City Council’s view that the area includes artificial mounds formed during earthworks in 2007 and that the area is unlikely to contain burials (see **Section 4.5**).

## 6.9 SUMMARY OF SURVEY RESULTS

One additional site, 49-2-0187 (Lake Wyangan OS-1), was recorded during the assessment and the locations of two previously recorded sites, 49-1-0044 (LW2) and 49-2-0165 (LW8), were ground-truthed.

Despite only subsurface materials originally identified as the 49-2-0165 (LW8) artefact scatter the location of the site was resurveyed to confirm no surface artefacts had since been exposed. It should be noted that those subsurface materials associated with 49-2-0165 (LW8) which were retrieved by NGH (2018b) during the test excavation program have been reburied with the other Aboriginal objects collected as per the AHIP #C0004458.

An additional eight artefacts were recorded at 49-1-0044 (LW2). This low quantity of identifiable artefacts is likely related to the extremely dense grass, reed and weed cover (**Plate 1** and **Plate 2**) evident across most of the 192 x 50 m site extent, hampering GSV.



The additional site recorded, 49-2-0187 (Lake Wyangan OS-1), comprised of a low-density artefact scatter including 23 artefacts. Most artefacts (n=22) were on a dirt access track which afforded increased visibility owing to minimal ground cover (**Plate 4**). Further details on the site are outlined in **Section 6.4**.

The higher density of silcrete artefacts across each of these sites may indicate that silcrete materials were local to the area whereas chert and quartz were more likely imported.

### 6.9.1 Discussion

GSE across the initial study area averaged 5% with most of the ground surface covered in extremely dense grass, reed and weed cover (**Plate 1**, **Plate 2** and **Plate 3**). GSV was afforded in areas of erosion or along dirt tracks (**Plate 4**) where GSE ranged from 90% to 100% (**Plate 5**).

The degree and type of disturbance varied across the initial study area and included vehicle movement along the gravel tracks, water sheet erosion and extensive earth works. These earth works were conducted in 2007 and involved the grading, bulldozing and complete disturbance of most of the initial study area. Large soil stockpiles scattered across the study area provide evidence of the disturbance associated with these earthworks (**Plate 6**). As a result, the subsurface archaeological potential, particularly within the site extent of 49-1-0044 (LW2), has been completely disturbed due to the extensive earthworks in the years following the Barber (2000) test excavation program.

The recording of 49-2-0187 (Lake Wyangan OS-1) conforms with the landform modelling (**Section 5.5.2**) that landforms within 500 m of Lake Wyangan have the potential to contain Aboriginal sites. However, it was also noted that archaeological deposits can be significantly disturbed because of past land use. For the study area, disturbance associated with agricultural practices and Lake Wyangan's construction from the previous swampland and gypsum mine have decreased the likelihood for subsurface deposits to occur and has likely displaced many of the Aboriginal sites within the study area from their original depositional contexts.

As mentioned in **Section 6.6**, a portion of the study area has not been surveyed as it was not part of the initial study area at the time of the survey. Following the incorporation of this land into the study area, the land has since become inundated with flood water and has not been surveyed. As such, the survey data from NGH 2018b has been extrapolated for use in this ACHAR. The NGH 2018b survey results indicated that this portion of land has low potential for archaeological deposits and objects, as flooding and erosional processes in this area have displaced Aboriginal material (see **Figure 6-7**).

No evidence of an Aboriginal burial was noted during the survey, and it was assessed that the likelihood of a burial within the initial study area is low. This is due to the extensive amount of disturbance within the study area, particularly the 2007 earthworks (**Figure 4-5**) in the lunette

landform. There has been no evidence of human skeletal remains during the Barber 2000 test excavation, 2007 earthworks, or the NGH 2018b test excavation. It is however acknowledged that lunettes overall have increased potential to contain burials, and oral history passed on by one of the RAPs suggests that evidence of a burial being present within the lunette.

### 6.9.2 Responses to the research questions

In **Section 5.6** several research questions were advanced to guide the survey of the study area. Following the survey, responses to these research questions are set out below.

- What resources were available to the Aboriginal people using the land within the study area (food, stone, and water) and what resources were transported to the area?
  - No specific food resource locations were noted within the study area. However, Lake Wyangan and its associated wetlands would have provided an abundance of terrestrial and aquatic resources. No outcropping rock materials were identified. Therefore, raw material used in the manufacturing of the artefacts at 49-2-0187 (Lake Wyangan OS-1) were likely transported into the area. Conversely, given the large quantities of silcrete materials present, silcrete was more likely locally sourced around Griffith (refer to **Section 6.4**).
- What tasks were Aboriginal people undertaking at the sites?
  - The recorded stone artefact sites are representative of a 'background scatter' of artefacts that are found in almost all landscapes in Australia and can provide no further information other than the fact that the landforms were used at one time or another by Aboriginal people.
- Is there potential for burials to be present in the landscape?
  - As the study area contains a lunette landform associated with Lake Wyangan, the general landform has a higher likelihood to contain burials. However, due to the extensive amount of past land disturbance and archaeological testing, no evidence of a burial has been noted. Therefore, it is considered there is a low potential for burial/s to be within the study area. It is however acknowledged that oral history passed on by one of the RAPs suggests that evidence of a burial being present within the lunette and the possibility of burial/s being present cannot be totally discounted.
- Is there potential for Aboriginal objects in currently inundated landforms?
  - When NGH 2018b surveyed these landforms, they were not inundated, however, the survey data reinforced that they were subject to flooding which would result in the displacement of any remnant archaeological material. Therefore, the constant erosion of this landform prior to flooding has resulted in a low potential for archaeological deposits.
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?



- No outcropping stone is present. As such, the stone tools within the study area are likely manufactured from stone that has been imported into the area.
- Establish how the findings within the study area (if any) accord with the regional archaeological context examined in **Section 5.2**.
  - The findings of the study accord with the regional archaeological context. Previous assessments indicated that lunette landforms, which dominate the study area, have higher archaeological potential compared to foot slopes and flat plains in the surrounding area. The recording of 49-2-0187 (Lake Wyangan OS-1) within a lunette landform associated with Lake Wyangan is consistent with Barber (1999 and 2000) and NGH (2018a and b).
- Do the survey results support the predictive model set out in **Section 5.5.3**?
  - The survey results do conform with the predictive model set out in **Section 5.5.3**, as the recording of an additional Aboriginal artefact scatter within 500 m of Lake Wyangan was predicted. In addition, artefact scatters were predicted to be the most likely recorded site type within the study area, and the recording of Lake Wyangan OS-1 reinforces this prediction.

## 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 (Burra Charter 2013).

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 (OEH 2011: 8–9) 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.

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 (Burra Charter 2013).

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 (DECCW 2010).

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. 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 (Burra Charter 2013).

#### **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.

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 OF THE RECORDED SITES

**Table 7-1** presents a summary of the significance assessment of Aboriginal cultural heritage sites recorded during this assessment. Further details of each of the assessment criteria are provided below.

### Social or cultural value

Aboriginal community members who accompanied the survey noted the cultural significance of all sites as being reminders of the traditional use of the area by Aboriginal people and as a tangible link to their ancestors.

### Archaeological/scientific value

The known sites have low scientific significance as past land use, principally extensive earthworks, and sheet wash erosion, has disturbed the integrity of the sites, lowering their potential to add to our knowledge of the area. Although site 49-1-0044 (LW2) is a large artefact scatter, it is situated within the main area of the 2007 earthworks as seen in **Figure 4-5** and contains no intact subsurface deposits (NGH 2018b).

### Aesthetic value

All the sites within the study area do not manifest themselves obviously in the landscape and are difficult for the layperson to appreciate. Discussions on the sites were held during the survey with Aboriginal representatives commenting on the general aesthetic characteristics of the study area, embodied in aspects such as the landforms, the weather, and wildlife (i.e. the birds and reptiles seen). Although, no specific aesthetic values were related specifically to the archaeological sites. It is therefore understood that the location of the sites is within an area of generalised aesthetic value.

### Historic value

No sites within the project area have specific historical significance as there are no known associations to specific people or events.

**Table 7-1: Aboriginal cultural heritage: significance assessment.**

Site name	Social or cultural value	Archaeological / scientific value	Aesthetic value	Historic value
49-2-0187 (Lake Wyangan OS-1)	High	Low	Low	None
49-2-0027 (LW1)	High (NGH 2018b)	Low (NGH 2018b)	Low (NGH 2018b)	None (NGH 2018b)
49-1-0044 (LW2)	High (NGH 2018b)	Low (NGH 2018b)	Low (NGH 2018b)	None (NGH 2018b)
49-1-0043 (LW4)	High (NGH 2018b)	Low (NGH 2018b)	Low (NGH 2018b)	None (NGH 2018b)
49-2-0165 (LW8)	High (NGH 2018b)	Low (NGH 2018b)	Low (NGH 2018b)	None (NGH 2018b)
49-2-0186 (LW Artefact Reburial 1)	High (OzArk 2021)	Low (OzArk 2021)	Low (OzArk 2021)	None (OzArk 2021)

### 7.2.1 Statement of significance

The intangible Aboriginal cultural values across the wider district relate to several important places and themes associated with non-archaeological cultural values. These places mainly relate to spiritual and ceremonial connections across the broader landscape that may encompass culturally significant geographical features.

The extant Aboriginal sites within the study area, 49-2-0027 (LW1), 49-1-0044 (LW2), 49-1-0043 (LW4), 49-2-0165 (LW8), 49-2-0186 (LW Artefact Reburial 1), and 49-2-0187 (Lake Wyangan OS-1), have been assessed as having low or no archaeological/scientific, aesthetic, and historical significance as the sites do not provide any information that is not already known about Aboriginal occupation in the area. However, as all Aboriginal objects have intangible cultural values, the cultural significance of all sites is high.

There is no previously recorded Aboriginal burial within the study area, however, there is community concern for a possible burial. Although it has been assessed in **Section 6.9.1**, that an Aboriginal burial within the study area is unlikely, any Aboriginal burial is considered to have high cultural, archaeological/scientific, and aesthetic significance. The historic significance of an Aboriginal burial would depend on whether the skeletal remains are associated with a historic individual, place, or event.





## 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:

- Harm to significant Aboriginal objects and places should always be avoided wherever possible
- Where harm to Aboriginal objects and places cannot be feasibly or reasonably avoided, proposals should be amended to reduce the extent and severity of harm to significant Aboriginal objects and places.

#### 8.1.2 Opportunities to conserve Aboriginal cultural heritage values

Following the stage 4 review of the revised ACHAR the development footprint of the proposal has excluded a portion of land adjacent to the western boundary of the study area referred to as the 'heritage exclusion zone'. This exclusion has been made to reduce impacts to Aboriginal cultural heritage from the proposal and address RAP concerns regarding the potential burial.

This avoidance measure has contributed to the partial conservation of the Aboriginal cultural heritage values at 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) as these sites will only be partially harmed. Additionally, 49-2-0027 (LW1) and 49-2-0186 (LW Artefact Reburial 1) will be wholly excluded from harm. The heritage exclusion zone is shown on **Figure 9-1**.

