

Regional
NSW

South Jerrabomberra Regional Job Precinct

Historic & Aboriginal Cultural Heritage
Assessment Report

26 May 2023

Project No: 0621304-03

Document details	
Document title	South Jerrabomberra Regional Job Precinct
Document subtitle	Historic & Aboriginal Cultural Heritage Assessment Report
Project No.	0621304-03
Date	26 May 2023
Version	2.2
Author	Elspeth Mackenzie and Lorien Perchard
Client Name	Department Regional NSW

Document history

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	00	E. Mackenzie L. Perchard	A. Davis	M. Davey	13.04.2022	For client review
Final Draft	01	E. Mackenzie		K. Bradfield	18.08.2022	For client review
Final Draft	02	E. Mackenzie				For RAP review
Final	03	E. Mackenzie		K. Bradfield	26.05.2023	For public exhibition

Signature Page

26 May 2023

South Jerrabomberra Regional Job Precinct

Historic & Aboriginal Cultural Heritage Assessment Report



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CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION	1
1.1 Project Description.....	1
1.2 South Jerrabomberra RJP Investigation Area.....	1
1.3 Aims and Objectives	2
1.4 Authorship.....	2
2. LEGISLATION	4
2.1 Commonwealth Legislation.....	4
2.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Cth)	4
2.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth).....	5
2.2 State Legislation	5
2.2.1 Environmental Planning and Assessment Act 1979 (NSW).....	5
2.2.2 National Parks and Wildlife Act 1974 (NSW)	6
2.2.3 Heritage Act 1977 (NSW)	7
2.2.4 Native Title Act 1994 (NSW).....	7
2.2.5 Aboriginal Land Rights Act 1983 (NSW).....	7
2.3 Heritage Guidelines	8
3. ASSESSMENT METHODOLOGY	9
3.1 Aboriginal Heritage Assessment Methodology	9
3.1.1 Desktop Investigation.....	9
3.1.2 Aboriginal Community Consultation.....	9
3.1.3 Aboriginal Heritage Survey	9
3.1.4 Cultural Heritage Values Assessment.....	10
3.1.5 Impact Assessment.....	11
3.2 Historic Heritage Assessment Methodology	11
3.2.1 Desktop Investigation.....	11
3.2.2 Historic Heritage Survey	11
3.2.3 Assessment of Archaeological potential	12
3.2.4 Significance Assessment.....	12
3.2.5 Impact Assessment.....	12
4. COMMUNITY CONSULTATION	13
4.1 Stage 1: Notification of Project Proposal and Registration of Interest.....	13
4.2 Stage 2: Presentation of Information about the Proposed Project.....	14
4.3 Stage 3: Gathering Information about Cultural Significance	14
4.4 Stage 4: Review of Draft Cultural Heritage Assessment Report.....	14
5. ENVIRONMENTAL BACKGROUND	15
5.1 Introduction	15
5.2 Topography.....	15
5.3 Geology	15
5.4 Soils.....	19
5.5 Waterways.....	19
5.6 Flora and Fauna	20
5.7 Natural Disturbances	21
5.8 Human Land Uses and Disturbances	21
5.9 Discussion	22
6. ABORIGINAL ARCHAEOLOGICAL BACKGROUND	24
6.1 Aboriginal History of the Locality.....	24
6.1.1 Post Contact	26

6.2	Regional Archaeological Context.....	26
6.3	Local Archaeological Context	27
6.4	Aboriginal Heritage Database Search Results.....	31
6.4.1	AHIMS Database Search Results.....	31
6.4.2	AHIP Register	31
6.5	Colonial Frontier Massacre Mapping	33
6.6	Predictive Model of Aboriginal Land Use and its Material Traces.....	33
6.6.1	Foley's (1981) Forager Settlement patterns.....	34
6.6.2	Kuskie and Kamminga's (2000) Occupation Model	34
6.6.3	Evan's (2003) Economic Resource Model.....	34
6.6.4	Baker's (2000) Activity Overprinting Model.....	34
6.7	Predictive Model	34
7.	HISTORICAL CONTEXT.....	36
7.1	Historical Overview	36
7.1.1	Surveying the Continent – Discovery of Queanbeyan.....	36
7.1.2	The Settlement of Queanbeyan and Jerrabomberra.....	36
7.1.3	Construction of the Railway Line.....	38
7.1.4	Establishment of the National Capital	39
7.1.5	20 th – 21 st Century Development	42
8.	ARCHAEOLOGICAL SURVEY.....	44
8.1	Survey Methodology	44
8.2	Survey Coverage.....	46
8.3	Survey Units	46
8.3.1	Survey Unit 1	47
8.3.2	Survey Unit 2	48
8.3.3	Survey Unit 3	48
8.3.4	Survey Unit 4	49
8.3.5	Survey Unit 5	50
8.3.6	Survey Unit 6	50
8.3.7	Survey Unit 7	51
8.3.8	Survey Unit 8	52
9.	ABORIGINAL HERITAGE SITES.....	54
9.1	Previously Recorded Sites.....	54
9.1.1	PAD 1 North (AHIMS # 57-2-0974).....	54
9.1.2	PIF 3 (AHIMS # 57-2-0476).....	54
9.1.3	PIF 4 (AHIMS # 57-2-0340/57-2-0345).....	54
9.1.4	NER 1 (AHIMS # 57-2-0802).....	54
9.1.5	SJ10 (AHIMS # 57-2-0811).....	55
9.1.6	SJ28 (AHIMS # 57-2-0829).....	55
9.1.7	SJ29 (AHIMS # 57-2-0830).....	55
9.1.8	SJ30 (AHIMS # 57-2-0831).....	56
9.1.9	SJ35 (AHIMS # 57-2-0832).....	56
9.1.10	SJ36 (AHIMS # 57-2-0833).....	57
9.1.11	SJ37 (AHIMS # 57-2-0834).....	57
9.1.12	SJ38 (AHIMS # 57-2-0835).....	57
9.1.13	SJ52 (AHIMS # 57-2-0848).....	58
9.1.14	SJ53 (AHIMS # 57-2-0849).....	58
9.1.15	SJ54 (AHIMS # 57-2-0850).....	58
9.1.16	SJ55 (AHIMS # 57-2-0851).....	59
9.1.17	SJ57 (AHIMS # 57-2-0853).....	59
9.1.18	SJ58 (AHIMS # 57-2-0854).....	59
9.1.19	SJ59 (AHIMS # 57-2-0855).....	60
9.1.20	SJ60 (AHIMS # 57-2-0856).....	60

9.1.21	SJ61 (AHIMS # 57-2-0857)	61
9.1.22	SJ62 (AHIMS # 57-2-0858)	61
9.1.23	SJ63 (AHIMS # 57-2-0859)	61
9.1.24	SJ64 (AHIMS # 57-2-0860)	62
9.1.25	SJ65 (AHIMS # 57-2-0861)	62
9.1.26	SJ15 (AHIMS # 57-2-0899)	62
9.1.27	SJ16 (AHIMS # 57-2-0900)	62
9.1.28	SJ21 (AHIMS # 57-2-0905)	63
9.1.29	TA9 (AHIMS # 57-2-0914)	63
9.1.30	PAD 4 (AHIMS # 57-2-0978)	63
9.1.31	PAD 4 (AHIMS # 57-2-0120)	64
9.1.32	PIF 1 (AHIMS # 57-2-0474)	64
9.1.33	PIF 2 (AHIMS # 57-2-0475)	64
9.1.34	PIF 5 (AHIMS # 57-2-0341)	64
9.1.35	PIF 6 (AHIMS # 57-2-0432)	64
9.1.36	PPS 11 (AHIMS # 57-2-0338)	65
9.1.37	PPS 1 (AHIMS # 57-2-0111)	65
9.1.38	PPS 2 (AHIMS # 57-2-0112)	65
9.1.39	PPS 6 (AHIMS # 57-2-0116)	65
9.1.40	PPS 4 (AHIMS # 57-2-0114)	65
9.1.41	PPS 5 (AHIMS # 57-2-0115)	66
9.1.42	PPS 5 (AHIMS # 57-2-0977)	66
9.1.43	SJ01 (AHIMS # 57-2-1127)	66
9.2	Newly Identified Site	67
9.2.1	Poplars Artefact Scatter (57-2-1226)	67
10.	HISTORIC HERITAGE SITES	68
10.1	Previous Historic Heritage Reports	68
10.2	Historic Heritage Database Search Results	68
10.2.1	Identified Historic Features	68
10.2.2	Historical Archaeological Potential	78
10.3	Historic Land Use Summary	78
10.3.1	Overview	78
10.3.2	South Poplars	79
10.3.3	North Tralee	81
10.3.4	Private Property (East)	82
10.3.5	Environs	82
10.3.6	South Tralee	84
10.3.7	Private Property (South)	85
11.	SIGNIFICANCE ASSESSMENT – ABORIGINAL HERITAGE	86
11.1	Aboriginal Cultural Heritage Significance Assessment Framework	86
11.2	Identifying Cultural Values	86
11.2.1	Social or Cultural Significance	87
11.2.2	Historic Significance	88
11.2.3	Scientific Significance	88
11.2.4	Aesthetic Significance	90
11.2.5	Aboriginal Heritage Statement of Significance	91
12.	SIGNIFICANCE ASSESSMENT – HISTORIC HERITAGE	94
12.1	Historic Heritage Significance Assessment Framework	94
12.2	Statement of Significance	100
13.	IMPACT ASSESSMENT	101
13.1	Proposed Master Plan	101
13.2	Potential Impacts	101
13.3	Ecological Sustainable Development Principles	106

13.3.1	The Precautionary Principle	106
13.3.2	The Principle of Intergenerational Equity	106
13.4	Cumulative Impacts	106
14.	SUMMARY AND RECOMMENDATIONS	108
14.1	Aboriginal Heritage	108
14.1.1	Aboriginal Heritage Sensitivity Mapping	108
14.1.2	Aboriginal Heritage Recommendations	109
14.2	Historic Heritage	111
14.2.1	Historic Heritage Recommendations	111
15.	MITIGATION AND MANAGEMENT MEASURES	112
15.1	Conservation and Protection	112
15.2	Heritage Management Plan	112
15.3	Cultural Heritage Awareness Induction	112
15.4	Chance Finds Procedure	112
15.5	Cultural Acknowledgement and Signage	113
15.6	Future Development and Design Principles	113
	REFERENCES	115
APPENDIX A	CONSULTATION LOG	
APPENDIX B	CONSULTATION DOCUMENTS	
APPENDIX C	AHIMS SEARCH RESULTS	
APPENDIX D	HERITAGE THEMES	
APPENDIX E	REGISTER OF THE NATIONAL ESTATE LISTINGS	

List of Tables

Table 1.1:	Summary of authors and reviewers qualifications	2
Table 4.1:	Registered Aboriginal Parties	14
Table 6.1:	Summary of AHIMS sites	31
Table 8.1:	List of participants in surveys	44
Table 8.2:	Survey Coverage Summary – Survey Units	46
Table 8.3:	Survey Coverage Summary – Landforms	46
Table 9.1:	Summary of artefacts identified at South Poplars (east)	67
Table 10.1:	Historic features within the Investigation Area	69
Table 11.1:	Cultural heritage values identified for the South Jerrabomberra RJP and surrounds	87
Table 11.2:	Assessment of scientific significance of archaeological sites found in the Investigation Area	89
Table 11.3:	Overall significance for AHIMS sites	91
Table 12.1:	NSW Heritage Assessment Criteria	94
Table 12.2:	Significance assessment of Poplars historical features	96
Table 12.3:	Significance assessment of North Tralee historical features	97
Table 12.4:	Significance assessment of Environa and Regional Sports Complex historical features	99
Table 13.1:	Potential impacts to Aboriginal heritage associated with proposed Master Plan	101
Table 13.2:	Potential impacts to historic heritage associated with proposed Master Plan	105

List of Figures

Figure 1.1 Investigation Area	3
Figure 5.1 Topography of the Investigation Area	16
Figure 5.2 Geology of the Investigation Area	17
Figure 5.3 Soils of the Investigation Area	18
Figure 5.4 Jerrabomberra Creek catchment (ACT Environment 2018)	20
Figure 5.5 Land zoning in the Investigation Area	23
Figure 6.1 Tribal boundaries of the Canberra and wider region, with approximate location of Jerrabomberra shown with red arrow (Tindale 1974)	25
Figure 6.2 Previous heritage assessments in the Investigation Area	30
Figure 6.3 Known Aboriginal heritage sites within the Investigation Area (AHIMS)	32
Figure 7.1 Parish of Queanbeyan 1885 2nd edition map (hlrv.nswlrs.com.au)	37
Figure 7.2 Parish of Tuggeranong 1889 2nd edition map (hlrv.nswlrs.com.au)	38
Figure 7.3 Walter Burley Griffin's winning design concept for Canberra (https://www.naa.gov.au)	39
Figure 7.4 Halloran's complementary design concept, in relation to the Walter Burley Griffin design of Canberra (nla.map-rm 1892-S1)	40
Figure 7.5 Promotional map of Environa (nla.map-rm 1892-S2)	41
Figure 7.6 Parish of Queanbeyan 1908/09 parish map, 4 th edition (hlrv.nswlrs.com.au)	42
Figure 7.7 Parish of Queanbeyan 1931 parish map (hlrv.nswlrs.com.au)	43
Figure 8.1 Survey Units and transects within the Investigation Area	45
Figure 8.2 View towards the west within SU1	47
Figure 8.3 View of open grass lands in SU1	47
Figure 8.4 View towards the north within SU1	47
Figure 8.5 View of SU1 and undulating hills	47
Figure 8.6 Site 57-2-1226 in SU2	48
Figure 8.7 Site 57-2-0345 previously recorded site location in SU2	48
Figure 8.8 Impenetrable regrowth and vegetation	49
Figure 8.9 Thick vegetation made ground visibility extremely low to nil	49
Figure 8.10 Site 57-2-0974 previously recorded PAD location	49
Figure 8.11 Grassy undulating hills of SU4	49
Figure 8.12 Stone pillars amongst thick vegetation in SU6	51
Figure 8.13 Erosion scours located at previously recorded site 57-2-0849 in SU6	51
Figure 8.14 View north at site 57-2-0860 within SU6	51
Figure 8.15 Cattle located in SU6	51
Figure 8.16 Mid slope showing thick grass vegetation	52
Figure 8.17 Relocated Aboriginal site, no artefacts were not located	52
Figure 8.18 Checking erosion scours at previously recorded site 57-2-0855	52
Figure 8.19 Thick vegetation cover within SU7	52
Figure 8.20 Thick grass and vegetation present within SU8	53
Figure 8.21 Scour marks along dam edge showing moderate visibility within SU8	53
Figure 8.22 General condition of mid slope within SU8	53
Figure 8.23 Assessing scours along dirt tracks in SU8	53
Figure 10.1 Known historic features within the Investigation Area	77
Figure 14.1 Aboriginal Heritage Sensitivity	110

List of Photographs

Photograph 7.1 Sports field at Environa 1929 (courtesy of David Larcombe in O’Keefe 2018).....	42
Photograph 9.1 View of silcrete and quartz artefacts identified at Poplars Artefact Scatter (57-2-1226) (ERM 2022).....	67
Photograph 9.2 Site plan of Poplars Artefact Scatter (57-2-1226) along an exposed dirt vehicle track (ERM 2022).....	67
Photograph 10.1 Historical aerial c~1961 showing general agricultural use of the South Jerrabomberra RJP (Source: Spatial Collaboration Services).....	78
Photograph 10.2 Historical aerial c~1998 showing general agricultural use of the South Jerrabomberra RJP (Source: Spatial Collaboration Services).....	79
Photograph 10.3 South Poplars & High School, 1961 (Source: Spatial Collaboration Services).....	79
Photograph 10.4 South Poplars & High School (Google Earth 2022).....	79
Photograph 10.5 Piggery, 1961 (Source: Spatial Collaboration Services).....	80
Photograph 10.6 Piggery – abandoned (Google Earth 2022).....	80
Photograph 10.7 Farm shed, 1961 (Source: Spatial Collaboration Services).....	80
Photograph 10.8 Farm shed – abandoned (Google Earth 2022).....	80
Photograph 10.9 North Tralee, 1961 (Source: Spatial Collaboration Services).....	81
Photograph 10.10 North Tralee (Google Earth 2022).....	81
Photograph 10.11 Tree planting, 1961 (Source: Spatial Collaboration Services).....	81
Photograph 10.12 Tree planting – some loss, some addition (Google Earth 2022).....	81
Photograph 10.13 Private property (east), 1961 (Source: Spatial Collaboration Services).....	82
Photograph 10.14 Private property (east) (Google Earth 2022).....	82
Photograph 10.15 Environa, 1961 (Source: Spatial Collaboration Services).....	82
Photograph 10.16 Environa (Google Earth 2022).....	82
Photograph 10.17 Environa subdivision, 1961 (Source: Spatial Collaboration Services).....	83
Photograph 10.18 Environa subdivision – little change (Google Earth 2022).....	83
Photograph 10.19 Environa homestead, 1961 (Source: Spatial Collaboration Services).....	83
Photograph 10.20 Environa homestead – minor change (Google Earth 2022).....	83
Photograph 10.21 South Tralee, 1961 (Source: Spatial Collaboration Services).....	84
Photograph 10.22 South Tralee (Google Earth 2022).....	84
Photograph 10.23 Tralee homestead complex, 1961 (Source: Spatial Collaboration Services).....	84
Photograph 10.24 Tralee homestead complex – demolished and redeveloped (Google Earth 2022).....	84
Photograph 10.25 Tralee landing ground, 1961 (Source: Spatial Collaboration Services).....	85
Photograph 10.26 Tralee landing ground – mostly redeveloped (Google Earth 2022).....	85
Photograph 10.27 Private property (south), 1961 (Source: Spatial Collaboration Services).....	85
Photograph 10.28 Private property (south) (Google Earth 2022).....	85

Acronyms and Abbreviations

Name	Description
ACHAR Guide	Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AHT	Australian Historic Themes
ATSIHP Act	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)</i>
ANM	Australian Newsprint Mills Holdings Limited
CMT	Culturally Modified Tree
Code of Practice	Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW
Consultation Requirements	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
DCP	Development Control Plan
Due Diligence Code of Practice	Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales
DECCW	Department of Environment, Climate Change and Water (former – now Heritage NSW)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ERM	Environmental Resources Management Australia Pty Ltd
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
ESD	<i>Ecologically Sustainable Development</i>
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
IHO	Interim Heritage Order
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NPW Act	<i>National Parks and Wildlife Act 1974 (NSW)</i>
NSWHT	New South Wales Historic Themes
NSW	New South Wales
OEH	Office of Environment and Heritage (former – now Heritage NSW)
PAD	Potential Archaeological Deposit
RJP	Regional Job Precinct
RNE	Register of the National Estate (former)
SHI	State Heritage Inventory
SHR	State Heritage Register
The Burra Charter	<i>The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013</i>

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by the New South Wales (NSW) Government to prepare a Heritage Report for the proposed South Jerrabomberra Regional Job Precinct (RJP).

This Heritage Report has been prepared to identify and assess Aboriginal and historic heritage values within the boundaries of the South Jerrabomberra RJP to guide development of the South Jerrabomberra RJP Master Plan. This Heritage Report has been designed to test the preferred structure plan that was developed as part of a series of Integration Workshops and aims to establish an understanding of potential impacts to heritage values associated with proposed future land use and develop and understanding of areas within the South Jerrabomberra RJP which require further heritage management in advance of future development.

This Heritage Report has been prepared in the context of the *Heritage Act 1977* (NSW) and the *National Parks and Wildlife Act 1974* (NSW) and their relevant codes and guidelines, including the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (ACHAR Guide) (OEH [now Heritage NSW] 2011), the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW [former] 2010) (Code of Practice) and the NSW Heritage Manual. The following conclusions and recommendations were made:

Aboriginal Heritage:

- A total of 85 previously registered Aboriginal sites are within the South Jerrabomberra RJP. Reassessment of the current status of these has identified that:
 - 14 sites have been noted as destroyed;
 - One additional record is noted as deleted; and
 - Three additional records have been determined to not be a site (57-2-0666, 57-2-0975 and 57-2-1127).
- One new Aboriginal site was identified during the survey within the Investigation Area.
- A total of 24 areas of Aboriginal potential archaeological deposit (PAD) with associated artefacts, and a total of 4 areas of Aboriginal PAD (no artefacts) have been previously identified across the South Jerrabomberra RJP.
- Based on the current Master Plan and the proposed associated land use, partial to total impact is likely for 29 of the 85 Aboriginal heritage features, assuming total development of the precinct.

Historic Heritage:

- Six items are recorded as local heritage sites in the three relevant Queanbeyan-Palerang Regional Council Local Environmental Plans:
 - Stone faced brick structure - Queanbeyan LEP (West Jerrabomberra) 2013
 - H2: Open Air Motor Sport Track - Queanbeyan LEP 1998 (now demolished)
 - H5: Shed Ruins - Queanbeyan LEP 1998 (not considered in this assessment as having heritage value)
 - H8: Sheep Dip - Queanbeyan LEP 1998 (now demolished)
 - H9: Tralee Landing Ground - Queanbeyan LEP 1998 (now demolished)
 - The Poplars, site of endangered button wrinkleworts *rutiodosis leptorhynchoides* - Queanbeyan LEP 1998

- One item (with associated features) is also considered in this assessment to have local heritage significance despite not being recognised as such by the Queanbeyan-Palerang Regional Council Local Environmental Plans:
 - Environa (subdivision built features, Lobbies Homestead, and stone façade building in adjoining Lot).
- One area of private property on the eastern side of the South Jerrabomberra RJP has not been assessed for heritage values but contains a homestead complex with potential for built and archaeological values.
- Based on the current Master Plan there is potential negative impact to part of the Environa subdivision, no likely impact to the Shed Ruins (H5) or Lobbies Homestead, and positive impact to the stone façade building.

Aboriginal Heritage Recommendations

- Additional heritage survey of un-surveyed lots within the South Jerrabomberra RJP with reported heritage assets would be required to confirm the status of sites unable to be accessed as part of the current assessment.
- Site updates should be submitted to the Heritage NSW Aboriginal Heritage Information Management System (AHIMS), particularly updates on sites which have been assessed to have been destroyed by former works.
- A management policy should be developed for conservation areas which overlap with identified heritage constraints. Procedures should incorporate mechanism to ensure the preservation of heritage values in these zones.
- Aboriginal archaeological test excavation would be required in areas of PAD with the potential to be subject to harm as part of future land uses. Test excavation would be required to be undertaken to support any future AHIP applications across the relevant landscape.

Historic Heritage Recommendations

- Any future areas of historic archaeological potential must be subject to a detailed historic archaeological assessment and archaeological research design prior to impacts. Following the preparation of these reports, proponents will be required to undertake historic archaeological test excavation. Further investigation and later impact may need to be supported by heritage permits or exceptions under the *Heritage Act 1977* (NSW).

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by the New South Wales (NSW) Government to prepare a Historic & Aboriginal Cultural Heritage Assessment Report (HACHAR) for the proposed South Jerrabomberra Regional Job Precinct (RJP).

This HACHAR has been prepared to identify and assess Aboriginal and historic heritage values within the boundaries of the South Jerrabomberra RJP to guide development of the South Jerrabomberra RJP Master Plan. This HACHAR has been designed to test the preferred structure plan that was developed as part of a series of Integration Workshops and aims to establish an understanding of potential impacts to heritage values associated with proposed future land use and development and understanding of areas within the South Jerrabomberra RJP which require further heritage management in advance of future development.

1.1 Project Description

The RJPs have been identified by the NSW Government as areas of land that are of local significance based on economic enablers. The intention of the RJP is to encourage private investment and generate jobs. To attract investors, the NSW Government is seeking to create a place-based planning framework that streamlines the approval process, removing statutory barriers and enhancing investment certainty. Four locations have been chosen for the first round of this initiative: Albury, Richmond Valley, South Jerrabomberra, and Namoi.

The South Jerrabomberra RJP will build on the existing developments in plan and will investigate the development of the Jerrabomberra Innovation Precinct and the future development of Environa. Target industries may include prime and tier one Defence, cyber and space and technology companies, advanced manufacturing, research and development, e-waste recycling, and government departments reliant on the Federal government's secure ICON Communications Network.

1.2 South Jerrabomberra RJP Investigation Area

The South Jerrabomberra RJP area (Investigation Area) is located on the Australian Capital Territory (ACT) and New South Wales (NSW) border at Queanbeyan (Figure 1.1). It is approximately 950 hectares (ha) in size and features:

- The existing Poplars Grassland Reserve;
- The existing Poplars Retail Services Precinct with proposed expansion;
- The proposed Poplars Innovation Precinct, Stage 1 of which is under construction;
- The proposed Poplars future development area;
- The planned new Jerrabomberra High School which is under construction, and the associated Poplars Learning Precinct;
- The Regional Sports Complex which is under construction;
- The proposed North Tralee Industrial Precinct;
- The existing early 20th century subdivision Environa;
- The South Jerrabomberra Residential Development (Stage 1) which is under construction;
- The proposed South Jerrabomberra Residential Development (Stage 2); and
- Two privately owned properties with no current development plans.

1.3 Aims and Objectives

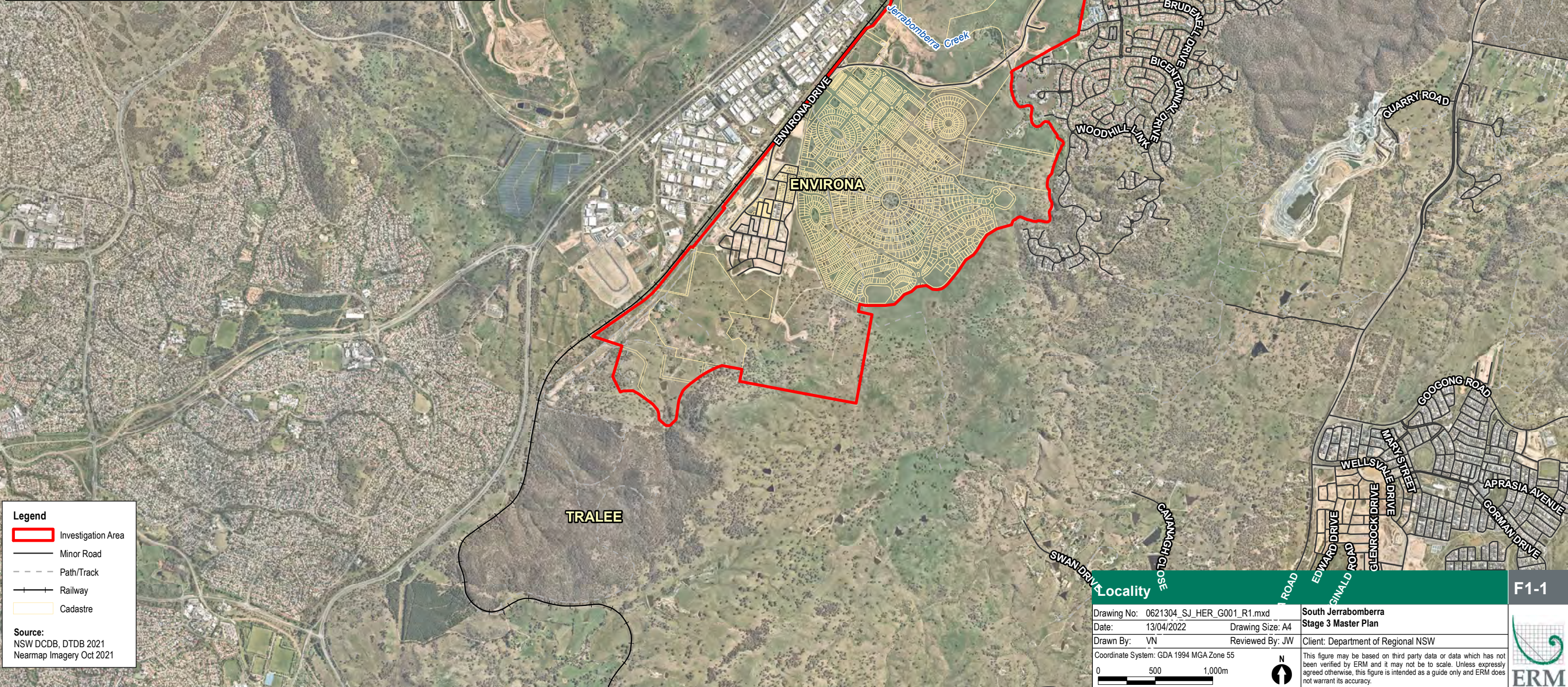
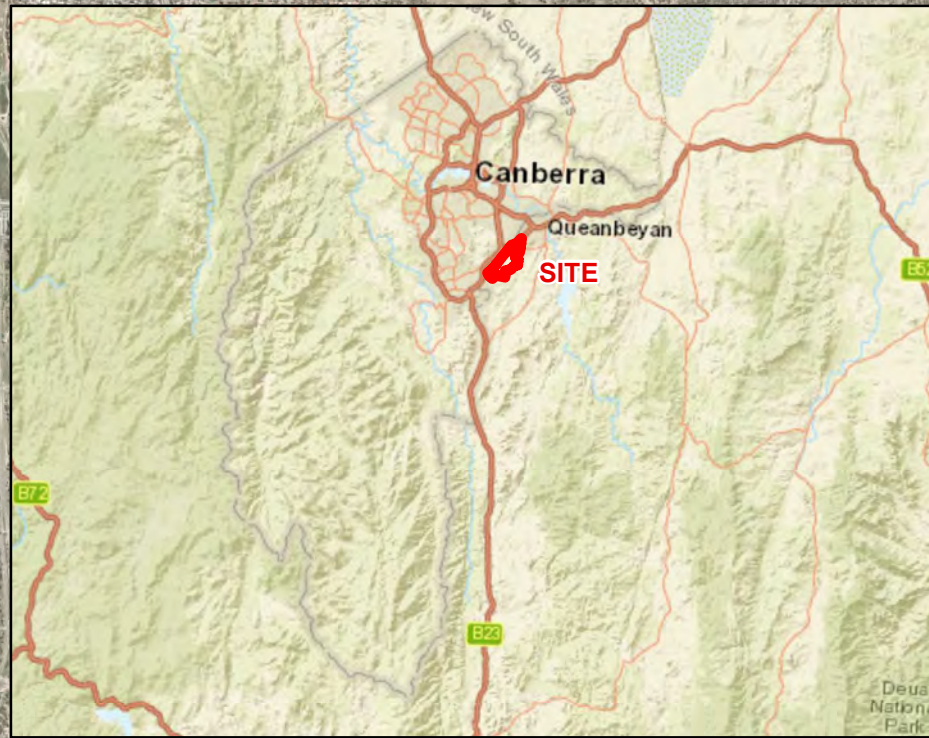
This HACHAR aims to provide an assessment of the heritage values and constraints of the Investigation Area. It has been prepared in the context of the *Heritage Act 1977* (NSW) and the *National Parks and Wildlife Act 1974* (NSW) and their relevant codes and guidelines, including the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH [now Heritage NSW] 2011), the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW [former] 2010), and the brief.

1.4 Authorship

A summary of the ERM staff involved in the preparation of this report and their relevant qualifications is provided in *Table 1.1* below.

Table 1.1: Summary of authors and reviewers qualifications

Name	Title	Role	Relevant Qualifications and years of experience in cultural heritage management
Lorien Perchard	Heritage Consultant	Author	<ul style="list-style-type: none">■ Bachelor of Arts (Hons) Archaeology, University of Queensland, 2010■ 12 years' professional experience
Elspeth Mackenzie	Principal Heritage Consultant	Author	<ul style="list-style-type: none">■ Bachelor of Arts (Hons) Anthropology & Archaeology, University of Queensland, 2002■ Graduate Diploma of Museum Studies, Deakin University, 2003■ Master of Cultural Heritage, Deakin University, 2005■ 20 years' professional experience
Annabelle Davis	Principal Heritage Consultant	Technical Review	<ul style="list-style-type: none">■ Bachelor of Arts (Hons), Archaeology, University of Western Australia 1999■ 21 years' professional experience
Karie Bradfield	Partner	Quality Assurance Review	<ul style="list-style-type: none">■ Bachelor of Engineering (Chemical), University of Sydney



Legend

- Investigation Area
- Minor Road
- Path/Track
- + Railway
- Cadastre

Source:
NSW DCDB, DTDB 2021
Nearmap Imagery Oct 2021

Locality		F1-1
Drawing No: 0621304_SJ_HER_G001_R1.mxd	South Jerrabomberra	
Date: 13/04/2022	Stage 3 Master Plan	
Drawn By: VN	Reviewed By: JW	Client: Department of Regional NSW
Coordinate System: GDA 1994 MGA Zone 55		
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.		

2. LEGISLATION

Heritage values and places are primarily protected under State legislation. Both the *National Parks and Wildlife Act 1974* (NSW) (NPW Act) and the *Heritage Act 1977* (NSW) (Heritage Act) are applicable to this desktop analysis, as are the *National Parks and Wildlife Regulation 2019* (NSW) and the *Environmental Planning & Assessment Act 1979* (NSW) (EP&A Act). World, National and Commonwealth Heritage values are also protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). Further, non-statutory considerations relevant to this analysis include the *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Adopted 31 October 2013) (The Burra Charter) as well as non-statutory heritage bodies including the *National Trust of NSW* (a community-based, non-government organisation) and Register of the National Estate (RNE).

This report has been prepared in the context of the Heritage Act and the NPW Act and their relevant codes and guidelines, including the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH [now Heritage NSW] 2011), the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW [former] 2010), NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning 1996), and the brief.

2.1 Commonwealth Legislation

2.1.1 *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*

The EPBC Act defines ‘environment’ as both natural and cultural environments and therefore includes natural, Aboriginal and historic or built cultural heritage items. Under the Act, protected heritage items or places are listed on the National Heritage List (items of significance to the nation) or the Commonwealth Heritage List (items belonging to the Commonwealth or its agencies). These two lists replaced the RNE. The RNE is no longer a statutory list; however, it remains available as an archive.

Under the EPBC Act, any action that is likely to have a significant impact on a matter of National Environmental Significance (known as a controlled action under the Act), may only progress with approval of the Commonwealth Minister for the Environment. Part 3, Division 2, Section 26 outlines the requirement for approval of activities involving Commonwealth land:

A person must not take on Commonwealth land an action that has, will have or is likely to have a significant impact on the environment.

Part 3, Division 2, Section 28 outlines the requirement for approval of activities of Commonwealth agencies significantly affecting the environment:

The Commonwealth or a Commonwealth agency must not take inside or outside the Australian jurisdiction an action that has, will have or is likely to have a significant impact on the environment inside or outside the Australian jurisdiction.

"Environment" (as defined in the EPBC Act) includes:

- Ecosystems and their constituent parts, including people and communities;
- Natural and physical resources;
- The qualities and characteristics of locations, places and areas;
- Heritage values of places; and
- The social, economic and cultural aspects of a thing mentioned above.

An “action” as defined by the Act (in Section 523) includes:

- A project;
- A development;
- An undertaking; and
- An alteration of any of the things mentioned above.

There are no World, National or Commonwealth Heritage values associated with the Investigation Area.

2.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) (ATSIHP Act) assists in the protection of places, areas and objects that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'.

The ATSIHP Act is designed to deal with Aboriginal cultural property (intangible heritage). These values are not currently protected under the NPW Act.

The Commonwealth Minister can make declarations to protect these areas and objects from specific threats of injury or desecration. The responsible Minister may make a declaration under Section 10 of the ATSIHP Act in situations where state or territory laws do not provide adequate protection of intangible heritage.

While no formal database of Section 10 applications or declarations is publicly available, this information is registered in gazettal notices within the Federal Register of Legislation. A search of this register did not identify any Section 10 applications or declarations relevant to the South Jerrabomberra RJP.

2.2 State Legislation

2.2.1 Environmental Planning and Assessment Act 1979 (NSW)

The EP&A Act requires that environmental impacts are considered prior to any development. This includes impacts to Aboriginal and non-Aboriginal cultural heritage items and places. The Act also requires that Local Government Areas (LGAs) prepare Local Environmental Plans (LEPs) and Development Control Plans (DCPs) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required. LEPs often include environmental heritage schedules that include significant items or places.