### 8.2 LIKELY HARM TO ABORIGINAL HERITAGE FROM THE PROPOSAL

**Table 8-1** presents a summary of potential harm to Aboriginal objects associated with the proposal.

**Table 8-1: Aboriginal cultural heritage - impact assessment.**

Site name	Type of harm (direct/indirect/none)	Degree of harm (Total/partial/none)	Consequence of harm (total/partial/no loss of value)
49-2-0187 (Lake Wyangan OS-1)	Direct	Partial	Partial loss of value
49-2-0027 (LW1)	None	No loss of value	No loss of value
49-1-0044 (LW2)	Direct	Partial	Partial loss of value
49-1-0043 (LW4)	Direct	Total	Total loss of value

Site name	Type of harm (direct/indirect/none)	Degree of harm (Total/partial/none)	Consequence of harm (total/partial/no loss of value)
49-2-0165 (LW8)	Direct	Total	Total loss of value
49-2-0186 (LW Artefact Reburial 1)	None	None	No loss of value

### 8.3 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.

#### 8.3.1 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 harmed, 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 proposal.

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

#### 8.3.2 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 guided by:

- The proposal 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 harmed.

### 8.3.3 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.

### 8.3.4 Applicability to the proposal

The loss of any Aboriginal cultural values, be physical sites or intangible values, is to be avoided as much as is possible to ensure that the environment impacts of the proposal are as acceptable as possible. If as many sites as is possible are conserved in the landscape the proposal will adhere to the ESD principles of ensuring that impacts are minimised and that the Aboriginal cultural heritage values within the study area are maintained or enhanced.

**Table 8-2** examines the application of ESD principles to the proposal.

**Table 8-2: Application of ESD principles to the proposal.**

ESD principle	Response
Avoiding and minimising harm	Following the stage 4 review of the revised ACHAR the development footprint of the proposal has excluded a portion of land adjacent to the western boundary of the study area referred to as the 'heritage exclusion zone'. This exclusion has been made to reduce impacts to Aboriginal cultural heritage from the proposal and address RAP concerns regarding the potential burial.  This avoidance measure has contributed to the partial conservation of the Aboriginal cultural heritage values at 49 1 0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) as these sites will only be partially harmed. Additionally, 49-2-0027 (LW1) and 49-2-0186 (LW Artefact Reburial 1) will be wholly excluded from harm.
The integration principle	The proposal has sought to minimise impacts to Aboriginal cultural heritage wherever possible. Management of unavoidable impacts will ensure that information regarding these sites is maintained.
The precautionary principle	The archaeological assessment has followed the precautionary principle through undertaking a robust impact assessment to ensure that harm to Aboriginal objects is minimised.
The intergenerational equity principle	The archaeological measures and management proposed in this report are designed to manage the loss of inter-generational equity as much as possible. The proponent assisted this by altering the proposed development footprint to conserve Aboriginal cultural heritage.

## 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 proposal. **Section 7.2** and **Section 8.2** describe, respectively, the significance / potential of the recorded sites and the likely impacts of the proposal. 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 proposal 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.
- If impact is unavoidable then approval to disturb sites under the authority of an AHIP must be sought from Heritage NSW. Whether the AHIP is consented will depend on many factors including the site's assessed significance. This ACHAR will be required to accompany the AHIP application and normally the management recommendations contained in the ACHAR become conditions of the AHIP. As the Aboriginal community have been provided the opportunity to view the draft ACHAR, the ACHAR must make it clear that an AHIP application will be sought so that the Aboriginal community can assess the management recommendations with this knowledge. The AHIP conditions will often stipulate that the Aboriginal community should be involved in any salvage activities and will dictate what the fate of any salvaged Aboriginal objects will be.

### 9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

#### 9.2.1 Management of potentially impacted Aboriginal sites

Should the proposal be approved, four sites will be harmed. Sites 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) will be partially harmed, while 49-1-0043 (LW4) and 49-2-0165 (LW8) will be totally harmed. In accordance with the management and mitigation of impacts to Aboriginal cultural heritage, an AHIP to permit harm to Aboriginal objects will be required.

Impacts arising from the proposal will be mitigated using methodologies to cover the following activities under Section 2.1.4 of the AHIP application:

- Movement only of certain Aboriginal objects
- Community collection
- Harm to certain Aboriginal objects through the proposed work (should objects be unable to be located and salvaged during the surface collection/community collection phase).



### Surface collection

Surface artefacts from sites 49-1-0043 (LW4), 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) within the development footprint will be subject to community collection and relocated near the artefact box of 49-2-0186 (LW Artefact Reburial 1).

Site 49-2-0165 (LW8) does not contain known artefacts; however, the location of the site will be subject to community collection to retrieve surface artefacts (if any) within the AHIP area prior to works commencing.

The following program is suggested:

- If there is significant ground cover at the sites at the time of salvage, it is recommended that the vegetation be poisoned well ahead for the salvage, and if necessary, some method of vegetation removal (slashing/poisoning) should be applied to enable sufficient view of the ground surface for salvage
- All visible artefacts at the sites should be flagged in the field.
- The site should be photographed after flagging and before recording
- All artefacts should have the following artefact information entered directly into a GPS unit, albeit one set up with all variable fields already entered to make the field recording job more efficient:
  - Location
  - Artefact class
  - Artefact type
  - Size
  - Reduction level
  - Raw material
  - Notes.
- A selection of indicative and / or unusual artefacts from each site will be photographed
- A sketch plan of the site will be completed indicating zones for the surface collection of artefacts
- Once all recording is complete, the artefacts will be collected according to site zones (if applicable) with artefacts from each zone being kept separate.
- Should the collection team encounter a human burial, all work should cease in the area and advice from authorities and RAPs (should the remains be Aboriginal) sought.
- The recording of the artefacts recovered will largely be completed in the field and this data would be incorporated into a report

- Analysis will be attempted although we do not anticipate a statistically valid artefact assemblage.

No further subsurface salvage excavations are considered necessary, as the study area has been extensively investigated by past test excavations (Barber 2000 and NGH 2018b) and no intact archaeological deposits are present.

#### Topsoil retention

It is a recommendation that topsoil be retained from the proposed footprint in the vicinity of the salvaged Aboriginal artefact sites to minimise the risk of artefacts not collected during salvage being taken away from the area.

It is envisaged that this material would be stockpiled on site and then used for revegetation after construction is complete.

### **9.2.2 Management of Aboriginal objects not being harmed**

#### **9.2.2.1 *Fencing***

The boundary of the 'heritage exclusion zone' must be fenced prior to works commencing to ensure no inadvertent harm occurs to the Aboriginal sites within this area. The location of the required fencing is shown on **Figure 9-1**.

#### **9.2.2.2 *Monitoring by an Aboriginal site officer***

While the western boundary in the southwest of the study area was part of the 2022 survey, it is appropriate works in the 'monitoring zone' shown on **Figure 9-2** should be monitored by a suitably qualified member of the Aboriginal community. The monitoring will aim to recover any further Aboriginal objects associated with site 49-1-0044 (LW2) and to ensure that there are no ancestral remains in this area. Should stone artefacts be noted, the AHIP will allow the site monitor to collect the artefacts and store them with other artefacts salvaged from the AHIP area.

If ancestral remains are encountered, all work must stop in the area of the find and Heritage NSW contacted for advice. Normally, the management of ancestral remains would be in the form of a variation to the AHIP. It is important to note that works in this portion of the study area involve levelling artificial mounds made in 2007 by earthworks, and that if any Aboriginal heritage items in this zone are recovered, they will most likely be in secondary contexts.

#### **9.2.2.3 *Project controls***

To avoid indirect harm associated with the proposal within the development footprint, the following measures will be implemented:

- Work crews will be inducted as to the protection of Aboriginal objects under the NPW Act

- Work crews will be made aware of the 'heritage exclusion zone' and the monitoring zone at 49-1-0044 (LW2) (**Figure 9-1** and **Figure 9-2**). They must be informed that the heritage exclusion zone is fenced and must not be impacted and that the monitoring zone must have an Aboriginal community member present when initial ground disturbing works are taking place
- The Construction Environmental Representative should ensure that the heritage exclusion zone is marked as a no-go area on all construction plans.

**Figure 9-1: 'Heritage exclusion area' and area requiring fencing.**

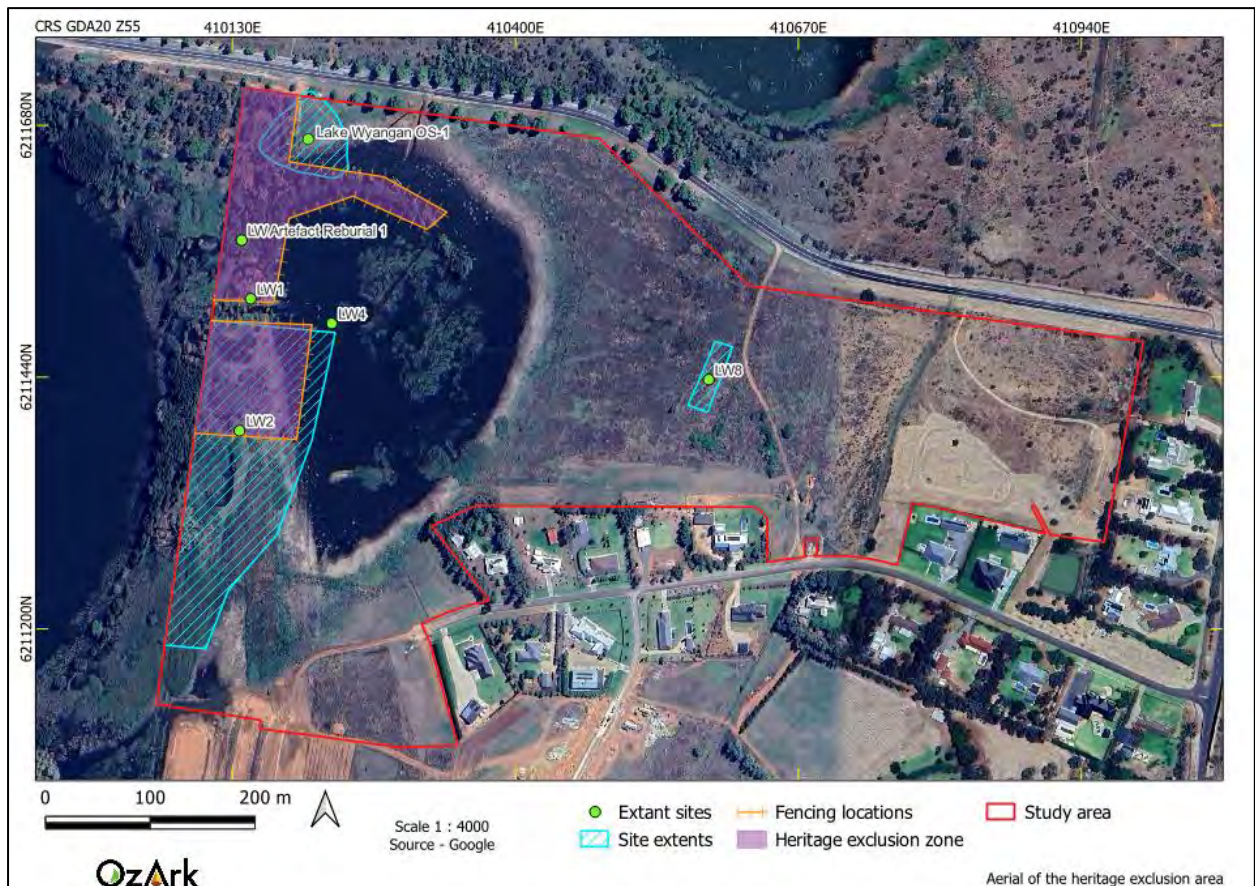
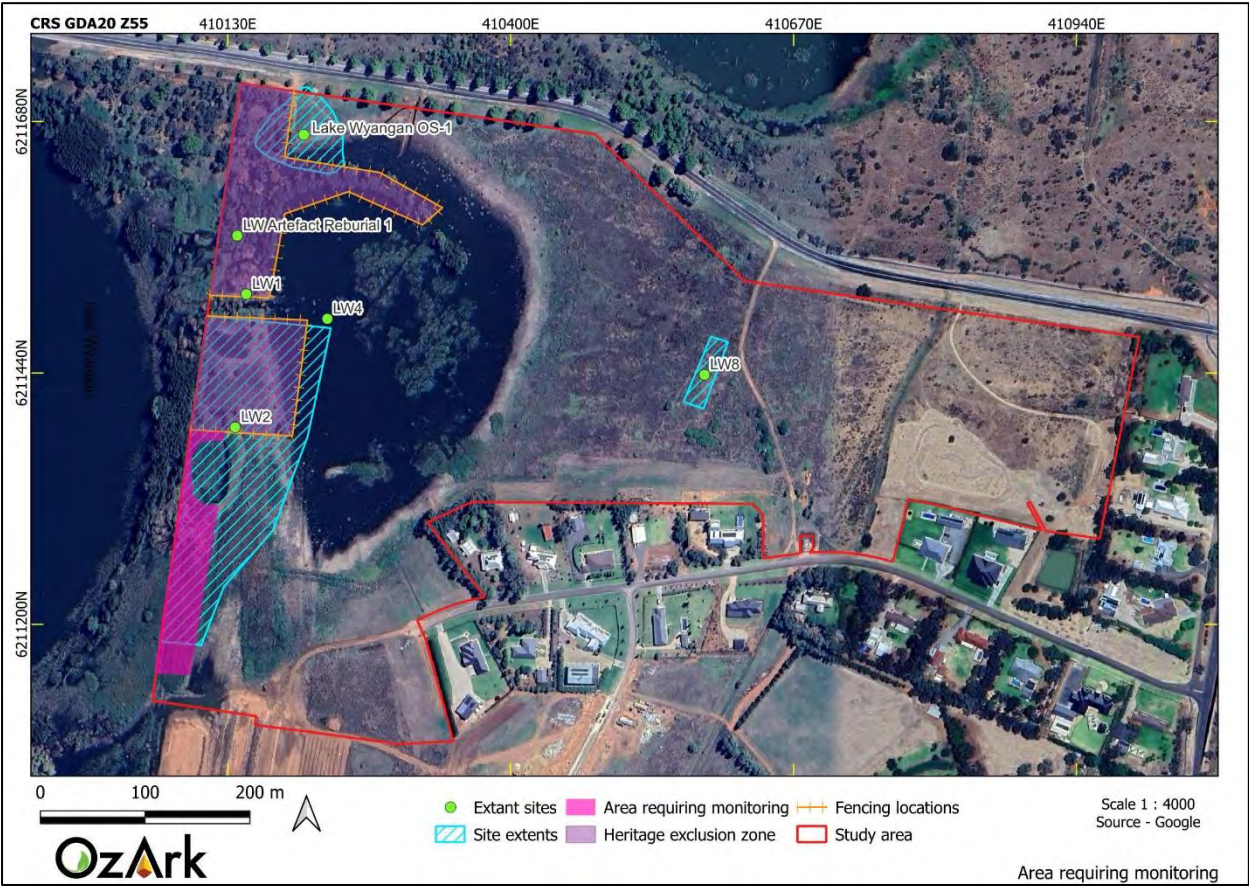




Figure 9-2: Portion of LW2 site extent requiring monitoring.



## 10 AHIP APPLICATION DETAILS

### 10.1 AHIP DETAILS

#### 10.1.1 Background

- The AHIP application will be in relation to the proposed residential housing subdivision, Lakeside Estate Stage 4, on the eastern side of the south Lake of Lake Wyangan. The AHIP area has potential to be harmed by the construction of housing and associated facilities and infrastructure.
- Test excavations were not undertaken as previous subsurface investigations completed by Barber (2000) and NGH (2018b) determined that the area has low conservation values due to previous disturbances.
- Part of sites 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) and the entirety of sites 49-1-0043 (LW4) and 49-2-0165 (LW8) are located within the development footprint of the proposed works and are likely to be harmed.
- Part of sites 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) and the entirety of sites 49-1-0043 (LW4) and 49-2-0165 (LW8) will be subject to community collection to retrieve surface artefacts within the AHIP area prior to works commencing.
- Any artefacts salvaged from part of site 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) and the entirety of sites 49-1-0043 (LW4) and 49-2-0165 (LW8) will be reburied near the artefact box of 49-2-0186 (LW Artefact Reburial 1).
- If reburial does not occur on the day of the surface collection, the Aboriginal objects will be temporarily stored at the Dubbo OzArk Environment & Heritage office until they can be reburied in an area where no future works are proposed.

#### 10.1.2 Proposed work

The proponent is LWLE Pty Ltd, 21 Bennu Cct, Albury NSW 2640.

The development of “large lot” residential zoned, vacant land subdivision at South Lake Drive Lakeside Estate Stage 4, will broadly include the following:

- Construction of single storey residential houses, sheds, driveways and landscaping
- Construction of internal roads and associated infrastructure

The proposed works will follow the design and details provided in the Statement of Environmental Effects (SEE).

#### 10.1.3 Proposed term

The proposed term of the AHIP will cover 10 years from the date of issue.



#### 10.1.4 AHIP area

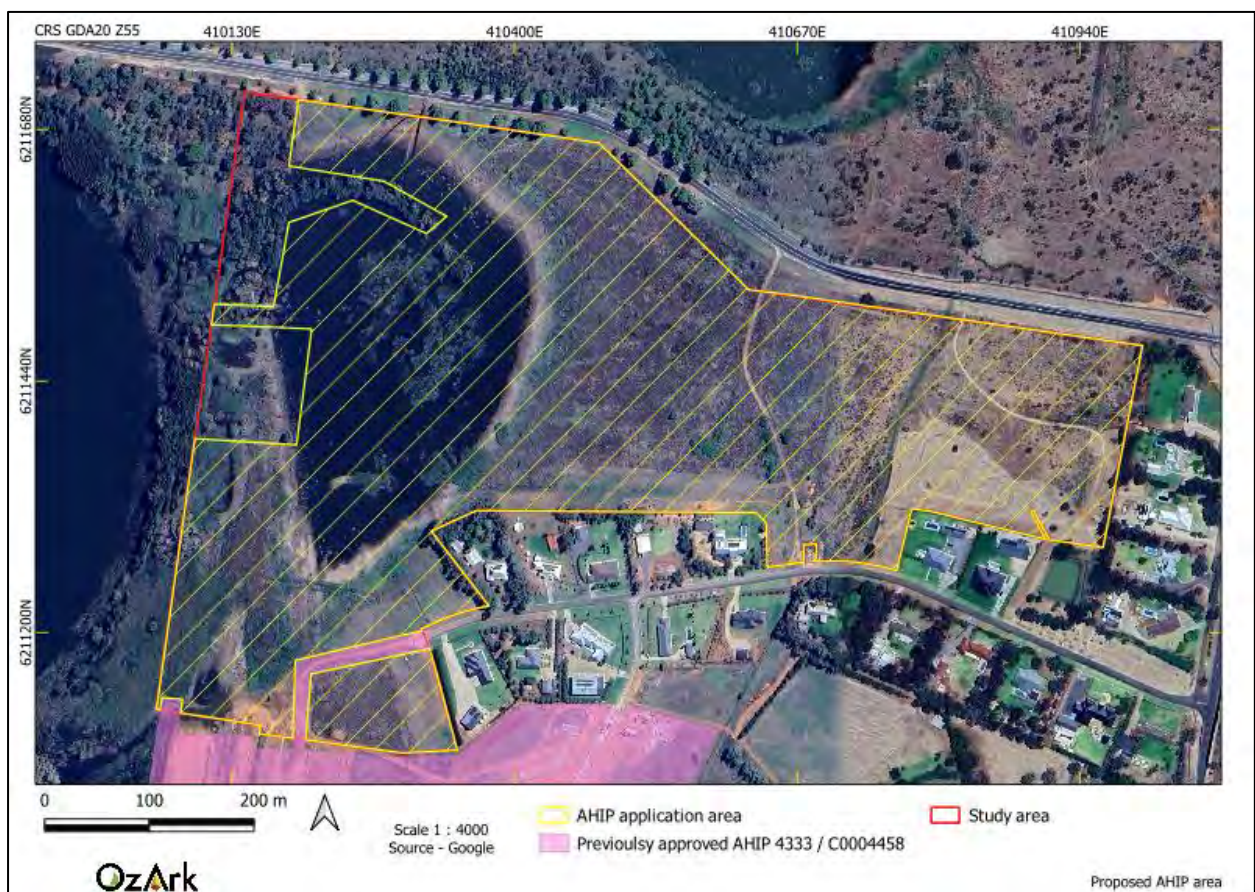
The AHIP area will include the 27.1 ha maximum development footprint assessed as part of this ACHAR (henceforth 'the AHIP area'). All ground disturbing impacts associated with the proposal will be contained within the AHIP area.

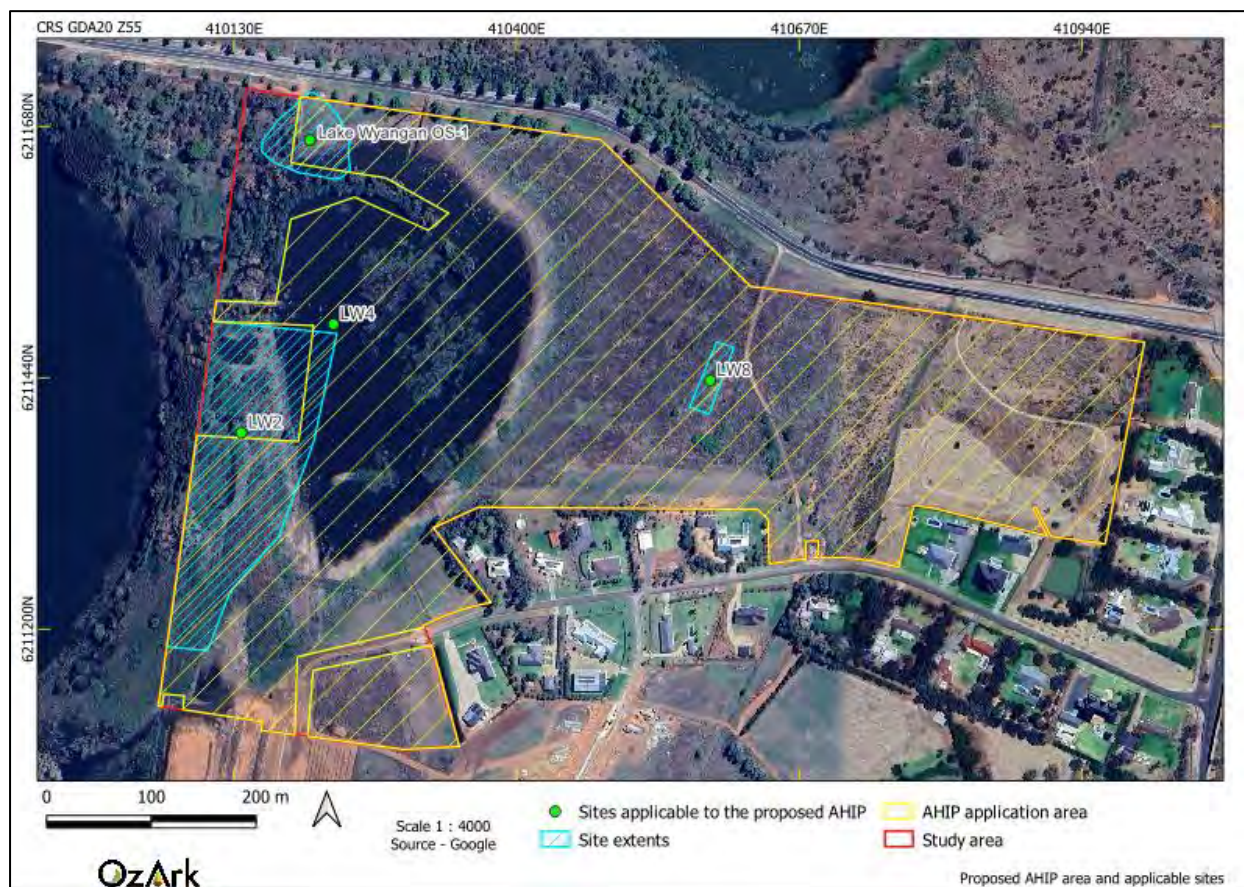
**Figure 10-1** shows the AHIP area in relation to the approved AHIP C0004458. AHIP C0004458 was issued by the Office of Environment and Heritage (now DCCEEW) on 1 February 2029 and is valid until 1 February 2029.