There are three relevant LEPs for the Investigation Area that are the principal planning instruments for the LGA:

- Queanbeyan LEP (South Jerrabomberra) 2012 for the South Tralee area;
- Queanbeyan LEP (West Jerrabomberra) 2013 for the Poplars area; and
- Queanbeyan LEP 1998 for the Environa area.

These LEPs are planned for consolidation into a Queanbeyan-Palerang LEP. The objectives of the current LEPs in relation to heritage conservation are:

- To conserve the environmental heritage;
- To conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views;
- To conserve archaeological sites; and
- To conserve places of Aboriginal heritage significance.

Local Environmental Plans

The EP&A Act allows for the preparation of planning instruments to direct development within NSW. This includes LEPs, which are administered by local government, and principally determine land use and the process for development applications. LEPs usually include a schedule of identified heritage items.

The Queanbeyan LEP (South Jerrabomberra) 2012 includes no heritage items. The Queanbeyan LEP (West Jerrabomberra) 2013 lists the following heritage items:

- Stone faced brick structure

The Queanbeyan LEP 1998 lists the following environmental and heritage items that are located in the Investigation Area:

- H2: Open Air Motor Sport Track (now demolished)
- H5: Shed Ruins
- H8: Sheep Dip (now demolished)
- H9: Tralee Landing Ground (now demolished)
- The Poplars, site of endangered button wrinkleworts *rutiodosis leptorhynchoides*

2.2.2 National Parks and Wildlife Act 1974 (NSW)

The NPW Act provides for the protection of Aboriginal places and objects in NSW. Under the NPW Act (Section 5), 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 New South Wales, 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 as an area that has been declared by the Minister administering the NPW Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

The AHIMS database provides information concerning previously recorded Aboriginal sites in NSW. A search of the data base will be undertaken to provide details of any previously recorded sites within the Investigation Area.

Under Section 86 of the NPW Act, it is an offence to knowingly destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of an Aboriginal object or Aboriginal place, without the prior written consent from the Director General of Heritage NSW. Penalties apply to the offence of knowingly impacting an Aboriginal object or Aboriginal place (up to \$550,000 for individuals and \$1,100,000 for corporations). The largest penalties apply when a person harms an object that they know to be an Aboriginal object (called a 'knowing offence'). However, a 'strict liability' offence still applies whether or not a person knows it is an Aboriginal object. In order to obtain such consent, known as an Aboriginal Heritage Impact Permit (AHIP), an application must be submitted and approved by the Director-General. In considering whether to issue AHIP, Heritage NSW will take into account:

- The significance of the Aboriginal object(s) or place(s) subject to the proposed impacts;
- The effect of the proposed impacts and the mitigation measures proposed;
- The alternatives to the proposed impacts;
- The conservation outcomes that will be achieved if impact is permitted; and
- The outcomes of the Aboriginal community consultation regarding the proposed impact.

Procedures that accompany the NPW Act include the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010c), the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010a) and the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b).

2.2.3 Heritage Act 1977 (NSW)

The Heritage Act provides for the identification and preservation of items of State Heritage significance, interim protection of items of State Heritage significance, and preservation of items of State Heritage Significance.

Under Section 32 of the Heritage Act places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the State Heritage Register (SHR). Items that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the Heritage Council.

Archaeological relics (any relics that are buried) are protected by the provisions of Section 139. Under this section, it is illegal to disturb or excavate any land knowing or suspecting that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. Note that no formal listing is required for archaeological relics; they are automatically protected if they are of local significance or higher.

State Heritage Register

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is maintained by Heritage NSW and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW. Listing on the SHR controls activities such as alteration, damage, demolition and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required for any major work.

The results of a search of the SHR for the South Jerrabomberra RJP and immediate surrounds is detailed in *Section 10.2*

Section 170 Heritage and Conservation Register (S170 Register)

Under Section 170 (S170) of the Heritage Act, NSW government agencies are required to maintain a register of the heritage assets it owns or controls. Under S170A of the Heritage Act, government agencies are required to notify the Heritage Council about decisions affecting assets on the S170 register including removing the item from the register, transferring ownership of a listed item, or vacating and/or demolishing part or all of the item. Government agencies are also required to maintain properties on the S170 and SHR with due diligence in accordance with State Owned Heritage Management Principles approved by the Minister on the advice of the Heritage Council.

The results of a search of the publicly available S170 registers for the South Jerrabomberra RJP and immediate surrounds is detailed in *Section 10.2*.

2.2.4 Native Title Act 1994 (NSW)

The *Native Title Act 1994* (NSW) (Native Title Act) was introduced to work in conjunction with the *Native Title Act 1993* (Cth). The Native Title Act recognises and protects the traditional and continuing rights and interests of Aboriginal and Torres Strait Island people. This may include the right to protect places and areas that are important under traditional law where Native Title has been determined.

The South Jerrabomberra RJP is not located within the boundaries of a native title claim or determination.

2.2.5 Aboriginal Land Rights Act 1983 (NSW)

The *Aboriginal Land Rights Act 1983* (NSW) established Aboriginal Land Councils (at a State and Local Level). In relation to Aboriginal culture and heritage, these bodies have a statutory obligation under Section 52 of the *Aboriginal Land Rights Act 1983* (NSW) to:

- a) take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law, and
- b) promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The South Jerrabomberra RJP is within the boundary of Ngambri Local Aboriginal Land Council (LALC).

There is no Crown Land within the Investigation Area, and as such there are no Aboriginal Land Claims.

2.3 Heritage Guidelines

The HACHAR was developed in accordance with Heritage NSW guidelines, including:

- DECCW [now Heritage NSW] (2010) Aboriginal Cultural Heritage Consultation Requirements for Proponents;
- DECCW [now Heritage NSW] (2010) Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales;
- OEH [now Heritage NSW] (2011) Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW; and
- NSW Heritage Office (2001) Assessing Heritage Significance.

3. ASSESSMENT METHODOLOGY

3.1 Aboriginal Heritage Assessment Methodology

3.1.1 Desktop Investigation

Desktop investigation included completion of a comprehensive review of existing background information to gain a contextual understanding of the cultural landscape associated with the South Jerrabomberra RJP. Review of background information included assessment of environmental information (*Section 0 and Section 7*), former historic land use, available ethnographic information, as well as existing registered Aboriginal heritage sites on the AHIMS register, existing AHIP permits and reports. Prior to the completion of this report ERM was engaged by the client to produce a desktop baseline analysis of the known and potential heritage values of the Investigation Area which provided information for this report.

3.1.2 Aboriginal Community Consultation

Aboriginal community consultation was undertaken in accordance with the consultation requirements as is detailed in *Section 4*.

In accordance with the Consultation Requirements, consultation with Aboriginal people formed an essential part of the heritage assessment process to:

- Determine potential harm on Aboriginal cultural heritage from proposed activities; and
- Inform decision making for any application for an AHIP where it is determined that harm cannot be avoided.

3.1.3 Aboriginal Heritage Survey

Aboriginal heritage survey was undertaken from the 22 March 2022 – 24 March 2022 by ERM Senior Heritage Consultant Elspeth Mackenzie and ERM Heritage Consultant Lorien Perchard. Representatives from eight of the twelve RAP groups also participated in the site inspection.

The site survey was limited to areas where property access had been granted, where previous Aboriginal Cultural Heritage Assessments had not been undertaken, current developments were not underway, and lands that were not zoned as conservation areas.

Aerial photographs and topographic maps were carried by the survey team. Photographs were taken to document the existing environment and landform context of each surveyed property.

3.1.3.1 Previously recorded Aboriginal sites

Where accessible, previously recorded Aboriginal sites were visited during the site survey to assess the site's current condition and confirm the spatial extent of the registered site. The sites visited are detailed in *Section 9.1*.

3.1.3.2 Newly identified sites

Newly identified sites were recorded in accordance with the requirement 6-8 of the Code of Practice and the *Guide to completing the AHIMS Site Recording Form* (OEH 2012).

Recorded site details for each newly identified site included:

- The spatial extent of the site as delineated by either:
 - The spatial extent of the visible objects;
 - Obvious physical boundaries where present; or
 - Identification by the Aboriginal community on the basis of cultural information.
- A photographic record with scale at an appropriate context to record both the site feature and its context.

- Geospatial information of the site recorded using GPS receivers.
- Enough detail to enable to registration of the site on AHIMS.

One newly identified site 57-2-1226 (*Figure 8.6*) was recorded during the site survey and documented on the AHIMS register as is detailed in *Section 9.2*.

3.1.3.3 Assessment of archaeological potential

Areas which were identified as having the potential to contain subsurface deposits of Aboriginal objects or the potential for Aboriginal objects to otherwise be obscured by surface conditions were recorded as areas of Potential Archaeological Deposit (PAD).

The identification of areas of PAD was based primarily on an assessment of:

- Whether Aboriginal objects were likely to have been deposited within a location as a result of Aboriginal occupation or through post depositional processes; and
- Whether historic land use or disturbances was likely to have resulted in impact or removal of any Aboriginal objects that may have been present within the assessment area.

3.1.4 Cultural Heritage Values Assessment

Aboriginal heritage sites, objects and places hold value for communities in many different ways. The nature of those heritage values is an important consideration when deciding how to manage a heritage site, object or place and balance competing land use options.

Assessment of the Aboriginal cultural heritage significance of the Investigation Area has been completed in accordance with the requirements of the ACHAR Guide (OEH 2011). Assessment has included identification of social, historic, scientific and aesthetic values which are discussed below:

- *Social or cultural value* (assessed only by Traditional Owners/First Nations People) 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;
- *Historic value* (assessed by Traditional Owners/First Nations People and/or non-Aboriginal historical specialists) 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 historic importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities and include places of post-contact Aboriginal history;
- *Scientific (archaeological) value* (assessed by professional archaeologists) 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; and
- *Aesthetic value* (assessed by Traditional Owners and/or non-Aboriginal specialists) refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with 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.

Scientific values were graded with a basic ranking of high, moderate, or low. The grading is based on the rarity, representativeness and research (educational) potential for each value:

- High significance is usually attributed to sites which are so rare or unique that the loss of the site would affect our ability to understand aspects of past Aboriginal use/occupation for an area;
- Moderate significance can be attributed to sites which provide information on an established research question; and
- Low significance is attributed to sites which cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to disturbance of the nature of the site's contents.

Cultural heritage values for the South Jerrabomberra RJP were identified through a combination of desktop assessment and consultation undertaken during the preparation of the heritage report. This information was collected by Lorien Perchard and Elspeth Mackenzie.

3.1.5 Impact Assessment

Following the identification of Aboriginal cultural values, an impact assessment was completed to identify whether any Aboriginal objects, places or cultural values have the potential to be harmed based on the identified land uses proposed by the Master Plan.

The impact assessment for the proposal is guided by the definition of harm under the NPW Act 1, which is limited to impact which ‘...destroys, defaces, damages an object or place or in relation to an object – moves the object from land on which it has been situated’ (Section 5, NPW Act).

Direct harm may occur as a result of activities which disturb the ground surface or identified cultural values including site preparation activities, and the installation of services and infrastructure. The direct impact associated with the proposal is assessed in *Section 13*.

Indirect harm for Aboriginal heritage refers to impacts that may affect sites or features located immediately beyond or within the area of the proposed work. Indirect harm may include impacts from vibration, increased visitation, increased erosion, or changing access to wild resources. The impact assessment evaluates the potential archaeological impacts for the proposal. It assessed the type of harm, the degree of harm, and the consequence of harm for any known Aboriginal sites or areas of potential.

3.2 Historic Heritage Assessment Methodology

3.2.1 Desktop Investigation

Desktop investigation included the identification of listed and potential historic heritage items through a review of historic heritage registers as well as the review of primary and secondary historical sources related to the development in the South Jerrabomberra RJP. Historic heritage registers reviewed included:

- World Heritage List;
- Commonwealth Heritage List;
- National Heritage List;
- (Former) Register of the National Estate (RNE);
- NSW Stage Heritage Inventory;
- SHR;
- Local Heritage Registers search:
 - Queanbeyan LEP (South Jerrabomberra) 2012;
 - Queanbeyan LEP (West Jerrabomberra) 2013;
 - Queanbeyan LEP 1998;
- National Trust (NSW) register search.

Desktop investigation included the review of previous built heritage and historic archaeological projects within the South Jerrabomberra RJP.

3.2.2 Historic Heritage Survey

Historic heritage survey was undertaken to review the condition of previously identified historic features within the Investigation Area as well as to identify previously unidentified historic heritage values.

Site survey included identification of evidence of historic and recent land disturbances to assist in the assessment of archaeological potential for each land use phase.

3.2.3 Assessment of Archaeological potential

A detailed assessment of Historic Archaeological Potential was developed based on the results of historical research and the site inspection.

The results of this assessment were delineated into zones of potential which formed the basis of proposed management measures.

3.2.4 Significance Assessment

A significance assessment of each listed or unlisted heritage item was completed in accordance with the Burra Charter and the NSW Heritage Manual. A significance assessment was also completed for all identified potential Historic Archaeological Remains.

3.2.5 Impact Assessment

An impact assessment was undertaken of each listed or unlisted heritage item based on the proposed land uses of the Master Plan.

4. COMMUNITY CONSULTATION

This chapter contains details of the Aboriginal community consultation undertaken regarding the Aboriginal cultural heritage of the Investigation Area. In accordance with the Consultation Requirements, consultation with Aboriginal people formed an essential part of the heritage assessment process to:

- Determine potential harm on Aboriginal cultural heritage from proposed activities; and
- Inform decision making for any application for an AHIP where it is determined that harm cannot be avoided.

The consultation requirements set out four stages of the consultation process. Fulfilment of these requirements for this project is outlined below. All correspondence is recorded in the Aboriginal Heritage Consultation Log, included as *Appendix A*.

4.1 Stage 1: Notification of Project Proposal and Registration of Interest

The aim of Stage 1 of the consultation process is to *identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project*.

On behalf of the Department of Regional NSW, ERM actively sought to fulfil this aim and identify stakeholder groups or people wishing to be consulted about the project and invite them to register their interest. After determining that there was no approved determination of Native Title over the Investigation Area (per 4.1.1 of the guidelines), ERM reached out to additional resources for information about interested parties.

In order to identify people with a potential interest in the project (as per 4.1.2 of the Consultation Requirements), a Public Advert stating the location and nature of the project and seeking registration of interested Aboriginal parties was run in the Queanbeyan Age & Canberra Chronicle on 7 December 2021 (*Appendix B*).

In addition, a letter containing these details (dated 2 December 2021) was sent to the following agencies:

- Ngambri LALC;
- South East Local Land Services;
- Native Title Services Corporation (NTS Corp);
- Heritage NSW;
- National Native Title Tribunal;
- Office of the Registrar, *Aboriginal Land Rights Act 1983* (NSW); and
- Queanbeyan Palerang Regional Council.

Responses received from these agencies indicated a total of 52 Aboriginal individuals or organisations may have an interest in the project. An invitation to register letter was sent to each of these identified parties on 17 December 2021 and a period of 14 days was provided for the parties to respond. A copy of this letter is provided as *Appendix B*.

At the end of the 14 days, ten individuals and organisations had registered their interest in being consulted in the project. Following closure of the registration of interest period but before the next project communication, two other individuals or organisations registered their interest in the project. One further organisation responded to the invitation to register on 17 March 2022, stating they had registered in December 2021, however no record could be found of this registration. A full list of the Registered Aboriginal Parties (RAPs) can be found in *Table 4.1* below, and copies of relevant registrations can be found at *Appendix B*.

Table 4.1: Registered Aboriginal Parties

Organisation	Contact
Ngambri Local Aboriginal Land Council	Trisha Williams
Djirringanj Elders Federation	John Dixon
Individual	Clive Freeman
DNC	Paul Boyd & Lilly Carroll
Konanggo Aboriginal Cultural Heritage Services	Robert Young
Gunjeewong Cultural Heritage Aboriginal Corporation	Shayne Dickson
Murri Bidgee Mullangari Aboriginal Corporation	Ryan Johnson
Ngunawal Heritage Aboriginal Corporation	Dean Delponte
Merrigarn Indigenous Corporation	Shaun Carroll
Thunderstone Aboriginal Cultural Services	Tyronne Bell
Individual *responded 14/01/2022	Adrian Brown
Muragadi Heritage Indigenous Corporation *responded 28/01/2022	Jesse Johnson
Corroboree Aboriginal Corporation *responded 17/03/2022	Marilyn Carroll-Johnson

4.2 Stage 2: Presentation of Information about the Proposed Project

The aim of Stage 2 of the consultation process was to provide *registered Aboriginal parties with information about the scope of the proposed project and the proposed cultural heritage assessment process.*

The proposed survey and assessment methodology was sent on 18 February 2022 to each of the 12 RAPs registered by that date (*Appendix B*).

4.3 Stage 3: Gathering Information about Cultural Significance

Stage 3 of the consultation process involved discussion of cultural values and intangible elements of significance. Feedback on the cultural heritage significance of the South Jerrabomberra RJP was requested as part of the survey and assessment methodology. Cultural values were also discussed during completion of the heritage survey.

4.4 Stage 4: Review of Draft Cultural Heritage Assessment Report

The Draft ACHAR was provided to all thirteen RAPs on 14 September 2022, via email. Each of the RAPs was provided 28 days to provide comments on the report and any recommended management and mitigation measures, prior to finalisation.

Four responses were received, all of which provided no further comments and endorsed the management and mitigation measures proposed.

5. ENVIRONMENTAL BACKGROUND

5.1 Introduction

The nature and distribution of cultural materials in a landscape are strongly influenced by environmental factors such as topography, geology, landforms, climate, hydrology and the associated soils and vegetation (Hughes and Sullivan 1984). These factors influence the availability of plants, animals, water, raw materials; the location of suitable camping places, ceremonial grounds, burials; and suitable surfaces for the application of rock art. As site locations may differ between landforms due to environmental constraints that result in the physical manifestation of different spatial distributions and forms of archaeological evidence. These environmental factors are used in constructing predictive models for heritage site locations.

Environmental factors also effect the degree to which cultural materials have survived in the face of both natural and human influences, and affect the likelihood of sites being detected during ground surface survey. Site detection is dependent on a number of environmental factors including surface visibility (which is determined by the nature and extent of ground cover including grass and leaf litter etc.) and the survival of the original land surface and associated cultural materials (by flood alluvium and slope wash materials). It is also dependant on the exposure of the original landscape and associated cultural materials (by water, sheet and gully erosion, ploughing, vehicle tracks etc.) (Hughes and Sullivan 1984). Combined, these processes and activities are used in determining the likelihood of both surface and subsurface cultural materials being deposited, surviving, and being detected during archaeological surveys.

The Investigation Area lies within the Murrumbateman subregion of the South-Eastern Highlands bioregion. This subregion is characterised by undulating plateaus with rounded hills and peaks, with entrenched meandering streams and chain of pond tributaries. The vegetation generally includes Blakely's red gum and yellow box on lower slopes, with red stringybark, bundy and white gum on ridges. There may be areas of apple box and mottled gum and limited swampy flats and valley floor grasslands. Soils are typically mottled yellow and brown texture contrast soils with strongly bleached topsoils and dark organic loams and clay loams on valley floors. The underlying geology is fine-grained Palaeozoic sedimentary and metasedimentary rocks, with minor areas of coarse acid volcanics and tertiary alluvial terraces along main streams (NSW Department of the Environment and Energy 2012).

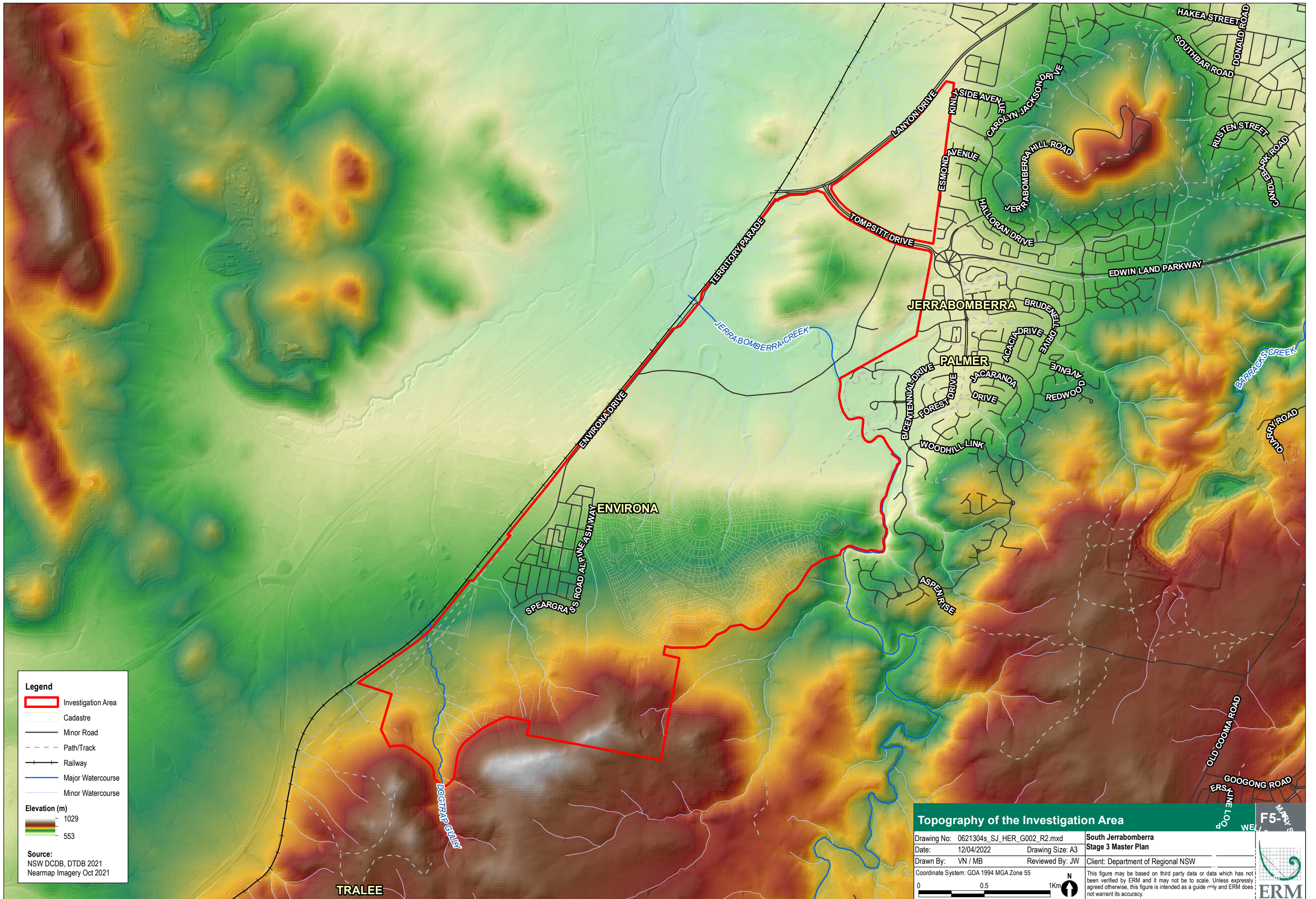
5.2 Topography

The topographical context is important to identify potential factors relating to past land use patterns. The investigation Area comprises a mix of low-lying lands adjacent to Jerrabomberra Creek, generally gentle sloping land with one minor peak to the north, and gentle to steep sloping lands to the south with a number of peaks and ridgelines (Figure 5.1).

5.3 Geology

The geology of a region is not only reflected in the environment (landforms, topography, geomorphology, vegetation, climate etc.), it also influences past occupation and its manifestation in the archaeological record. The nature of the surrounding and local geology along with the availability and distribution of stone materials has a number of implications for Aboriginal land use and archaeological implications. The implications for past Aboriginal land use mainly relate to location of stone resources or raw materials, and their procurement for manufacturing and modification for stone tools. Evidence of stone extraction, and manufacture, can be predicted to be concentrated in the areas of stone availability. However, stone can be transported for manufacture and/or trading across the region.

The geology of the Investigation Area is characterised by exposed bedrock including granite, quartz, hornfels and other metamorphic and igneous rocks within the hills (Figure 5.2). Silcrete, mudstone and fine-grained siliceous rock suitable for flaking is present in creek gravel beds.



Legend

- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- + Railway
- Major Watercourse
- Minor Watercourse

Elevation (m)

1029

553

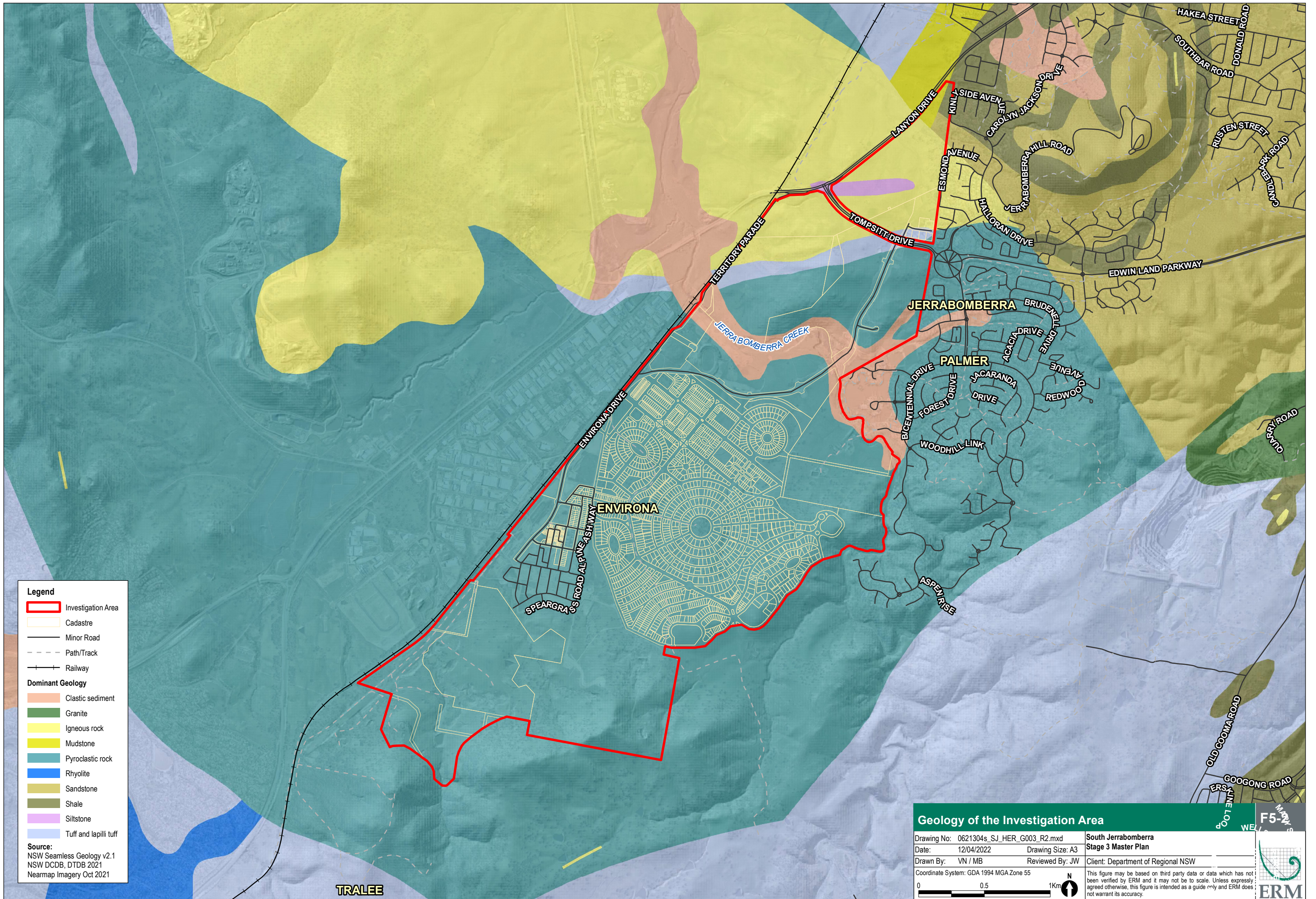
Source:
NSW DCDB, DTDB 2021
Nearmap Imagery Oct 2021

Topography of the Investigation Area	
Drawing No: 0621304s_SJ_HER_G002_R2.mxd	South Jerrabomberra
Date: 12/04/2022	Stage 3 Master Plan
Drawing Size: A3	Client: Department of Regional NSW
Drawn By: VN / MB	Reviewed By: JW
Coordinate System: GDA 1994 MGA Zone 55	
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	

0 0.5 1km

N

TRALEE



Legend

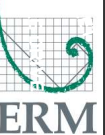
- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- + Railway

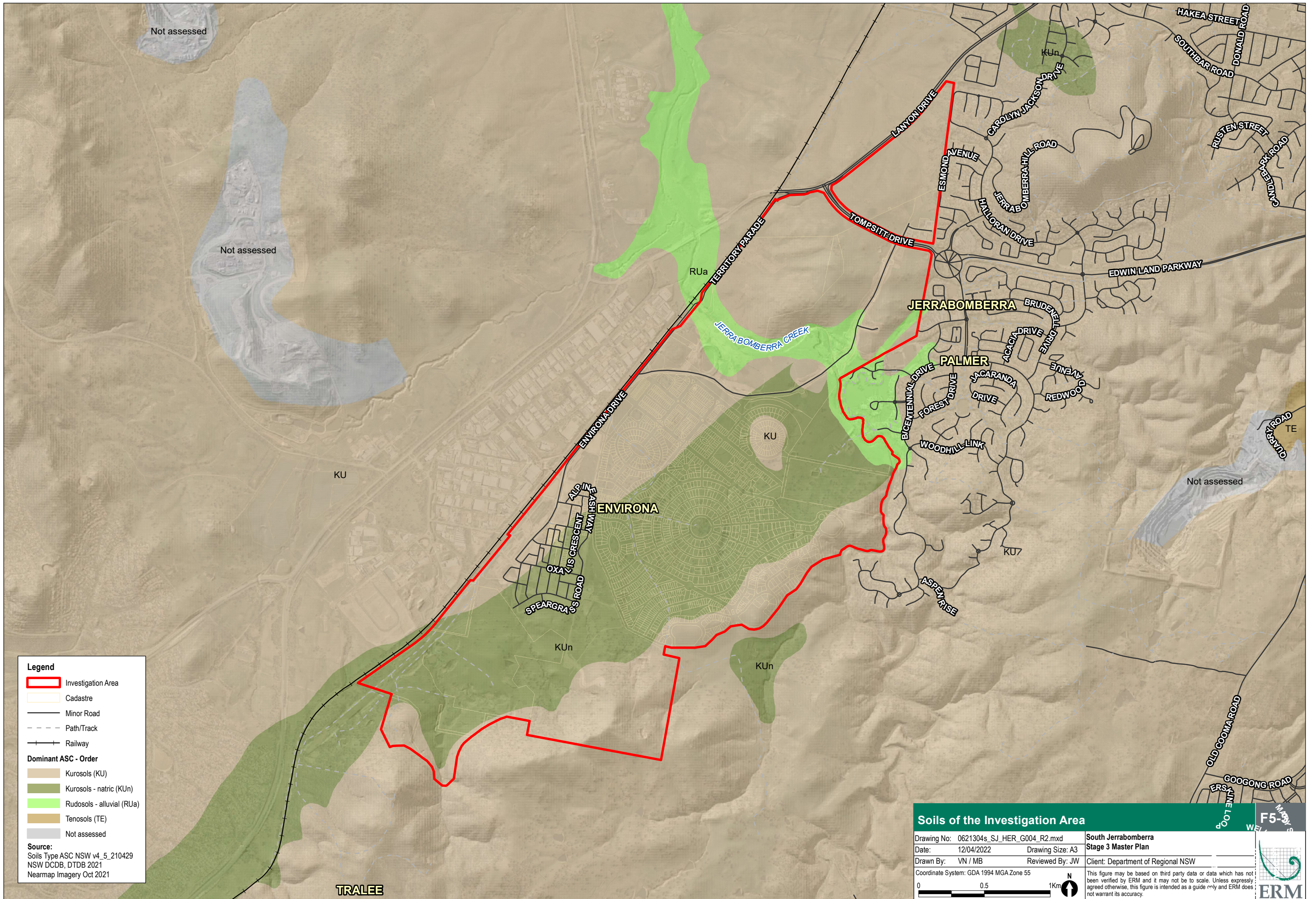
Dominant Geology

- Clastic sediment
- Granite
- Igneous rock
- Mudstone
- Pyroclastic rock
- Rhyolite
- Sandstone
- Shale
- Siltstone
- Tuff and lapilli tuff

Source:
 NSW Seamless Geology v2.1
 NSW DCDB, DTDB 2021
 Nearmap Imagery Oct 2021

Geology of the Investigation Area	
Drawing No: 0621304s_SJ_HER_G003_R2.mxd	South Jerrabomberra
Date: 12/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>0 0.5 1km</p> </div> <div style="flex: 0.2; text-align: center;"> <p>N</p> </div> </div>	<p style="font-size: 8px;">This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.</p>





Legend

- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- + Railway

Dominant ASC - Order

- Kurosols (KU)
- Kurosols - natric (KUn)
- Rudosols - alluvial (RUa)
- Tenosols (TE)
- Not assessed

Source:
 Soils Type ASC NSW v4_5_210429
 NSW DCDB, DTDB 2021
 Nearmap Imagery Oct 2021

Soils of the Investigation Area	
Drawing No: 0621304s_SJ_HER_G004_R2.mxd	South Jerrabomberra
Date: 12/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>0 0.5 1km</p> </div> <div style="flex: 0.2; text-align: center;"> <p>N</p> </div> </div>	<p>This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.</p>



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5.4 Soils

The nature of the surrounding soil landscape also has implications for land use and site preservation, mainly relating to supporting vegetation and the preservation of organic materials and burials. The deposit of alluvial and aeolian sediments and colluvium movement of fine sediments (including artefacts) results in the movement and burying of archaeological materials. The increased movement in soils by this erosion is likely to impact upon cultural materials through the post-depositional movement of materials, specifically small portable materials such as stone tools, contained within the soil profiles. The Investigation Area is situated on a limited range of soil landscapes that are illustrated in Figure 5.3. Alluvial rudosols are present along Jerrabomberra Creek and a band of natric kurosols extend south of the creek in a north-east south-west direction. The remainder of the Investigation Area consists of kurosols.

Alluvial rudosols are found in areas prone to flooding and are essentially deep sand and silt deposits. Archaeological artefacts are not commonly found in these soils, with flat elevated land above the flood plain preferred for human occupation. Kurosols are a duplex soil with a loamy topsoil and a strongly acidic B horizon. Natric kurosols are those that contain a denser subsurface horizon with a higher clay content than the overlying horizon. Archaeological artefacts are typically only found in the upper A horizon of duplex soils of the region due to the impermeable nature of the B horizon.

5.5 Waterways

One of the major environmental factors influencing human behaviour is water as it is essential for survival and as such people will not travel far from reliable water sources. In those situations, where people did travel far from reliable water, this indicates a different behaviour such as travelling to obtain rare or prized resources and/or trade. Proximity to water not only influences the number of sites likely to be found but also artefact densities. The highest number of sites and the highest density are usually found in close proximity to water and on an elevated landform. This assertion is undisputedly supported by the regional archaeological projects carried out in the region where by such patterns are typically within 50 metres of a reliable water source. When assessing the relationship between sites and water sources it must be noted that the Australian continent has undergone significant environmental changes during the past 65,000 years that people have lived here and the landscape has changed significantly during this time and ancient water systems may no longer exist.

The main types of water sources include permanent (rivers and soaks), semi-permanent (large streams, swamps and billabongs), ephemeral (small stream and creeks) and underground (unconfined and artesian). Stream order assessment is one way of determining the reliability of streams as a water source and is determined by applying the Strahler method to 1:25 000 topographic maps (Anon 2003; Wheeling Jesuit University 2002).

Jerrabomberra Creek is the main waterway present in the Investigation Area. It is a fifth order stream and is a recognised spiritual pathway, guiding Aboriginal groups from the south to corroboree grounds for inter-tribal gatherings (Ecological Australia 2021). It is part of the wider Murrumbidgee catchment within the Murray-Darling Basin and culminates in a confluence with the Molonglo River into Lake Burley Griffin. The catchment of Jerrabomberra Creek is approximately 128 km² and is present in both NSW and the ACT (*Figure 5.4: Investigation Area indicated by arrow*). The creek was originally a chain-of-ponds with ephemeral flows and rick alluvial flats in the riparian zones, although post-colonial land practices has altered the creek to a deeply incised channel with eroded gullies and tributaries (Maunsell 2006).