The current proposed AHIP area does not overlap with AHIP C0004458.

**Figure 10-2** shows the Aboriginal sites applicable to the proposed AHIP area.

**Figure 10-1: The AHIP area in relation to AHIP C0004458.**



**Figure 10-2: The proposed AHIP area and the application Aboriginal sites.**

### 10.1.5 Cadastral details

Table 10-1 details the cadastral information specific to the AHIP area.

**Table 10-1: Cadastral details for the AHIP area.**

Information requirement	Details
Street Address	Various
Lot(s) / DP	Lot 146 DP1214737
LGA	Griffith City Council LGA
Land zone	R5 Large Lot Residential
Parish	Wyangan
County	Cooper

### 10.1.6 Descriptions of 'harm'

#### 10.1.6.1 Community collection

Any surface artefacts visible at sites 49-1-0043 (LW4), 49-1-0044 (LW2; part), 49-2-0165 (LW8), and 49-2-0187 (Lake Wyangan OS-1; part) should be subject to community collection and reburial near the artefact box of 49-2-0186 (LW Artefact Reburial 1). The method for collecting the surface artefacts is outlined in **Section 9.2.1**.



The community collection includes the following known Aboriginal objects, as identified on AHIMS (Table 10-2).

**Table 10-2: Aboriginal objects subject to community collection.**

Portion of Site (whole or part)	AHIMS Site ID	Site Name	Site Feature	Information access restriction? (Y/N)	Coordinates (GDA Zone 55) East	Coordinates (GDA Zone 55) North	Datum
Whole	49-1-0043	LW4	Artefact scatter	N	410224	6211425	GDA
Part	49-1-0044	LW2	Artefact scatter	N	410137	6211388	GDA
Whole	49-2-0165	LW8	Artefact scatter	N	410585	6211438	GDA
Part	49-2-0187	Lake Wyangan OS-1	Artefact scatter	N	410203	6211667	GDA

#### **10.1.6.2 Harm to certain Aboriginal objects through the proposed works**

The harm to certain Aboriginal objects through the proposed works would apply to any stone artefacts not identified during the survey inside the AHIP area. Impact to these stone artefacts from the proposal would be authorised by the AHIP.

#### **10.1.6.3 Areas where Aboriginal objects will not be harmed**

The portions of sites 49-1-0044 (LW2) and 49-2-0187 (Lake Wyangan OS-1) within the heritage exclusion zone will not be harmed during the duration of the AHIP. The 'heritage exclusion zone' that is being avoided by the proposal and will be fenced and demarcated as a no go zone on plans.

## **10.2 HERITAGE CONTINGENCY PROTOCOLS FOR UNANTICIPATED FINDS**

If unexpected Aboriginal features, such as a large number of stone artefacts or skeletal material, are encountered within the AHIP area that are not identified in this ACHAR, work must stop immediately, and the area be cordoned off with high visibility fencing. The AHIP holder must be notified of the situation as soon as possible and the following protocol followed.

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities (excluding human skeletal remains), 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 a suitably qualified archaeologist and the RAPs registered for the proposal
  - e. With the assistance of the archaeologist and the RAPs, salvage the artefact under the terms of the AHIP by recording and collecting the artefact

- f. The salvaged artefact should be reburied along with the other artefacts recovered from the test program and surface collection
  - g. A brief addendum to this report should be written to record the find.
- 2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted. It should be noted that an AHIP, should it be granted, will not allow harm to human skeletal material and that further investigation, as set out below, will be required.
  - a. In the event of human skeletal material being uncovered, the proponent must cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
    - i. The recording and assessment of the find(s)
    - ii. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
    - iii. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
  - b. Recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from HNSW (at a minimum with a variation to the AHIP).



## 11 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 one previously unrecorded Aboriginal site 49-2-0187 (Lake Wyangan OS-1) was recorded during the assessment.

The following recommendations are made based on these impacts and regarding:

- 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 AHIP.
- 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. An Aboriginal Heritage Impact Permit (AHIP) application must be sought to permit harm to four Aboriginal objects. Further details on the AHIP application are provided in **Section 10**. The sites that are likely to be harmed by the proposal are:
  - 49-1-0043 (LW4) (total harm)
  - 49-1-0044 (LW2) (partial harm)
  - 49-2-0165 (LW8) (total harm)
  - 49-2-0187 (Lake Wyangan OS-1) (partial harm).
2. It is recommended that the following measures will be carried out prior to the commencement of works under the authority of an approved AHIP:
  - a) 49-1-0044 (LW2; part), 49-1-0044 (LW4), 49-2-0165 (LW8), 49-2-0186 and 49-2-0187 (Lake Wyangan OS-1; part) will undergo a community collection of visible artefacts in the AHIP area before works commence as set out in **Section 9.2**
  - b) 49-2-0165 (LW8) does not have a manifestation of surface artefacts, although the site location should be visited at the time of the salvage to ensure that this remains the case. If surface artefacts are visible, they will be collected using the same methodology as set out in **Section 9.2**
  - c) The 'heritage exclusion zone' shown on **Figure 9-1** will be fenced to ensure that there are no inadvertent impacts to the Aboriginal sites within this area and the relatively undisturbed portions of the lunette landform
  - d) An Aboriginal site monitor will be present during initial ground disturbing works in the area within the site extent of 49-1-0044 (LW2) designated here as the 'monitoring zone' on **Figure 9-2**. This will ensure any Aboriginal objects are

recovered from this area and placed with any other artefacts recovered from the AHIP salvage program

- e) Topsoil retained from within the development footprint will be stockpiled on site and used for revegetation works within the development footprint following works.
- 3. All works must be confined to the development footprint. For any works proposed outside this area, further archaeological assessment will be required.
- 4. Inductions for all construction crew members must include a cultural heritage awareness procedure to ensure awareness of the protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and to learn basic stone artefact identification (**Appendix 3**).
- 5. An *Unanticipated Finds Protocol* such as that set out in **Section 10.2** must be adhered to by all site personnel for all proposed construction works.

## REFERENCES

- Barber 1998                      Barber 1998. *An Archaeological Survey of Proposed Subdivision at Lake Wyangan, Griffith NSW*. Unpublished report to Griffith Local Aboriginal Land Council.
- Barber 2000                      Barber 2000. *An Archaeological Subsurface Investigation at Lake Wyangan, Griffith NSW*. Unpublished report to Griffith Local Aboriginal Land Council.
- Burke & Smith 2004              Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- Burra Charter 2013              International Council on Monuments and Sites 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*.
- Clegg 1990                      Clegg, F. *Simple statistics: a course book for the social sciences*. Cambridge University Press, Cambridge.
- DECCW 2010                      Department of Environment, Climate Change and Water, Sydney (now Heritage NSW). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
- DECCW 2010b                      Department of Environment, Climate Change and Water, Sydney (now Heritage NSW). *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.
- Hiscock 1983                      Hiscock P. 1983. *An Archaeological Survey of the proposed 330kV Transmission Line, Wagga Wagga to Darlington Point*. Report to the Electricity Commission of NSW.
- Hiscock and Mitchell 1993      Hiscock, P. and Mitchell, S. Stone artefact quarries and reduction sites in Australia: towards a type profile. *Australian Heritage Commission Technical Publications Series No.4*, Australian Government Publishing Service, Canberra.
- Kabaila 1995                      Kabaila, P. (1995). *Wiradjuri Places: The Murrumbidgee River Basin, with a section on Ngunawal Country*. Volume 1. Black Mountain Projects.
- Kass 2003                      Kass, T. (2003). *A Thematic History of the Central West: Comprising the NSW Historical Regions of Lachlan and Central Tablelands*. NSW Heritage Office.
- Leonard and Jones 1989      Leonard, R. D. and Jones, G. T. (eds) *Quantifying diversity in archaeology*. Cambridge University Press, Cambridge.

Moore 2000	Moore, M.W. Technology of Hunter Valley microlith assemblages, New South Wales. <i>Australian Archaeology</i> 51.
NGH 2016	NGH Environmental. 2016. <i>Archaeological assessment for the Griffith Solar Farm</i> . Report to Neoen.
NGH 2018a	NGH Environmental 2018. <i>Aboriginal Heritage Due Diligence Assessment: Lakeside Estate</i> . Report for Norgriff Pty Ltd.
NGH 2018b	NGH Environmental 2018. <i>Aboriginal Cultural Heritage Assessment: Lakeside Estate, Griffith</i> . Report for Norgriff Pty Ltd.
NSW NPWS 1996	New South Wales National Parks and Wildlife Service. 1996. <i>Koonadan Historic Site Plan of Management</i> .
OEH 2011	Office of Environment and Heritage 2011. <i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i> .
OzArk 2013	OzArk Environment & Heritage. 2013. <i>Aboriginal and Historic Heritage Assessment: Darlington Point Levee Upgrade</i> . Report prepared for NSW Public Works on behalf of Murrumbidgee Council.
OzArk 2021	OzArk Environment and Heritage 2021. <i>Aboriginal Cultural Heritage Salvage Report: Lakeside Estate Stages 1 &amp; 2, Lake Wyangan – AHIP 4333 / C0004458</i> . Report prepared for Davis Sanders Homes on behalf of LWLE Pty Ltd.
Tindale 1974	Tindale N. <i>Aboriginal Tribes of Australia</i> . ANU Press, Canberra.
Tindale 2000	Tindale NB. 2000. Wiradjuri. In Tindale's <i>Catalogue of Australian Aboriginal Tribes</i> . South Australian Museum on South Australian Museum Website, South Australia.
White and Cane 1986	White. I and Cane. S. 1986. <i>An Investigation of Aboriginal Settlements and Burial Patterns in the Vicinity of Yass</i> . Report to the NSW NPWS, Queanbeyan.
White 1999	White E. <i>From artefacts to the actions of people in prehistory: a behavioural study of the W2 stone artefact assemblage, Hunter Valley, NSW</i> . Master of Philosophy Thesis, University of Sydney.
Witter 1980	Witter D. 1980. <i>Archaeological Gas Pipeline Survey between Wagga Wagga and Young</i> .



## PLATES



Plate 1: View to the north of the study area within the site extent of 49-1-0044 (LW2) showing the extensive reed cover.



Plate 2: View to the north of the study area showing dense grass and weed cover.





Plate 3: View to the east of the study area showing dense grass and weed cover.



Plate 4: View to the north towards Jones Road showing the dirt track that provided visibility.