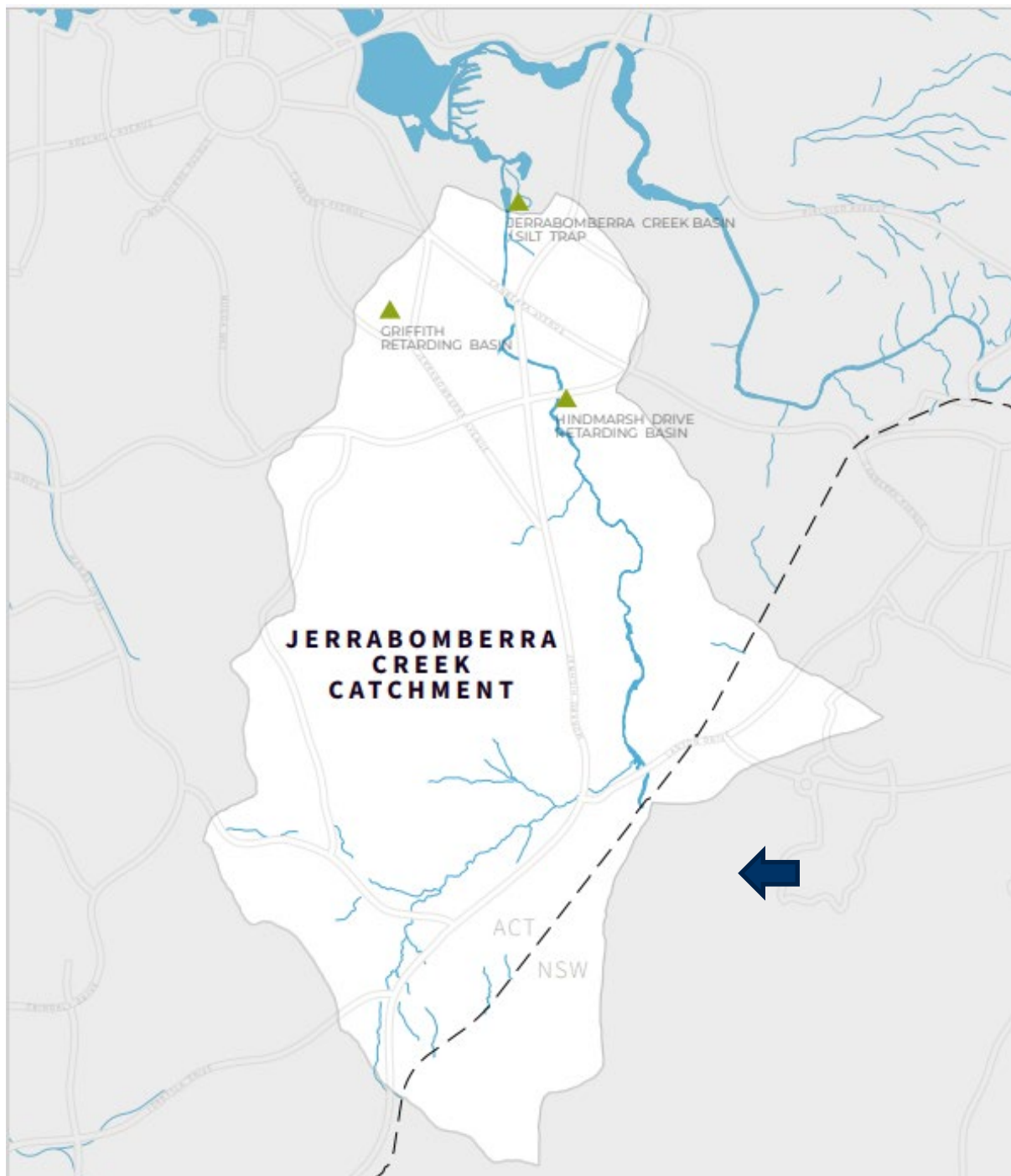


Figure 5.4 Jerrabomberra Creek catchment (ACT Environment 2018)

5.6 Flora and Fauna

The availability of flora and associated water sources affect fauna resources, all of which are primary factors influencing patterns of past Aboriginal land use and occupation. The assessment of flora has two factors that assist in an assessment including a guide to the range of plant resources used for food and medicine and to manufacture objects including nets, string bags, shields and canoes which would have been available to Indigenous people in the past. The second is what it may imply about current and past land uses and to affect survey conditions such as visibility, access, and disturbances.

The Investigation Area would have naturally been predominantly a grassland-woodland mosaic, however clearing for pasture in the 19th century has reduced the woodland to small patches of endemic species. There are currently ten vegetation communities, which include native species such as White Box (*Eucalyptus albens*), Blakey's Red Gum (*Eucalyptus blakelyi*), Long-leaved Box (*Eucalyptus goniocalyx*), Nortons Box (*Eucalyptus nortonii*), Yellow Box (*Eucalyptus melliodora*), Red Stringybark (*Eucalyptus macrorhyncha*), Speargrass (various), and Redleg Grass (*Bothriochloa macra*). Noted fauna includes many species of frogs, reptiles, birds and mammals (ERM 2022).

5.7 Natural Disturbances

The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of sediment accumulation is generally very high, artefacts deposited in such an environment will be buried shortly after being abandoned.

Frequent and lengthy depositional events will also increase the likelihood of the presence of well-stratified cultural deposits (Waters 2000:538,540).

In a stable landscape with few episodes of deposition and minimal to moderate erosion, soils will form and cultural materials will remain on the surface until they are buried. Repeated and extended periods of stability will result in the compression of the archaeological record with multiple occupational episodes being located on one surface prior to burial (Waters 2000:538-539).

If erosion occurs after cultural material is deposited, it will disturb or destroy sections of archaeological sites even if they were initially in a good state of preservation. The more frequent and severe the episodes of erosional events, the more likely it is that the archaeological record in that area will be disturbed or destroyed (Waters 2000:539; Waters and Kuehn 1996:484). Regional erosional events may entirely remove older sediments, soils and cultural deposits so that archaeological material or deposits of a certain time interval no longer exist within a region (Waters and Kuehn 1996:484-485).

The potential for preservation of archaeological deposits is further influenced by the underlying soil conditions. Hydrated clay deposits are generally noted to be largely impermeable with archaeological deposits associated with these landscapes likely to be limited to surface deposits. Cracking clays which demonstrate shrink and swell properties comparatively demonstrate self-mulching properties which may allow for the preservation of artefacts within the upper 0.1m of these soil profiles (Potter et al 1995).

The Investigation Area contains a small area of flood plain along the Jerrabomberra Creek, with impacts from flooding having the potential to either erode or deposit sediment within the landscape depending on sediment load of the flood waters and flood velocity. It is noted that high intensity floods have the potential to erode landscapes, particularly the steeper hillslopes, resulting in the removal of artefacts from a landscape while gentle floods may deposit a protective layer of sediment over the archaeological deposit.

5.8 Human Land Uses and Disturbances

The Jerrabomberra area was settled by colonial Australians in 1826 and granted to John Palmer in 1827 when clearing for pasture would have begun. The property grant soon began to be subdivided for more intensified farm use, and this trend continued until the establishment of the residential suburb of Jerrabomberra to the east of the Investigation Area in 1988 (refer to *Section 10.3* for aerial images between 1960s and 1990s). Most of the Investigation Area was only used for pastoral grazing, however the planned Environa subdivision did result in the establishment of a sports and recreation ground just south of Jerrabomberra Creek, and other various plantings and stone pillars and arches. The sports and recreation ground was later converted into a speedway track and facilities.

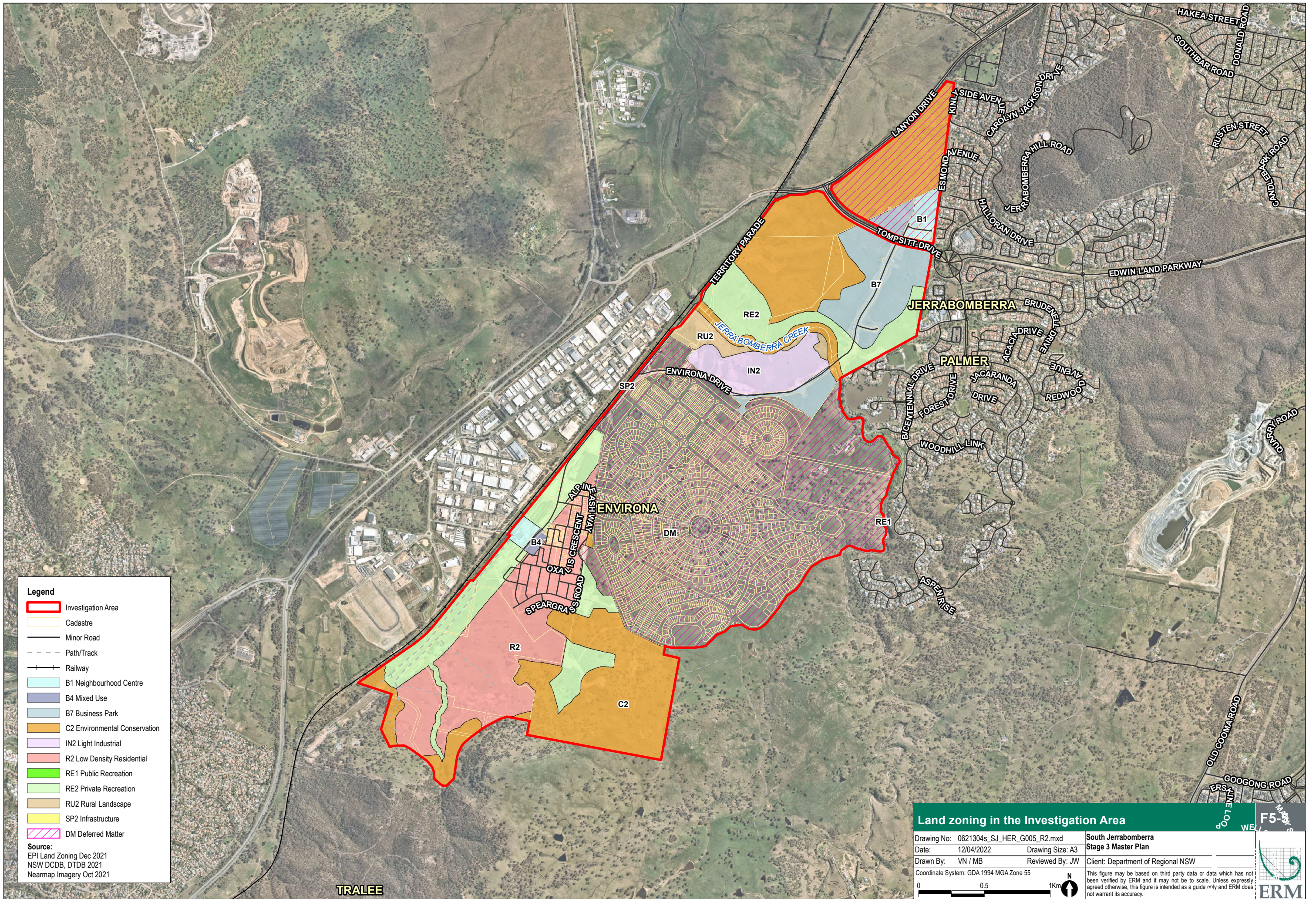
Various modern development plans have been proposed for the Investigation Area, with the first construction being undertaken in 2019 of the Poplars Retail Services Precinct north of Tomsitt Road. Environa Drive was constructed in 2021, and clearing and construction activities are also currently underway for the new High School, the Regional Sports Complex, Stage 1 of the South Jerrabomberra Residential Development, and the Poplars Innovation Precinct.

5.9 Discussion

The regional environment provides resources and landscapes which would have supported significant and continued Aboriginal and European occupation within the region. Jerrabomberra Creek is considered likely to have been a focus of Aboriginal occupation and travel which would have been a key travel route across the wider extent of Ngunawal, Walgalu and Ngarigo lands. Away from the Creek, elevated areas would also have provided access to a number of plant and animal resources suggesting that Jerrabomberra provided a suitable environment for both resource gathering and occupation activities.

Archaeological evidence of historic land use in the South Jerrabomberra RJP is likely to be focused around agricultural and pastoral use of the land and the early urban design plans of Environa. The Environa, Poplars, and Tralee homesteads were constructed across the Investigation Area in the 19th and early 20th centuries and had associated outbuildings and pastoral infrastructure. Both the Poplars and Tralee homesteads and most of their outbuildings and infrastructure have been demolished for recent retail and residential development. Environa homestead and the various physical features associated with the Environa subdivision are still present in the landscape, and their association with landscape features such as water, flat land, ridges, and views from hillslopes is evident.

More recent development across the South Jerrabomberra RJP is considered less likely to have been as focused on the surrounding environmental conditions as land uses turned to secondary industries which were less focused on underlying environmental conditions.



Legend

- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- Railway
- B1 Neighbourhood Centre
- B4 Mixed Use
- B7 Business Park
- C2 Environmental Conservation
- IN2 Light Industrial
- R2 Low Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- RU2 Rural Landscape
- SP2 Infrastructure
- DM Deferred Matter

Source:
 EPI Land Zoning Dec 2021
 NSW DCDB, DTDB 2021
 Nearmap Imagery Oct 2021

Land zoning in the Investigation Area

Drawing No: 0621304s_SJ_HER_G005_R2.mxd	South Jerrabomberra
Date: 12/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	

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6. ABORIGINAL ARCHAEOLOGICAL BACKGROUND

A review of the archaeological literature of the region and the results of a search of the AHIMS database provide essential contextual information for this HAR. Due to the number and extent of previous heritage assessments it is already possible to determine presence of Aboriginal heritage sites within the Investigation Area. It is then possible to use the archaeological context in combination with the review of environmental conditions to establish an archaeological predictive model for the Investigation Area.

6.1 Aboriginal History of the Locality

Aboriginal occupation of New South Wales is thought to have spanned at least 40,000 years, however dates in excess of 40,000 years have been presented for artefacts found in gravels of the Cranebrook Terrace on the Nepean River (Stockton and Holland 1974; Nanson et al. 1987; Stockton 1993 in Richards 2015).

Late Pleistocene occupation sites have been identified at Shaws Creek in the Blue Mountain foothills (14,700 BP, Kohen et al. 1984), Mangrove Creek and Loggers Shelter in the Sydney Basin (c.11,000 BP, Attenbrow 1981, 2004), and Burrill Lake on the South Coast (c.20,000 BP, Lampert 1971). Continuous occupation from late Pleistocene to the late Holocene of the Wallen Wallen Creek on North Stradbroke Island has been established (20560 ± 250 BP), and faunal material analysis from this site suggests a lifestyle initially reliant on hunting terrestrial fauna that would later change to a reliance on a marine diet. These changes may reflect structural changes to lifestyle caused by rising sea levels during the late Pleistocene (Neil and Stock 1985).

Australian Aboriginal people occupied land according to a system of spatial organisation and land occupancy (Clark 1990: 11-14). Individual groups were intimately familiar with their own geographical regions and the seasonal availability of resources within it. Tribal boundaries were often defined through linguistic associations, social relations, and spiritual links to the land. These boundaries were most likely fluid, changing position over time. If this was the case, then tribal boundaries recorded by European people at, or after, the point of contact can only be considered as current to that period and were probably quite different prior to European observation. To make things more ambiguous, the few European accounts of Aboriginal groups in the broad study region are limited in detail, often confused in regard to Aboriginal group names and give varying interpretations of territorial boundaries (Flood 1980: 2). Aboriginal people in the broader Canberra and Queanbeyan district are associated collectively within the Ngunawal, Walgalu and Ngarigo boundaries described by Tindale (*Figure 6.1*). This area is part of the Ngarigo language area, and is today generally represented by Ngunawal (Ngunnawal), Ngambri (subset of the Walgalu), and Ngarigo people.



Figure 6.1 Tribal boundaries of the Canberra and wider region, with approximate location of Jerrabomberra shown with red arrow (Tindale 1974)

As far as can be ascertained, the Aboriginal groups living permanently in the Canberra and Queanbeyan region spoke different, but related languages (all most likely associated with the dominant Ngarigo) (Cooke 1988: 33; Flood 1980: 194). They are thought to have lived in small, highly mobile, kin-based groups. Individual groups came together regularly to participate in trade, marriage and ceremonial gatherings. An early ethnographic account from Bennett (1834: 173) records their diet as including flying squirrel, kangaroo, wallaby, wombat, koala, possum, emu, duck, swan, snake, goanna, platypus, ant eggs, insects, fish, mussels, yabbies, plant tubers, berries and seeds.

Ethnographic information relating to the Aboriginal occupation of the Canberra and Queanbeyan region has been obtained from historical documentation written by early European settlers and government officials during the mid to late 18th century (Barwick 1984).

In general, early settlers recorded very little of their observations, particularly in regard to the Aboriginal people they encountered (Flood 1980: 26). The best recorded observations come from the journals of early explorers, government surveyors and authors of travel books. By the early 1840s, early European ethnographers including Currie, Bennet, Lhotsky, Backhouse, and George August Robinson had each recorded small amounts of detail regarding the Aboriginal people within a broad region surrounding Canberra and Queanbeyan. These records are not detailed and by the 1880s, when more serious ethnographers came into the region, the consequences of European settlement had already greatly altered the traditional Aboriginal way of life (Flood 1980: 26). However, some indication of the Aboriginal population living in the Limestone region shortly after the time of contact is evident from the recording on 12 September 1844 by George Augustus Robinson, the Chief Protector of Aborigines, while staying at Yarralumla House, of the names and ages of 91 Aboriginal people (Ngambri Local Aboriginal Council 2014). By 1856 the local 'Canberra Tribe', presumably referring to the remaining Ngunnawal/Ngambri/Ngarigo people, numbered around seventy (Shumack 1967).

6.1.1 Post Contact

Not surprisingly, the colonial settlement of the Queanbeyan region resulted in multiple conflicts between Europeans and Aboriginal people. As elsewhere in Australia, European settlement disrupted Aboriginal patterns of land use and movement across the country, and many Aboriginal people died from European-brought diseases like influenza, smallpox and tuberculosis.

The local Aboriginal people came into conflict with the early squatters often as a result of hunting the squatters' stock. Interactions between Aboriginal people and the European arrivals also introduced alcohol and tobacco, which took a serious toll on the Aboriginal population. Many families moved on to quieter, more peaceful hunting grounds while others attached themselves as servants to white settlers and officials. Aboriginal men also worked as farm hands, stockmen and drovers (Spenneman 2015: 5). Relationships between master and servant were often strained, although relationships between Aboriginal women and European men were also common place, producing children who often found it difficult to fit into either of their parents' cultural societies.

Prominent Ngunnawal woman Nellie Hamilton, also known as Queen Nellie, gave a glimpse of the full impact that European settlement had on her traditional lifestyle when she was quoted to say in 1895 (Shumack 1967):

"I no tink much of your law. You come here and take my land, kill my possum, my kangaroo; leave me starve. Only gib me rotten blanket. Me take calf or sheep, you been shoot me, or put me in jail. You bring your bad sickness 'mong us."

Her words are recounted by Samuel Shumack in his manuscript about the history of Canberra. This quoted version was taken from a letter sent to John Gale which is held by the national library.

6.2 Regional Archaeological Context

The Southern Tablelands is a geographic area of New South Wales, Australia, located south-west of Sydney and west of the Great Dividing Range. The area is easily accessible to the Australian federal capital city of Canberra in the Australian Capital Territory. Several heritage studies have been undertaken in the wider Southern Tablelands region of NSW that attest to the Aboriginal occupation of the area. The most common Aboriginal site type recorded in the Southern Tablelands is by far stone artefacts (isolated artefacts and scatters) (Biosis 2005; Austral Archaeology 2010). Large stone artefact sites, including densities of up to thousands, have been recorded in the region. Other site types recorded include stone artefacts, stone grinding grooves, scarred trees, bora grounds, and burials (Lance and Koettig 1986). Burial and ceremonial sites are rare and generally located on river banks or possibly on hill tops away from occupation sites (JCHHM 2003).

Fuller (1989) proposed to refine the model of Aboriginal site locations in the region based on a model outlined by Lance and Koettig (1986). The initial study divided the area into landform type zones.

The zones were assessed as having high, moderate or low sensitivity for archaeological potential, and significance (importance of a site). The alluvial flats adjacent to major rivers were assessed as having potential to contain stratified sites, and areas located near the junction of major water courses and minor creeks, such as Jerrabomberra Creek, suggest the most likely sites would be stone artefact scatters.

Within landforms of undulating hills and plains (the landform pattern across the Investigation Area), lower hill slopes adjacent to watercourses have been assessed to be the preferred camp site location where stone artefact sites are suggested to be common (Fuller 1989). This landform type is considered to have high sensitivity, and moderate potential for significant sites. Also within this landform pattern, mid-slopes are noted to have yielded few archaeological sites. Fuller notes that the distance to water and absence of level ground are likely to have restricted Aboriginal use of this landform type, therefore giving it a low sensitivity and potential for significant sites.

Hilltops are noted as potential locations for burials and ceremonial activities (Fuller 1989), and that due to ground disturbance caused since European occupation, these sites have likely been disturbed or destroyed. If undisturbed sites are located in these areas (though considered unlikely), they will be of high significance. This area is therefore assessed as having low potential sensitivity and high potential significance. Built up areas are considered to have a moderate potential sensitivity, but a low potential for significance. Fuller's report identifies resources such as water, stone, plant and food, medicine and shelter may have provided an incentive to camp in an otherwise unlikely location. Hills generally have low potential sensitivity and significance, except for high hills which might contain burial or ceremonial sites.

Other reports (Wittner 1980; Dallas 1985; JMCHM 2003) have suggested that sites across the Southern Tablelands region are likely to cluster along waterways, and that larger occupation sites are most likely to occur in river valleys, and gently sloping landforms. Therefore, smaller sites reflect more transient corridors along escarpments, saddles and ridges.

Austral Archaeology (2010) state that across the Southern Tablelands region, stone artefact sites occur in all landforms, but vary in density, i.e., they are more common within 100m of watercourses on lower slopes, flats, at drainage confluences, alluvial landforms and hilltops. They also suggest that sites located in hilly landforms can generally be considered representative of transient occupation, which reflects the results from an array of other reports, as mentioned above, carried out over the region. The results of these archaeological assessments across the Molonglo and Queanbeyan River systems and the wider region provide important data and detailed analysis on Aboriginal archaeological site distribution and typology within the landscape.

The earliest reliable date for occupation in the region comes from Birrigai Rock Shelter located in the Tidbinbilla Nature Reserve approx. 20 km south-east of the Investigation Area, and it demonstrates sporadic occupation from the last glacial maximum 21,000 years ago (Flood et al 1987). As for the Investigation Area itself, the previous reports identify open artefact sites and scatters as the most common site type (Ecological 2021). They conclude that most of the recorded Aboriginal sites were located on fairly level ground, particularly on river flats, terraces and ridges leading to water courses and that the relationship of site density is reflective of their proximity to water (Flood 1980; Saunders 2004).

6.3 Local Archaeological Context

Almost all of the South Jerrabomberra RJP has been subject to various forms of heritage assessment. Survey boundaries of assessments recorded in AHIMS show almost complete coverage (*Figure 6.2*). There is one gap with a property on the eastern edge of the Investigation Area (11DP730220, 1DP721855 and 101DP754912) never having undergone any kind of heritage assessment.

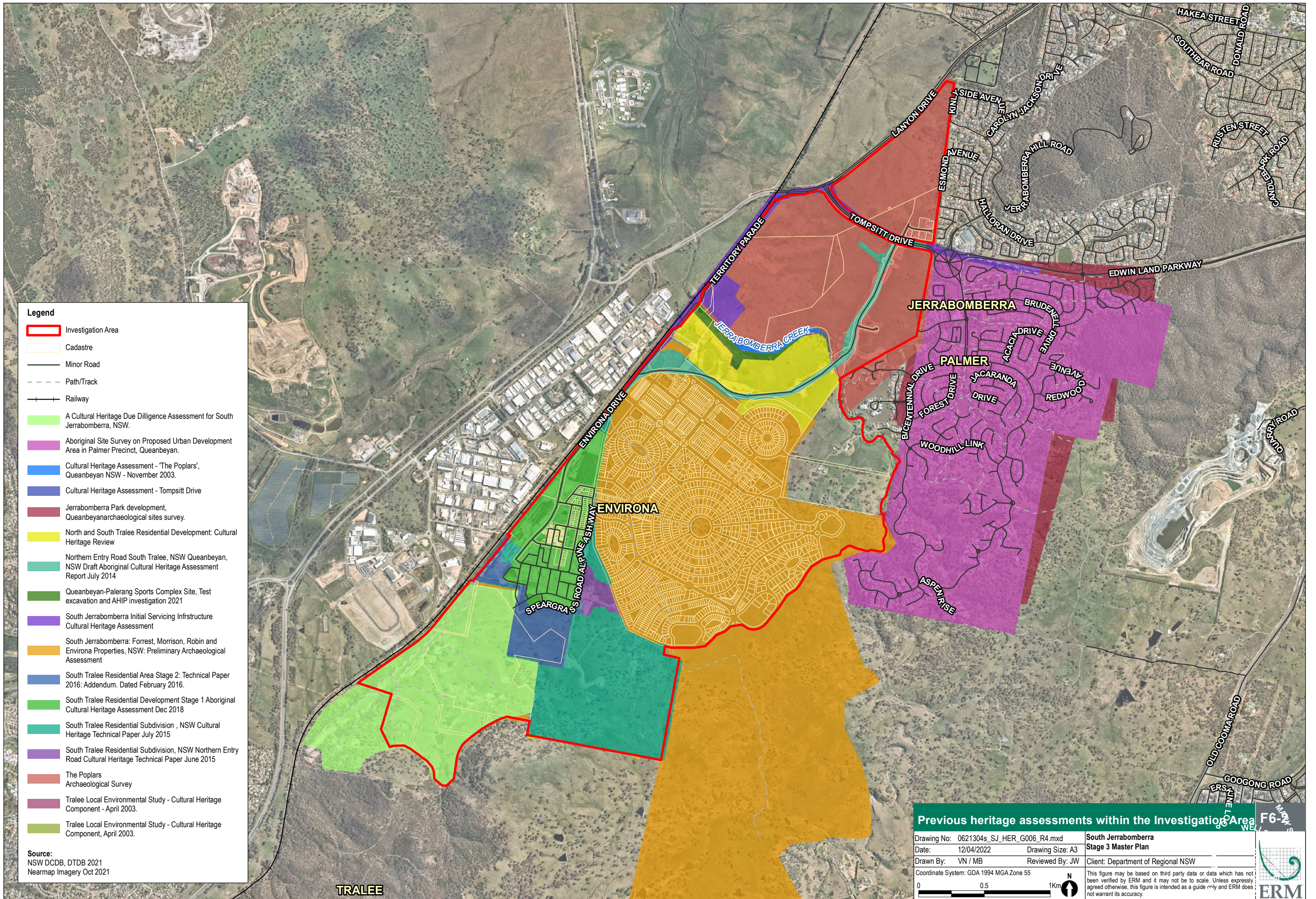
Areas that have been subject to an Aboriginal Cultural Heritage Assessment in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) include the Jerrabomberra High School; Regional Sports Complex; South Jerrabomberra Residential Development Stage 1; and South Jerrabomberra Residential Development Stage 2 – Development Application 1.

Areas that have been subject to other cultural heritage assessments include Poplars; North Tralee; Environa; South Jerrabomberra Residential Development Stage 2 (remainder); and the private property at the south of the Investigation Area.

Previous assessment reports for the Investigation Area and immediate surrounds include:

- Lewis (1984) Jerrabomberra Park Development, Queanbeyan: Archaeological Sites Survey [AHIMS 794];
- Access Archaeology (1991) The Poplars Archaeological Survey [AHIMS 98919];
- Saunders (2000) Archaeological Investigation of Two Potential Scarred Trees at Jerrabomberra Estate [AHIMS 98146];
- Archaeological Heritage Surveys (2003) Cultural Heritage Assessment – ‘The Poplars’, Queanbeyan NSW [AHIMS 98808];
- Archaeological Heritage Surveys (2003) Tompsitt Drive Duplication Cultural Heritage Assessment;
- Navin Officer Heritage Consultants (2003) Tralee Local Environmental Study – Cultural Heritage Component [AHIMS 98419];
- Navin Officer Heritage Consultants (2010) North and South Tralee Residential Development: Cultural Heritage Review [AHIMS 103419];
- Navin Officer Heritage Consultants (2010) South Jerrabomberra Forrest, Morrison, Robin and Environa Properties, NSW: Preliminary Archaeological Assessment [AHIMS 103029];
- Navin Officer Heritage Consultants (2010) South Jerrabomberra Initial Servicing Infrastructure: Cultural Heritage Assessment [AHIMS 102025];
- Navin Officer Heritage Consultants (2013) Tralee Northern Entry Road Desktop Assessment;
- Navin Officer Heritage Consultants (2014) South Jerrabomberra Forrest and Morrison Properties, NSW: Preliminary Archaeological Assessment;
- Ironbark Heritage & Environment (2014) A Cultural Heritage Due Diligence Assessment for South Jerrabomberra, NSW [AHIMS 103735];
- Navin Officer Heritage Consultants (2014) Northern Entry Road South Tralee, NSW Queanbeyan: Aboriginal Cultural Heritage Assessment Report [AHIMS 103928];
- Navin Officer Heritage Consultants (2015) South Tralee Residential Subdivision, NSW: Northern Entry Road Cultural Heritage Technical Paper [AHIMS 103929];
- Navin Officer Heritage Consultants (2015) South Tralee Residential Subdivision, NSW: Cultural Heritage Technical Paper [AHIMS 103930];
- Navin Officer Heritage Consultants (2015) Googong Neighbourhood 1B (NH1B), Southern NSW: Aboriginal Cultural Heritage Assessment of NH1B Remaining Areas [AHIMS 103384];
- Navin Officer Heritage Consultants (2016) South Tralee Residential Area Sewer and Water Infrastructure: Review of Environmental Factors – Due Diligence Archaeological Assessment Addendum;
- Navin Officer Heritage Consultants (2016) South Tralee Residential Area Stage 2: Technical Paper 2016: Addendum [AHIMS 103931];

- Navin Officer Heritage Consultants (2018) South Tralee Residential Development Stage 1 Aboriginal Cultural Heritage Assessment [AHIMS 103987];
- Indesco and Black Mountain Projects (2020) Tralee Cultural and Heritage Interpretation Plan. Queanbeyan-Palerang Regional Council;
- Ecological Australia (2020) Monaro Cluster: Jerrabomberra Aboriginal Due Diligence Assessment;
- Ecological Australia (2021) New High School in Jerrabomberra – Aboriginal Cultural Heritage Assessment;
- Apex Archaeology (2021) Queanbeyan-Palerang Regional Sports Complex Site, South Jerrabomberra: Aboriginal Test Excavation Report. Queanbeyan-Palerang Regional Council;
- Navin Officer Heritage Consultants (2021) South Jerrabomberra Estate 2 Development Application 1: Aboriginal Cultural Heritage Assessment; and
- Apex Archaeology (2021) Queanbeyan-Palerang Regional Sports Complex Site, South Jerrabomberra: Additional Archaeological Investigation, AHIP ID: 4791. Queanbeyan-Palerang Regional Council.



Legend

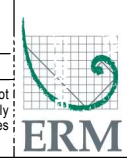
- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- Railway
- A Cultural Heritage Due Diligence Assessment for South Jerrabomberra, NSW.
- Aboriginal Site Survey on Proposed Urban Development Area in Palmer Precinct, Queanbeyan.
- Cultural Heritage Assessment - 'The Poplars', Queanbeyan NSW - November 2003.
- Cultural Heritage Assessment - Tompsitt Drive
- Jerrabomberra Park development, Queanbeyan archaeological sites survey.
- North and South Tralee Residential Development: Cultural Heritage Review
- Northern Entry Road South Tralee, NSW Queanbeyan, NSW Draft Aboriginal Cultural Heritage Assessment Report July 2014
- Queanbeyan-Palerang Sports Complex Site, Test excavation and AHIP investigation 2021
- South Jerrabomberra Initial Servicing Infrastructure Cultural Heritage Assessment
- South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW: Preliminary Archaeological Assessment
- South Tralee Residential Area Stage 2: Technical Paper 2016: Addendum. Dated February 2016.
- South Tralee Residential Development Stage 1 Aboriginal Cultural Heritage Assessment Dec 2018
- South Tralee Residential Subdivision, NSW Cultural Heritage Technical Paper July 2015
- South Tralee Residential Subdivision, NSW Northern Entry Road Cultural Heritage Technical Paper June 2015
- The Poplars Archaeological Survey
- Tralee Local Environmental Study - Cultural Heritage Component - April 2003.
- Tralee Local Environmental Study - Cultural Heritage Component, April 2003.

Source:
NSW DCDB, DTDB 2021
Nearmap Imagery Oct 2021

Previous heritage assessments within the Investigation Area

Drawing No: 0621304s_SJ_HER_G006_R4.mxd	South Jerrabomberra
Date: 12/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	

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6.4 Aboriginal Heritage Database Search Results

6.4.1 AHIMS Database Search Results

AHIMS Limitations

ERM note that there are many limitations with an AHIMS search. Firstly, site coordinates are not always correct due to errors and changing of computer systems at AHIMS over the years that failed to correctly translate old coordinate systems to new systems. Secondly, AHIMS will only provide up to 110 sites per search, thus potentially limiting the search area surrounding the Investigation Area. And finally, few sites have been updated on the AHIMS register to notify if they have been subject to a s87 or s90 permit, and as such which sites remain in the local area and which sites have been destroyed.

In addition to this, ground surface visibility also hinders site identification and the geomorphology of the majority of NSW soils and high levels of erosion have proven to disturb sites and site contents, and the extent of those disturbances is unknown (i.e., we do not know if a site identified at the base of an eroded slope derived from the upper crest, was washed along the bottom etc. thus altering our predictive modelling in an unknown way). Thus, the AHIMS search is limited and provides a basis which only aids in predictive modelling.

The new terminology for site names including (amongst many) an 'artefact' site encompasses stone, bone, shell, glass, ceramic and/or metal and combines both open camps and isolated finds into the one site name. Unfortunately, this greatly hinders in the predictive modelling as different site types are grouped under one name and this provides inaccurate data.

Search Results

A search of the AHIMS register has shown that 85 known Aboriginal sites are currently recorded within the Investigation Area (*Appendix C*). Four additional AHIMS records are present, however three have been determined not to be a site (57-2-0666, 57-2-0975 and 57-2-1127) and one is noted as deleted (57-2-0788). These sites are summarised in *Table 6.1* and their approximate location is illustrated in *Figure 6.3*. Of the 85 sites, 14 have been noted as destroyed through Aboriginal Heritage Impact Permits.

Table 6.1: Summary of AHIMS sites

Site Type	Number	% of Total Sites
Artefact	58	67.4%
■ Isolated Artefact	■ 47	■ 54.6%
■ Multiple Artefacts	■ 11	■ 12.8%
Artefact with Potential Archaeological Deposit	24	27.9%
Potential Archaeological Deposit	4	4.7%

6.4.2 AHIP Register

Four AHIPs for the Investigation Area are noted in the AHIMS database and AHIP Register:

- AHIP 3862 applied for by Canberra Estates Consortium Number 4 for the South Tralee – Stage 1 Residential Subdivision but never issued;
- AHIP 3954 applied for by Canberra Estates Consortium Number 4 for the South Tralee – Stage 2 Residential Subdivision but never issued;
- AHIP 4360 issued to The Village Building Co. for the South Tralee Residential Development Stage 1: Harm to certain Aboriginal objects through proposed works (12 sites – 11 noted as destroyed). Other action causing harm; and
- AHIP 4791 issued to Queanbeyan Council on behalf of Apex Archaeology for the Queanbeyan-Palerang Regional Sports Complex Site, South Jerrabomberra. The AHIP allowed for mechanic auguring at site 57-2-0975.

Figure 6.3 Known Aboriginal heritage sites within the Investigation Area (AHIMS)

[Figure removed for Public Display]

An excavation was conducted at 57-2-0977 and 57-2-0115 in June 2021 at the new High School site. The recommendations in the excavation report include an application for an AHIP for destruction of the two sites.

6.5 Colonial Frontier Massacre Mapping

A review of the Colonial Frontier Massacre Mapping Project developed through the Newcastle University has revealed that there are no known massacre sites within the South Jerrabomberra RJP.

6.6 Predictive Model of Aboriginal Land Use and its Material Traces

There are several factors which have the potential to skew the results and interpretations of former archaeological studies. These factors include elements such as:

- The landform on which a site is observed is not necessarily the site's origin. Post depositional processes including impacts from flooding and bioturbation are likely to have resulted in the movement or burial of archaeological deposits;
- Biases in landforms investigated are limited by proposed development locations or areas of interest to the archaeologist. Further variation in type, accuracy and level of reporting exist; and
- Site interpretation can be skewed by level of ground surface visibility and fragmentation of the archaeological record.

The following statements provide a summary of identified archaeological site patterning in the South Jerrabomberra RJP:

- Site types include isolated artefacts, small artefact scatters, and potential archaeological deposits;
- Sites are located reasonably uniformly across the landscape;
- Stone artefacts are most predominantly made from chert, quartz, and silcrete material; and
- Aboriginal sites are most likely to be located in landscapes which have been subject to low historic disturbance.

The main aim of this HACHAR is to attempt to define both the nature and extent of heritage sites across the Jerrabomberra region relative to impacts on the subject site. As a result, the nature of the analysis will focus on both the landform features and site types. The purpose of this strategy is to highlight any variations between sites, landforms and resources across the area to enable the archaeological record to be assessed as part of a continuous expression of Aboriginal land use across the region.

Several models of Aboriginal land use have been identified across archaeological literature to identify key determining factors in Aboriginal occupation and consequently archaeological site patterning. A consideration of these models in combination with the results of previous archaeological studies of the region has been utilised to identify key patterns in archaeological patterning of the region.

A brief summary of the considered models is outlined in *Section 6.2* above and provided below in greater detail.

6.6.1 *Foley's (1981) Forager Settlement patterns*

A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral 'activity locations'. Key concepts of this model are that:

- Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area); and
- Activity locations occur within the foraging radius of a home base camp and will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths).

6.6.2 *Kuskie and Kamminga's (2000) Occupation Model*

Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities as well as the expected archaeological assemblage associated with each activity type. Predictive concepts included that:

- Features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time;
- Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation;
- Particular activities may not be adequately predicted by tool users (and deposition), adding to the increased low-density scattering of artefacts over the landscape; and
- If individuals were opting to carry a number of stone tools during hunting and gathering activities and maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high.

6.6.3 *Evan's (2003) Economic Resource Model*

The Economic Resource Model identifies locations with substantial resources (such as food and knapping sources) as economic zones. Economic zones are identified as areas rich in resources that Aboriginal people regularly accessed.

The model identifies a correlation between the relative yield of the economic zone and the distance that sites are likely to be away from the economic zone. The model suggests that the evidence of Aboriginal activities will decrease with distance from large economic zones.

6.6.4 *Baker's (2000) Activity Overprinting Model*

The Activity Overprinting Model explains the density of sites at increasing distances from the creek. This is achieved through an understanding of the nature of repeated long-term activities on a landform.

The model requires the examination of local environmental resources to identify zones of 'complexity' which would represent areas where repeated occupation and therefore 'activity overprint' were more likely.

6.7 Predictive Model

Aboriginal people have been living in and around the Canberra region for at least 21,000 years, as evidenced through the archaeological recordings of hundreds of sites associated with Aboriginal culture in the Canberra and Queanbeyan region.

The vast majority of these represent campsites, many of which have been destroyed by the development of Canberra and Queanbeyan's city and suburbs (Ecological 2021).

Stone artefacts are the most common remaining physical evidence of Aboriginal activity in the archaeological record of the Canberra and Queanbeyan region. These can be detected as isolated artefacts or artefact scatters. A broad regional pattern can be described with larger, denser artefact scatters occurring in the vicinity of permanent creek lines, and smaller, less dense scatters around less permanent water sources.

The larger sites tend to be found in proximity to creeks, wetlands and valley floors, where these areas avoid frost drainage hollows (Flood 1980, Ecological 2021, Lewis 1984, Access Archaeology 1991, Saunders 2000, Navin Officer Heritage Consultants 2010). Other areas where larger sites have been found tend to correlate with stone outcrops suitable for artefact production (Access Archaeology 1990, Heffernan and Klaver 1995, Kuskie 1992a and b, Walshe 1994), or other geological features that have particular cultural significance.

Chert, Quartz and then silcrete are the dominant raw material found in archaeological assemblages across the region, most likely sourced from the interbedded quartz-rich sandstone of the Ordovician sedimentary rock formation, which also includes siltstone, mudstone and chert (Ecological 2021).

The distribution of recorded Aboriginal heritage sites across the Investigation Area is reasonably consistent, with isolated artefacts and potential archaeological deposits found across the entire length, and sites with multiple artefacts more often found south of Jerrabomberra Creek. Based on the number and extent of heritage assessments that have already been undertaken across the Investigation Area, it is unlikely that significant additional sites will be identified in the future. Additional isolated artefacts or small artefact scatters could be found in any part of the Investigation Area if ground visibility were increased, and additional subsurface artefacts may be uncovered during ground disturbance works. The likelihood of additional discoveries would be highest on relatively flat elevated ground within 100 m of Jerrabomberra Creek and the smaller non-perennial streams that flow into it from the ridges located across the South Jerrabomberra RJP.

7. HISTORICAL CONTEXT

7.1 Historical Overview

Much of the Investigation Area has been historically cleared for pastoral use since colonial settlement in the early nineteenth century. Large Crown grants have gradually been broken down into smaller holdings over the last two centuries.

7.1.1 Surveying the Continent – Discovery of Queanbeyan

The first documented European exploration in the Canberra/Queanbeyan district took place in 1820 and 1821 when expeditions searching for the Murrumbidgee River passed through the area (Gillespie 1991). Charles Throsby Smith, James Vaughan and Joseph Wilde reached the Molonglo River near Queanbeyan in 1820 (Fitzhardinge 1954) and in 1822 a group led by William Kearns crossed the Molonglo Plains and reached the Queanbeyan River (Lea-Scarlett 1968). Between 31 May and 15 June 1823 Captain Currie and Major Ovens travelled over Limestone Plains and Isabella Plain (Field 1825).

The Molonglo River was recorded as the "Yeal-am-bid-gie" in 1820 by the explorer Charles Throsby. Later it was referred to as the Limestone River, and the Fish River. The discovery of Canberra is described in an extract from the journal of the exploration by Smith, Wilde and Vaughan (Canberra Times 1928):

"Thursday, 7th December, 1820, "Time. ½ past 6, Course, S.S.W 2 miles; ¼ past 7, S.W. 9 miles; 11a.m., S.S.E 12 miles "At daylight, calm and cloudy. Set out thro' a fine forest country for 3 miles, ascending a Stony Range, from Stone and Barren Scrubby timber, Stringy Bark, Gum and Box; from this Range we had a view of some grassy hills, bearing N. by West, Distant about 8 miles. "Crossed a chain of ponds, rather indifferent country. "Ascending a Stony Range, Barren and Scrubtop at 11, on top of the hill; some beautiful clear plain in sight, bearing S. by e., and extensive chain of mountains running S.S.E. and N.N.W.; thick hazy wr., with light- showers of rain occasionally. We then descended the range into a scrubby country for almost ½ a mile, then into a most beautiful forest country, gentle hills and valleys, well-watered by streams, and a fine rich Black Soil. Came to a Beautiful River that was running thro' the plains in a S.W. direction, by the side of which we slept that night. When we made the Hut this evening, we saw several pieces of stone that had been burnt by all appearances. I then examined some of it, which proved to be limestone. We then went along the Banks of the River, and found immense quantities of the same sort, some of which I have preserved as specimens; this Evening caught 3 fish of the same kind we caught before; throughout the Night, Calm and Cloudy."

7.1.2 The Settlement of Queanbeyan and Jerrabomberra

European settlement of the Queanbeyan area began in the mid-1820s. After the initial expeditions, Crown grants were established, including a grant of 2,000 acres to Robert Campbell in 1825 known as 'Duntroon' and a grant to the east to his brother-in-law John Palmers in 1827 known as 'Jerrabomberra', derived from the local Aboriginal place name meaning 'boy frightened by storm'. 'Jerrabomberra' eventually comprised 6,160 acres running south from a long frontage to the Molonglo River and included a large portion of the Jerrabomberra Creek valley (Access Archaeology 1991:12). In 1833 the property had passed to John Palmer's son, George Thomas Palmer Snr, and was managed by Palmer's brother, Pemberton. Nearby was an illegal squattage know as 'Quinbean', an Aboriginal word meaning 'clear waters' (Queanbeyan Museum), which was managed by Timothy Beard.

To the west of 'Jerrabomberra' was land also initially granted to Palmer, although the title to the land was never issued. In 1831 it was granted to Francis Mowatt, but again the title was never confirmed. In 1837 an additional grant of 960 acres was acquired and added to Francis Mowatt's primary grant of 2,560 acres which included the acquisition of 'Quinbean'.

This grant was purchased in October 1937 by Dr James Fitzgerald Murray who established it as an outstation of his 'Woden' property further to the west. After several further changes in ownership, this property had passed by September 1870 to Robert Campbell's son George, of Duntroon. It became known as 'Duntroon Hill Station' or just 'Hill Station'. At the time of the sale of Duntroon, 'Hill Station' was purchased by Alexander Joseph McDonald who sold it to Henry Brougham Blyth in 1920 as a property of 5,100 acres (ACT Heritage Council 2012).

During the 1830s the town of Queanbeyan was established. In 1834 the first school was opened, and in 1836 a post office with mail arriving weekly. In 1837 it was announced that Captain Alured Tasker Faunce would become the Police Magistrate at the newly established Queanbeyan court, and in September 1838 Queanbeyan was proclaimed a township with a population of 50 people. During the 1840s the first wave of bushrangers arrived in the area. As more people arrived in the town and travelled through the area a new inn was opened, the first brewery opened and the first hospital was established. During the 1850s gold, silver, lead and copper mines flourished for a brief time. Several more churches and inns were established and the Commercial Banking Company of Sydney opened (Queanbeyan Museum).

The 1860s and 1870s witnessed a new wave of European settlement. The Robertson Land Act of 1861 allowed Crown land to be purchased in much smaller lots. This heralded a rush by poorer settlers to purchase small areas (Gillespie 1991). This can be seen in the division of the early large land grants in the historical parish maps of Queanbeyan. The historical Parish maps in *Figure 7.1* and *Figure 7.6* demonstrate how the large land grants over decades were broken down and portioned off for sale. In 1871, Pemberton Palmer began subdividing 'Jerrabomberra', selling leases of thirty to 100 acre blocks. Further subdivision of the estate occurred in the 1880s when 4,000 acres were subdivided into blocks of 50 to 300 acres (Gillespie 1991:181). *Figure 7.1* shows that in 1885 the bulk of the Investigation Area (the north) was divided between 'Jerrabomberra' in the east, and 'Hill Station' in the west. The remaining section to the south was subdivided into much smaller lots with multiple owners, including George Campbell, W.F. Thomson and L. Delaney (*Figure 7.2*).



Figure 7.1 Parish of Queanbeyan 1885 2nd edition map (hlrv.nswlrs.com.au)

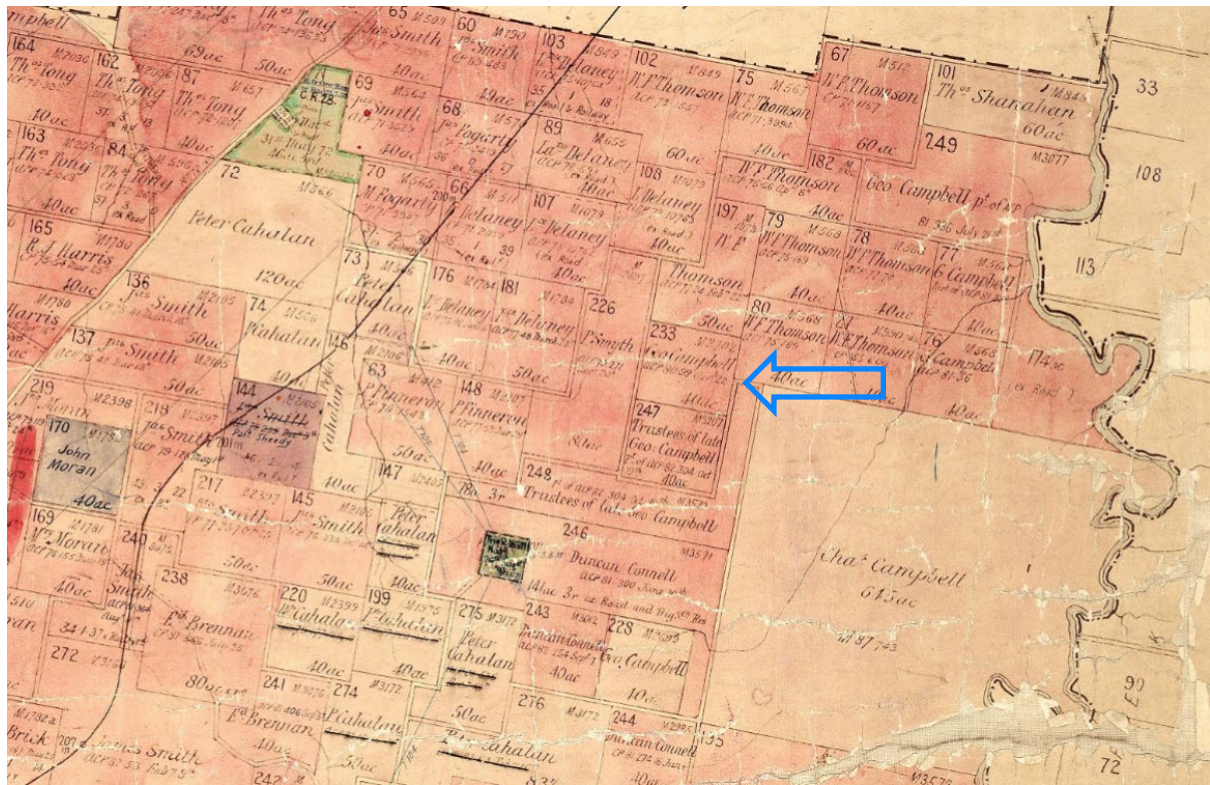


Figure 7.2 Parish of Tuggeranong 1889 2nd edition map (hlrv.nswlrs.com.au)

7.1.3 Construction of the Railway Line

Running along the western edge of the Investigation Area is the former southern section of the Bombala railway line. The northern part of this line is still in operation and forms part of the main line from Sydney to Canberra, but the southern part is no longer operational. Part of the line further south towards Tuggeranong have been incorporated into the Canberra Tracks Heritage Trail.

The southern part of the Bombala line was opened in stages to Torago (1884), Bungendore (1885), Queanbeyan (1887), Michealago (1887), Cooma (1889), Nimmitabel (1912) and Bombala (1921) (Stokes 1984). To catch the train from the Queanbeyan station to Tuggeranong valley over the Tralee Hills engineers had to construct numerous cuttings and embankments which later became known as the Horse Shoe Bend (Stokes 1984). This particular section of the railway lies approximately 3 km south of the Investigation Area.

The line south from Queanbeyan to Cooma operated for approximately 100 years. On 26 March 1986, the line south of Cooma was closed (Railway Digest 1986). Passenger services south of Queanbeyan ceased in September 1988 as a bridge carrying the line over the Numeralla River at Chakola was declared unsafe, with freight services south of Queanbeyan ceased in May 1989 (Railway Digest 1989).

The 49 km section between Queanbeyan and Michelago was re-opened in April 1993 for heritage tourist operation by the ACT Division of the Australian Railway Historical Society. The line that was available for traffic was truncated to Royalla as it deteriorated, until finally being suspended at the beginning of 2007 as a result of storm damage.

After the line was suspended, several of the railway stations were dismantled and demolished. The tracks have fallen into disrepair. None of the tracks or railway stations are heritage listed and the part of the railway line that passes along the western edge of the Investigation Area boundary holds no particular significance for the heritage values of the Investigation Area.

7.1.4 Establishment of the National Capital

Following Federation in 1901, a new city with its own territory was proposed for the nation's capital. It was to be within New South Wales and not less than 100 miles (160 km) from Sydney. The borders of the Federal Capital Territory were also to incorporate a water catchment under the control of the Federal Government. In 1910 a survey to map out the border of the capital territory begun and took five years to complete. This is in part due to the fact that sections of the border follow the line of the railway corridor which itself was contentious during its construction. A condition of the NSW Government in surrendering land for the ACT was the retention of the existing railway.

In April 1911, the Australian Commonwealth Government held an international competition to produce a design for its new, as yet unnamed, federal capital city. Canberra, as national capital through its inception and early development, represents an outstanding and unique achievement in town planning and social idealism of the early twentieth century. It stands as a significant milestone in the application of the utopian ideal of conceiving and building a new City reflective of Australia's democratic principles based on contemporary early international twentieth century planning. In the 1911 international competition for the Federal Capital, results of which were announced in 1912, the winning entry submitted by Walter Burley Griffin (entrant 29 of 137 entrants) with its City Beautiful inspiration formed the initial design format for the city (*Figure 7.3*).

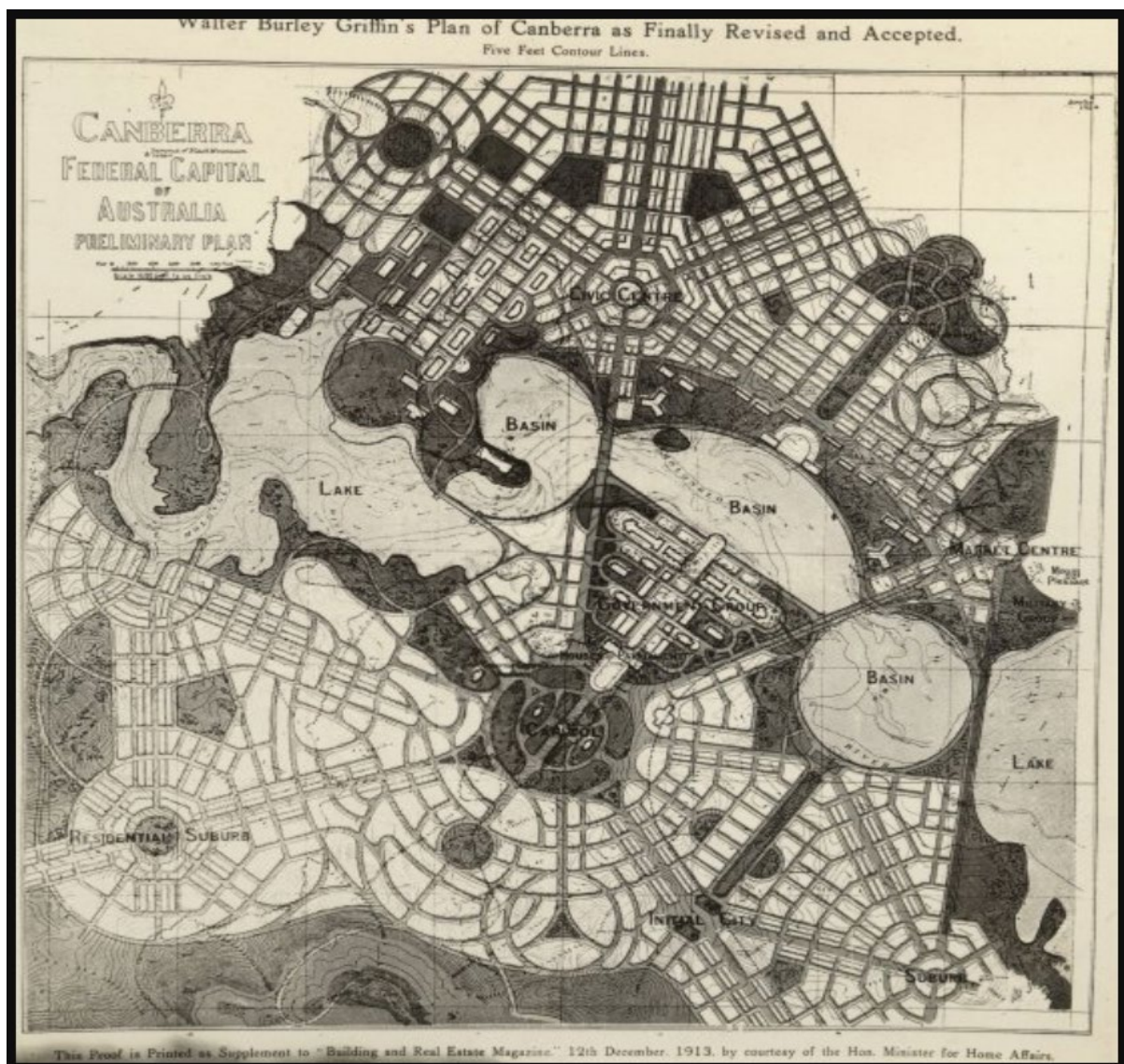


Figure 7.3 Walter Burley Griffin's winning design concept for Canberra
 (<https://www.naa.gov.au>)

The changes to a Garden City model initiated by John Sulman in 1921-1924 overlay Griffin's structure, but do not obliterate it. Scholars have also detected a strong classical influence permeating the Burley Griffin design of Canberra. Its significance is further underpinned in the way it was seen as a national role model of planning and civic achievement, where the civic ideal was regarded as critical to successful city development (Gillespie 1991).

Burley Griffin's wife, Marion Mahony Griffin, also an architect, collaborated with him on the design competition entry and is known to have prepared the design drawings that accompanied the Burley Griffin entry (nla.gov.au).

7.1.4.1 Complementary Urban Design across the Border

In 1924 'Hill Station' was subdivided and four lots were sold to James Patrick Heaton, who quickly sold them in 1925 to Amy Halloran, wife of H.F. Halloran, a lawyer in Sydney. The four subdivisions originally straddled the NSW and ACT border, however soon after purchase the ACT lands were acquired by the Commonwealth under a compulsory order on 2 April 1925 (ACT Heritage Council 2012). 'Halloran Estate' was leased to Thomas Tyson, however Halloran promptly became known as a subdivision designer and surveyor in the Queanbeyan district, and began planning a future city of Environa on his new property, and in the centre of the current Investigation Area.

The layout of the Environa Urban Conservation Area in the Investigation Area followed Garden City Design concepts popular in the early 20th century, and was heavily influenced by Walter Burley Griffin's Canberra plan, notably in the curvilinear and radiating street patterns, the open space reserves and in the planning for community facilities as seen in *Figure 7.4* below (Otway-Smith 1991). Halloran promoted the future development of the region as the closest freehold land to the ACT, and Environa (*Figure 7.5*) was the most ambitious of his numerous projects. The Great Depression resulted in a lack of sales and Halloran ultimately removed the land from the market (Otway-Smith 1991). Unlike most paper subdivisions which failed to eventuate, Environa shows physical evidence of its designer's intentions: timber structures including a bandstand, stonework, tree planting and surveyors' marks which enable the tracing of the design on the ground today.

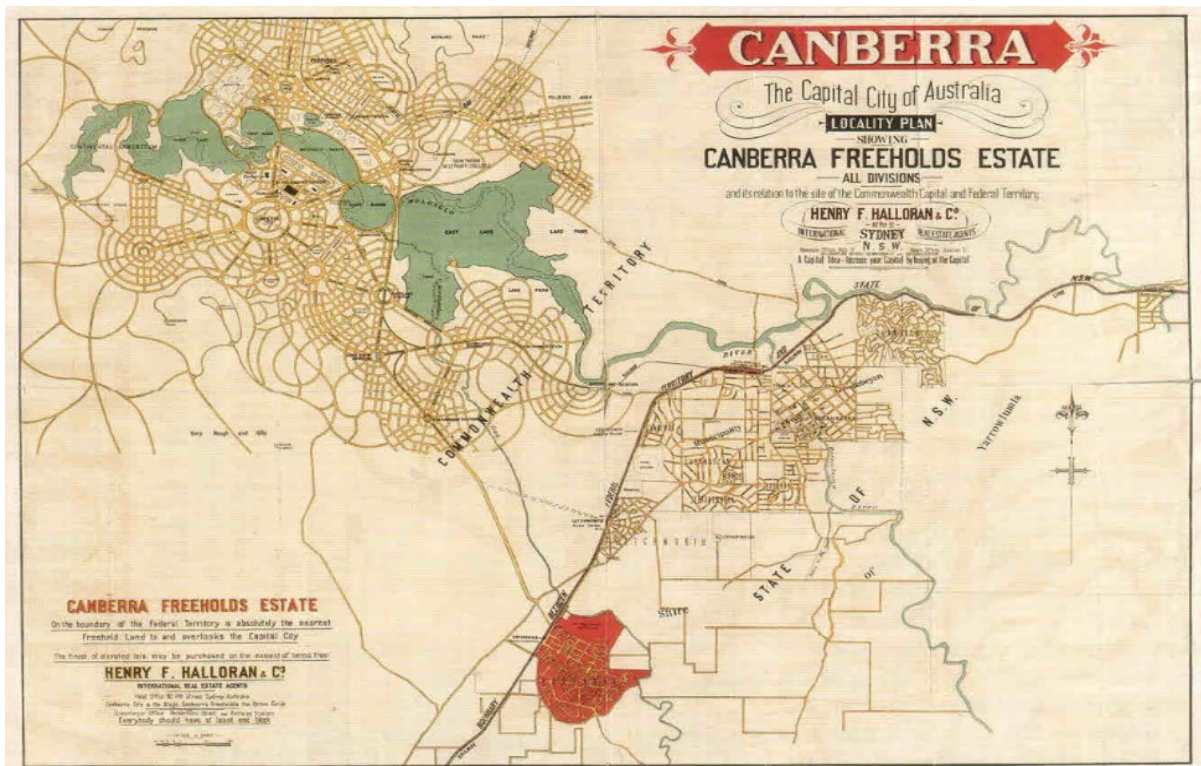


Figure 7.4 Halloran's complementary design concept, in relation to the Walter Burley Griffin design of Canberra (nla.map-rm 1892-S1)



Photograph 7.1 Sports field at Envirova 1929 (courtesy of David Larcombe in O’Keefe 2018)

7.1.5 20th – 21st Century Development

After the initial exploration and settlement of the Jerrabomberra area during the 19th century, suburban development begun in earnest during the 20th and 21st centuries. The historical parish map of the Queanbeyan area dating to 1908/09 (*Figure 7.6*) shows the subdivision of Jerrabomberra (red arrow) (blue arrow approximate Investigation Area). As described in the section above, ‘Hill Station’ was subdivided in the 1920s, four lots of which were purchased by H.F. Halloran in 1925. For many years these lots were leased to John Morrison of ‘Tralee’ to the south. Ownership of some of this land passed to the Morrison family to be incorporated into ‘Tralee’. By 1931 the Investigation Area had been completed subdivided (*Figure 7.7*) but remained in use as grazing properties.

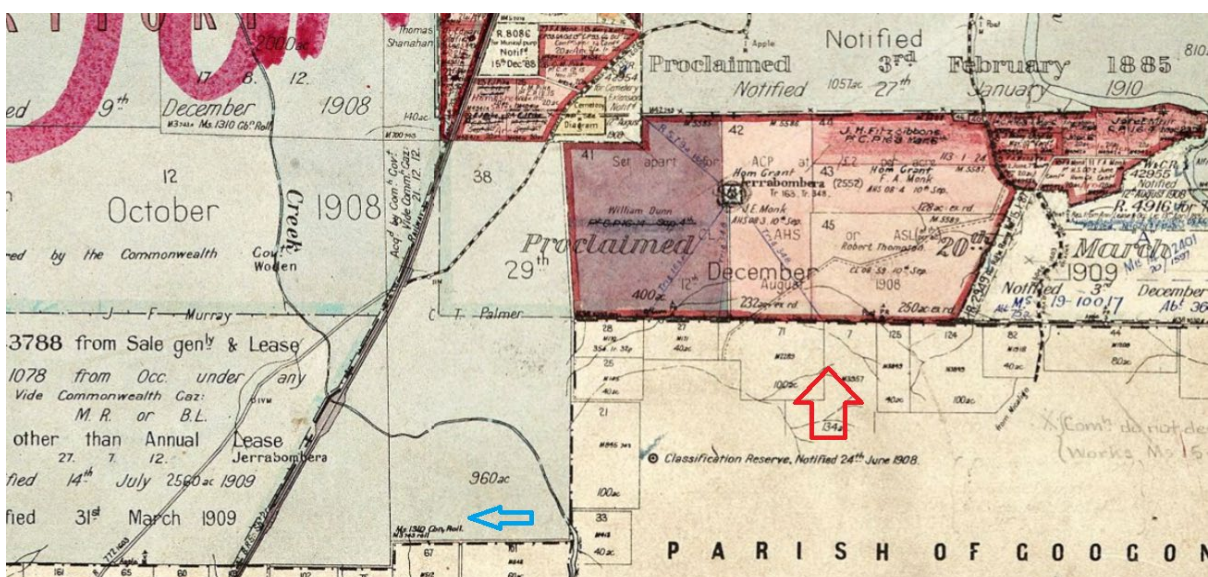


Figure 7.6 Parish of Queanbeyan 1908/09 parish map, 4th edition (hlrv.nswlrs.com.au)

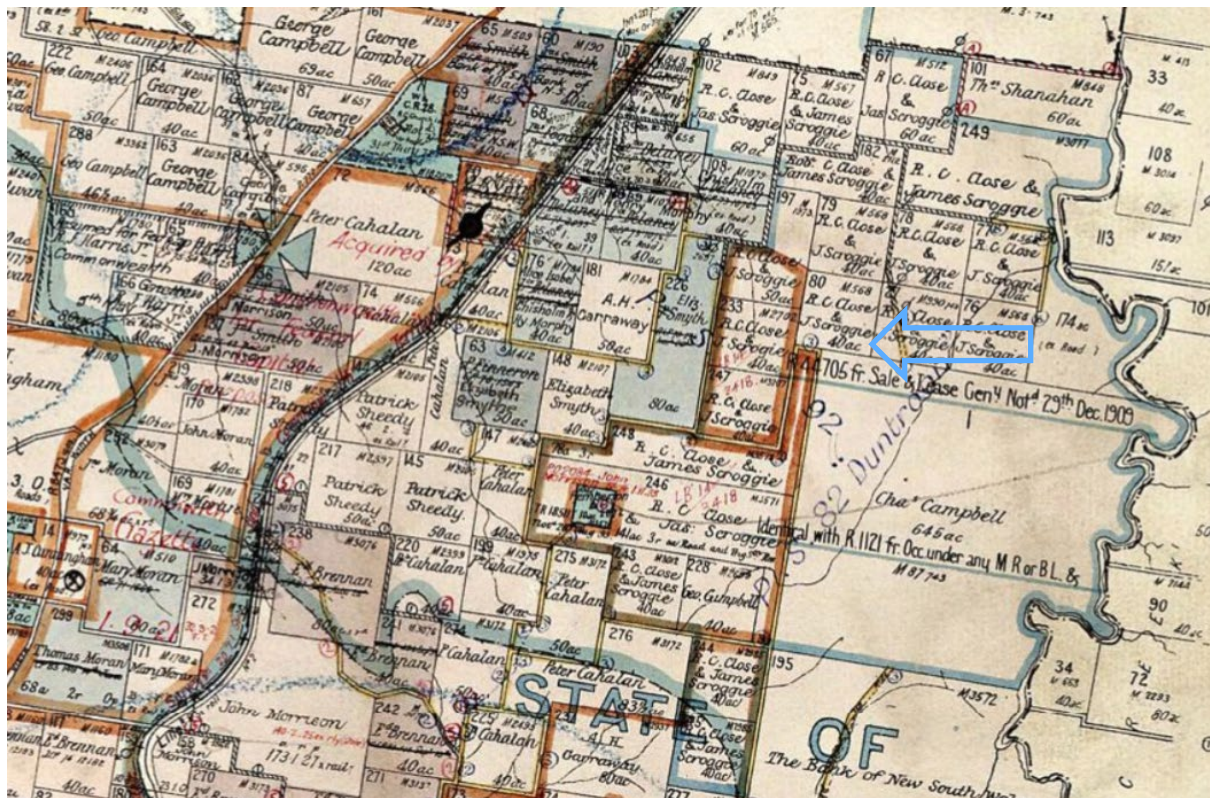


Figure 7.7 Parish of Queanbeyan 1931 parish map (hlrv.nswlrs.com.au)

In the late 1960s 'Tralee' had passed to Morrison's son Bernard, who partnered with the Canberra Speedway Club to build a professional speedway track on the northern portion of 'Tralee', where Halloran had previously established his sports and recreation ground. Morrison and his associates built a ¼ mile circuit with a grandstand, restaurant and administration centre on Halloran's sports oval, which was officially opened on 21 June 1970. It was first known as the Tralee Speedway but was renamed in 1974 to the Fraser Park Speedway. The speedway closed in 1997 due to lack of patronage and noise complaints from the encroaching new suburb of Jerrabomberra (O'Keefe 2018).

In 1987, Jerrabomberra Estates Ltd was established to develop Palmer's original land for housing. The first serviced blocks in stage one of the residential release at Jerrabomberra were released in February 1988. Since then, the suburb of Jerrabomberra has grown from a resident population of eight in 1828 to over 8,740 at the 2006 census. Jerrabomberra was established with the construction of the first homes in 1988, followed shortly after by the construction of the community centre hall. Many people living in Jerrabomberra work in nearby Queanbeyan but most work in the national capital, Canberra (queanbeyanmuseum.org.au).

8. ARCHAEOLOGICAL SURVEY

This section presents the results of the archaeological survey. In accordance with the requirements of the Code of Practice, the South Jerrabomberra RJP was delineated into survey units. A summary of each survey unit is provided in *Section 8.1* and a full list of participants is presented in *Table 8.1* below.

The aims of the historical and Aboriginal heritage survey were to:

- Cover a representative sample of the Investigation Area that will potentially be impacted by the proposed works;
- Record all Aboriginal objects or sites, and all historic heritage features identified during survey;
- Identify areas of potential archaeological deposit (PAD) that may be present; and
- Collect information to ascertain whether further archaeological investigation is required.