Plate 5: View of 100% GSV provided on a dirt track.



Plate 6: View to the west of the study area showing a stockpile from the extensive earthworks in 2008.

## APPENDIX 1 COMMUNITY CONSULTATION LOG

Appendix 1 Figure 1: Community consultation log.

Aboriginal Consultation Log - Lakeside Estate			
Date	Organisation	Comment	Method
19.10.21	Daily Liberal	Catherine Burrowes (CB) sent draft ad to Tammy Daily Liberal Conformation will be placed in paper 20.10.21	email
19.10.21	Heritage NSW	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	Griffith Local Aboriginal Land Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	Office of The Registrar, ALRA	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	National Native Title Tribunal	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	NTSCORP	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	Griffith City Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
19.10.21	Griffith Local Land Services	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 2.11.21	email
20.10.21	National Native Title Tribunal	CB received notification ' <i>Records held by the National Native Title Tribunal as at 30 May 2017 indicate that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area of the Griffith City Council</i>	email
20.10.21	Griffith Local Land Services	CB response from LALC CEO - in responses folder	email
26.10.21	Heritage NSW	CB received RAP list	email
26.10.21	Griffith Local Aboriginal Land Council	CB sent community letters exp 9.11.21	email
26.10.21	Miyagan Cultural & Heritage	CB sent community letters exp 9.11.21	email
26.10.21	Shailyn Williams	CB sent community letters exp 9.11.21	email
26.10.21	Will Carter	CB sent community letters exp 9.11.21	email
26.10.21	Ray Woods	CB sent community letters exp 9.11.21	email
27.10.21	Will Carter	CB received registration of interest	email
27.10.21	Maydina Penrith	CB sent community letters exp 9.11.21	email
2.11.21	Neal Cranston	CB Neal Registered his interest - I have requested contact address and contact number	email
3.11.21	Neal Cranston	CB Neal sent email - details in folder and to side. My reply in the folder too. Also provided community letter to Neal.	email
12.11.21	Neal Cranston	Brendan Fisher (BF) answered call from Neal who voiced his concerns regarding the project. He asked why the Agency letter was placed in the Dubbo Liberal and not the local Area News for Griffith. He also disapproves of the development due to concerns of burials in the nearby lunette - "The burials are not on AHIMS for a reason". Voiced further concern that project may have started on 3rd November (saw an OzArk car in town)	Phone
12.11.21	Neal Cranston	BF phoned Neal to apologise that the notification to express interest in the project was put in the Dubbo Daily Liberal and that it is now being reissued in the Area News for Griffith. Neal thanked for rectifying this.	Phone
12.11.21	Daily Liberal	Sheridan Baker (SB) phoned Tammy to notify her that the notification to express interest in the project was placed in the wrong newspaper. Tammy is rectifying this issue by putting it in the Griffith Area Newspaper on Monday 15th November. Closing date to express interest is 29.11.21	Phone

Aboriginal Consultation Log - Lakeside Estate			
15.11.21	Griffith Local Land Services	CB received email advising us to be in touch with Griffith LALC to seek a list of interested parties. This had been done in the initial contact 19.10.21	email
14.12.21	Griffith Local Aboriginal Land Council	BF sent stag2 cover letter and assessment methodology. Closing date 11.1.22	email
14.12.21	Will Carter	BF sent stag2 cover letter and assessment methodology. Closing date 11.1.22	email
14.12.21	Neal Cranston	BF sent stag2 cover letter and assessment methodology. Closing date 11.1.22	Post
13.1.22	Neal Cranston	CB received phone call from Neal advising the Stage 2 letter and methodology only just arrived. Disappointed in Aust Post delay. Sent email to Neal acknowledging our discussion today	Post
17.1.22	Neal Cranston	BF phoned Neal to see if he had any feedback on the assessment methodology. Neal had a few comments on the methodology and will send BF an email compiling his comments	Phone
17.1.22	Neal Cranston	Neal emailed Brendan his comments and feedback on the assessment methodology. Neal wants the western boundary of the study area to be pushed further east, to exclude the lunette (sand dune) landform from being impacted. It is Neal's belief that this is where the burial is located. Neal also disagrees with the Tindale map representing "tribal" boundaries, and that the Native Title should be incorporated here instead.	Phone
20.1.22	Neal Cranston	Barry Kerton (BK) sent fieldwork invite.	email
20.1.22	Griffith Local Aboriginal Land Council	BK sent fieldwork invite.	email
20.1.22	Neal Cranston	BK received email from Neal informing that he does not have workers Compensation insurance.	email
20.1.22	Frank - Getset	CB sent email to Getset for Neal to gain insurance	email
20.1.22	Neal Cranston	BK received email from Neal stating his intent to assist with or without insurance	email
21.1.22	Neal Cranston	SB received a call from Neal requesting to be sent an electronic copy of the assessment methodology	email
21.1.22	Neal Cranston	BF contacted Neal to explain the third-party workers insurance. Neal also reiterated that he would like an electronic copy of the draft assessment methodology.	Phone
21.1.22	Neal Cranston	BF sent Neal an electronic copy of the draft assessment methodology	Email
8.7.22	Neal Cranston	CB sent Stage 4 draft ACHAR and letter closing date 5.8.22	Email
8.7.22	Griffith Local Aboriginal Land Council	CB sent Stage 4 draft ACHAR and letter closing date 5.8.22	email
8.7.22	Will Carter	CB sent Stage 4 draft ACHAR and letter closing date 5.8.22	email
8.7.22	Neal Cranston	Neal thanked Catherine for sending through draft ACHAR	Email
11.7.22	Neal Cranston	BF phoned Neal to discuss ACHAR. Neal has a few comments and will email them to BF. Once received, BF will incorporate into ACHAR.	Phone
12.7.22	Neal Cranston	Neal emailed BF an article on the changing ownership of Lake Wyangan	Email
12.7.22	Neal Cranston	BF thanked Neal for sending through the article	Email
3.8.22	Neal Cranston	Neal sent BF information on Cobar Peneplains and photos of grinding grooves out in Terry Hie Hie near Moree.	Email
4.8.22	Neal Cranston	Neal sent additional information on the Cobar Peneplains.	Email
5.8.22	Neal Cranston	BF thanked Neal for sending through the information	Email
16.12.22	Griffith Local Aboriginal Land Council	CB sent project update letter	Email
16.12.22	Will Carter	CB sent project update letter	Email
16.12.22	Neal Cranston	CB sent project update letter	Email
8.2.23	Neal Cranston	BF contacted Neal to explain project update. No response, message left.	Phone



Aboriginal Consultation Log - Lakeside Estate			
20.2.23	Neal Cranston	Neal emailed BF to receive an explanation on what council wishes to change for the study area.	Email
20.2.23	Neal Cranston	BF responded to Neal's email and outlined the changes that council wishes for.	Email
20.3.23	Neal Cranston	BF emailed Neal to confirm whether he read email sent to him by BF on 20.2.23	Email
20.3.23	Neal Cranston	Neal responded to BF's email, noting that any soil being removed from this portion of land must go through a sieve.	Email
20.3.23	Neal Cranston	BF responded to Neal's email noting that no soil will be removed or excavated, and that the levelling of the mounds is the only works proposed there.	Email
20.3.23	Neal Cranston	Neal responded to BF's email saying that he still wants all soil from the "so called artificial mounds" checked for artefacts and human bone.	Email
9.11.23	Griffith Local Aboriginal Land Council	CB Emailed revised Stage 4 ACHAR - Closing date 7.12.23	Email
9.11.23	Will Carter	CB Emailed revised Stage 4 ACHAR - Closing date 7.12.23	Email
9.11.23	Neal Cranston	CB Emailed revised Stage 4 ACHAR - Closing date 7.12.23	Email
16.11.23	Neal Cranston	CB returned call to Neal - Neal discussed Griffith Council along with size of the revised report. CB commented to Neal that he has until 7.12 to return comments/feedback	Email
9.11.23	Will Carter	CB received Email - Comments in folder	Email
9.11.23	Will Carter	CB replied - Thanking Will for email	Email
6.12.23	Neal Cranston	CB received Email - Comments in folder	Email
7.3.24	Griffith Local Aboriginal Land Council	Stephanie Rusden (SR) sent project update letter and final revised ACHAR	Email
7.3.24	Will Carter	SR sent project update letter and final revised ACHAR with Stage 4 comments addressed.	Email
7.3.24	Neal Cranston	SR sent project update letter and final revised ACHAR with Stage 4 comments addressed.	Email

**Appendix 1 Figure 2: Stage 1 advertisement.**

**Expression of Interest  
Cultural Heritage Management**

OzArk Environment & Heritage has been engaged on behalf of the proponent, LWLE Pty Ltd, and seeks registration of Aboriginal groups or individuals who are interested in being consulted over an Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application (AHIP) for the proposed Stage 4 of the Pelican Shores Lakeside Estate residential subdivision, Lake Wyangan, Griffith, NSW.

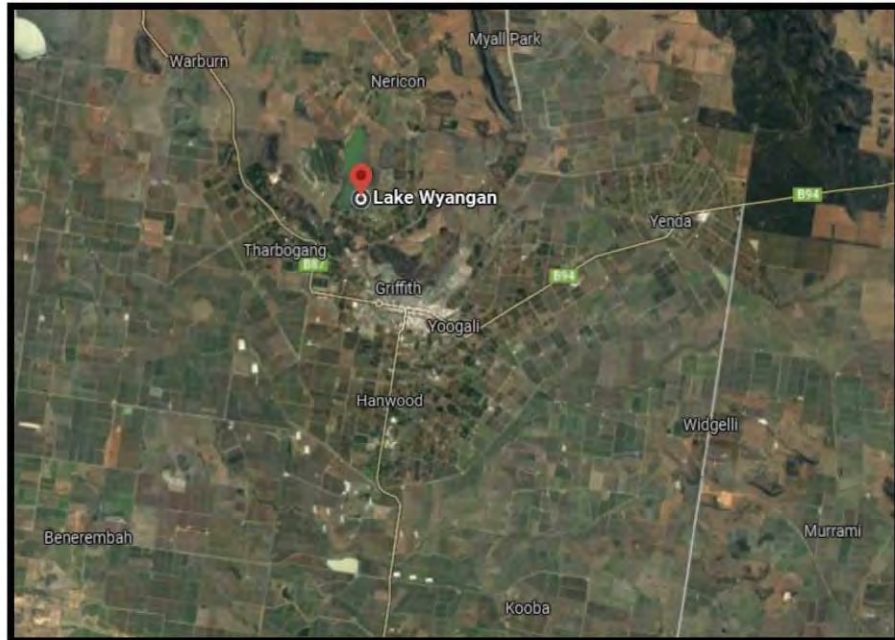
This consultation will assist the proponent in the preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR), including AHIP application, and to assist Heritage NSW in their consideration.

If you hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places in the proposed study area, please register your interest. We will continue to consult with this group. Registrations can be made by post: OzArk PO Box 2069 Dubbo NSW 2830; email: [catherine@ozarkehm.com.au](mailto:catherine@ozarkehm.com.au) or by phoning OzArk on 02 6882 0118. All submissions should be received no later than 3<sup>rd</sup> November 2021.

## Appendix 1 Figure 3: Stage 1 letters to agencies.





**Figure 1: Proposed development location****Figure 2: Proposed (approximate) area for Stage 4 subdivision of Lakeside Estate, Lake Wyangan (yellow).**



## Appendix 1 Figure 4: Stage 1 replies from agencies.

Hi Catherine,

Thank you for your email entailed with promoting consultative engagement with the Griffith Local Aboriginal Land Council, and notification for undertaking an Aboriginal Cultural Heritage Assessment (ACHA) and Aboriginal Heritage Impact application for Stage 4, Lakeside Estate, Lake Wyangan, as the area is located with Griffith LALC's defined boundaries.