Table 8.1: List of participants in surveys

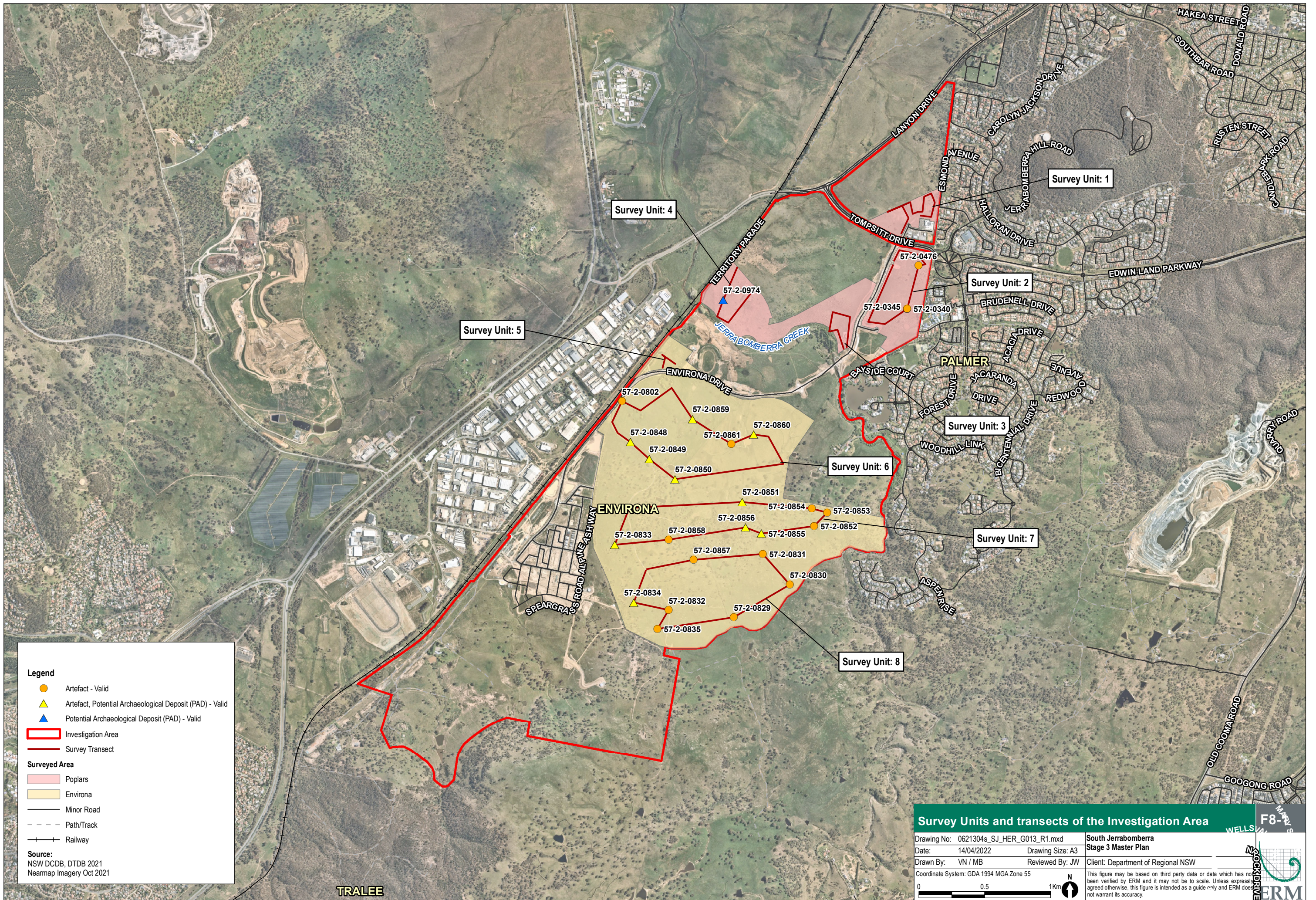
Name	Organisation	Role	Date
Elspeth Mackenzie	ERM	Survey supervisor	22, 23 and 24 March 2022
Lorien Perchard	ERM	Archaeologist	22, 23 and 24 March 2022
Paul Boyd	DNC	Cultural Officer	22, and 23 March 2022
Lee Carroll	Muragadi Heritage Indigenous Corporation	Cultural Officer	22, 23 and 24 March 2022
Shaun Carroll	Merrigarn Indigenous Corporation	Cultural Officer	22, 23 and 24 March 2022
Graeme Dobson	Ngunawal Heritage Aboriginal Corporation	Cultural Officer	22, 23 and 24 March 2022
Robert Young	Konanggo Aboriginal Cultural Heritage Services	Cultural Officer	23 and 24 March 2022
Pamela Young	Konanggo Aboriginal Cultural Heritage Services	Cultural Officer	24 March 2022
Kenny Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Cultural Officer	23 March 2022
Sonione Rogers	Ngambri LALC	Cultural Officer	23 March 2022

8.1 Survey Methodology

A pedestrian survey of the Investigation Area was undertaken with each member of the survey team spaced 10 – 20 m apart when possible. Survey transects were traversed in an east to west, or north to south alignment as per the landscape. Where areas of exposure were identified, members of the transect team temporarily deviated from their assigned transect to investigate areas of surface exposures.

A handheld GPS was used to track the path of the survey team, record the coordinates of survey transects as well as the location of Aboriginal sites (Figure 8.1).

A photographic record was kept during the survey. Photographs were taken to record aspects of each survey unit including landform, surface exposures, vegetation, areas of disturbance, and any identified Aboriginal site or area of archaeological potential. Scales were used for photographs where required, as specified in the Code of Practice.



Legend

- Artefact - Valid
- ▲ Artefact, Potential Archaeological Deposit (PAD) - Valid
- ▲ Potential Archaeological Deposit (PAD) - Valid
- ▭ Investigation Area
- Survey Transect

Surveyed Area

- ▭ Poplars
- ▭ Environa
- Minor Road
- - - Path/Track
- +— Railway

Source:
NSW DCDB, DTDB 2021
Nearmap Imagery Oct 2021

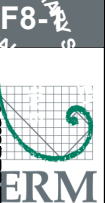
Survey Units and transects of the Investigation Area

Drawing No: 0621304s_SJ_HER_G013_R1.mxd	South Jerrabomberra
Date: 14/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	

0 0.5 1Km

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

TRALEE



8.2 Survey Coverage

An assessment of survey coverage was completed in order to quantitatively assess the effectiveness of the survey at identifying Aboriginal objects. The assessment of effective survey coverage provides a measure of whether Aboriginal objects are readily visible, buried or otherwise obscured. The conditions which effect the detection of Aboriginal objects are referred to as exposure and visibility.

Visibility is the amount of bare ground that is present across a survey area. Visibility is lowered by elements which conceal the ground surface such as leaf litter, vegetation, stony ground or introduced materials.

Exposure estimates the percentage of land for which erosional processes and exposure was sufficient to reveal archaeological evidence on the ground.

A summary of survey coverage in accordance with the Code of Practice is outlined in *Table 8.2* and *Table 8.3*.

Table 8.2: Survey Coverage Summary – Survey Units

Survey Unit	Survey Unit Area (m ²)	Landform	Visibility (%)	Exposure (%)	Effective Coverage (m ²)	Effective Coverage (%)
Survey Unit 1	129700	Flat grass land	10	20	2594	2
Survey Unit 2	240900	Gentle slope	5	5	602.25	0.25
Survey Unit 3	4474	Gentle to moderate slope	5	5	11.185	0.25
Survey Unit 4	326200	Gentle to moderate slopes and flat grass land	5	20	3262	1
Survey Unit 5	47400	Flat grass land	5	40	948	2
Survey Unit 6	13560	Gentle slope	5	25	169.5	1.25
Survey Unit 7	404000	Gentle to moderate slope	5	25	5050	1.25
Survey Unit 8	721700	Gentle to moderate slope	5	25	9021.25	1.25

Table 8.3: Survey Coverage Summary – Landforms

Landform	Landform Area (m ²)	Area Effectively Surveyed (m ²)	Percentage of Landform Effectively Surveyed (%)	Number of Sites
Flat grass land	181100	1811	1	3
Gentle to moderate slope	1706360	17063	1	27

8.3 Survey Units

The South Jerrabomberra RJP was delineated into eight survey units (SU) which were allocated within two survey areas; Poplars (north, central, south and west), and Environa (north, north transect, central and south) (Figure 8.1). SU1, SU2, SU3, SU4 all were carried out within North and South Poplars. SU5, SU6, SU7, SU8 were carried out across Environa.

Key observations from each SU is summarised below and in *Table 8.2* and *Table 8.3*.

8.3.1 Survey Unit 1

North Poplars

Survey Unit 1 is located in the northern portion of the Investigation Area and is comprised of flat open grass land and undulating hills. This survey unit crosses two lot boundaries with land use predominantly associated with grazing activities. The SU is bordered by Esmond Avenue on the east, Ferdinand Land and an Aldi shopping complex to the south, and a large area of conservation to the north and west. Tomsitt Drive runs along the entire south boundary of SU1 and in the northern boundary of SU2. A large dam was present in the northern corner of the SU and areas of previous disturbance were noted where the previous Poplars homestead and other houses were located prior to the construction of the Aldi shopping complex.

Vegetation within the survey unit was comprised of a combination of regrowth vegetation and non-native plantings. No evidence of cultural scarring was noted. Visibility was extremely low across the survey unit with visibility limited to erosion scours surrounding existing access tracks, dams and borrow pits.

Identified historic features:

- None

Identified Aboriginal heritage values:

- None



Figure 8.2 View towards the west within SU1



Figure 8.3 View of open grass lands in SU1



Figure 8.4 View towards the north within SU1



Figure 8.5 View of SU1 and undulating hills

8.3.2 Survey Unit 2

South Poplars (east)

Survey Unit 2 is located in the north east portions of the South Jerrabomberra RJP and is comprised of gently sloped landform transitioning towards undulating hills. The northern boundary of SU2 is Tomsitt Drive, the eastern boundary is houses of the Jerrabomberra suburb, and portions of the west and south boundary are set to be conservation areas.

Grass cover and shrubs were thick, and visibility was extremely low across the majority of the survey unit with small areas of exposure noted in erosion scars of a dirt track within the SU. ERM was not able to locate two previously recorded Aboriginal sites due to low visibility. The ruins of the piggery were located during the survey but the majority of the ruins were covered in thick grass and not visible.

One new Aboriginal site was recorded and registered on AHIMS. Three artefacts (two silcrete, on quartz) were exposed in a dirt track running north to south parallel to the newly constructed Environa Drive.

Identified historic features:

- Piggery Ruin (PHS5).

Identified Aboriginal heritage values:

- 57-2-0340 / 57-2-0345 – light grey quartzite hammerstone (not found);
- 57-2-0476 – opaque grey quartzite flake (not found); and
- 57-2-1226 – newly identified site silcrete core, silcrete flake, quartz flake.



Figure 8.6 Site 57-2-1226 in SU2



Figure 8.7 Site 57-2-0345 previously recorded site location in SU2

8.3.3 Survey Unit 3

South Poplars (central)

A newly constructed dead end street (no name registered or found on maps) is located on the east side of Environa Drive on the north side of Jerrabomberra Creek. Grass and regrowth vegetation was extremely thick and ground visibility was extremely low making the survey area impenetrable. Due to the size of the SU the archaeologist attempted to gain visual of the landform from the edge of the impenetrable shrubs.

Heading towards the west of SU3 was halted as the slope increased and impenetrable thick grass, shrubs and regrowth vegetation made it impossible to traverse through safely. The southern portion of SU3 is bounded by Jerrabomberra Creek, the eastern boundary consists of Environa Drive, and the north-western boundary is set to be a conservation area.

Identified historic features:

- None

Identified Aboriginal heritage values:

- None



Figure 8.8 Impenetrable regrowth and vegetation



Figure 8.9 Thick vegetation made ground visibility extremely low to nil

8.3.4 Survey Unit 4

South Poplars (west)

SU4 is located in the north-west portion of the Investigation Area which is comprised of a moderately sloped landform with undulating hills and water drainage lines. The north and eastern boundary of SU4 is set to be a conservation area, and the southern boundary is the Jerrabomberra Creek line. Access from the western side of the SU allowed the team to traverse the transect as the eastern portion was impenetrable and access extremely difficult. SU4 comprised of exposed weathered volcanic rocks on the mid slopes and thick long grass on the flats in proximity to the creek. One previously recorded Aboriginal site was not located.

Identified historic features:

- Farm Shed Ruin (PHS2); and
- Old Fence (PHS4) (could not access).

Identified Aboriginal heritage values:

- 57-2-0974 – PAD.



Figure 8.10 Site 57-2-0974 previously recorded PAD location



Figure 8.11 Grassy undulating hills of SU4

8.3.5 Survey Unit 5

Environa (north)

SU5 is comprised of flat open to undulating grass land. Ground surface visibility was largely low with extensive introduced grasses and scrub obscuring the ground surface.

Identified historic features:

- None

Identified Aboriginal heritage values:

- None

8.3.6 Survey Unit 6

Environa (northern transect)

Survey Unit 6 is located in the central portion of the Investigation Area and the northern portion of Environa, and is comprised of a series of undulating hill slopes. SU6 was designed to access and assess several previously recorded Aboriginal and historical sites. The survey unit included localised disturbance across SU6 in the form of historic land clearance across the majority of the area. Localised disturbances were also noted associated with the construction of the historic features. Several large wombat burrows were noted across the northern portion of the SU creating localised ground disturbance in the lower open grass lands. Ground visibility was extremely low with thick grasses obscuring ground visibility.

Built elements across the SU included a stone archway, four stone pillars, stone column, two gateways flanked by stone pillars, and a bandstand. Cattle predominantly use this portion of the Investigation Area and were present below and around the bandstand.

Vegetation within the SU was comprised of a combination of regrowth vegetation and non-native plantings. No evidence of cultural scarring was noted. Visibility was extremely low across the survey unit with visibility limited to erosion scours surrounding existing access tracks, dams and borrow pits.

Identified historic features:

- Environa subdivision features – stone archway, four stone pillars, rock garden, stone column, Oak and Plane trees, Cedar and Oak trees, pedestal (could not access), Hawthornes, two gateways flanked by stone pillars, and bandstand

Identified Aboriginal heritage values:

- 57-2-0802 – fine-grained siliceous flake (not located)
- 57-2-0848 – quartz core, two quartz flakes, brown silcrete flaked piece, grey volcanic flaked pebble, PAD (not located)
- 57-2-0849 – quartz flake, PAD (not located)
- 57-2-0850 – grey tuff flake blade, quartz flake, PAD (not located)
- 57-2-0859 – brown volcanic hammerstone, quartz flake, PAD (not located)
- 57-2-0860 – grey tuff flake, quartz flaked piece, quartz flake, PAD (not located)
- 57-2-0861 – grey chert flake, brown volcanic flake, brown volcanic anvil (not located)



Figure 8.12 Stone pillars amongst thick vegetation in SU6



Figure 8.13 Erosion scours located at previously recorded site 57-2-0849 in SU6



Figure 8.14 View north at site 57-2-0860 within SU6



Figure 8.15 Cattle located in SU6

8.3.7 Survey Unit 7

Environa (central transect)

Survey Unit 7 is located in the central portion of the Investigation Area and is comprised of a series of undulating hill slopes varying from low to moderate slope. SU6 was designed to access and assess several previously recorded Aboriginal sites and the existing homestead and surrounding stone work.

Vegetation within the SU was comprised of a combination of regrowth vegetation and non-native plantings. No evidence of cultural scarring was noted. Visibility was extremely low across the survey unit with visibility limited to erosion scours surrounding existing access tracks, dams and borrow pits.

Built elements across the SU were limited to the existing homestead, several corrugated metal animal pens and existing paddock fences.

Identified historic features:

- Lobbies Homestead - encircling stonework and bust of Henry Parkes (formerly on stone column in Environa subdivision)

Identified Aboriginal heritage values:

- 57-2-0833 – three grey tuff flakes, grey volcanic flake, two grey tuff flake blades, grey silcrete blade core, grey tuff chip, quartz flake, PAD (not located)

- 57-2-0851 – quartz flake, PAD (not located)
- 57-2-0852 – brown chert flake, quartz flake, quartz flaked piece (not located)
- 57-2-0853 – grey volcanic hammerstone (not located – red quartzite flake found in vicinity)
- 57-2-0854 – grey chert geometric microlith (not located)
- 57-2-0855 – grey tuff flake, brown-red chert flake, three quartz flakes, brown volcanic anvil, PAD (one quartz flake located)
- 57-2-0856 – grey tuff core, three quartz flakes, PAD (grey tuff flake and six quartz flakes/flaked pieces found in vicinity)
- 57-2-0858 – grey silcrete flake, two brown chert flakes (not located)



Figure 8.16 Mid slope showing thick grass vegetation



Figure 8.17 Relocated Aboriginal site, no artefacts were not located



Figure 8.18 Checking erosion scours at previously recorded site 57-2-0855



Figure 8.19 Thick vegetation cover within SU7

8.3.8 Survey Unit 8

Environa (southern transect)

Survey Unit 8 is located in the central to southern portion of the Investigation Area and is comprised of a series of undulating hill slopes varying from low to moderate slope. SU8 was designed to access and assess several previously recorded Aboriginal sites.

Vegetation within the SU was comprised of a combination of regrowth vegetation and non-native plantings. No evidence of cultural scarring was noted. Visibility was extremely low across the survey unit with visibility limited to erosion scours surrounding existing access tracks, dams and borrow pits.

Built elements across the SU were limited to the existing homestead, several corrugated metal animal pens and existing paddock fences.

Identified historic features:

- None

Identified Aboriginal heritage values:

- 57-2-0829 – grey volcanic ground-edge hatchet (not relocated)
- 57-2-0831 – grey silcrete flake (not relocated)
- 57-2-0832 – grey chert flake (not relocated)
- 57-2-0833 – three grey tuff flakes, grey volcanic flake, two grey tuff flake blades, grey silcrete blade core, grey tuff chip, quartz flake, PAD (not relocated)
- 57-2-0834 – brown volcanic hammerstone, quartz core, PAD (not relocated)
- 57-2-0835 – grey quartzite hammerstone (not relocated)
- 57-2-0857 – grey-yellow tuff flake (not relocated)



Figure 8.20 Thick grass and vegetation present within SU8



Figure 8.21 Scour marks along dam edge showing moderate visibility within SU8



Figure 8.22 General condition of mid slope within SU8



Figure 8.23 Assessing scours along dirt tracks in SU8

9. ABORIGINAL HERITAGE SITES

9.1 Previously Recorded Sites

This summary of previously recorded sites is limited to sites currently registered as valid. Sites within the Investigation Area which have the status of 'destroyed' or 'not a site' are not considered as part of this assessment.

9.1.1 PAD 1 North (AHIMS # 57-2-0974)

Site type: PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PAD 1 North was originally recorded in Archaeological Heritage Survey 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment as a PAD. The PAD was reported to be measuring 135 m x 274 m.

The site was revisited as part of the current survey program (*Figure 8.10*). The site extent and location was heavily obscured by dense grasses. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.2 PIF 3 (AHIMS # 57-2-0476)

Site type: Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 3 was originally recorded in Access Archaeology 1991, The Poplars Archaeology Survey. The location was corrected in 2015 by Navin Officer and updated on the AHIMS site card. The original site card describes the site as having fair surface visibility, in the area of the old piggery. The isolated artefact comprised of an opaque grey quartzite flake 7 x 7 x 2 mm in size.

The site was revisited as part of the current survey program. The site extent and location was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.3 PIF 4 (AHIMS # 57-2-0340/57-2-0345)

Site type: Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 4 was originally recorded in Archaeological Heritage Survey 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment as an isolated artefact. The site card describes the site as located on a stock trail on the upper slope/crest of a ridgeline. The isolated artefact comprised of a light grey quartzite hammerstone measuring 91 x 41 x 39 mm with 85% cortex.

The site was revisited as part of the current survey program (*Figure 8.7*). The site extent and location was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.4 NER 1 (AHIMS # 57-2-0802)

Site type: Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

NER 1 was recorded in 2014 by Navin Officer Heritage Consultants for Northern Road Technical Report as an isolated artefact.

The artefact had retouch on the left margin ventral face and was comprised of fine grained basalt measuring 45 x 40 x 15mm. The site consisted of 1 x 1 m² area of visibility.

The site was revisited as part of the current survey program. The site extent and location was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.5 SJ10 (AHIMS # 57-2-0811)

Site type: Open site with Artefact Scatter and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ10 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site was originally recorded in 2010 as a scatter of greater than 40 stone artefacts exposed at the eroding upslope edge of a quarried area directly to the south of the Tralee Homestead. Site area is approximately 15 x 3 m. When the site was first recorded the artefacts present consisted of blade flake tuff grey 41 x 14 x 5mm, flake quartz white 27 x 16 x 8mm, flake chert brown 19 x 11 x 4mm, flake quartzite grey 26 x 15 x 6mm, flake chert grey 39 x 24 x 3mm, flake volcanic brown 38 x 19 x 7mm, blade flake quartz white 17 x 5 x 4mm, ground edge hatchet volcanic brown 48 x 54 x 19mm snapped laterally some flaking at working edge with 90% water worn cortex. Topographic setting is a lower slope/valley bottom interface directly to the west of Dog Trap Creek which is now dammed at this point. The site extends into the small holding paddock adjacent to the homestead complex. The associated deposit comprises a gravely soil with moderate to high archaeological potential.

In 2020 Navin Officer Heritage Consultants lodged an Aboriginal Site Impact Recording Form notifying AHIMS that impacts to this site has resulted due to test excavations carried out in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*. The results of the test excavation consisted of 5 test pits yielding 4 artefacts. Recommendations were that no further excavation was required.

The site was **not** revisited as part of the current survey program as access was not granted by the landholders.

9.1.6 SJ28 (AHIMS # 57-2-0829)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ28 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a single stone artefact exposed in a bare area disturbed by animal digging in an open paddock, approximately 20 m northeast of a plastic water tank. The artefact comprised of ground edge hatchet volcanic grey 69 x 65 x 18mm broken laterally, distal (ground- working) end. Topographic setting is a low gradient saddle on a major local ridgeline. Exposure incidence is approximately 10% and visibility within the exposure is approximately 20%. The archaeological potential of the location is rated as moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.7 SJ29 (AHIMS # 57-2-0830)

Site type: Open site with Artefact Scatter

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ29 was recorded in 2010 as an artefact scatter by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of eight stone artefacts exposed in restricted incidences of bare soil at the base of two separate gum trees approximately 25 m apart. The artefacts comprise of core silcrete grey 21 x 32 x 20mm with multiple platforms and negative flake scars, flake silcrete grey 14 x 12 x 2mm, flake tuff grey 40 x 27 x 7mm, flake tuff grey 6 x 9 x 2mm, core volcanic grey 42 x 50 x 33mm with two platforms and 6 negative flake scars, flake tuff grey 28 x 14 x 6mm, flake quartz white 30 x 20 x 6mm, and a flake quartz white 25 x 18 x 14mm. Topographic setting is a ridge top. Exposure incidence is approximately 10% and visibility within the exposures is approximately 60%. The associated deposit is a brownish sandy soil that exhibits moderate archaeological potential.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.8 SJ30 (AHIMS # 57-2-0831)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ30 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site is a single stone artefact exposed on a bare soil surface. The artefact is flake silcrete grey 8 x 14 x 3mm flake segment. Topographic setting is a low gradient spur crest with a northerly aspect. Exposure incidence is approximately 10% and visibility within the exposure is approximately 20%. The archaeological potential of the location is rated as moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.9 SJ35 (AHIMS # 57-2-0832)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ35 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a single stone artefact exposed on a bare soil surface.

This site is a single stone artefact exposed on the surface of a dirt four-wheel drive/farm track. The artefact comprises of flake chert grey 19 x 22 x 7mm with 50% chalky cortex. Topographic position is a shoulder on the upper northern side of a ridgeline. Surface visibility along the subject section of the grade was estimated to be approximately 60% while surface visibility in the surrounding grassed areas was comparatively low. The archaeological potential of the associated deposit was assessed as low.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording

9.1.10 SJ36 (AHIMS # 57-2-0833)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ36 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site is a scatter of nine stone artefacts exposed primarily on the surface of a cattle track paralleling a fence. The artefacts comprised of flake tuff grey 12 x 29 x 11mm, flake volcanic grey 24 x 21 x 6mm, blade flake tuff grey 47 x 10 x 5mm, blade flake tuff grey 26 x 7 x 5mm, flake tuff grey 15 x 10 x 3mm, flake tuff grey 19 x 16 x 6mm, blade core silcrete grey 26 x 19 x 11mm with 1 platform and 4 negative flake scars, chip tuff grey 14 x 6 x 2mm, and flake quartz white 41 x 32 x 10mm. The site occurs in the rough centre of an oval-shaped planting of old exotic cedar trees. Site area is approximately 20 x 1 m. One of the artefacts, a quartz flake, was located at the base of one of the trees (at GPS 0697278. 6080147). Topographic setting is a very low gradient broad spur top in a lower valley side.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.11 SJ37 (AHIMS # 57-2-0834)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ37 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

Originally recorded as two stone artefacts exposed in soil at the end of a felled tree. The artefacts appear to have eroded from remnant soil lodged in the exposed root ball of the dead tree. Site area is approximately 2 x 1 m. The site is located approximately 30 m to the east of a drainage line which is dammed approximately one metre further downstream. The artefacts comprise of hammerstone volcanic brown 155 x 58 x 42mm flaked and pitted with 90% water-worn cortex, and a core quartz white 24 x 35 x 12mm with 1 platform and 4 negative flake scars. Topographic setting is a lower spur crest/valley bottom interface.

The site was revisited as part of the current survey program. The site extent and location was heavily obscured by dense grasses and the artefact scatter was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.12 SJ38 (AHIMS # 57-2-0835)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ38 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

Originally recorded as a site comprising a single stone artefact exposed on the surface of a cattle track next to a fence. The artefact occurs at the lower eastern edge of a low rocky outcrop. The artefact consists of a hammerstone quartzite grey 59 x 50 x 30mm broken with heavy pitting on edge and opposite margin with 2 negative flake scars, and 50% water worn cortex.

Topographic setting is a moderate to low gradient upper slope/ridge side. Exposure incidence is approximately 40% and visibility within the exposure is approximately 50%.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.13 SJ52 (AHIMS # 57-2-0848)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ52 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. The site is an open scatter of five stone artefacts exposed on the soil surface paralleling the northern side of the 'Environa' entrance road. Relevant exposures include a spear drain and bare surfaces adjacent to a gate and fence line, between 70 and 20 m to the west of the Environa stone arch and wall construction. Topographic setting is a long, low spur crest at the edge of a valley bottom interface. The artefacts are associated with restricted incidences of exposure within a comparatively low visibility background. Surface visibility within the exposures was estimated at approximately 50%. The archaeological potential of the associated landform is rated as moderate to high. The artefact consisted of core quartz white 21 x 30 x 15mm with 1 platform, 4 negative flake scars, flake quartz white 23 x 13 x 9mm, flake quartz white 26 x 22 x 9mm, flaked piece silcrete brown 24 x 16 x 8mm, and flaked pebble volcanic grey 50 x 80 x 29mm flaked end, 90% water-worn cortex.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording and the PAD still exists.

9.1.14 SJ53 (AHIMS # 57-2-0849)

Site type: Open site with Artefact and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ53 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a single stone artefact exposed on the north side of a metalled section of the 'Environa' entrance road. The artefact is located in a cutting approximately three metres west of a spear drain and is comprised of flake quartz white measuring 16 x 12 x 4mm. Topographic setting is the eastern end of a broad spur crest in a valley bottom interface zone. Exposure incidence is approximately 5% and visibility within the exposure is approximately 50%. The archaeological potential of the associated deposits is rated as moderate to high.

The site was revisited as part of the current survey program (*Figure 8.13*). The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be relocated (*Figure 8.13*). There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.15 SJ54 (AHIMS # 57-2-0850)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ54 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

The site is a scatter of two stone artefacts exposed on the surface of an eroding stock track adjacent to a drainage line. The artefacts comprise a blade flake tuff grey 21 x 10 x 3mm, and flake quartz white 9 x 11 x 6mm. Topographic setting is a gentle lower slope/valley bottom interface. The exposure is a linear feature approximately 30m long x 0.5m wide within a low visibility background. Surface visibility within the exposure is approximately 50%. The archaeological potential of the associated brown sandy soil is rated as moderate to high. The archaeological potential of the associated deposits is rated as moderate to high.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.16 SJ55 (AHIMS # 57-2-0851)

Site type: Open site with Artefact and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ55 was recorded in 2010 as an isolated artefact and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site is a single stone artefact exposed on the disturbed surface of a graded contour bank. The artefact is flake quartz white 17 x 22 x 6mm. Topographic setting is a gentle lower slope overlooking a valley bottom interface zone. Exposure incidence is approximately 10% and visibility within the exposure is approximately 20%. Although the immediate vicinity has been disturbed by earthworks, the adjacent slope and spur crest features have some archaeological potential.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.17 SJ57 (AHIMS # 57-2-0853)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ57 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site is a single stone artefact exposed on a bare eroded surface. The artefact is a hammerstone volcanic grey 93 x 63 x 32mm snapped laterally, pitting both ends, 60% water-worn cortex. The exposure occurs just above an ants' nest on the north side of a major local ridgeline. Topographic setting is a small spur crest in an upper slope context. Exposure incidence is approximately 40% and visibility within the exposure is approximately 30%. The archaeological potential of the location is rated as low to moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.18 SJ58 (AHIMS # 57-2-0854)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ58 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a single stone artefact exposed in a bare and eroded patch approximately 4 metres downslope from a large 'bonfire' event and approximately 10 m east of a stand of Eucalyptus trees. The artefact is geometric microlith chert grey 26 x 15 x 3mm large backed blade. Topographic setting is a low gradient lower slope. The exposure zone is approximately 5 x 3 m in extent and affords surface visibility of approximately 60% within a comparatively low visibility background. The archaeological potential of the adjacent deposits is rated as moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.19 SJ59 (AHIMS # 57-2-0855)

Site type: Open site with Artefact Scatter and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ59 was recorded in 2010 as an artefact scatter with associated PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of six stone artefacts exposed on the surface of an eroded cattle track on either side of a drainage line. The artefacts occur over approximately 65 m of the track exposures. Artefacts comprise of flake tuff grey 30 x 21 x 4mm, flake chert brown-red 17 x 16 x 6mm, flake quartz white 22 x 17 x 7mm, anvil volcanic brown 95 x 74 x 40mm concentrated pitting on surface and margins, flake quartz white 14 x 19 x 4mm, flake quartz white 16 x 18 x 4mm. Topographic setting is a low gradient middle slope on the north side of a major local ridgeline. Surface visibility within the narrow linear exposure is approximately 50%. The archaeological potential of the adjacent deposits is rated as moderate to high.

The site was revisited as part of the current survey program (*Figure 8.18*). The site visibility was approx. 50% and the artefact scatter was able to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.20 SJ60 (AHIMS # 57-2-0856)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ60 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company.

This site is a scatter of four stone artefacts exposed on a series of bare patches to the west of a minor drainage line. The artefacts comprised of core tuff grey 35 x 34 x 25mm with 2 platforms and 12 negative flake scars, flake quartz white 13 x 14 x 2mm, flake quartz white 18 x 9 x 4mm, flake quartz white 14 x 9 x 2mm. The site occurs upslope from a graded contour embankment. Topographic setting is a low gradient spur crest and spur toe. Exposure incidence is approximately 25% and visibility within the exposure is approximately 40%. The associated deposit is a grey brown sandy soil that exhibits moderate to high archaeological potential.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.21 SJ61 (AHIMS # 57-2-0857)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ62 was recorded in 2010 as an isolated artefact by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a single stone artefact exposed on the surface of an eroded stock track approximately three metres upslope from a contour embankment. The artefact consists of a flake tuff grey-yellow 65 x 42 x 12mm. Topographic setting is low gradient low spur crest in a middle slope context. Exposure incidence is approximately 40% and surface visibility within the exposure is approximately 50% (maximum). The archaeological potential of the associated brown sandy soil is rated as moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the isolated artefact was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.22 SJ62 (AHIMS # 57-2-0858)

Site type: Open site with Artefacts

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ62 was recorded in 2010 as an artefact scatter by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of three stone artefacts exposed on the surface of a stock track paralleling a fenceline in an open paddock to the south of an adjacent paddock containing a tin shed and silo. The artefacts are apparent at two points along approximately 40 m of the stock track. The artefacts comprised of a flake silcrete grey 36 x 34 x 8mm, retouched end – possible scraper with some damage, flake chert brown 22 x 21 x 7mm, and flake chert brown 12 x 17 x 5mm fragment. Topographic setting is a low spur crest in a lower slope context. Exposure incidence is approximately 15% and visibility within the exposure is approximately 50%. The archaeological potential of the associated deposits is rated as moderate.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefacts were unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.23 SJ63 (AHIMS # 57-2-0859)

Site type: Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ63 was recorded in 2010 as an isolated artefact and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of two stone artefacts exposed on the top of a graded contour embankment at the north end of a rise in a valley bottom context. The artefacts are approximately 10 m apart. The artefacts are exposed in an otherwise grassy low surface visibility background. Although the immediate context is disturbed by earthworks, the adjacent slightly elevated landform's high archaeological potential is taken to be illustrated by the artefacts' presence.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter and was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.24 SJ64 (AHIMS # 57-2-0860)

Site type: Open site with Artefacts

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ64 was recorded in 2010 as an artefact scatter and PAD by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of three stone artefacts exposed in an area of sheet erosion to the south-west of the extant historical bandstand complex site. The artefacts include a flake tuff grey 31 x 28 x 7mm, a flaked piece quartz white 30 x 24 x 20mm, and flake quartz white 19 x 16 x 6mm. The exposure is approximately 5 x 5 m in area. Scatter dimensions are approximately 8 x 2 m. Topographic setting is a terminal spur crest with low to moderate gradient. Immediate exposure incidence is approximately 80% and surface visibility within the exposure is approximately 60%. Background visibility away from the exposure is very low due to grassy cover. The site is highly disturbed by erosion and grading activity. Local deposit is a gravelly soil with frequent exposed bedrock.

The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be located. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.25 SJ65 (AHIMS # 57-2-0861)

Site type: Open site with Artefacts

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ65 was recorded in 2010 as an artefact scatter by Navin Officer Heritage Consultants for South Jerrabomberra: Forrest, Morrison, Robin and Environa Properties, NSW. Preliminary Archaeological Assessment, a Report to Village Building Company. This site is a scatter of three stone artefacts exposed on the surface of a graded contour embankment a short distance to the north of an old hawthorn planting. Site area is approximately 8 x 1 m. The artefacts consist of a flake chert grey 22 x 15 x 4mm, flake volcanic brown 18 x 21 x 2mm, and anvil volcanic brown 102 x 134 x 35mm deep pitting on one surface, snapped laterally. Topographic setting is a valley bottom. Exposure incidence is approximately 10% and surface visibility within the exposure is approximately 20%.

The archaeological potential of the location is rated as moderate. The site was revisited as part of the current survey program. The site extent was heavily obscured by dense grasses and the artefact scatter was unable to be relocated. There was no evidence to suggest that the site had been further disturbed following its initial recording.

9.1.26 SJ15 (AHIMS # 57-2-0899)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ15 was recorded in 2014 by Ironbark Heritage as an isolated artefact located on imported fill on a levelled landing strip. No in situ cultural material was recorded at this location. Provenance of material is unknown. The artefact consists of volcanic flake measuring approx. 70mm.

The archaeological potential of the location is rated as low due to imported fill. The site was **not** revisited as part of the current survey program as access was not granted by the landholders.

9.1.27 SJ16 (AHIMS # 57-2-0900)

Site type: Open site with Isolated Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ16 was recorded in 2014 by Ironbark Heritage as an isolated artefact located on gentle lower slope adjacent to property boundary. Low potential for subsurface deposit as area is disturbed and adjacent to imported fill for landing ground. Moderate visibility was noted with no other artefacts found in the vicinity. The artefact consists of quartz core measuring approx. 50mm.

The site was **not** revisited as part of the current survey program as access was not granted by the landholders.

9.1.28 SJ21 (AHIMS # 57-2-0905)

Site type: Open site with Artefact and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

SJ21 was recorded in 2014 by Ironbark Heritage as being of low Scientific Significance for a disturbed artefact but possible additional subsurface artefacts. The isolated artefact was located in exposure associated with excavated contour bank and consisted of a chert flake measuring approx. 40mm in length. The artefact is on the upslope side of the ditch, on a break of slope between the mid and lower slopes of a broad, low gradient spur. There is potential for a low density scatter to exist in this area with shallow subsurface deposit. Moderate visibility of soils was noted.

In 2020 Navin Officer Heritage Consultants lodged an Aboriginal Site Impact Recording Form notifying AHIMS that impacts to this site has resulted due to test excavations carried out in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*. The results of the test excavation consisted of 3 test pits yielding zero artefacts. Recommendations were that no further excavation was required and that post-investigation significance was recorded as low.

The site was **not** revisited as part of the current survey program as access was not granted by the landholders.

9.1.29 TA9 (AHIMS # 57-2-0914)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

TA9 was recorded in 2014 as an isolated artefact by Navin Officer Heritage Consultants. The artefact consists of quartz flake measuring 12 x 5 x 2mm and was visible in a 1 x 1 m² visible scour. No other details regarding the site were given in the site card.

The site was **not** revisited as part of the current survey program as access was denied by the landholders.

9.1.30 PAD 4 (AHIMS # 57-2-0978)

Site type: PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PAD 4 was recorded as a PAD measuring 302 x 104 m in length and width by Navin Officer Heritage Consultants. Navin Officer notes that a potential archaeological deposit requires subsurface testing if impacted and that the site was originally recorded in Archaeological Heritage Surveys 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment. Report to Queanbeyan City Council. No other details regarding the site were given in the site card.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.31 PAD 4 (AHIMS # 57-2-0120)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 10 was recorded as an artefact scatter and PAD in 1991 by Access Archaeology as part of the Poplars Archaeology Survey in 1991. The site card notes ground visibility as very good, with only minor disturbance from a track and small quarry/pit. Over 24 artefacts were measured over an area covering 140 x 80 m on a broad flat and gentle slope of a ridge top.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.32 PIF 1 (AHIMS # 57-2-0474)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 1 was recorded as isolated artefact in in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The artefact was located on a flat to gentle slope and measured 73 x 35 x 43 mm in length.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.33 PIF 2 (AHIMS # 57-2-0475)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 2 was recorded as isolated artefact in in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The artefact was located on a slope and measured 36 x 21 x 14 mm in length on a sheep track.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland

9.1.34 PIF 5 (AHIMS # 57-2-0341)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 5 was recorded as isolated artefact in Archaeological Heritage Surveys 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment. The artefact was located in the rocky bed of an eroded drainage line and probably originated on the bank to the south. The artefact comprised of red jasper flake measuring 27 x 17 x 6mm.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.35 PIF 6 (AHIMS # 57-2-0432)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PIF 6 was recorded as isolated artefact in Archaeological Heritage Surveys 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment.