The GLALC being a Registered Aboriginal Party (RAP) as per the requirement Code of Practice for Aboriginal Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b) and the guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)

I can confirm that the area that area is of very high Aboriginal ancestral value, and does contain Ancestral Aboriginal Burial site including objects and materials that are located within proposed survey areas.

The GLALC would require our Aboriginal Cultural Assessments Officer's to undertake multiple site survey's. If Aboriginal Cultural artefacts/material are located or unearthed, we would then support an AIMP application to ensure the ongoing protection of our local Wiradjuri Aboriginal Cultural Heritage.

The GLALC does not authorise any other non-endorsed Aboriginal or non-Aboriginal persons to assume the roles and responsibilities of the Griffith Local Aboriginal Lands Council of whom is constituted rights are contained with the NSW Aboriginal Land Rights Act 1983.

If you require any further clarification/information please don't hesitate to contact the GLALC.

Regards

Stephen Young  
CEO



Griffith Local Aboriginal Land Council  
P.O Box 8043 East Griffith NSW  
5 Wiradjuri Pl, Griffith NSW 2680  
Ph: (02) 69626711  
Fax: (02) 69641477  
Email: [griffithlalc@bigpond.com](mailto:griffithlalc@bigpond.com)

## Appendix 1 Figure 5: Stage 1 expressions of interest to Aboriginal community stakeholders.

	<p style="text-align: center;"><b>OzArk Environment &amp; Heritage</b></p> <p> <span style="color: green;">Dubbo</span>      T: 02 6882 0118  <span style="color: green;">Queanbeyan</span>      enquiry@ozarkehm.com.au  <span style="color: green;">Newcastle</span>      www.ozarkehm.com.au         </p>	<p>ABN 59 104 582 354</p> <p>145 Wingewarra St PO Box 2069 DUBBO NSW 2830</p>
---	--	---

26 October 2021

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

***Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application for Stage 4, Lakeside Estate, Lake Wyangan, Griffith, NSW***

---

Dear [REDACTED],

OzArk Environment & Heritage (OzArk) has been engaged by LWLE Pty Ltd to undertake Aboriginal community consultation as per the 'Aboriginal cultural heritage consultation requirements for proponents 2010' (DECCW 2010).

LWLE are proposing the development of Stage 4 of the Lakeside Estate residential subdivision, Lake Wyangan, Griffith, NSW on Lot 146 DP1214737.

We are therefore seeking Expressions of Interest from relevant Aboriginal stakeholder groups and individuals in the area, to form a consultation group. This consultation is to assist OzArk and LWLE in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and Aboriginal Heritage Impact Permit (AHIP) application, and to assist Heritage NSW in their consideration.

If you hold cultural knowledge relevant to determining the impacts to the cultural significance of this project area, please register your interest by contacting our office. The closing date for expressions of interest is COB Tuesday 9th November 2021. 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.

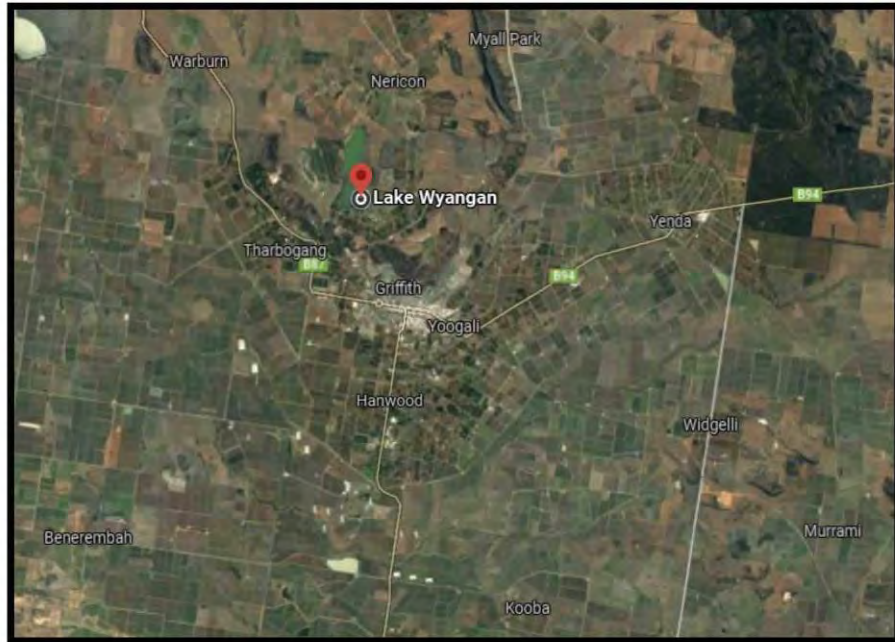
Once relevant groups and individuals have been identified, they will form part of the formal consultation process for the project.

Kind regards,



Catherine Burrows  
Office Manager/ Community Liaison

**Figure 1: Proposed development location**



**Figure 2: Proposed (approximate) area for Stage 4 subdivision of Lakeside Estate, Lake Wyangan (yellow).**





## Appendix 1 Figure 6: Stage 2/3 letters to RAPs.





**Appendix 1 Figure 7: Stage 2/3 comments.**

**From:** neal cranston <[nealcranston1961@gmail.com](mailto:nealcranston1961@gmail.com)>  
**Sent:** Monday, 17 January 2022 3:27 PM  
**To:** Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)>  
**Subject:** Re: Lakeside Estate Assessment Methodology - Comments and Feedback

You don't often get email from [nealcranston1961@gmail.com](mailto:nealcranston1961@gmail.com). [Learn why this is important](#)

Hi Brendan...as per phone call... this is a approximate area that should not be desturbed...the sand dunes are burial sites....the other issue I have is who are the Traditional Owners of this area and the Tindale map is not accurate and only a guide... this needs to be talked about through Native Tittle....and current land council does not have any qualified to access this site.... thanks Neal Cranston

On Mon, Jan 17, 2022, 10:59 AM Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)> wrote:

Hi Neal,

Thank you very much for taking my call this morning. I appreciate your comments and feedback that were discussed over the phone for the Lakeside Estate assessment methodology.

As discussed, if you could please provide those comments and feedback in response to this email, that would be much appreciated.

You also mentioned that you would draft up a line to exclude the lunette from the study area. If you could send this through, this would be very helpful, and I will pass on to the client for further discussion on whether it would be possible to adjust the study area or not.

I look forward to hearing back from you as soon as you can.

Have a great day.

Kind regards,  
Brendan

---

**Brendan Fisher**  
Project Archaeologist



## Appendix 1 Figure 8: Stage 4 cover letter (sample)

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

8<sup>th</sup> July 2022

Members  
 Griffith Local Aboriginal Land Council  
 5 Wiradjuri Place  
 Griffith NSW 2680  
 griffalac@bigpond.com

***ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT - LAKESIDE ESTATE,  
 LAKE WYANGAN, GRIFFITH NSW***

---

Dear Members,

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

Davis Saunders Homes would like to offer you the opportunity to provide feedback on the draft *Aboriginal Cultural Heritage Assessment (ACHA)* in accordance with stage four (4) of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (ACHCRs)*.

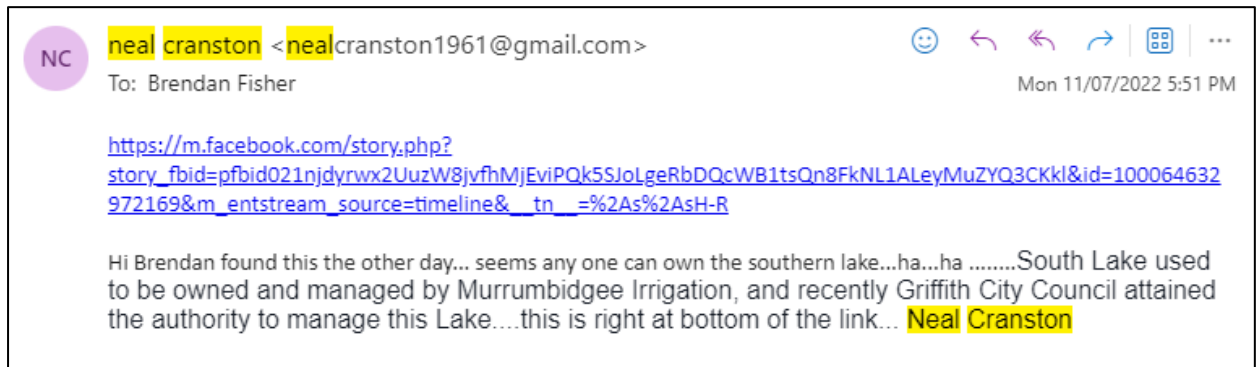
As per the ACHCRs we are required to give you twenty-eight (28) days to supply feedback on the attached ACHA. This period closes on the **Friday 5<sup>th</sup> August 2022**. Should our office not be contacted within this time frame, we will presume that you are satisfied with the contents of the ACHAR 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**

**Appendix 1 Figure 9: Stage 4 RAP response (Neal Cranston)**

## Appendix 1 Figure 10: Project update letter (16 December 2022)





Figure 1: Portion of land that GCC propose to re incorporate in the study area and AHIP boundary.



## Appendix 1 Figure 11: Correspondence with Neal Cranston following project update.

**From:** neal cranston <[nealcranston1961@gmail.com](mailto:nealcranston1961@gmail.com)>  
**Sent:** Tuesday, February 21, 2023 12:23 PM  
**To:** Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)>  
**Subject:** Lake Wyangan

Hi Brendan... hope your holiday was long enough...they never are ..ha...ha... been having some fun trying to get information about changes to the housing estate...if you can email me with an explanation ... that would be great...apparently the Lands council is not talking with the Griffith council... thanks Neal Cranston

**From:** Brendan Fisher  
**Sent:** Tuesday, February 21, 2023 12:44 PM  
**To:** neal cranston <[nealcranston1961@gmail.com](mailto:nealcranston1961@gmail.com)>  
**Subject:** RE: Lake Wyangan

Hi Neal,

My holiday was long, but you are right... it was not long enough! I hope you have been well.

I've been filled in on your attempts to get in touch with me, and I deeply apologise that it has been difficult. I have attempted to call you since I have been back.

Essentially, Griffith Council wish to include the portion of land that you recommended we remove back in to the study area. Attached is a figure showing the land Griffith Council want to add back in to the study area. As they wish to put this land back in, the ACHAR we drafted will require updating, and discussions with yourself and other RAPs will be required.

In the attached figure, the dashed orange line was the original study area, which was then revised to the solid red line following your recommendations. However, the green sections are the areas of land that the Griffith Council want to add back in to the study area. Council say that these mounds are due to heavy machinery earth works conducted in 2007, which is true (aerial imagery from 2007 confirms this), and all they want to do is level these artificial mounds of dirt.

If you could let me know your thoughts, that would be much appreciated. I can then forward them to our client.

It's great to hear from you again.

Cheers,

Brendan Fisher

On Mon, Mar 20, 2023, 11:12 AM Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)> wrote:

Hi Neal,

Hope all is well.

I am just checking in to see if you have managed to review my email below?