The artefact was located just below the top of an eroded drainage line. The artefact comprised of metamorphosed tuff flake measuring 68 x 31 x 21mm.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.36 PPS 11 (AHIMS # 57-2-0338)

Site type: Open site with Artefact

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 11 was recorded as artefact scatter in Archaeological Heritage Surveys 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment. The artefact scatter comprised of 3 artefacts in a 38 x 1 m area on a bank of an eroded drainage line.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.37 PPS 1 (AHIMS # 57-2-0111)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 1 was recorded as an artefact scatter and PAD containing 2 surface artefacts in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The site is located on a gentle slope on a flank of a ridge and measure 21 x 1 m in width.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.38 PPS 2 (AHIMS # 57-2-0112)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 2 was recorded as an artefact scatter containing 2 surface artefacts in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The site is located on a moderate slope of broad ridge spur and measures 8 x 1 m in width.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.39 PPS 6 (AHIMS # 57-2-0116)

Site type: Open site with Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 6 was recorded as an artefact scatter and PAD containing 2 surface artefacts in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The site is located on a gentle to moderate slope and measures 8 x 1 m in width.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.40 PPS 4 (AHIMS # 57-2-0114)

Site type: Scarred Tree

Registered site location: [Removed from Public Display]

Current site assessment: Not Valid

PPS 4 was recorded as a scarred tree in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The tree was located on a moderate slope near a saddle. The tree was a dead eucalypt sawn to stump 0.84m high and 1.44 in circumference. Scar is a NW aspect, commencing 0.28m above the ground, and 0.48m high and 0.12m wide (with evidence of 0.05m regrowth on each side. Depth of scar 0.06m.

In 2003 as part of the following Archaeological Heritage Surveys 2003 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment, the site was recorded as no longer present.

9.1.41 PPS 5 (AHIMS # 57-2-0115)

Site type: Artefact scatter

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PPS 5 was recorded as an artefact scatter containing 9 surface artefacts in 1991 by Access Archaeology as part of The Poplars Archaeology Survey in 1991. The site is located on a broad spur crest/slope above creek flats.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland.

9.1.42 PPS 5 (AHIMS # 57-2-0977)

Site type: PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid

PAD 3 is recorded as a potential archaeological deposit, which requires subsurface testing if impacted. It was originally recorded in Archaeological Heritage Surveys 2003a 'The Poplars', Queanbeyan, NSW: Cultural Heritage Assessment. Report to Queanbeyan City Council.

The site was **not** revisited as part of the current survey program as the area is zoned to be conservation grassland

9.1.43 SJ01 (AHIMS # 57-2-1127)

Site type: Artefacts and PAD

Registered site location: [Removed from Public Display]

Current site assessment: Valid (has not been updated – see below)

SJ01 is recorded as an artefact scatter containing two fractured quartz pieces. The two artefacts were located on a mound of soil and rock in an area that had undergone significant disturbance. Site SJ01 was reassessed as part of the test excavation program carried out by Apex Archaeology in 2021 as part of the Regional Sports Complex archaeological assessments. The site was located in a disturbed area within the western portion of the study area. There were a number of large quartz cobbles within and around a spoil heap and a number of smaller angular quartz fragments in a disturbed context as a result of bulldozing activity to form a carpark located directly north of the area. The site is considered to be machine impacted quartz material in a highly disturbed context.

The site was **not** revisited as part of the current survey program as the area was assessed under the Regional Sports Complex and its location is undergoing bulk earth ground works currently.

Apex Archaeology's (2021) significance assessment of SJ01 found that:

- The site was machine impacted quartz pieces rather than culturally modified artefactual material. Therefore, this site is not considered to be an archaeological site and it is not considered to hold archaeological or scientific significance.
- No archaeological material was identified within the area designated as the Queanbeyan-Palerang Regional Council Regional Sports Complex study area.
- The site is not considered to hold archaeological value on Aboriginal grounds.
- No further archaeological assessment is necessary

9.2 Newly Identified Site

9.2.1 *Poplars Artefact Scatter (57-2-1226)*

Site type: Artefact

Site location: [Removed from Public Display]

Site extent: 5m x 5m

Poplars Artefact Scatter, site 57-2-1226, was identified as a small artefact scatter located along an exposed vehicle dirt track. The track was located on a mid-slope environment with the newly constructed Enviroana Drive located immediately to the west. Previous site disturbance appears to be from the dirt track rather than the construction of Enviroana Drive.

The artefact scatter was comprised of three artefacts, two silcrete and one quartz which were identified within a small area of exposure along the track. Based on the overall slope of the landscape it was considered unlikely that the artefact scatter would correspond with an area of PAD.

A summary of the characteristics of the identified artefacts is provided in *Table 9.1*.

Table 9.1: Summary of artefacts identified at South Poplars (east)

Artefact type	Material	Length (mm)	Width (mm)	Depth (mm)	Additional information
Flake piece	Silcrete	20	19	8	Three flake scars
Core piece	Silcrete	28	30	17	Broken core piece
Flake piece	Quartz	14	8	4	Two flake scars



Photograph 9.1 View of silcrete and quartz artefacts identified at Poplars Artefact Scatter (57-2-1226) (ERM 2022)



Photograph 9.2 Site plan of Poplars Artefact Scatter (57-2-1226) along an exposed dirt vehicle track (ERM 2022)

10. HISTORIC HERITAGE SITES

10.1 Previous Historic Heritage Reports

Most of the previous assessments discussed in the Aboriginal heritage section also considered historic heritage. A small number of additional assessments or reports are relevant only to historic heritage:

- Pip Giovanelli (2010) Queanbeyan Heritage Survey – 2010;
- Eric Martin (2013) Report on Tralee Homestead and Woolshed;
- Navin Officer Heritage Consultants (2015) South Tralee Residential Area and Northern Entry Road: Cultural Heritage Archival Recordings: Tralee Homestead – Dwelling and Woodshed; and
- SQC Architecture (2016) South Tralee Residential Area and Northern Entry Road: Cultural Heritage Archival Recordings: Tralee Homestead – Dwelling House.

10.2 Historic Heritage Database Search Results



A search of the databases listed in *Section 2* identified that there are **no** World, National, Commonwealth, State or locally listed historic heritage sites within the South Jerrabomberra RJP. The National Trust NSW have two listings within this area, the Environa Urban Conservation Area (R2226) and the associated Environa Monument and Arch (R6358). The RNE also includes an indicative listing for Environa (#101922), and while it is not listed in the QPRC LEPs it was originally recommended for inclusion in the 2010 Queanbeyan Heritage Study.

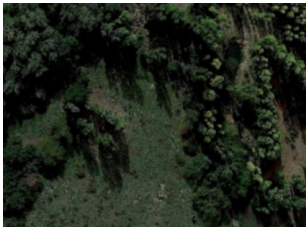
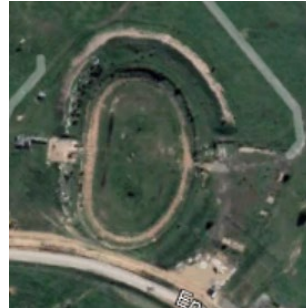

10.2.1 Identified Historic Features





A number of other historic features have been identified in previous heritage assessments. Many of these have since been destroyed, or have development approval to demolish. *Table 10.1* presents a breakdown of the known historic heritage features that exist or were previously identified within the Investigation Area, and these are shown in *Figure 10.1*. ERM has sourced information regarding these sites from previous heritage assessment reports, or the heritage listing where it is available (i.e. for Environa). For more details on the RNE listing for Environa, refer to *Appendix E*.




Table 10.1: Historic features within the Investigation Area






Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
Old Fence	PHS3	Conservation Poplars Grassland Reserve (north)	The Poplars CHA (2003)	None	250m section of six wire fencing. It comprises eucalypt strainers and split eucalypt posts with drilled holes and the wire still in place.	No	Presumed still present	No photograph provided in original assessment report
Poplars Homestead Precinct	PHS1	Local Activity Centres Poplars Retail & Services Precinct	The Poplars CHA (2003)	None	A dwelling, woolshed with a dip and post and rail yards, a machinery shed with a former cowshed and other sheds attached, a small hut, two concrete silos, a windmill and a number of sheds of various sizes.	Yes (SU1)	Demolished – Archival Recording available	No photograph provided in original assessment report
Old Fence	PHS7	Space, Defence & Technology Poplars Innovation Precinct	The Poplars CHA (2003)	None	Five five-wire eucalypt fence posts incorporated into new metal fence posts.	No	Presumed still present	No photograph provided in original assessment report
Garbage Dump	PHS8	Conservation Poplars Grassland Reserve (south)	The Poplars CHA (2003)	None	A small garbage dump in a 30 x 12 m erosion blowout beside a fenceline. Garbage includes a 1940s beer bottle, a 1960s drink can, a green wine bottle and an old metal watering can.	No	Presumed still present	No photograph provided in original assessment report




Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
Platoon Defence Position	PHS6	Conservation Poplars Grassland Reserve (south)	The Poplars CHA (2003)	None	Four semi-circular dry stone walls beneath low natural outcrops, located along the 630m contour overlooking Jerrabomberra Valley. A fifth enclosure, rectangular, occurs on the reverse slope and would have been platoon HQ.	No	Presumed still present	No photograph provided in original assessment report
Piggery Ruin	PHS5	Space, Defence & Technology Poplars Innovation Precinct (future)	The Poplars CHA (2003)	None	Two piles of introduced building rubble, a corrugated iron shed, a concrete slab with troughs and a pile of bolted sawn timber frames with corrugated iron sheeting.	Yes (SU2)	Still present	
Old Fence	PHS4	Open Space Poplars Grassland Reserve	The Poplars CHA (2003)	None	550m alignment of five-wire eucalypt fence posts.	Yes (SU2) – but could not access	Presumed still present	No photograph provided in original assessment report
Farm Shed Ruin	PHS2	Conservation Poplars Grassland Reserve	The Poplars CHA (2003)	None	A 13 x 5 m shed with eucalypt poles. Artefacts include concrete pedestals, a sulky cart and kerosene tin.	Yes (SU2)	Still present	

Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
Tree Plantings	H4	Conservation North Tralee	North Tralee LES (2011)	None	A row of old poplar trees located on the prominent bend in Jerrabomberra Creek at the northern boundary of the Tralee North zone.	No	Presumed still present	 <p>Google Earth (2019)</p>
Shed Ruins	H5	Conservation North Tralee	North Tralee LES (2011)	Local	The ruins of a wooden shed structure on the southern bank of Jerrabomberra Creek.	No	Presumed still present	No photograph provided in assessment report
Fraser Park Raceway Complex	Site H1	Open Space Regional Sports Complex	North Tralee LES (2011)	None	The former Tralee (later renamed Fraser Park) Speedway/Raceway motor-sport facility. The raceway operated between 1971 and the late 1990s.	No	Demolished (DA 157-2010)	 <p>Google Earth (2020)</p>
Open Air Motor-sport Track	Site H2	Open Space Regional Sports Complex	North Tralee LES (2011)	Local	A large excavation and levelled section approximately five hectares in area, directly to the east of the Fraser Park Raceway complex.	No	Demolished (DA 157-2010)	 <p>Google Earth (2020)</p>

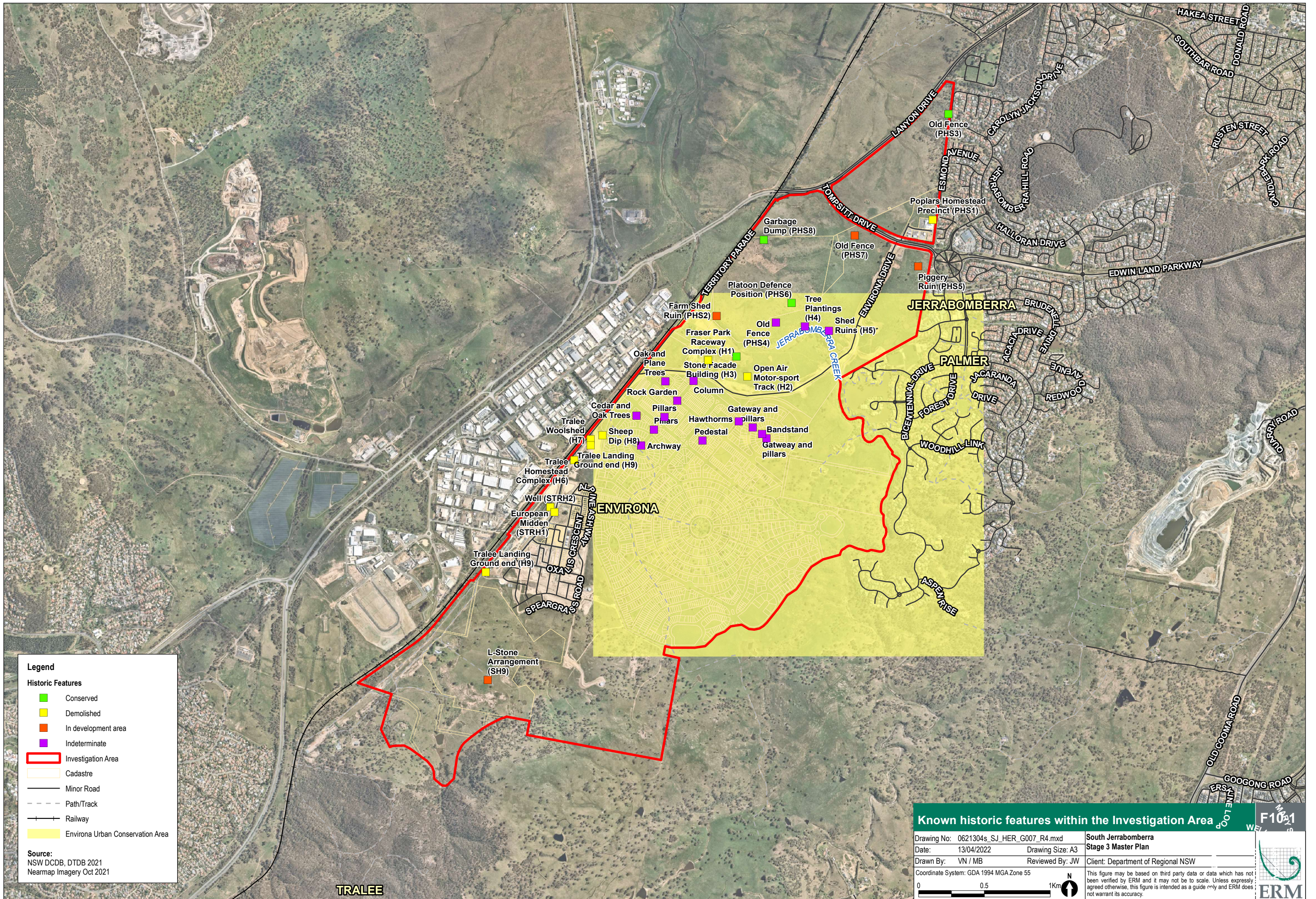
Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
Stone Façade Building	Site H3 LEP #11	Open Space Regional Sports Complex	O'Keefe (2018)	Local	An amenities building associated with sporting fields conceived and constructed by H.F. Halloran using cobbles in the style of the neighbouring Environa built features, and tiles imported from Italy.	No	Still present – will be restored and incorporated into Regional Sports Complex as an interpretive feature	 <p>O'Keefe (2018)</p>
Environa Subdivision	National Trust #R2226 National Trust #R6358 RNE #101922	Local Activity Centres / Local Business & Industry / Rural Landscape Environa	QPRC Heritage Study (2010)	None [National Trust RNE]	Stone arch gateway – part of Parliament Boulevard, a series of stone structures from a stone arch gateway at the crest of the hill through to a stone column that once supported a bust of Sir Henry Parkes	Yes (SU6)	Still present	
					Two pairs of stone pillars – part of Parliament Boulevard, a series of stone structures from a stone arch gateway at the crest of the hill through to a stone column that once supported a bust of Sir Henry Parkes	Yes (SU6)	Still present	
					Rock garden – part of Parliament Boulevard, a series of stone structures from a stone arch gateway at the crest of the hill through to a stone column that once supported a bust of Sir Henry Parkes	Yes (SU6)	Still present	 <p>Google Earth (2020)</p>

Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
					Stone column – part of Parliament Boulevard, a series of stone structures from a stone arch gateway at the crest of the hill through to a stone column that once supported a bust of Sir Henry Parkes	Yes (SU6)	Still present	
					Oak and Plane trees associated with one of two former proposed urban parks	Yes (SU6)	Still present	
					Cedar and Oak trees associated with one of two former proposed urban parks	Yes (SU6)	Still present	
					Pedestal	Yes (SU6) – but could not access	Presumed still present	N/A

Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
					Stone gateway with iron pillars flanked by two nearby stone pillars	Yes (SU6)	Still present	
					Stone gateway (missing iron pillars and one side fallen) flanked by two nearby stone pillars	Yes (SU6)	Still present	
					Timber bandstand	Yes (SU6)	Still present	
The Lobbies Homestead		Rural Landscape Environa	N/A	None	Residence	Yes (SU7)	Still present	
					Encircling stone wall	Yes (SU7)	Still present	

Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
					Bust of Henry Parkes (formerly atop stone column at end of Parliamentary Boulevard)	Yes (SU7)	Still present	
Tralee Homestead Complex	H6	Local Business & Industry South Jerrabomberra Residential Development	Tralee LES Supplementary Report (2010)	None	The site comprises a number of structures, including a main dwelling and a shearer's quarters.	No	Demolished (DA 157-2010 & DA 114-2019) – History and Archival Recording available, and Cookhouse elements will be reused in the South Jerrabomberra Residential Development BBQ area	 (Martin 2013)
Tralee Woolshed	H7	Open Space South Jerrabomberra Residential Development	Tralee LES Supplementary Report (2010)	None	Unknown.	No	Demolished (DA 157-2010 & DA 114-2019) – History and Archival Recording available, and elements will be reused in the community centre	 (Martin 2013)

Feature	Item #	Precinct	Source	Listing Level	Description	Within Current Survey Area	Status	Photograph
Sheep Dip	H8	Open Space South Jerrabomberra Residential Development	Tralee LES Supplementary Report (2010)	Local	Unknown.	No	Demolished	No photograph provided in assessment report
Tralee Landing Ground	H9	Open Space / Local Business & Industry / Local Activity Centres South Jerrabomberra Residential Development	Tralee LES Supplementary Report (2010)	Local	Unknown.	No	Demolished	No photograph provided in assessment report
European Midden (Rubbish Dump)	STRH 1	Open Space South Jerrabomberra Residential Development	QPRC Assessment of DA 395-2017	None	An area approximately 10 x 5 m. The visible objects are car parts and metal drums and assumed to be less than 50 years old.	No	Demolished	No photograph provided in assessment report
Well	STRH 2	Open Space South Jerrabomberra Residential Development	QPRC Assessment of DA 395-2017	None	Constructed by John Morrison as a water source for the Tralee Homestead, probably in the 1920s. The well has been filled.	No	Demolished	No photograph provided in assessment report
Indeterminate Feature	SJ9	Residential South Jerrabomberra Residential Development	South Jerrabomberra Forrest & Morrison PAA (2014)	None	A roughly L-shaped arrangement of local stones located in the southeastern corner of an open paddock to the east of Tralee homestead.	No	Presumed still present	No photograph provided in original assessment report



Legend

Historic Features

- Conserved
- Demolished
- In development area
- Indeterminate
- Investigation Area
- Cadastre
- Minor Road
- Path/Track
- Railway
- Environs Urban Conservation Area

Source:
NSW DCDB, DTDB 2021
Nearmap Imagery Oct 2021

Known historic features within the Investigation Area

Drawing No: 0621304s_SJ_HER_G007_R4.mxd	South Jerrabomberra
Date: 13/04/2022	Stage 3 Master Plan
Drawn By: VN / MB	Reviewed By: JW
Client: Department of Regional NSW	
Coordinate System: GDA 1994 MGA Zone 55	
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	

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10.2.2 Historical Archaeological Potential

The review of the potential for Historical Archaeological Resource to be present within the South Jerrabomberra RJP is based on a consideration of current ground conditions and analysis of historic development within the Investigation Area.

It is considered highly unlikely that any further historic heritage features would be discovered during future assessment or works in the previously assessed areas of the South Jerrabomberra RJP. All archaeological potential in the previously assessed areas that would have been associated with 19th century land use and homesteads have been destroyed as part of the demolition of the Poplars and Tralee buildings associated with the Poplars Retail Precinct and the South Jerrabomberra Residential Development Stage 1.

The small area that is yet to be assessed consists of a homestead and associated infrastructure. This property remains the only area of built and archaeological historic heritage potential in the Investigation Area. The area was not visited as part of the current survey program as access was not granted by the landholders.

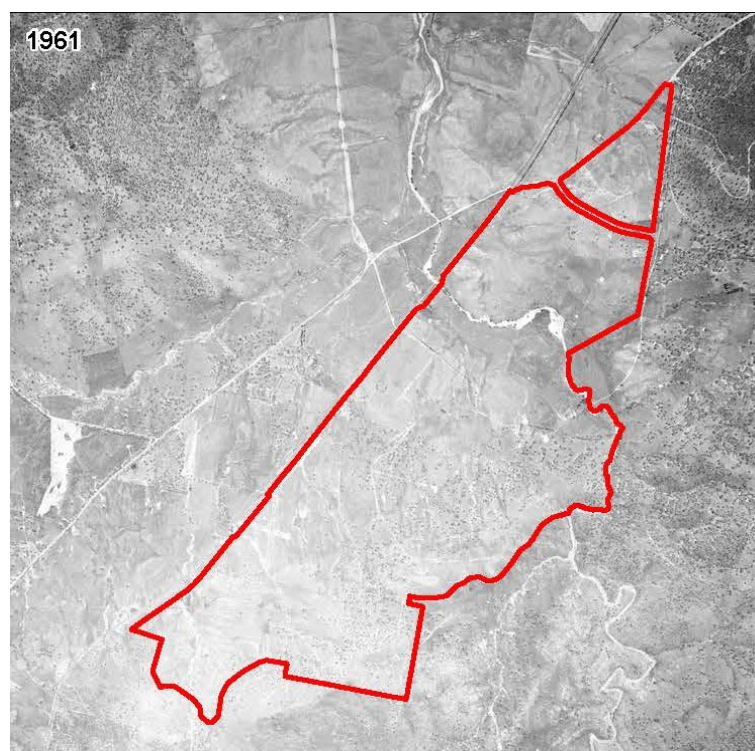
10.3 Historic Land Use Summary

Review of historic development within the South Jerrabomberra RJP identified two key themes relating to land use within the South Jerrabomberra RJP. These themes included:

- Pastoralism; and
- Agriculturalism.

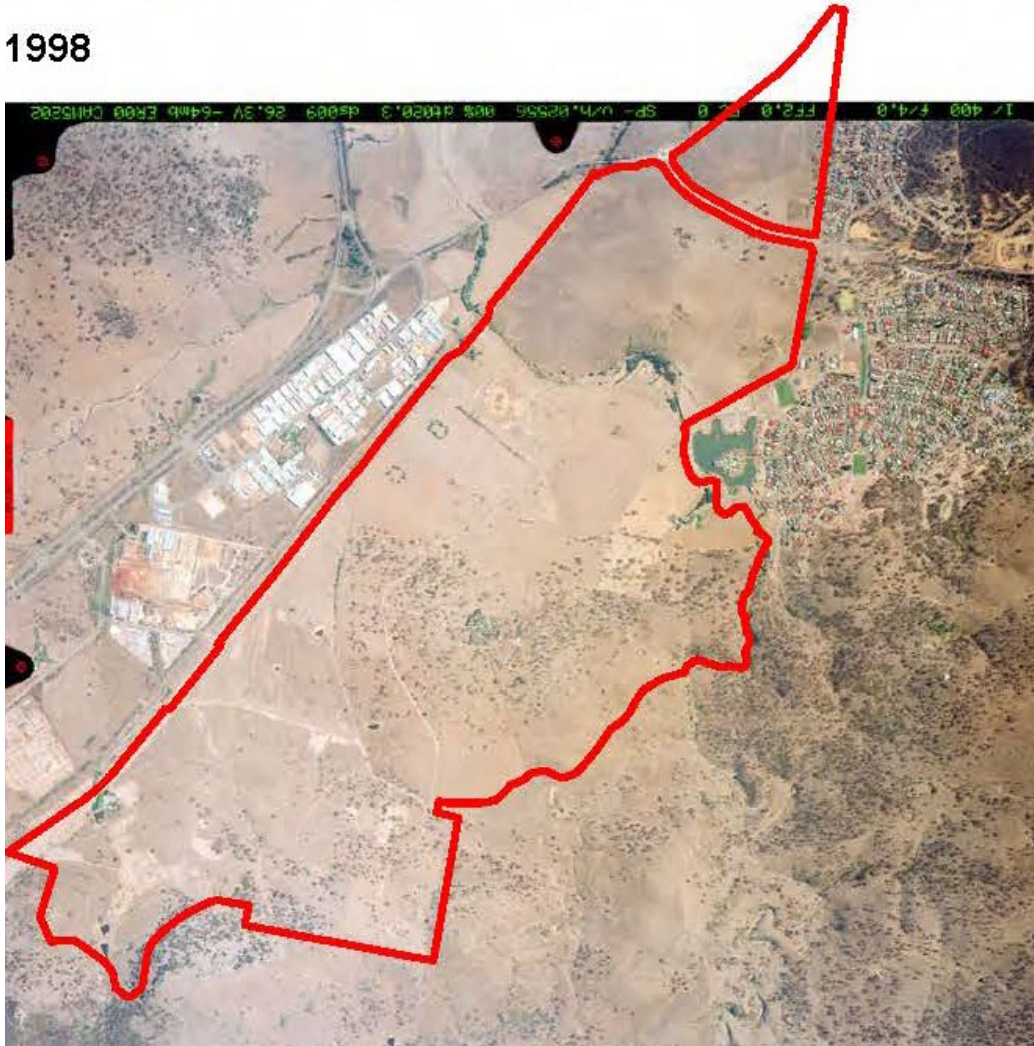
Historical aerials in the sections below indicate that occupation of the region continued to be dominated by agricultural land uses up to the present.

10.3.1 Overview



Photograph 10.1 Historical aerial c~1961 showing general agricultural use of the South Jerrabomberra RJP (Source: Spatial Collaboration Services)

1998



Photograph 10.2 Historical aerial c~1998 showing general agricultural use of the South Jerrabomberra RJP (Source: Spatial Collaboration Services)

10.3.2 South Poplars



Photograph 10.3 South Poplars & High School, 1961 (Source: Spatial Collaboration Services)



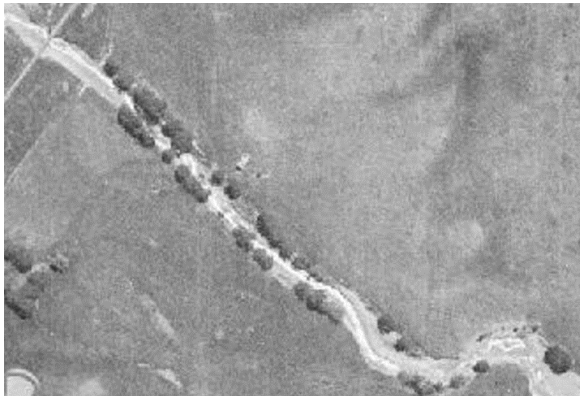
Photograph 10.4 South Poplars & High School (Google Earth 2022)



Photograph 10.5 Piggery, 1961 (Source: Spatial Collaboration Services)



Photograph 10.6 Piggery – abandoned (Google Earth 2022)

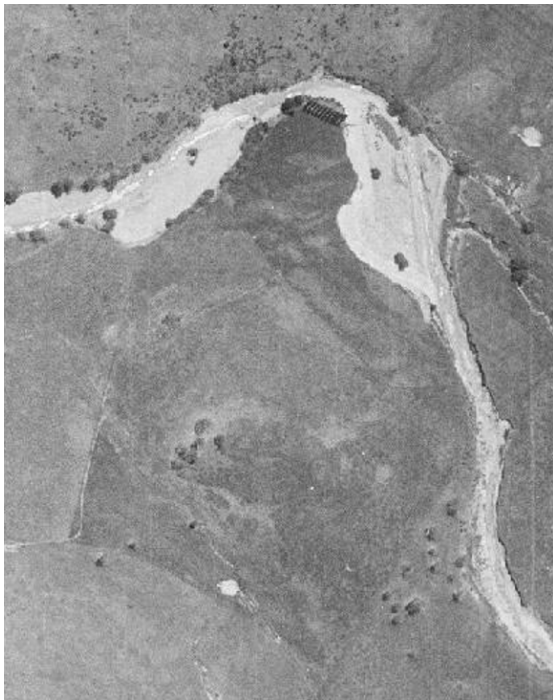


Photograph 10.7 Farm shed, 1961 (Source: Spatial Collaboration Services)



Photograph 10.8 Farm shed – abandoned (Google Earth 2022)

10.3.3 North Tralee



**Photograph 10.9 North Tralee, 1961
(Source: Spatial Collaboration
Services)**



**Photograph 10.10 North Tralee (Google
Earth 2022)**



**Photograph 10.11 Tree planting,
1961 (Source: Spatial Collaboration
Services)**



**Photograph 10.12 Tree planting – some
loss, some addition (Google Earth
2022)**

10.3.4 Private Property (East)



Photograph 10.13 Private property (east), 1961 (Source: Spatial Collaboration Services)

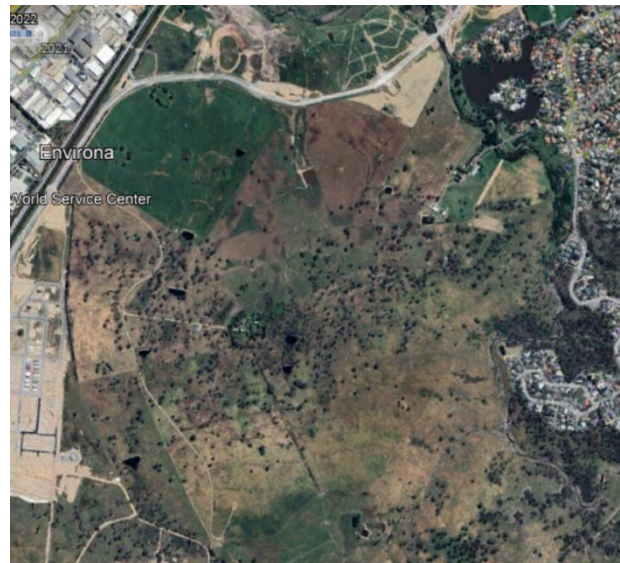


Photograph 10.14 Private property (east) (Google Earth 2022)

10.3.5 Environa



Photograph 10.15 Environa, 1961 (Source: Spatial Collaboration Services)



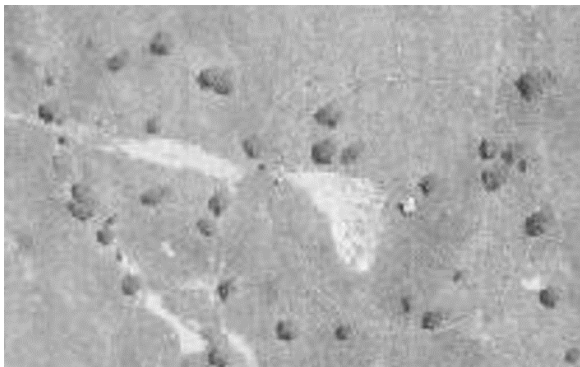
Photograph 10.16 Environa (Google Earth 2022)



Photograph 10.17 Environa subdivision, 1961 (Source: Spatial Collaboration Services)



Photograph 10.18 Environa subdivision – little change (Google Earth 2022)



Photograph 10.19 Environa homestead, 1961 (Source: Spatial Collaboration Services)



Photograph 10.20 Environa homestead – minor change (Google Earth 2022)

10.3.6 South Tralee



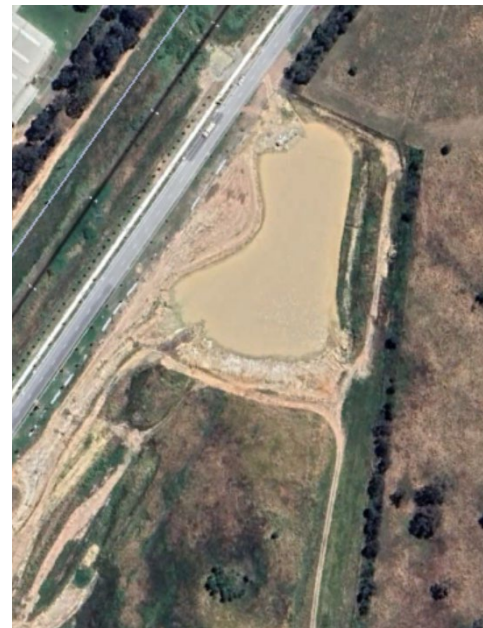
**Photograph 10.21 South Tralee, 1961
(Source: Spatial Collaboration
Services)**



**Photograph 10.22 South Tralee
(Google Earth 2022)**



**Photograph 10.23 Tralee homestead
complex, 1961 (Source: Spatial
Collaboration Services)**



**Photograph 10.24 Tralee
homestead complex –
demolished and redeveloped
(Google Earth 2022)**



Photograph 10.25 Tralee landing ground, 1961 (Source: Spatial Collaboration Services)



Photograph 10.26 Tralee landing ground – mostly redeveloped (Google Earth 2022)

10.3.7 Private Property (South)



Photograph 10.27 Private property (south), 1961 (Source: Spatial Collaboration Services)



Photograph 10.28 Private property (south) (Google Earth 2022)

11. SIGNIFICANCE ASSESSMENT – ABORIGINAL HERITAGE

11.1 Aboriginal Cultural Heritage Significance Assessment Framework

Aboriginal heritage sites, objects and places hold value for communities in many different ways. The nature of those heritage values is an important consideration when deciding how to manage a heritage site, object or place and balance competing land use options.

Assessment of the Aboriginal cultural heritage significance of the Investigation Area has been completed in accordance with the requirements of the ACHAR Guide (OEH 2011). Assessment has included identification of social, historic, scientific and aesthetic values which are discussed below:

- *Social or cultural value* (assessed only by Traditional Owners/First Nations People) 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;
- *Historic value* (assessed by Traditional Owners/First Nations People and/or non-Aboriginal historical specialists) 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 historic importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities and include places of post-contact Aboriginal history;
- *Scientific (archaeological) value* (assessed by professional archaeologists) 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; and
- *Aesthetic value* (assessed by Traditional Owners and/or non-Aboriginal specialists) refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with 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.

Scientific values were graded with a basic ranking of high, moderate, or low. The grading is based on the rarity, representativeness and research (educational) potential for each value:

- High significance is usually attributed to sites, which are so rare or unique that the loss of the site would affect our ability to understand aspects of past Aboriginal use/occupation for an area;
- Moderate significance can be attributed to sites which provide information on an established research question; and
- Low significance is attributed to sites which cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to disturbance of the nature of the site's contents.

11.2 Identifying Cultural Values

Cultural heritage values for the Investigation Area were identified through a combination of desktop assessment and consultation undertaken during the preparation of this HACHAR (see *Section 3.1.2*). This information was collected by Elspeth Mackenzie and Lorien Perchard.

The Burra Charter states:

cultural significance is embodied in the place—in its fabric, setting, use, associations and meanings. It may exist in: objects at the place or associated with it; in other places that have some relationship to the place; and in the activities and traditional and customary practices that may occur at the place or that are dependent on the place.

The review of background information and information gained through consultation with Aboriginal people and the site survey during this HACHAR should provide insight into past events. These include how the landscape was used and why the identified Aboriginal objects are in this location, along with contemporary uses of the land. The following descriptions of cultural heritage values are drawn from the *Guide to investigating, assessing, and reporting on Aboriginal cultural heritage in NSW* (OEH 2011).

Table 11.1 summarises the cultural heritage values identified for the Investigation Area and the surrounding region.

Table 11.1: Cultural heritage values identified for the South Jerrabomberra RJP and surrounds

Cultural heritage value	Description	Distance from Investigation Area	Source
Food and raw materials	Pre-European contact the local area would offer hunting and gathering opportunities.	Within	Lee Carroll, Robert Young (pers. comm., 2022)
Freshwater	The Jerrabomberra creek system within the Investigation Area's would provide a consistent water source for most of the year.	Within	Lee Carroll, Robert Young (pers. comm., 2022)
Cultural landscapes	During survey, RAPs discussed the culturally significant creek line that runs through the Investigation Area. It is recognised as a spiritual pathway guiding Aboriginal groups from the south to corroboree grounds for inter-tribal gatherings.	Within	Pamela and Robert Young (pers. comm., 2022) (Ecological Australia 2021)
Travel routes	The Investigation Area and its surrounds is situated between a number of culturally significant locations as well as offering food and other resources, as described above	Within	Pamela and Robert Young (pers. comm., 2022) (Ecological Australia 2021)
Aboriginal heritage sites	Of value to the Aboriginal community as a tangible connection between the land today and past Aboriginal occupation and use	Within	Kuskie 2012b: 4

11.2.1 Social or Cultural Significance

The Consultation Requirements specifies that the social or cultural value of a place must be identified through consultation with Aboriginal people. All Aboriginal sites are considered to have cultural significance to the Aboriginal community as they provide physical evidence of past Aboriginal use and occupation of the area.

Consultation with the RAPs throughout the process have identified that the Investigation Area demonstrates cultural significance as a resource gathering location and travel route. This significance of these values is most clearly articulated as a component of the overall cultural landscape of the region. No social or cultural significance was provided for the AHIMS sites. The Investigation Area is considered to demonstrate moderate social and cultural significance as part of a wider cultural landscape of ongoing significance to multiple Aboriginal communities.

11.2.2 Historic Significance

Historic values refer to the association of the place with aspects of Aboriginal history. Historic values are not necessarily reflected in physical objects, but may be intangible and relate to memories, stories or experiences.

There is no historic evidence in the ethnographic literature or within the Aboriginal community for specific use of Investigation Area.

The Investigation Area is considered to demonstrate **low** historic significance.

11.2.3 Scientific Significance

Scientific significance contains four subsets: research potential, representativeness, rarity, and educational potential. These are outlined below.

Research Potential: is the ability of a site to contribute to our understanding of Aboriginal occupation locally and on a regional scale. The potential for the site to build a chronology, the level of disturbance within a site, and the relationship between the site and other sites in the archaeological landscape are factors which are considered when determining the research potential of a site.

The study area has low research potential.

Representativeness: is defined as the level of how well or how accurately something reflects upon a sample. The objective of this criterion is to determine if the class of site being assessed should be conserved in order to ensure that a representative sample of the archaeological record be retained. The conservation objective which underwrites the 'representativeness' criteria is that such a sample should be conserved (NSW NPWS 1997: 7-9).

The AHIMS sites (found within the Investigation Area) have a low representative value in the regional context. Low density artefact scatters were identified as a common occurrence in the Jerrabomberra region by previous investigations by Navin Officer (2010), Archaeological Heritage Surveys (2003) - 'The Poplars' Cultural Heritage Assessment and Ecological (2021), New High School in Jerrabomberra - Aboriginal Cultural Heritage Assessment.

Rarity: This criterion is similar to that of representativeness, it is defined as something rare, unusual, or uncommon. If a site is uncommon or rare it will fulfil the criterion of representativeness. The criterion of rarity may be assessed at a range of levels including local, regional, state, national and global (NSW NPWS 1997: 10).

The AHIMS sites present within the Investigation Area are low density artefact scatters, this site type has been identified as common in the Jerrabomberra region, therefore the rarity value is low.

Educational Potential: This criterion relates to the ability of the cultural heritage item or place to inform and/or educate people about one or other aspects of the past. It incorporates notions of intactness, relevance, interpretative value, and accessibility. Where archaeologists or others carrying out cultural heritage assessments are promoting/advocating the educational value of a cultural heritage item or place it is imperative that public input and support for this value is achieved and sought. Without public input and support the educative value of the items/places is likely to not ever be fully realised (NSW NPWS 1997: 10).

The study area has low educational value, the AHIMS sites are low density artefact scatters that were identified as being in a disturbed context from previous land use activities. The Aboriginal consultation did not identify any educational potential for the low density artefact scatter identified.

A summary of the scientific significance of the AHIMS sites identified during the background assessment and site survey is presented in *Table 11.2*.

A summary of the scientific value of each archaeological site within the study area is included below and summarised in *Table 11.2*.

Table 11.2: Assessment of scientific significance of archaeological sites found in the Investigation Area

AHIMS site #	Research Potential	Representativeness	Rarity	Educational Potential	Significance Assessment
57-2-0340	Low	Low	Low	Low	Low
57-2-0974	Moderate	Low	Low	Low	Moderate
57-2-0976	Moderate	Low	Low	Low	Moderate
57-2-0977	Moderate	Low	Low	Low	Moderate
57-2-0978	Moderate	Low	Low	Low	Moderate
57-2-0474	Low	Low	Low	Low	Low
57-2-0475	Low	Low	Low	Low	Low
57-2-0476	Low	Low	Low	Low	Low
57-2-0111	Low	Low	Low	Low	Low
57-2-0112	Low	Low	Low	Low	Low
57-2-0114	Low	Low	Low	Low	Low
57-2-0115	Low	Low	Low	Low	Low
57-2-0116	Low	Low	Low	Low	Low
57-2-0120	Low	Low	Low	Low	Low
57-2-0338	Low	Low	Low	Low	Low
57-2-0341	Low	Low	Low	Low	Low
57-2-0342	Low	Low	Low	Low	Low
57-2-0343	Low	Low	Low	Low	Low
57-2-0345	Low	Low	Low	Low	Low
57-2-0346	Low	Low	Low	Low	Low
57-2-0347	Low	Low	Low	Low	Low
57-2-0476	Low	Low	Low	Low	Low
57-2-0802	Low	Low	Low	Low	Low
57-2-0848	Moderate	Low	Low	Low	Moderate
57-2-0849	Moderate	Low	Low	Low	Moderate
57-2-0850	Moderate	Low	Low	Low	Moderate
57-2-0860	Moderate	Low	Low	Low	Moderate
57-2-0861	Low	Low	Low	Low	Low
57-2-0859	Moderate	Low	Low	Low	Moderate
57-2-0833	Moderate	Low	Low	Low	Moderate
57-2-0858	Low	Low	Low	Low	Low
57-2-0831	Low	Low	Low	Low	Low
57-2-0853	Low	Low	Low	Low	Low
57-2-0854	Low	Low	Low	Low	Low
57-2-0851	Moderate	Low	Low	Low	Moderate
57-2-0852	Low	Low	Low	Low	Low
57-2-0856	Moderate	Low	Low	Low	Moderate

AHIMS site #	Research Potential	Representativeness	Rarity	Educational Potential	Significance Assessment
57-2-0834	Moderate	Low	Low	Low	Moderate
57-2-0835	Low	Low	Low	Low	Low
57-2-0832	Low	Low	Low	Low	Low
57-2-0829	Low	Low	Low	Low	Low
57-2-0830	Low	Low	Low	Low	Low
57-2-0857	Low	Low	Low	Low	Low
57-2-0899	Low	Low	Low	Low	Low
57-2-0900	Low	Low	Low	Low	Low
57-2-0905	Moderate	Low	Low	Low	Moderate
57-2-0914	Low	Low	Low	Low	Low
57-2-0913	Low	Low	Low	Low	Low
57-2-0916	Moderate	Low	Low	Low	Moderate
57-2-0811	Low	Low	Low	Low	Low
57-2-1226	Low	Low	Low	Low	Low
57-2-1148	Low	Low	Low	Low	Low
57-2-1149	Low	Low	Low	Low	Low
57-2-1150	Low	Low	Low	Low	Low
57-2-1151	Low	Low	Low	Low	Low
57-2-0934	Low	Low	Low	Low	Low
57-2-0935	Low	Low	Low	Low	Low
57-2-0901	Moderate	Low	Low	Low	Moderate
57-2-0903	Moderate	Low	Low	Low	Moderate

Identified artefact scatters have been assessed to demonstrate low archaeological significance. The majority of the identified artefact scatters have been identified in areas which demonstrate clear evidence of disturbance or impact from post depositional processes. Artefact sites located in these landscapes are considered to demonstrate low research potential due to their limited connection to the original phase of deposition and are equally not considered to be representative of a specific type of phase of land use. These sites have been identified as relatively common across the region and are not considered to exhibit high rarity values

Areas of PAD within the South Jerrabomberra RJP have been assessed as moderate as they demonstrate unknown scientific significance. These sites would require further investigation through archaeological test excavation to adequately assess their significance.

11.2.4 Aesthetic Significance

Aesthetic values refer to the sensory, scenic, architectural and creative aspects of the place. These values may be related to the landscape and are often closely associated with social/cultural values.

The Investigation Area is currently comprised of a semi-rural landscape with Jerrabomberra Creek located through the centre. The Investigation Area maintains aesthetic connection to the pre-contact landscape through the presence of a variety of native tree and grass species located within close proximity to the creek bank and across the entire the Investigation Area.

The Investigation Area offers clear vantage points to surrounding landscape features including raised landscapes which were flagged by the RAPs as areas more likely to represent occupation sites. The Investigation Area is considered to demonstrate **moderate** aesthetic value.

11.2.5 Aboriginal Heritage Statement of Significance

While the Investigation Area has been identified to be located within a semi-rural landscape which has undergone modification, the assessment has identified that the Investigation Area demonstrates **moderate** social value to the Ngaganwal and Worimi community as part of a cultural landscape as a resource gathering location and travel route. Aboriginal objects are of **high** significance to the Aboriginal community as it proves evidence of their connection to the land.

The semi-rural landscape of the Investigation Area and the Jerrabomberra Creek line transecting the area, along with the intact landscape features of vantage points including raised landscapes which were flagged by the RAPs. The Investigation Area is considered to demonstrate **moderate** aesthetic value.

The numerous previous investigations, the results of this HACHAR and the Aboriginal consultation carried out in conjunction with his report revealed that the AHIMS sites within the Investigation Area possess moderate scientific significance due to the low artefact density and lack of rare or representative samples of lithic technology. Based on the intactness, representativeness, and research potential, the sites are determined to have moderate scientific significance.

Table 11.3: Overall significance for AHIMS sites

AHIMS site #	Social or Cultural value	Historic value	Aesthetic value	Scientific value	Significance Assessment
57-2-0340	High	Low	Low	High	Moderate
57-2-0974	High	Low	Low	High	Moderate
57-2-0474	High	Low	Low	Low	Low
57-2-0475	High	Low	Low	Low	Low
57-2-0476	High	Low	Low	Low	Low
57-2-0476	High	Low	Low	Low	Low
57-2-0802	High	Low	Low	Low	Low
57-2-0848	High	Low	Low	High	Moderate
57-2-0849	High	Low	Low	High	Moderate
57-2-0850	High	Low	Low	High	Moderate
57-2-0860	High	Low	Moderate	High	Moderate
57-2-0861	High	Low	Moderate	High	Moderate
57-2-0859	High	Low	Low	High	Moderate
57-2-0833	High	Low	Low	High	Moderate
57-2-0858	High	Low	Low	Low	Low
57-2-0831	High	Low	Low	Low	Low
57-2-0852	High	Low	Moderate	Low	Moderate
57-2-0853	High	Low	Moderate	Low	Moderate
57-2-0854	High	Low	Moderate	Low	Moderate
57-2-0855	High	Low	Moderate	Low	Moderate
57-2-0851	High	Low	Low	Low	Low
57-2-0856	High	Low	Low	Low	Moderate
57-2-0834	High	Low	Low	High	Moderate
57-2-0835	High	Low	Low	Low	Low

AHIMS site #	Social or Cultural value	Historic value	Aesthetic value	Scientific value	Significance Assessment
57-2-0832	High	Low	Low	Low	Low
57-2-0829	High	Low	Low	Low	Low
57-2-0830	High	Low	Moderate	Low	Moderate
57-2-0857	High	Low	Low	Low	Moderate
57-2-0899	High	Low	Low	Low	Low
57-2-0900	High	Low	Low	High	Moderate
57-2-0901	High	Low	Low	High	Moderate
57-2-0903	High	Low	Low	Low	Low
57-2-0904	High	Low	Low	Low	Low
57-2-0905	High	Low	Low	High	Moderate
57-2-0913	High	Low	Low	Low	Low
57-2-0914	High	Low	Low	Low	Low
57-2-0916	High	Low	Low	High	Moderate
57-2-0811	High	Low	Low	Low	Low
57-2-0111	High	Low	Low	Low	Low
57-2-0112	High	Low	Low	Low	Low
57-2-0114	High	Low	Low	Low	Low
57-2-0115	High	Low	Low	Low	Low
57-2-0116	High	Low	Low	Low	Low
57-2-0120	High	Low	Low	Low	Low
57-2-0338	High	Low	Low	Low	Low
57-2-0341	High	Low	Low	Low	Low
57-2-0342	High	Low	Low	Low	Low
57-2-0343	High	Low	Low	Low	Low
57-2-0345	High	Low	Low	Low	Low
57-2-0346	High	Low	Low	Low	Low
57-2-0347	High	Low	Low	Low	Low
57-2-0803	High	Low	Low	High	Moderate
57-2-0804	High	Low	Low	High	Moderate
57-2-0805	High	Low	Low	High	Moderate
57-2-0806	High	Low	Low	Low	Low
57-2-0807	High	Low	Low	Low	Low
57-2-0808	High	Low	Low	Low	Low
57-2-0809	High	Low	Low	High	Moderate
57-2-0810	High	Low	Low	High	Moderate
57-2-0812	High	Low	Low	High	Moderate
57-2-0813	High	Low	Low	High	Moderate
57-2-0814	High	Low	Low	High	Moderate
57-2-0815	High	Low	Low	High	Moderate
57-2-0976	High	Low	Low	High	Moderate

AHIMS site #	Social or Cultural value	Historic value	Aesthetic value	Scientific value	Significance Assessment
57-2-0977	High	Low	Low	High	Moderate
57-2-0978	High	Low	Low	High	Moderate
57-2-0934	High	Low	Low	High	Moderate
57-2-0935	High	Low	Low	Low	Low
57-2-1148	High	Low	Low	Low	Low
57-2-1149	High	Low	Low	Low	Low
57-2-1150	High	Low	Low	Low	Low
57-2-1151	High	Low	Low	Low	Low

12. SIGNIFICANCE ASSESSMENT – HISTORIC HERITAGE

12.1 Historic Heritage Significance Assessment Framework

The NSW Heritage Management System sets out a detailed process for conducting assessments of heritage significance. The guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001), part of the Heritage Manual, provides a set of specific criteria for assessing the significance of an item, including guidelines for inclusion and exclusion (which reflect four categories of significance and whether a place is rare or representative) under which a place can be evaluated in the context of State or local historical themes (*Appendix D*).

An item would be considered to be of State significance if it meets two or more criteria at a State level, or of local heritage significance if it meets one or more of the criteria outlined below. Similarly, a heritage item assessed as having heritage values significant to the country as a whole would be of National significance.

The seven criteria upon which the following significance assessment is based are summarised in *Table 12.1*.

Table 12.1: NSW Heritage Assessment Criteria

Criteria	Description
<i>Criterion (a) – Historical significance</i>	<p><i>an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)</i></p> <p>Note: The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.</p>
<i>Criterion (b) – Associative significance</i>	<p><i>an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)</i></p> <p>Note: The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.</p>
<i>Criterion (c) – Aesthetic significance</i>	<p><i>an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i></p> <p>Note: An item can be excluded on the grounds that it has lost its design or technical integrity or its landmark qualities have been more than temporarily degraded.</p>
<i>Criterion (d) – Social significance</i>	<p><i>an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons</i></p> <p>Note: This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.</p>
<i>Criterion (e) – Research potential</i>	<p><i>an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)</i></p> <p>Note: Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.</p>

Criteria	Description
<i>Criterion (f) - Rarity</i>	<p><i>an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)</i></p> <p>Note: An item is excluded if it is not rare or if it is numerous, but under threat. The item must demonstrate a process, custom or other human activity that is in danger of being lost, is the only example of its type or demonstrates designs or techniques of interest.</p>
<i>Criterion (g) - Representative</i>	<p><i>an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments</i></p> <p>Note: An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.</p>

The Heritage Council require the summation of the significance assessment into a succinct paragraph, known as a Statement of Significance. The Statement of Significance is the foundation for future management and impact assessment. The following assessment (*Table 12.2, Table 12.3 and Table 12.4*) has been prepared in accordance with these guidelines.

Table 12.2: Significance assessment of Poplars historical features

Criteria	Old Fences (PHS3, PHS 4, PHS7)	Garbage Dump (PHS8)	Piggery Ruin (PHS5)	Farm Shed Ruin (PHS2)
<i>Criterion (a) – Historical significance an item is important in the course, or pattern, of NSW’s cultural or natural history (or the cultural or natural history of the local area)</i>	Fences such as these are common to rural properties in the region and are not important to the cultural history of the local area or NSW.	Farm dumps such as these are common to rural properties in the region and are not important to the cultural history of the local area or NSW.	Farm outbuildings such as these are common to rural properties in the region and are not important to the cultural history of the local area or NSW.	Farm outbuildings such as these are common to rural properties in the region and are not important to the cultural history of the local area or NSW.
<i>Criterion (b) – Associative significance an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history (or the cultural or natural history of the local area)</i>	These fences are part of the Poplars Homestead, which has no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.	This dump is part of the Poplars Homestead, which has no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.	This outbuilding is part of the Poplars Homestead, which has no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.	This outbuilding is part of the Poplars Homestead, which has no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.
<i>Criterion (c) – Aesthetic significance an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	These fences do not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.	This dump does not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.	This outbuilding does not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.	This outbuilding does not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.
<i>Criterion (d) – Social significance an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons</i>	These fences do not have a strong or special association with any community or cultural group.	This dump does not have a strong or special association with any community or cultural group.	This outbuilding does not have a strong or special association with any community or cultural group.	This outbuilding does not have a strong or special association with any community or cultural group.

Criteria	Old Fences (PHS3, PHS 4, PHS7)	Garbage Dump (PHS8)	Piggery Ruin (PHS5)	Farm Shed Ruin (PHS2)
<i>Criterion (e) – Research potential an item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history (or the cultural or natural history of the local area)</i>	The history of fencing in Australia is well documented and these examples would not contribute anything further.	This garbage dump is not extensive or particularly old, so would not contribute anything new to our understanding of the local or NSW cultural history.	This outbuilding has limited research potential and is unlikely to contribute anything new to our understanding of the local or NSW cultural history.	This outbuilding has limited research potential and is unlikely to contribute anything new to our understanding of the local or NSW cultural history.
<i>Criterion (f) - Rarity an item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history (or the cultural or natural history of the local area)</i>	These fences are common examples of their type.	This dump is a common example of its type.	This piggery does not display any uncommon, rare or endangered aspects of the local or NSW cultural history.	This shed does not display any uncommon, rare or endangered aspects of the local or NSW cultural history.
<i>Criterion (g) - Representative an item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places, or cultural or natural environments</i>	These fences are disconnected from their associated farming infrastructure and do not demonstrate any principal characteristics of this site type.	This dump is disconnected from its associated farming infrastructure and does not demonstrate any principal characteristics of this site type.	This outbuilding is disconnected from its associated farming infrastructure and does not demonstrate any principal characteristics of this site type.	This outbuilding is disconnected from its associated farming infrastructure and does not demonstrate any principal characteristics of this site type.
CONCLUSION:	These fences do not meet the criteria for State or local significance.	This dump does not meet the criteria for State or local significance.	This piggery ruin does not meet the criteria for State or local significance.	This farm shed ruin does not meet the criteria for State or local significance.

Table 12.3: Significance assessment of North Tralee historical features

Criteria	Tree Plantings (H4)	Shed Ruins (H5)
<i>Criterion (a) – Historical significance an item is important in the course, or pattern, of NSW’s cultural or natural history (or the cultural or natural history of the local area)</i>	Tree plantings are a common feature of rural properties, particularly around natural water features and residences. These plantings along Jerrabomberra Creek are not important to the cultural history of the local area or NSW.	Farm outbuildings such as these are common to rural properties in the region and are not important to the cultural history of the local area or NSW.
<i>Criterion (b) – Associative significance an item has strong or special association with the life or works of a person, or group of persons, of importance in</i>	The tree plantings have no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.	This outbuilding has no special association with the life or works of anyone of particular importance to the cultural history of the local area or NSW.

Criteria	Tree Plantings (H4)	Shed Ruins (H5)
<i>NSW's cultural or natural history (or the cultural or natural history of the local area)</i>		
<i>Criterion (c) – Aesthetic significance an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	While the tree plantings do add to the aesthetic appeal of the Jerrabomberra Creek area, they do not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.	This outbuilding does not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement.
<i>Criterion (d) – Social significance an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons</i>	The tree plantings do not have a strong or special association with any community or cultural group.	This outbuilding does not have a strong or special association with any community or cultural group.
<i>Criterion (e) – Research potential an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	The tree plantings have no research potential and can't contribute anything new to our understanding of the local or NSW cultural history.	This outbuilding has limited research potential and is unlikely to contribute anything new to our understanding of the local or NSW cultural history.
<i>Criterion (f) - Rarity an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	The tree plantings do not display any uncommon, rare or endangered aspects of the local or NSW cultural history.	This shed does not display any uncommon, rare or endangered aspects of the local or NSW cultural history.
<i>Criterion (g) - Representative an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments</i>	The tree plantings are disconnected from their associated farming infrastructure and do not demonstrate any principal characteristics of this site type.	This outbuilding is disconnected from its associated farming infrastructure and does not demonstrate any principal characteristics of this site type.
CONCLUSION:	The trees are of considerable age and may represent a form of land management or use practised at the location some time ago. However, they do not meet the criteria for State or local significance.	This farm shed ruin does not meet the criteria for State or local significance.

Table 12.4: Significance assessment of Environa and Regional Sports Complex historical features

Criteria	Environa Subdivision	The Lobbies Homestead	Stone Façade Building (H3)
<i>Criterion (a) – Historical significance an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	The layout of Environa is of significance as an example of Garden City Design concepts popular in the early 20th century, and for the marked influence of Burley Griffin's Canberra plan, notably in the curvilinear and radiating street patterns, the open space reserves and in the planning for community facilities.	A detailed assessment of The Lobbies homestead was not part of the scope of this report. Given its long association with the family of H.F. Halloran and its design links to the Environa Subdivision, it is likely to hold some heritage significance.	This building has historical significance to the local area as representing the early recreational activities that occurred in the sports field at this location.
<i>Criterion (b) – Associative significance an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	Environa is an example of the work of H.F. Halloran, active as a subdivision designer and surveyor in the Queanbeyan and Canberra district in the 1920s. It is the most ambitious of his numerous projects. These other projects include the extension of Tanilba House at Tanilba Bay, Port Stephens which has recognised State Heritage significance; and an elaborate stone wall to the west of Tanilba House and the Portal to the Peerless at Port Stephens, which have recognised local heritage significance.		This building was commissioned by H.F. Halloran, active as a subdivision designer and surveyor in the Queanbeyan and Canberra district in the 1920s.
<i>Criterion (c) – Aesthetic significance an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The structures which show physical evidence of the designer's intentions are not only interesting historically, they have a high degree of aesthetic value individually as well as collectively. These features include Parliamentary Boulevard (stone arch, pillars, rock garden and column), the urban park plantings, the bandstand, and the stone gateways with iron pillars.		This structure has aesthetic significance in its links to the similar features of the neighbouring Environa subdivision, built using stone from the surrounding area.
<i>Criterion (d) – Social significance an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons</i>	Environa does not have a strong or special association with any community or cultural group.		This building does not have a strong or special association with any community or cultural group.
<i>Criterion (e) – Research potential an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	Environa has limited research potential and is unlikely to contribute anything new to our understanding of the local or NSW cultural history.		This building has limited research potential and is unlikely to contribute anything new to our understanding of the local or NSW cultural history.

Criteria	Environa Subdivision	The Lobbies Homestead	Stone Façade Building (H3)
<i>Criterion (f) - Rarity an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)</i>	Unlike most paper subdivisions which failed to eventuate, Environa shows physical evidence of its designer's intentions which enable the tracing of the design on the ground today.		This building is rare as an example of the work commissioned by H.F. Halloran as it is the only one lined with brick.
<i>Criterion (g) - Representative an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments</i>	Environa is not important in demonstrating the principal characteristics of a class of cultural places, despite its Garden City Design concepts.		This building is not important in demonstrating the principal characteristics of a class of cultural places.
CONCLUSION:	Environa meets the criteria for local heritage significance due to its historical, associative, aesthetic, and rarity.	Undetermined.	Moderate local heritage significance due to its association with the structures in the adjacent Environa Urban Conservation Area.

12.2 Statement of Significance

Environa is a significant example of the work of H.F. Halloran, active as a subdivision designer and surveyor in the Queanbeyan and Canberra district in the 1920s. It is the most ambitious of his numerous projects, which include the extension of Tanilba House at Tanilba Bay, Port Stephens, an elaborate stone wall to the west of Tanilba House, and the Portal to the Peerless at Port Stephens. The layout of Environa is of significance as an example of Garden City Design concepts popular in the early 20th century, and for the marked influence of Burley Griffin's Canberra plan, notably in the curvilinear and radiating street patterns, the open space reserves and in the planning for community facilities. Unlike most paper subdivisions which failed to eventuate, Environa shows physical evidence of its designer's intentions which enable the tracing of the design on the ground today. The structures which show physical evidence of the designer's intentions are not only interesting historically, but they also have a high degree of aesthetic value individually as well as collectively. These features include Parliamentary Boulevard (stone arch, pillars, rock garden and column), the urban park plantings, the bandstand, and the stone gateways with iron pillars.

13. IMPACT ASSESSMENT

13.1 Proposed Master Plan

The draft Master Plan has been developed in consultation with industry, government and professional consultants to foster development that is sustainable and environmentally conscious.

The Draft Master Plan delineates land uses into the following sub precincts:

- Conservation;
- Education;
- Local Activity Centres;
- Local Business & Industry;
- Open Space;
- Residential;
- Rural Landscape; and
- Space, Defence & Technology.

Key to the design is the incorporation of large areas of land zoned conservation which provides opportunities to preserve intact natural and cultural heritage landscapes.

13.2 Potential Impacts

A summary of potential impacts to identified historical and Aboriginal heritage values has been developed based on the Investigation Area being fully developed under the proposed land zoning of the Master Plan and are summarised in *Table 13.1* and *Table 13.2*.

This impact has assumed that all land uses outside of conservation zones have a high potential for impact to sites to occur when they are located within these boundaries. Heritage sites located on the boundary of these landscapes and proposed development areas have been assessed to contain moderate potential to be impacted by either direct or indirect impacts associated with these land uses. Sites located within zones that will be developed are listed as having a high potential for impact due to the destructive nature of the proposed ground disturbance. Sites within conservation zones have been identified as containing low potential to be subject to impact based on the proposed land use of the Master Plan. It is noted that sites within these zones would need to be subject to management plans to ensure inadvertent impacts do not occur as part of vegetation management or other conservation activities.

The low, moderate and high scale is based on the proposed layout of the current Master Plan. Even if the South Jerrabomberra RJP is fully developed, the degree of impact could be mitigated by considerate siting of infrastructure and disturbance within each zone.

Table 13.1: Potential impacts to Aboriginal heritage associated with proposed Master Plan

Aboriginal heritage site	Master Plan Precinct	Developer Precinct	Potential for impact	Degree of Impact
57-2-0111	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0112	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0114	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value

Aboriginal heritage site	Master Plan Precinct	Developer Precinct	Potential for impact	Degree of Impact
57-2-0116	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0120	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0338	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0340 57-2-0345 (same site)	Open Space	Poplars – Grassland reserve	Low	Potentially no loss of value
57-2-0341	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0342	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0343	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0346	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0347	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0474	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0475	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0476	Space, Defence & Technology	Poplars - Innovation Precinct	High	Total loss of value
57-2-0974	Conservation	Poplars – Grassland reserve	Low	Potentially no loss of value
57-2-0976	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0978	Conservation	Poplars - Grassland reserve	Low	Potentially no loss of value
57-2-0115	Education	High School	High	Total loss of value (already addressed)
57-2-0977	Education	High School	High	Total loss of value (already addressed)
57-2-0802	Local Activity Centres	Environa	High	Total loss of value
57-2-0829	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0830	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0831	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0832	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0833	Rural Landscape	Environa	Low	Potentially no loss of value

Aboriginal heritage site	Master Plan Precinct	Developer Precinct	Potential for impact	Degree of Impact
57-2-0834	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0835	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0848	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0849	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0850	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0851	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0852	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0853	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0854	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0855	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0856	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0857	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0858	Rural Landscape	Environa	Low	Potentially no loss of value
57-2-0859	Local Activity Centres	Environa	High	Total loss of value
57-2-0860	Local Business & Industry	Environa	High	Total loss of value
57-2-0861	Local Business & Industry	Environa	High	Total loss of value
57-2-0337	Open Space	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0667	Open Space	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0668	Open Space	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0669	Local Activity Centres	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0670	Local Activity Centres	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0671	Residential	Village - Residential Area Stage 1	N/A	Already destroyed
57-2-0912	Residential	Village - Residential Area Stage 1	N/A	Already destroyed

Aboriginal heritage site	Master Plan Precinct	Developer Precinct	Potential for impact	Degree of Impact
57-2-0915	Open Space	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0916	Open Space	Village - Residential Area Stage 1 Buffer	High	Already destroyed (still valid in AHIMS)
57-2-0934	Open Space	Village - Residential Area Stage 1 Buffer	High	Already destroyed (still valid in AHIMS)
57-2-0935	Residential	Village - Residential Area Stage 1	High	Already destroyed (still valid in AHIMS)
57-2-1079	Local Activity Centres	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-1080	Local Business & Industry	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-1082	Local Activity Centres	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-1110	Residential	Village - Residential Area Stage 1	N/A	Already destroyed
57-2-1111	Open Space	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-1112	Local Activity Centres	Village - Residential Area Stage 1 Buffer	N/A	Already destroyed
57-2-0803	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0804	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0805	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0807	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0808	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0809	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0810	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0811	Open Space	Village - Residential Area Stage 2 Buffer	Low	Potentially no loss of value
57-2-0812	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0813	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0814	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0815	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0899	Open Space	Village - Residential Area Stage 2 Buffer	Low	Potentially no loss of value
57-2-0900	Open Space	Village - Residential Area Stage 2 Buffer	Low	Potentially no loss of value

Aboriginal heritage site	Master Plan Precinct	Developer Precinct	Potential for impact	Degree of Impact
57-2-0903	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0904	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0905	Residential	Village - Residential Area Stage 2	High	Total loss of value (yet to be addressed)
57-2-1148	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-1149	Open Space	Village - Residential Area Stage 2	Low	Potentially no loss of value
57-2-1150	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-1151	Residential	Village - Residential Area Stage 2	High	Total loss of value (already addressed)
57-2-0806	Conservation	Village - Residential Offset	Low	Potentially no loss of value
57-2-0901	Conservation	Village - Residential Offset	Low	Potentially no loss of value
57-2-0913	Conservation	Village - Residential Offset	Low	Potentially no loss of value
57-2-0914	Open Space	Village - Residential Offset	Low	Potentially no loss of value

Table 13.2: Potential impacts to historic heritage associated with proposed Master Plan

Historic heritage feature	Master Plan Precinct	Developer Precinct	Potential for impact	Potential for heritage value enhancement (reuse, interpretation etc.)
Old Fence (PHS3)	Conservation	Poplars - Grassland Reserve	None	No heritage value
Old Fence (PHS7)	Space, Defence & Technology	Poplars - Innovation Precinct	High	No heritage value
Garbage Dump (PHS8)	Conservation	Poplars - Grassland Reserve	None	No heritage value
Platoon Defence Position (PHS6)	Conservation	Poplars - Grassland Reserve	None	No heritage value
Piggery Ruin (PHS5)	Space, Defence & Technology	Poplars - Innovation Precinct	High	No heritage value
Old Fence (PHS4)	Open Space	Poplars – Grassland	None	No heritage value
Farm Shed Ruin (PHS2)	Conservation	Poplars - Grassland	None	No heritage value
Tree Plantings (H4)	Conservation	North Tralee	None	No heritage value
Shed Ruins (H5)	Conservation	North Tralee	None	Low
Stone Façade Building (H3)	Open Space	Regional Sports Complex	High (already been addressed)	High (already been addressed)

Historic heritage feature	Master Plan Precinct	Developer Precinct	Potential for impact	Potential for heritage value enhancement (reuse, interpretation etc.)
Environa Subdivision	Local Activity Centres / Local Business & Industry / Rural Landscape	Environa	High	High
The Lobbies Homestead	Rural Landscape	Environa	None	Moderate
Indeterminate Feature (SJ9)	Residential	Residential Area Stage 2	High	No heritage value

13.3 Ecological Sustainable Development Principles

In accordance with the ACHAR Guide, Ecologically Sustainable Development (ESD) principles have been considered in the preparation of this CHAR including options to avoid impacts to Aboriginal and historic cultural heritage values.

The ESD principles as relevant to Aboriginal and historic cultural heritage when considered in the context of the preparation of the current Master Plan are summarised below.

13.3.1 The Precautionary Principle

The precautionary principle states that lack of full scientific certainty about the threat of harm should never be used as a reason for not taking measures to prevent harm from occurring. The current assessment has included detailed heritage investigation incorporating review of former studies, in depth field surveys and the identification of areas of heritage constraint which would require further investigation in order to ensure scientific certainty.

13.3.2 The Principle of Intergenerational Equity

The principle of inter-generational equity holds that the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations.

Heritage values have formed a key assessment criterion in the development of the current Master Plan which has included the incorporation of significant conservation areas aimed at preserving identified biodiversity and heritage values.

The completion of the current detailed assessment at the Master Plan stage has resulted in the development of a uniform and detailed understanding of the precinct which will enable an accurate insight into potential heritage impacts at a precinct level. This will allow for appropriate management of the cumulative impacts to heritage associated with the precinct ensuring that appropriate management and mitigation strategies can be developed as part of future development stages.

13.4 Cumulative Impacts

The ACHAR guide identifies that a consideration of the ESD principles should include an understanding of the cumulative impacts of the proposal in relation to other identified sites in the region.

‘Cumulative impacts are a result of incremental, sustained and combined effects of human action and natural variations over time and can be both positive and negative.

They can be caused by the compounding effects of a single project or multiple projects in an area, and by the accumulation of effects from past, current and future activities as they arise’ (DPIE 2021).

As the Investigation Area does contain Aboriginal Objects or Aboriginal Places, there **is** cumulative impacts associated with the proposal to these elements.

It is acknowledged that continued development across Jerrabomberra has the potential to result in a cumulative impact to the cultural values of the local area. Consultation undertaken for the project noted that the Investigation Area was part of a moderately culturally significant landscape which contains the Jerrabomberra creek line. While the proposed development is considered unlikely to reduce the significance of this cultural landscape, measures to recognise the cultural significance of the Investigation Area and wider cultural landscape as part of the proposed development are detailed in *Section 14*.

14. SUMMARY AND RECOMMENDATIONS

14.1 Aboriginal Heritage

- A total of 85 previously registered Aboriginal sites are within the Investigation Area. Reassessment of the current status of these has identified that:
 - 14 sites have been noted as destroyed;
 - One additional record is noted as deleted; and
 - Three additional records have been determined to not be a site (57-2-0666, 57-2-0975 and 57-2-1127).
- One new Aboriginal site was identified during the survey within the Investigation Area;
- A total of 24 areas of Aboriginal PAD with associated artefacts, and a total of 4 areas of Aboriginal PAD (no artefacts) have been previously identified across the Investigation Area; and
- Based on the current Master Plan and the proposed associated land use, partial to total impact is likely for 29 of the 85 Aboriginal heritage features with proposed land uses of the Master Plan. It is noted that this figure assumes full development of all lands within the footprint of developable (non-conservation) lands. Mechanisms to promote reduction of these impacts have been incorporated into *Section 14.1.1* and *14.1.2* below.