Cheers,

**Brendan Fisher**

OzArk Environment & Heritage

Project Archaeologist

02 6882 0118

**From:** neal cranston <[nealcranston1961@gmail.com](mailto:nealcranston1961@gmail.com)>

**Sent:** Monday, March 20, 2023 11:35 AM

**To:** Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)>

**Subject:** Re: Lake Wyangan

Hi Brendan... seems to me that the reincorporated land is part of the dune...is that correct?...if so any removal of soil should be put through a sive.... Neal Cranston

On Mon, Mar 20, 2023, 11:44 AM Brendan Fisher <[Brendan@ozarkehm.com.au](mailto:Brendan@ozarkehm.com.au)> wrote:

Thanks for getting back to me Neal.

This is not quite correct, as they will only be levelling the artificial mounds that were constructed during earthworks in 2007. There will be **NO** subsurface excavation as part of the works proposed in this area, as the proponent has confirmed they will only be using graders to level the artificial mounds. In addition, once the land has been subdivided into lots, there is to be no construction in this portion of land, only land management (i.e. weed and grass cutting).

Therefore, the proponent only wants to reincorporate this land in order to make it easier to manage the land following the construction of the subdivision. However, they wanted me to reinforce that strictly no excavation works or future construction will be allowed in this area of land that you had initially wanted excluded. The only reason they require it to be added back in is to level the artificial mounds to manage the grass and weed cover.

Let me know if there are any issues.

Cheers,

**Brendan Fisher**

OzArk Environment & Heritage

Project Archaeologist

02 6882 0118

**From:** [neal cranston](#)

**Sent:** Monday, 20 March 2023 12:03 PM

**To:** [Brendan Fisher](#)

**Subject:** Re: Lake Wyangan

I still need the so called artificial mounds checked/dives for bones/artifacts... speaking to our Mayor Doug Curran the other day...he informed me that the Griffith City Council is no longer talking to the Lands Council....



Appendix 1 Figure 12: Stage 4 (second round) cover letter for revised ACHAR



## Appendix 1 Figure 13: RAP comments on the revised ACHAR

**From:** [Will Carter](#)  
**To:** [Catherine Burrowes](#)  
**Cc:** [admin@viradyuri.au](#); [Splinter - Ray Woods](#); [Mark Williams](#)  
**Subject:** Re: Stage 4 Methodology - Lakeside Estate  
**Date:** Sunday, 19 November 2023 1:16:44 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.jpg](#)  
[image003.jpg](#)

Hi Catherine,

P.45

Is there potential for burials to be present in the landscape?

o As the study area contains a lunette landform associated with Lake Wyangan, the general landform has a higher sensitivity to contain burials. However, due to the extensive amount of past land disturbance and archaeological testing, no evidence of a burial has been noted. Therefore, there is a low potential for burials to be within the study area.

We disagree and say there is still a higher potential for burials than the low potential stated. The lunettes which burials are usually contained within are largely un-disturbed on the sub-surface. The regional context (Lake Wyangan being in between Koonadan Aboriginal Place and a burial site in lunettes situated beside an ephemeral wetland on Barber Rd, Warrawidgee NSW) would suggest a higher chance of burials within the context of Lake Wyangan.

Thanks, Will.

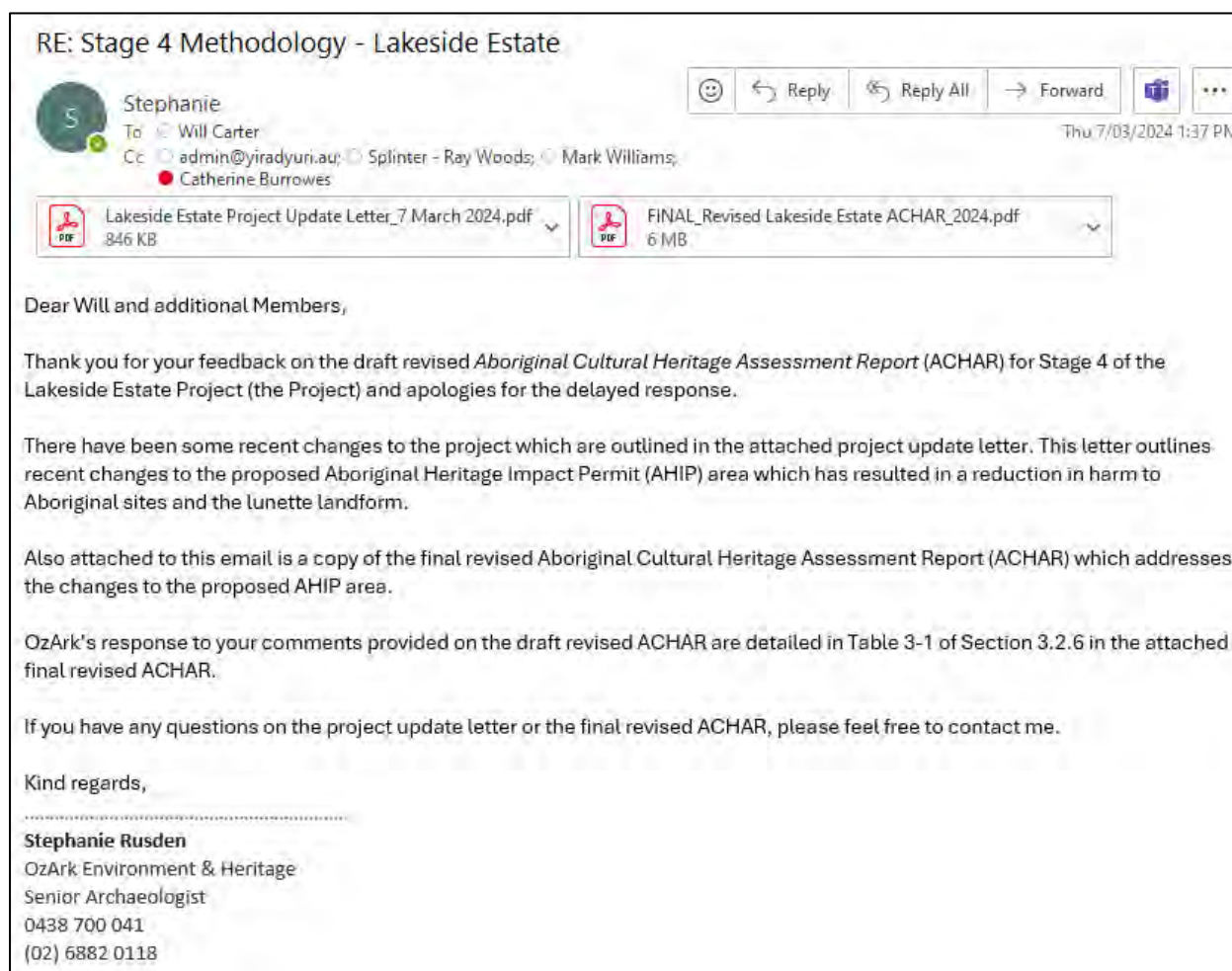
**From:** [neal cranston](#)  
**To:** [Catherine Burrowes](#)  
**Subject:** Lakeside Estate Lake Wyangan  
**Date:** Wednesday, 6 December 2023 8:34:00 PM

I have a few concerns about the Stage 4 at Lake Wyangan...

I would like to know why Brendan Fisher is no longer working at Ozark..?

I disagree with the statement that there is no evidence of human remains in the study area...the AIMS records don't go back far enough...We have Orally history of this burial past down through our family the Harris family... the earth works done in the 2007/2008 ?... that the Griffith Council talks about, they where done for a reason....?...I would like to know what that reason was ..any leveling of mounds of sand/soil need to be monitored and sieved by Senior Qualified Professionals...?...A sign that was on the fenced area stating.. something like "Aboriginal Protected Site"needs to be investigated..this was told to us by people who back onto the stage 4 estate...they said there was a sign there but it disappeared...???.... these sites need to be protected and if people can just cover-up and truck in heaps of soil to cover our sites... this has already happened on the southern side of Pelican Shores....this new study area is now a flood zone....I hope Heritage has a long hard look at this but everyone has their price.. thanks Neal Cranston

## Appendix 1 Figure 14: Emails to Neal Cranston and Will Carter advising of Stage 4 (second round) RAP comments being addressed in the final ACHAR



## RE: Lakeside Estate Lake Wyangan



Stephanie

To: Neal Cranston

Cc: Catherine Burrows



Reply



Reply All



Forward



Thu 7/03/2024 1:39 PM

Lakeside Estate Project Update Letter\_7 March 2024.pdf  
846 KBFINAL\_Revised Lakeside Estate ACHAR\_2024.pdf  
6 MB

Hi Neal,

Thank you for your feedback on the draft revised *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for Stage 4 of the Lakeside Estate Project (the Project) and apologies for the delayed response.

There have been some recent changes to the project which are outlined in the attached project update letter. This letter outlines recent changes to the proposed Aboriginal Heritage Impact Permit (AHIP) area which has resulted in a reduction in harm to Aboriginal sites and the lunette landform.

Also attached to this email is a copy of the final revised Aboriginal Cultural Heritage Assessment Report (ACHAR) which addresses the changes to the proposed AHIP area.

OzArk's response to your comments provided on the draft revised ACHAR are detailed in Table 3-1 of Section 3.2.6 in the attached final revised ACHAR.

If you have any questions on the project update letter or the final revised ACHAR, please feel free to contact me.

Kind regards,

.....  
**Stephanie Rusden**

OzArk Environment & Heritage

Senior Archaeologist



## Appendix 1 Figure 15: Project update letter (7 March 2024)



---

OzArk Environment & Heritage

Kind regards,



Stephanie Rusden  
**Senior Archaeologist**

---

Project Update: Aboriginal Cultural Heritage Assessment - Lakeside Estate Subdivision, Griffith NSW Page 2

Figure 1: The proposed AHIP area and the application Aboriginal sites.





Figure 2: 'Heritage exclusion area' and area requiring fencing.

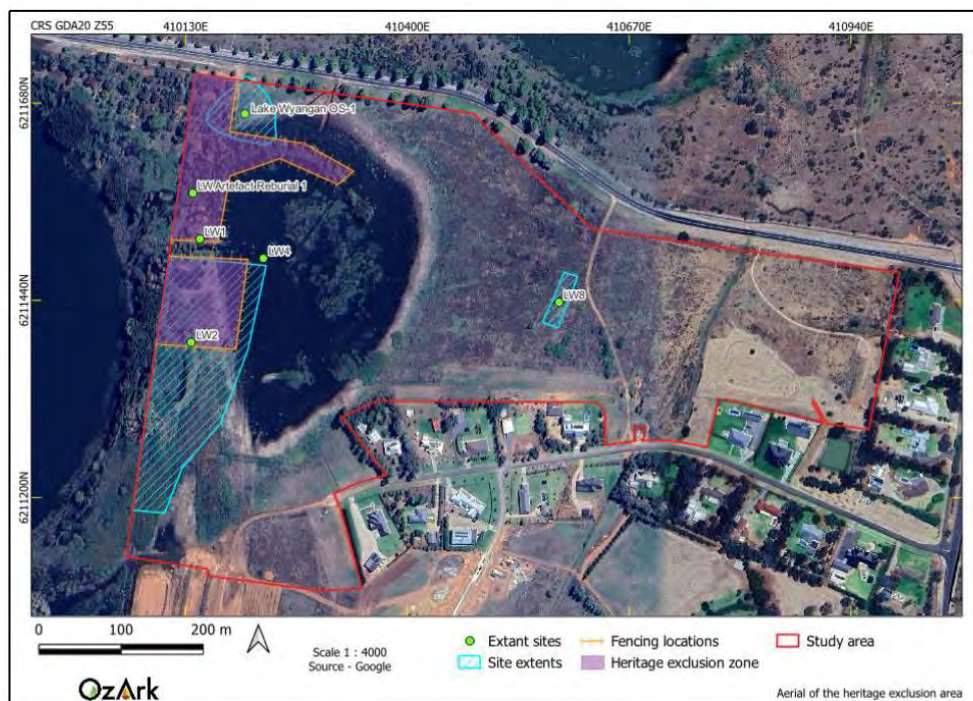




Figure 3: Portion of LW2 site extent requiring monitoring.



## APPENDIX 2: AHIMS SEARCH

AHIMS Web Services (AWS)										
Extensive search - Site list report										
SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
49-1-0157	Tharabogan Crowa Reserve - Site 3	AGD	55	406062	6214636	Open site	Valid	Modified Tree (Carved or Scarred):		
	<b>Contact</b>	<b>Recorders</b>	Mr M Harris					<b>Permits</b>		
49-2-0138	Tharabogan Swamp - Wake 1001	GDA	55	408129	6211650	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mrs Catherine Cook					<b>Permits</b>		
49-2-0165	LWS	GDA	55	410585	6211438	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Matthew Barber, Mr Matthew Barber, NGH Heritage - Pyrbwick, NGH Heritage - F					<b>Permits</b>		
49-2-0116	GLW2	GDA	55	410688	6212031	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>	Niamh Coulter					<b>Permits</b>	3156	
49-2-0108	Scenic Hill Reserve Site 1 (SHR1)	GDA	55	414529	6207464	Open site	Valid	Artefact: 11		101033
	<b>Contact</b>	<b>Recorders</b>	Navis Offshore Heritage Consultants Pty Ltd					<b>Permits</b>		
49-1-0153	Bullingall MT 2	AGD	55	406717	6211001	Open site	Valid	Modified Tree (Carved or Scarred):		
	<b>Contact</b>	<b>Recorders</b>	Mr Steve Moyedini					<b>Permits</b>		
49-2-0107	Lake Wyangan Artefact Scatter	GDA	55	409595	6211927	Open site	Valid	Artefact: 200		
	<b>Contact</b>	<b>Recorders</b>	Mr Chris Burton					<b>Permits</b>		
49-2-0135	Tharabogan Swamp	GDA	55	406007	6211590	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr John Cook					<b>Permits</b>		
49-2-0133	Tharabogan 1	GDA	55	406093	6211605	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Mark Sadder					<b>Permits</b>		
49-2-0100	LWS	GDA	55	410190	6211130	Open site	Destroyed	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	OzArk Environmental and Heritage Management - Dubbo, Mr Matthew Barber, NGH					<b>Permits</b>	4533	
49-2-0117	GLW3	GDA	55	410700	6212753	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>	Niamh Coulter					<b>Permits</b>	3156	
49-2-0122	GLW9	GDA	55	410960	6212653	Open site	Valid	Artefact: 2		101665
	<b>Contact</b>	<b>Recorders</b>	Niamh Coulter					<b>Permits</b>	3156	
49-2-0112	Scenic Hill Reserve Site 5 (SHR5)	GDA	55	414354	6207248	Open site	Valid	Artefact: 1		101033
	<b>Contact</b>	<b>Recorders</b>	Navis Offshore Heritage Consultants Pty Ltd					<b>Permits</b>		
49-2-0109	Scenic Hill Reserve Site 2 (SHR2)	GDA	55	414524	6207581	Open site	Valid	Artefact: 1		101033
	<b>Contact</b>	<b>Recorders</b>	Navis Offshore Heritage Consultants Pty Ltd					<b>Permits</b>		
49-1-0042	LWS	GDA	55	410064	6211134	Open site	Destroyed	Artefact:-	Open Camp Site	
	<b>Contact</b>	<b>Recorders</b>	OzArk Environmental and Heritage Management - Dubbo, Mr Matthew Barber, Mr B					<b>Permits</b>	4533	
49-2-0136	Tharabogan Swamp LWS	GDA	55	408141	6211662	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Ms Kerrie Sullivan					<b>Permits</b>		
49-2-0106	LW Artefact Robertal 1	GDA	55	410139	6211571	Open site	Valid	Artefact:-		

Report generated by AHIMS Web Service on 06/12/2021 for Brendan Fisher for the following area at Datum :GDA, Zone: 55, Eastings: 405510.0 - 415463.0, Northings: 6206392.0 - 6216376.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error omission. Storage 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 4

AHIMS Web Services (AWS)										
Extensive search - Site list report										
SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
49-1-0043	LWS	AGD	55	410110	6211210	Open site	Valid	Artefact:-	Open Camp Site	
	<b>Contact</b>	<b>Recorders</b>	OzArk Environmental and Heritage Management - Dubbo, Mr Brendan Fisher					<b>Permits</b>		
49-2-0119	GLW5	GDA	55	410750	6212609	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>	Mr Matthew Barber					<b>Permits</b>		
49-2-0124	GLW10	GDA	55	411047	6212681	Open site	Valid	Artefact:-		101665
	<b>Contact</b>	<b>Recorders</b>	Niamh Coulter					<b>Permits</b>	3156	
49-2-0125	GLW11	GDA	55	411040	6212700	Open site	Valid	Artefact: 2		101665
	<b>Contact</b>	<b>Recorders</b>	Niamh Coulter					<b>Permits</b>	3156	
49-1-0134	Tharabogan Crowa Reserve - Site 5	AGD	55	406003	6214723	Open site	Valid	Modified Tree (Carved or Scarred):		
	<b>Contact</b>	<b>Recorders</b>	Mr M Harris					<b>Permits</b>		
49-1-0158	Tharabogan Crowa Reserve - Site 4	AGD	55	406020	6214679	Open site	Valid	Aboriginal Resource and Gathering:-		
	<b>Contact</b>	<b>Recorders</b>	Mr M Harris					<b>Permits</b>		
49-2-0103	LWS	GDA	55	410195	6212425	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Douglas Williams, Access Archaeology & Heritage					<b>Permits</b>	4786	
49-2-0104	LW 10	GDA	55	410330	6212005	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Douglas Williams, Access Archaeology & Heritage					<b>Permits</b>	4786	
49-2-0166	LWS	GDA	55	410372	6210899	Open site	Destroyed	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	OzArk Environmental and Heritage Management - Dubbo, Mr Matthew Barber, NGH					<b>Permits</b>	4533	
49-2-0103	LWS	GDA	55	410480	6214355	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Douglas Williams, Access Archaeology & Heritage					<b>Permits</b>	4786	
49-2-0113	Scenic Hill Reserve Site 6 (SHR6)	GDA	55	414387	6207371	Open site	Valid	Artefact: 3		101033
	<b>Contact</b>	<b>Recorders</b>	Navis Offshore Heritage Consultants Pty Ltd					<b>Permits</b>		
49-2-0114	Scenic Hill Reserve Site 7 (SHR7)	GDA	55	414475	6207395	Open site	Valid	Artefact: 4		101033
	<b>Contact</b>	<b>Recorders</b>	Navis Offshore Heritage Consultants Pty Ltd					<b>Permits</b>		
49-1-0140	Tharabogan Crowa Reserve - Site 6	AGD	55	405919	6214687	Open site	Valid	Modified Tree (Carved or Scarred):		
	<b>Contact</b>	<b>Recorders</b>	Mr M Harris					<b>Permits</b>		
49-2-0015	Wairdy Swamp/Wairdy/Narrandera	AGD	55	407920	6211880	Open site	Valid	Artefact:-	Open Camp Site	
	<b>Contact</b>	<b>Recorders</b>	Mr M Harris					<b>Permits</b>		
49-2-0137	Tharabogan 3	GDA	55	408092	6211605	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Mark Sadder					<b>Permits</b>		
49-2-0139	Tharabogan Swamp 17	GDA	55	408179	6211623	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>	Mr Graham Traynor					<b>Permits</b>		

Report generated by AHIMS Web Service on 06/12/2021 for Brendan Fisher for the following area at Datum :GDA, Zone: 55, Eastings: 405510.0 - 415463.0, Northings: 6206392.0 - 6216376.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error omission. Storage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.

Page 2 of 4



## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Lakeside Estate  
Client Service ID : 645155

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status **	SiteFeatures	SiteTypes	Remarks
49-2-0167	LW6	GDA	55	410299	6210943	Open site	Destroyed	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0185	LW-9	GDA	55	410520	6213755	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-3-0113	Scenic Hill Reserve Site 4 (SHR4)	GDA	55	414476	6207266	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-1-0156	Tharabogan Crown Reserve - Site 2	AGD	55	405900	6214599	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-1-0154	Bulligall MT 4	AGD	55	406764	6210947	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0181	LW-12	GDA	55	409910	6212140	Open site	Valid	Artefact:-, Heard:-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-3-0118	GLW4	GDA	55	410717	6212620	Open site	Delayed	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0123	GLW9	GDA	55	410970	6212639	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0013	Bermis Cove Isolated Artefact	AGD	55	413780	6206600	Open site	Valid	Artefact:-	Open Camp Site	990
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-3-0110	Scenic Hill Reserve Site 3 (SHR3)	GDA	55	414554	6207349	Closed site	Valid	Art (Pigment or Engraved) : 3		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0130	Bermis Cove Isolated Artefact	GDA	55	414752	6207708	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-1-0155	Tharabogan Crown Reserve - Site 1	AGD	55	405860	6214729	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0136	Bulligall MT 1	AGD	55	408204	6211665	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0016	Lake Wyangan Site 1: Lake Wyangan	AGD	55	409179	6211991	Open site	Valid	Artefact:-	Open Camp Site	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0134	Tharabogan 6	GDA	55	408125	6211607	Open site	Valid	Artefact:-		
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		

Report generated by AHIMS Web Service on 06/12/2021 for Brendan Fisher for the following area at Datum :GDA, Zone: 55, Eastings: 405510.0 - 415463.0, Northings: 6206382.0 - 6216376.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error or omission. Copyright NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.

Page 2 of 4



## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Lakeside Estate  
Client Service ID : 645155

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status **	SiteFeatures	SiteTypes	Remarks
49-2-0027	LW1	AGD	55	410300	6211180	Open site	Valid	Artefact:-	Isolated Find	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0115	GLW1	GDA	55	410692	6212990	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-2-0121	GLW7	GDA	55	410954	6212630	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-1-0044	LW2	GDA	55	410137	6211388	Open site	Valid	Artefact:-	Open Camp Site	
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		
49-3-0120	GLW6	GDA	55	410757	6212620	Open site	Valid	Artefact: 1		101665
	<b>Contact</b>	<b>Recorders</b>						<b>Permits</b>		

\*\* Site Status  
Valid - The site has been recorded and accepted onto the system as valid.

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but remnants should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit 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 - This 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 permit but Heritage NSW should be notified.

Report generated by AHIMS Web Service on 06/12/2021 for Brendan Fisher for the following area at Datum :GDA, Zone: 55, Eastings: 405510.0 - 415463.0, Northings: 6206382.0 - 6216376.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error or omission. Copyright NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.

Page 4 of 4





## AHIMS Web Services (AWS) Search Result

Your Ref/PO Number : Lakeside estate

Client Service ID : 838158

OzArk Environmental and Heritage Management - Dubbo

Date: 09 November 2023

PO Box 2069

Dubbo New South Wales 2830

Attention: Stephanie Rusden

Email: stephanie@ozarkehm.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 405510.0 - 415463.0, Northings : 6206382.0 - 6216376.0 with a Buffer of 0 meters, conducted by Stephanie Rusden on 09 November 2023.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

54	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *



### APPENDIX 3: ABORIGINAL HERITAGE: 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