14.1.1 Aboriginal Heritage Sensitivity Mapping

For the purposes of future planning controls, the Investigation Area has been delineated into zones of low, moderate and high Aboriginal heritage sensitivity (*Figure 14.1*). This zoning has been developed to guide suitable Aboriginal heritage assessment processes to be undertaken as part of future development applications. This delineation is based on the results of predictive modelling as well as the archaeological survey completed as part of this and previous assessments.

- Areas of high archaeological sensitivity include landscapes identified as areas of PAD, land within 100 m of existing watercourses and land within 50 m of identified Aboriginal heritage sites. This land should be prioritised for conservation either through the Master Planning process or through proposed future developments. Any development applications with boundaries which overlap with these areas should be supported by an ACHAR and Cultural Heritage Management Plan which details measures to manage and preserve Aboriginal cultural heritage values.
- Areas of moderate archaeological sensitivity include land which has not been identified to be subject to extensive previous disturbance but does not contain areas of known heritage values or PAD. Development applications within these footprints should be supported by either an ACHAR or a due diligence assessment (for previously surveyed areas, existing reports would be sufficient). They should also include a review of the AHIMS database to confirm that the assessment of potential of the current report remains consistent with the known Aboriginal heritage record. Should an updated AHIMS search identify newly recorded Aboriginal heritage sites within an area of moderate archaeological potential, a new ACHAR should be prepared to support the development application.
- Areas of low archaeological sensitivity have been identified to be located within either highly disturbed landscapes or in landscapes (such a steep slopes) which have not been assessed to be conducive to the survivability of Aboriginal archaeological deposits. These areas have not been identified to contain any known Aboriginal or potential Aboriginal heritage sites. Development applications within these boundaries should include a review of the AHIMS database to confirm that the assessment of potential of the current report remains consistent with the known Aboriginal heritage record. Should an updated AHIMS search identify newly recorded Aboriginal heritage sites within an area of low archaeological potential, a new ACHAR should be prepared to support the development application.

14.1.2 Aboriginal Heritage Recommendations

- Additional heritage survey of un-surveyed lots within the Investigation Area would be required should any development be proposed on these lots.
- Site updates should be submitted for the AHIMS sites which have been assessed to have been destroyed by former works.
- Preservation and management of Aboriginal sites and heritage values should form a key objective of future development controls.
- Investigation of opportunities to preserve and protect Aboriginal sites should be prioritised as part of future development applications. Where future development applications identify mechanisms to preserve Aboriginal heritage values within their development, these areas should be subject to a cultural heritage management plan which would be valid throughout both construction and operational phases of future development.
- Future development should be encouraged to incorporate mechanisms to acknowledge and integrate Aboriginal cultural heritage values into design and development. Mechanisms to incorporate this may include:
 - The incorporation of Aboriginal knowledge and native plantings into the development of landscaping designs;
 - The utilisation of Ngunnawal language in the naming of places and buildings within future development; and
 - The incorporation of Aboriginal art and design into future development.
- A management policy should be developed for conservation areas which overlap with identified heritage constraints. The management policy could form a component of an overall cultural heritage management plan for the precinct or form a standalone document. The management policy should detail:
 - The location of identified heritage values and areas of potential archaeological deposit within identified conservation lands.
 - Procedures for vegetation and land use management to ensure impact to known or potential archaeological deposits does not occur.
 - Procedures for further assessment and heritage approvals should the potential for future impacts be identified as part of conservation works.
- Areas of PAD which may be subject to harm as part of proposed land uses should be subject to archaeological test excavation. The results of archaeological test excavation and feedback received during consultation with the Aboriginal community in accordance with the consultation requirements should be considered as part of the assessment of any future development applications.
- An AHIP will be required to harm sites which remain valid and are not currently subject to an AHIP. An AHIP application would need to be supported by an ACHAR.

Figure 14.1 Aboriginal Heritage Sensitivity

[Figure removed from Public Display]

14.2 Historic Heritage

- No registered historic heritage items are located within the Investigation Area;
- One item (with associated features) is considered to have local heritage significance:
 - Environa (subdivision built features, Lobbies Homestead, and stone façade building in adjoining Lot).
- One area of private property on the eastern side of the Investigation Area has not been assessed for heritage values, but contains a homestead complex with potential for built and archaeological values; and
- Based on the current Master Plan there is potential (but currently unknown) negative impact to the Environa subdivision and Lobbies Homestead, and positive impact to the stone façade building.

14.2.1 Historic Heritage Recommendations

- Additional heritage survey of un-surveyed lots within the Investigation area will be required to confirm the status of sites unable to be accessed as part of the current assessment, should development be proposed on these lots.
- Any areas identified in future surveys as having historic archaeological potential must be subject to a detailed historic archaeological assessment and archaeological research design prior to impacts.
- Further investigation and later impact may need to be supported by heritage permits or exceptions under the *Heritage Act 1977 (NSW)*.

15. MITIGATION AND MANAGEMENT MEASURES

Based on the results of this HACHAR, it is known that Aboriginal Cultural Heritage objects and historic heritage items occur within the South Jerrabomberra RJP Investigation Area. The following recommendations have therefore been developed to provide guidance in future works within the Investigation Area.

15.1 Conservation and Protection

Conservation is the first option which should be considered wherever possible and is suitable for all sites. Conservation includes the processes of looking after a site or place so as to retain its cultural significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

15.2 Heritage Management Plan

A Heritage Management Plan (HMP) could be developed to manage cultural heritage within the entirety of the Investigation Area. The HMP would provide consistent guidance for the management of cultural heritage within the development areas both during construction activities and into the future. The HMP outlines the legislative context of the project in respect to heritage and the Aboriginal consultation which has been undertaken and would continue through the life of the project. For the practical management of cultural heritage, a clear outline of roles and responsibilities would also be provided along with operational flow charts to be used by Land Managers and contractors who may need to access, or conduct works, within the Investigation Area. The HMP would be produced in consultation with the RAPs that have expressed an interest in the project. Details of the recommendations below would be captured in the HMP.

15.3 Cultural Heritage Awareness Induction

All personnel and contractors involved with construction activities within the Investigation Area should undertake a cultural heritage awareness induction. The induction should include:

- A summary of the cultural heritage values of the Investigation Area and surrounds;
- Guidance on the identification of potential Aboriginal objects and historic heritage finds; and
- A summary of the Chance Finds Procedure.

The induction should include input from the RAPs.

15.4 Chance Finds Procedure

If suspected unrecorded Aboriginal heritage objects or historic heritage items are found during future works, the following Chance Find Procedure should be followed:

- All activity in the immediate area should cease and the location should be cordoned off with visible flagging. Flagging should be placed at a 10 m radius surrounding the find and an appropriately qualified heritage professional should be consulted;
- Heritage NSW should be immediately contacted;
- The RAPs should be notified (potential Aboriginal objects only);
- An appropriately qualified heritage professional should record the location and attributes of the heritage feature and determine the significance of the find; and
- Works will only recommence once the area has been cleared by further assessment and heritage permits (where required).

In the event of the discovery of human skeletal material (or suspected human skeletal material) during project activities in the Investigation Area the following steps should be followed:

- All activity in the immediate area should cease and the location should be cordoned off with visible flagging. Flagging should be placed at a 10 m radius surrounding the find;
- The NSW Police must be contacted along with Heritage NSW; and
- Any sand/soils removed from the near vicinity of the find must be identified and set aside for assessment by the investigating authorities. No further excavation is to be undertaken until the area has been assessed, cleared, and any relevant permits granted.

15.5 Cultural Acknowledgement and Signage

It is recommended that mechanisms to acknowledge Aboriginal cultural values and history of the Investigation Area should be incorporated into ongoing operations of the Master Plan.

Potential mechanisms to achieve this may include:

- The placement of a cultural acknowledgement within a publicly accessible area of the overall Jerrabomberra facilities;
- Incorporating a summary of Aboriginal cultural values into on-boarding documentation for staff employed during operational phases of the project;
- The utilisation of Ngunnawal language in the naming of places and buildings within future development; and
- The incorporation of Aboriginal art and design into future development.

15.6 Future Development and Design Principles

The heritage values identified within the Investigation Area contribute to the character of the region, and there is opportunity within future development to incorporate and enhance these character values through considered design. The following guidance has been taken from various NSW Government design policies and guidelines, primarily:

- DPIE (2021) Explanation of Intended Effect for a Design and Place SEPP;
- Government Architect NSW (2017) Better Placed: An Integrated Design Policy for the Built Environment of New South Wales;
- Government Architect NSW (2019) Better Placed – Design Guide for Heritage: Implementing the Better Placed Policy for Heritage Buildings, Sites, and Precincts;
- Government Architect NSW (2020) Design Guide – Urban Design for Regional NSW: A Guide for Creating Healthy Built Environments in Regional NSW; and
- Government Architect NSW (2020) Better Placed - Draft Connecting with Country: A Draft Framework for Understanding the Value of Aboriginal Knowledge in the Design and Planning of Places.

Good design can contribute to sustainably managing culture and heritage through an awareness and response to heritage, character, culture and Country. It can also enhance a sense of place and reinforce local identity to support a sense of community and belonging and provides opportunities for future generations to learn and benefit from shared values.

Good design will identify heritage assets and respond to their attributes, meaning, and context. It will enable heritage assets to have ongoing, viable futures that respond to the contemporary needs of clients, users, and the community. It will encourage economic activity and increase tourism by creating distinct and attractive places for businesses to trade and invest, and for people to visit.

Future design should also take into account the strategic goals of the NSW Government's Connecting with Country framework which is currently under development.

The ambition of this framework is that everyone who is involved in delivering government projects will adopt the following commitment: *“through our projects, we commit to helping support the health and wellbeing of Country by valuing, respecting, and being guided by Aboriginal people, who know that if we care for Country – it will care for us”*.

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APPENDIX A CONSULTATION LOG

Consultation Log – Regional Jobs Precinct South Jerrabomberra

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
Agency Letters Out						
2/12/2021	Email	To whom it may concern	Heritage NSW	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Email	To whom it may concern	Ngambri LALC	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Email	To whom it may concern	NTS Corp	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Email	To whom it may concern	Office of the Registrar	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Email	To whom it may concern	QPRC	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Email	To whom it may concern	South East LLS	Elspeth Mackenzie	ERM	Request for stakeholder details
2/12/2021	Website	N/A	NT Tribunal	Elspeth Mackenzie	ERM	Search for NT claims or determinations, and ILUAs - none
Agency Letters In						
6/12/2021	Email	Elspeth Mackenzie	ERM	Dan Clegg	Heritage NSW	Provided list of 51 potential RAPs
9/12/2021	Email	Elspeth Mackenzie	ERM	Conor Wakefield	NTS Corp	Provided contact details for one RAP
Advert						
7/12/2021	Online	Queanbeyan Age & Canberra Chronical	Stakeholders	Elspeth Mackenzie	ERM	Invitation for registration of interest
Invitation to register						
17/12/2021	Email	Adrian & Maree Moore		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Karia Lea Bond	Badu	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Simalene Carriage	Bilinga	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Wally Bell	Buru Ngunawal Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Clive Freeman		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Clorine Lyons		Elspeth Mackenzie	ERM	Invitation for registration of interest - could not be delivered
17/12/2021	Email	Marilyn Carroll-Johnson	Corroboree Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Lillie Carroll	Didge Ngunawal Clan	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Ellen Mundy		Elspeth Mackenzie	ERM	Invitation for registration of interest

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
17/12/2021	Email	Gordon Campbell	Gadhu Dreaming	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Krystle Carroll	Ginninderra Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Basil Smith	Goobah Development Pty Ltd	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Caine Carroll	Goodradignee Cultural & Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Kylie Ann Bell	Gunyuu	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Janine Thompson		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Jodie Stewart	Jerringong	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	John Dixon		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Rebecca Ingram	Karlari Ngunnawal Pajong Wallabalooa Descendants	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Karrial Johnson		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Robert Young	Konanggo Aboriginal Cultural Heritage Service	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Antoinette House	Little Gudenby River Tribal Council	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Shaun Carroll	Merrigarn Indigenous Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Kaya Dawn Bell	Munyunga	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Phillip Carroll	Mura Indigenous Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest - could not be delivered
17/12/2021	Email	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Darleen Johnson	Murri Bidgee Mullangari Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
17/12/2021	Email	Mark Henry	Murrumbul	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Peiro Delponte	Ngunawal Consultancy	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Dorothy Campbell & Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Arnold Williams	Ngunawal Elders Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Robert Monaghan	Ngurambang	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Noel Butler		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Newton Carriag	Nundagurri Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Sonia Shea	Oak Hill Enterprise	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Pemulwuy Johnson		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	John Carriage	Thoorga Nura	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Tyronne Bell	Thunderstone Aboriginal Cultural & Land Management Services Aboriginal Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Tina Brown		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Hika Te Kowhai	Walbunja	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Ronald Stewart	Walgalu	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Hayley Bell	Wingikara	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Lee-Roy Boota	Wullung	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Email	Robert Parsons	Yerramurra	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail		Batemans Bay LALC	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Clorine Lyons		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Colleen Dixon		Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Lavinus Ingram	Kalari Ngunawal Descendants	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Matilda House		Elspeth Mackenzie	ERM	Invitation for registration of interest

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
17/12/2021	Mail	Phillip Carroll	Mura Indigenous Corporation	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Matthew Glass	Ngunnawal Pajong Wallabalooa Descendants	Elspeth Mackenzie	ERM	Invitation for registration of interest
17/12/2021	Mail	Thomas Brown		Elspeth Mackenzie	ERM	Invitation for registration of interest
Registration of Interest from advert or letter						
6/12/2021	Email	Elspeth Mackenzie	ERM	Trisha Williams	Ngambri LALC	Registered for project
9/12/2021	Email	Elspeth Mackenzie via Conor Wakefield	ERM via NTS Corp	John Dixon		Registered for project
17/12/2021	Email	Elspeth Mackenzie	ERM	Clive Freeman		Registered for project
17/12/2021	Email	Elspeth Mackenzie	ERM	Paul Boyd & Lilly Carroll	DNC	Registered for project
17/12/21	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Registered for project
17/12/2021	Email	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjee Wong Cultural Heritage Aboriginal Corporation	Registered for project
20/12/2021	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murri Bidgee Mullangari Aboriginal Corporation	Registered for project
22/12/2021	Email	Elspeth Mackenzie	ERM	John Dixon	Djirringanj Elders Federation	Registered for project again
1/01/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Registered for project
3/01/2022	Email	Elspeth Mackenzie	ERM	Shaun Carroll	Merrigarn Indigenous Corporation	Registered for project

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
5/01/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Service	Registered for project again
11/01/2022	Email	Elspeth Mackenzie	ERM	Tyronne Bell	Thunderstone Aboriginal Cultural Services	Registered for program – does not wish details supplied (after date advised)
14/01/2022	Email	Elspeth Mackenzie	ERM	Adrian Brown		Registered for project (after date advised)
28/01/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Registered for project (after date advised)

Section 4.1.6 Letter

22/02/2022	Email	Trisha Williams	Ngambri LALC	Elspeth Mackenzie	ERM	Notification of registrations
22/02/2022	Email		Heritage NSW	Elspeth Mackenzie	ERM	Notification of registrations

Comments on Project Methodology

18/02/2022	Email	All RAPs (twelve)		Elspeth Mackenzie	ERM	Provided project information and draft ACHA methodology for comment
18/02/2022	Email	Elspeth Mackenzie	ERM	Paul Boyd & Lilly Carroll	DNC	Confirmed acceptance of methodology and described available site officers
19/02/2022	Email	Elspeth Mackenzie	ERM	John Dixon	Djirringanj Elders Federation	Confirmed acceptance of methodology and provided information on Ngarigo people of area
19/02/2022	Email	Elspeth Mackenzie	ERM	Cheryl Carroll Lagerway	Gunjeewong Cultural Heritage Aboriginal Corporation	Introduced herself (mother of Shayne)
20/02/2022	Email	Elspeth Mackenzie	ERM	Shaun Carroll	Merrigarn Indigenous Corporation	Confirmed acceptance of methodology
22/02/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Confirmed acceptance of methodology and interest in further assessment
23/02/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage	Confirmed acceptance of methodology

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
					Indigenous Corporation	
08/03/2022	Email	All RAPs (twelve)		Elspeth Mackenzie	ERM	Proposed tentative fieldwork dates and fees and requested confirmation of interest in involvement and information regarding insurances
08/03/2022	Email	Elspeth Mackenzie	ERM	Paul Boyd & Lilly Carroll	DNC	Confirmed interest and availability for fieldwork and provided insurance details
08/03/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Confirmed interest and availability for fieldwork and promised to provide insurance details – provided 09/03/2022
08/03/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Confirmed acceptance of methodology, interest and availability for fieldwork, and provided insurance details
08/03/2022	Email	Elspeth Mackenzie	ERM	Shaun Carroll	Merrigarn Indigenous Corporation	Confirmed interest and availability for fieldwork and provided insurance details
08/03/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murri Bidgee Mullangari Aboriginal Corporation	Confirmed interest and availability for fieldwork and provided insurance details – also confirmed acceptance of methodology 09/03/2022
08/03/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Confirmed interest and availability for fieldwork and provided insurance details
08/03/2022	Email	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Confirmed interest and availability for fieldwork and provided insurance details
15/03/2022	Email/ Phone	Elspeth Mackenzie	ERM	Tyronne Bell	Thunderstone Aboriginal Cultural Services	Requested to know if still possible to participate in fieldwork
15/03/2022	Email/ Phone	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Email and call to discuss fieldwork dates and arrangements

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
15/03/2022	Phone	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Call to discuss fieldwork dates
15/03/2022	Email/ Phone	Elspeth Mackenzie	ERM	Adrian Brown		Email and call to discuss interest in fieldwork
16/03/2022	Email	RAPs interested in fieldwork (nine)		Elspeth Mackenzie	ERM	Provided fieldwork information
16/03/2022	Email	Elspeth Mackenzie	ERM	Paul Boyd & Lilly Carroll	DNC	Confirmed availability for roster
16/03/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Confirmed availability for roster – Robert & mother Pamela
16/03/2022	Email	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Confirmed availability for roster – Kenny Dickson
16/03/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Confirmed availability for roster
16/03/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murri Bidgee Mullangari Aboriginal Corporation	Confirmed availability for roster – later requested a change of days. This was accommodated by sending a request to another RAP who agreed to change days.
16/03/2022	Email	Elspeth Mackenzie	ERM	Tyronne Bell	Thunderstone Aboriginal Cultural Services	Confirmed availability for roster
17/03/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Confirmed availability for roster – Graeme Dobson
17/03/2022	Email	Elspeth Mackenzie	ERM	Marilyn Carroll-Johnson	Corroboree Aboriginal Corporation	A number of emails back-and-forth starting 17/03/2022 regarding registration for the project, however no record of such registration found by ERM. ERM agreed on 29/03/2022 to provide copy of the draft report for comment.

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
21/03/2022	Email	Elspeth Mackenzie	ERM	Trisha Williams	Ngambri LALC	Requested to know if still able to attend fieldwork – was offered one day
22/03/2022 – 24/03/2022	Face to face	RAPs		Elspeth Mackenzie Lorien Perchard	ERM	Fieldwork
24/03/2022	Text	Elspeth Mackenzie	ERM	Tyronne Bell	Thunderstone Aboriginal Cultural Services	Advised he was unwell and wouldn't be able to participate in fieldwork
24/03/2022	Text	Adrian Brown		Elspeth Mackenzie	ERM	Request if still attending fieldwork – received no response
24/03/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Provided invoice for fieldwork – ERM responded following day to request change to proponent's details
24/03/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murri Bidgee Mullangari Aboriginal Corporation	Provided invoice for fieldwork – ERM responded following day to request change to proponent's details and offer
25/03/2022	Email	Dean Delponte	Ngunawal Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Paul Boyd & Lilly Carroll	DNC	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Shaun Carroll	Merrigarn Indigenous Corporation	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Trisha Williams	Ngambri LALC	Elspeth Mackenzie	ERM	Provided invoicing details for fieldwork
25/03/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Provided thanks for fieldwork, and subsequently invoices
25/03/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murra Bidgee Mullangari	Provided updated invoice

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
					Aboriginal Corporation	
25/03/2022	Email	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Provided invoice
25/03/2022	Email	Elspeth Mackenzie	ERM	Shaun Carroll	Merrigarn Indigenous Corporation	Provided invoice
25/03/2022	Email	Elspeth Mackenzie	ERM	Paul Boyd & Lilly Carroll	DNC	Provided invoice
28/03/2022	Email	Elspeth Mackenzie	ERM	John Dixon	Djirringanj Elders Federation	Requested update on project – updated was provided
28/03/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation (Mundawari Heritage Consultants)	Provided invoice
29/03/2022	Email	Elspeth Mackenzie	ERM	Jesse Johnson	Muragadi Heritage Indigenous Corporation	Provided updated invoice
31/03/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Provided updated invoice
31/03/2022	Email	Elspeth Mackenzie	ERM	Jim Andriopoulos	Ngambri LALC	Provided updated invoice
1/04/2022	Email	Elspeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation (Mundawari Heritage Consultants)	Requested minor revisions to details on invoice. Dean provided updated invoice and email of thanks and received back a confirmation email that it had been sent onto Regional NSW

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
12/04/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Provided updated invoice and email of thanks
12/04/2022	Email	Trisha Williams Jim Andriopoulos	Ngambri LALC	Elspeth Mackenzie	ERM	Requested minor revisions to details on invoice. Jim provided updated invoice.
12/04/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Provided an amended invoice and thanks for the project. Received a response that the invoice had already been corrected and passed onto Regional NSW and that processing was underway
15/04/2022	Email	Elspeth Mackenzie	ERM	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Notification of overdue invoice for payment
19/04/2022	Phone + email	Elspeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Requested update on payment of invoice
19/04/2022	Email	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Elspeth Mackenzie	ERM	Passed on details provided by Regional NSW on status of invoice processing
21/04/2022	Phone + email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Requested update on payment of invoice
22/04/2022	Phone + email	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Elspeth Mackenzie	ERM	Passed on details provided by Regional NSW on status of invoice processing
24/04/2022	Email	Elspeth Mackenzie	ERM	Robert Young	Konanggo Aboriginal Cultural Heritage Services	Confirmed receipt of payment of invoice
4/05/2022	Phone + email	Elspeth Mackenzie	ERM	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Requested update on payment of invoice
Comments on Draft Report						
14/09/2022	Email	All RAPs (twelve)		Elspeth Mackenzie	ERM	Provided draft copy of report for review and requested comments by 13 th October

Date	Method	Addressee	Organisation	Sender	Sender Organisation	Details
14/09/2022	Email	Marilyn Carroll-Johnson	Corroboree Aboriginal Corporation	Elsbeth Mackenzie	ERM	Provided draft copy of report for review and requested comments by 13 th October
14/09/2022	Email	Elsbeth Mackenzie	ERM	John Dixon	Djirringanj Elders Federation	Responded with only comment being disappointment at not being included in survey
17/09/2022	Email	Elsbeth Mackenzie	ERM	Shayne Dickson	Gunjeewong Cultural Heritage Aboriginal Corporation	Responded that has no further comment
30/09/2022	Email	Elsbeth Mackenzie	ERM	Darleen Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Responded that endorse the recommendations made
01/10/2022	Email	Elsbeth Mackenzie	ERM	Dean Delponte	Ngunawal Heritage Aboriginal Corporation (Mundawari Heritage Consultants)	Responded that support the recommendations made and thanked ERM and NSW Government for the consultation

APPENDIX B CONSULTATION DOCUMENTS

[Removed from Public Display]

APPENDIX C AHIMS SEARCH RESULTS

[Removed from Public Display]

APPENDIX D HERITAGE THEMES

AUSTRALIAN HISTORIC THEMES FRAMEWORK

KEY

Theme Groups (1-9)

Themes (2.1, 2.2, ...)

2

PEOPLING AUSTRALIA

This theme group recognises the pre-colonial occupations of Indigenous people, as well as the ongoing history of human occupation from diverse areas.

- 2.1** Living as Australia's earliest inhabitants
- 2.2** Adapting to diverse environments
- 2.3** Coming to Australia as a punishment
- 2.4** Migrating
 - 2.4.1 Migrating to save or preserve a way of life
 - 2.4.2 Migrating to seek opportunity
 - 2.4.3 Migrating to escape oppression
 - 2.4.4 Migrating through organised colonisation
 - 2.4.5 Changing the face of rural and urban Australia through migration

Examples of sub-themes.
Others may be added
to suit particular regions

1



TRACING THE EVOLUTION OF THE AUSTRALIAN ENVIRONMENT

The environment exists apart from being a construct of human consciousness. However, a thematic approach recognises the human factor in the natural environment, and how our understanding and appreciation of the environment has changed over time.

- 1.1 Tracing climatic and topographical change
- 1.2 Tracing the emergence of Australian plants and animals
- 1.3 Assessing scientifically diverse environments
- 1.4 Appreciating the natural wonders of Australia

2



PEOPLING AUSTRALIA

This theme group recognises the pre-colonial occupations of Indigenous people, as well as the ongoing history of human occupation from diverse areas.

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 - 2.4.2 Migrating to seek opportunity
 - 2.4.3 Migrating to escape oppression
 - 2.4.4 Migrating through organised colonisation
 - 2.4.5 Changing the face of rural and urban Australia through migration
- 2.5 Promoting settlement
- 2.6 Fighting for land
 - 2.6.1 Resisting the advent of Europeans and their animals
 - 2.6.2 Displacing Indigenous people

3



DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

While Geoffrey Blainey conceived of Australian history as dominated by the 'tyranny of distance' this concept is alien to Indigenous Australians. Eighteenth and nineteenth century developments in technology made it possible to link the continent to distant marketplaces, and the incentive for almost every expedition by the first European 'explorers' was the search for valuable resources. Much subsequent Australian history has revolved around the search for a staple on which to base regional economic development.

- 3.1 Exploring the coastline
- 3.2 Constructing capital city economies
- 3.3 Surveying the continent
 - 3.3.1 Looking for inland seas and waterways
 - 3.3.2 Looking for overland stock routes
 - 3.3.3 Prospecting for precious metals
 - 3.3.4 Looking for land with agricultural potential
 - 3.3.5 Laying out boundaries
- 3.4 Utilising natural resources
 - 3.4.1 Hunting
 - 3.4.2 Fishing and whaling
 - 3.4.3 Mining
 - 3.4.4 Making forests into a saleable resource
 - 3.4.5 Tapping natural energy sources
- 3.5 Developing primary production
 - 3.5.1 Grazing stock
 - 3.5.2 Breeding animals
 - 3.5.3 Developing agricultural industries
- 3.6 Recruiting labour
- 3.7 Establishing communications
 - 3.7.1 Establishing postal services
 - 3.7.2 Developing electric means of communication
- 3.8 Moving goods and people
 - 3.8.1 Shipping to and from Australian ports
 - 3.8.2 Safeguarding Australian products for long journeys
 - 3.8.3 Developing harbour facilities
 - 3.8.4 Making economic use of inland waterways
 - 3.8.5 Moving goods and people on land
 - 3.8.6 Building and maintaining railways
 - 3.8.7 Building and maintaining roads
 - 3.8.8 Getting fuel to engines
 - 3.8.9 Moving goods and people by air
- 3.9 Farming for commercial profit
- 3.10 Integrating people into the cash economy
 - 3.10.1 Assisting Indigenous people into the cash economy
 - 3.10.2 Encouraging women into employment
 - 3.10.3 Encouraging fringe and alternative businesses
- 3.11 Altering the environment
 - 3.11.1 Regulating waterways
 - 3.11.2 Reclaiming land
 - 3.11.3 Irrigating land
 - 3.11.4 Clearing vegetation
 - 3.11.5 Establishing water supplies
- 3.12 Feeding people
 - 3.12.1 Using indigenous foodstuffs
 - 3.12.2 Developing sources of fresh local produce
 - 3.12.3 Importing foodstuffs
 - 3.12.4 Preserving food and beverages
 - 3.12.5 Retailing foods and beverages
- 3.13 Developing an Australian manufacturing capacity
- 3.14 Developing an Australian engineering and construction industry
 - 3.14.1 Building to suit Australian conditions
 - 3.14.2 Using Australian materials in construction
- 3.15 Developing economic links outside Australia
- 3.16 Struggling with remoteness, hardship and failure
 - 3.16.1 Dealing with hazards and disasters
- 3.17 Inventing devices
- 3.18 Financing Australia
 - 3.18.1 Raising capital
 - 3.18.2 Banking and lending
 - 3.18.3 Insuring against risk
 - 3.18.4 Cooperating to raise capital (co-ops, building societies, etc.)
- 3.19 Marketing and retailing
- 3.20 Informing Australians
 - 3.20.1 Making, printing and distributing newspapers
 - 3.20.2 Broadcasting
- 3.21 Entertaining for profit
- 3.22 Lodging people
- 3.23 Catering for tourists
- 3.24 Selling companionship and sexual services
- 3.25 Adorning Australians
 - 3.25.1 Dressing up Australians
- 3.26 Providing health services
 - 3.26.1 Providing medical and dental services
 - 3.26.2 Providing hospital services
 - 3.26.3 Developing alternative approaches to good health
 - 3.26.4 Providing care for people with disabilities

4



BUILDING SETTLEMENTS, TOWNS AND CITIES

Although many people came to Australia in search of personal gain, they realised the need to co-operate in the building of safe, pleasant urban environments. Australian urbanisation and suburbanisation have special characteristics which set them apart from similar phenomena elsewhere in the world.

- 4.1 Planning urban settlements
 - 4.1.1 Selecting township sites
 - 4.1.2 Making suburbs
 - 4.1.3 Learning to live with property booms and busts
 - 4.1.4 Creating capital cities
 - 4.1.5 Developing city centres
- 4.2 Supplying urban services (power, transport, fire prevention, roads, water, light and sewerage)
- 4.3 Developing institutions
- 4.4 Living with slums, outcasts and homelessness
- 4.5 Making settlements to serve rural Australia
- 4.6 Remembering significant phases in the development of settlements, towns and cities

5



WORKING

Although a lot of what we call work is related to the economy, most of it is not undertaken for profit. A great deal of the work done in the home is neither paid nor counted as part of the national economy. Some of the most interesting recent social history written about Australia concerns work and workplaces.

- 5.1 Working in harsh conditions
 - 5.1.1 Coping with unemployment
 - 5.1.2 Coping with dangerous jobs and workplaces
- 5.2 Organising workers and work places
- 5.3 Caring for workers' dependent children
- 5.4 Working in offices
- 5.5 Trying to make crime pay
- 5.6 Working in the home
- 5.7 Surviving as Indigenous people in a white-dominated economy
- 5.8 Working on the land

6



EDUCATING

Every society educates its young. While European education places a great emphasis on the formal schooling system, education encompasses much more.

- 6.1 Forming associations, libraries and institutes for self-education
- 6.2 Establishing schools
- 6.3 Training people for the workplace
- 6.4 Building a system of higher education
- 6.5 Educating people in remote places
- 6.6 Educating Indigenous people in two cultures

7



GOVERNING

This theme group is as much about self-government as it is about being governed. It includes all the business of politics, including hostility to acts of government.

- 7.1 Governing Australia as a province of the British Empire
- 7.2 Developing institutions of self-government and democracy
 - 7.2.1 Protesting
 - 7.2.2 Struggling for inclusion in the political process
 - 7.2.3 Working to promote civil liberties
 - 7.2.4 Forming political associations
- 7.3 Making City-States
- 7.4 Federating Australia
- 7.5 Governing Australia's colonial possessions
- 7.6 Administering Australia
 - 7.6.1 Developing local government authorities
 - 7.6.2 Controlling entry of persons and disease
 - 7.6.3 Policing Australia
 - 7.6.4 Dispensing justice
 - 7.6.5 Incarcerating people
 - 7.6.6 Providing services and welfare
 - 7.6.7 Enforcing discriminatory legislation
 - 7.6.8 Administering Indigenous Affairs
 - 7.6.9 Conserving Australian resources
 - 7.6.10 Conserving fragile environments
 - 7.6.11 Conserving economically valuable resources
 - 7.6.12 Conserving Australia's heritage
- 7.7 Defending Australia
 - 7.7.1 Providing for the common defence
 - 7.7.2 Preparing to face invasion
 - 7.7.3 Going to war
- 7.8 Establishing regional and local identity

8



DEVELOPING AUSTRALIA'S CULTURAL LIFE

Australians are more likely to express their sense of identity in terms of a way of life rather than allegiance to an abstract patriotic ideal. One of the achievements of this society has been the creation of a rich existence away from the workplace. While some of the activities encompassed in this theme are pursued for profit - horse racing and cinema, for instance - their reason for being is the sheer enjoyment of spectators. While many people could not pursue careers in art, literature, science, entertainment or the church without being paid, those activities do not fit easily into the categories of economy or workplace.

- 8.1 Organising recreation
 - 8.1.1 Playing and watching organised sports
 - 8.1.2 Betting
 - 8.1.3 Developing public parks and gardens
 - 8.1.4 Enjoying the natural environment
- 8.2 Going to the beach
- 8.3 Going on holiday
- 8.4 Eating and drinking
- 8.5 Forming associations
 - 8.5.1 Preserving traditions and group memories
 - 8.5.2 Helping other people
 - 8.5.3 Associating for mutual aid
 - 8.5.4 Pursuing common leisure interests
- 8.6 Worshipping
 - 8.6.1 Worshipping together
 - 8.6.2 Maintaining religious traditions and ceremonies
 - 8.6.3 Founding Australian religious institutions
 - 8.6.4 Making places for worship
 - 8.6.5 Evangelising
 - 8.6.6 Running city missions
 - 8.6.7 Running missions to Australia's indigenous people
- 8.7 Honouring achievement
- 8.8 Remembering the fallen
- 8.9 Commemorating significant events
 - 8.9.1 Remembering disasters
 - 8.9.2 Remembering public spectacles
- 8.10 Pursuing excellence in the arts and sciences
 - 8.10.1 Making music
 - 8.10.2 Creating visual arts
 - 8.10.3 Creating literature
 - 8.10.4 Designing and building fine buildings
 - 8.10.5 Advancing knowledge in science and technology
- 8.11 Making Australian folklore
 - 8.11.1 Celebrating folk heroes
 - 8.11.2 Myth making and story-telling
- 8.12 Living in and around Australian homes
- 8.13 Living in cities and suburbs
- 8.14 Living in the country and rural settlements
- 8.15 Being homeless

9



MARKING THE PHASES OF LIFE

Although much of the experience of growing up and growing old does not readily relate to particular heritage sites, there are places that can illustrate this important theme. Most of the phases of life set out below are universal experiences.

- 9.1 Bringing babies into the world
 - 9.1.1 Providing maternity clinics and hospitals
 - 9.1.2 Promoting mothers' and babies' health
- 9.2 Growing up
 - 9.2.1 Being children
 - 9.2.2 Joining youth organisations
 - 9.2.3 Being teenagers
 - 9.2.4 Courting
- 9.3 Forming families and partnerships
 - 9.3.1 Establishing partnerships
 - 9.3.2 Bringing up children
- 9.4 Being an adult
- 9.5 Living outside a family/partnership
- 9.6 Growing old
 - 9.6.1 Retiring
 - 9.6.2 Looking after the infirm and the aged
- 9.7 Dying
 - 9.7.1 Dealing with human remains
 - 9.7.2 Mourning the dead
 - 9.7.3 Remembering the dead

New South Wales Historical Themes

**Table showing correlation of national, state and local themes,
with annotations and examples
Dated 4 October 2001**

Australian Theme	NSW Theme		Notes	Examples
1 Tracing the natural evolution of Australia,	Environment - naturally evolved	Local themes	There are two aspects to this theme: (1) Features occurring naturally in the physical environment which have significance independent of human intervention (2) Features occurring naturally in the physical environment which have shaped or influenced human life and cultures.	A geological formation, fossil site, ecological community, island, soil site, river flats, estuary, mountain range, reef, lake, woodland, seagrass bed, wetland, desert, alps, plain, valley, headland, evidence of flooding, earthquake, bushfire and other natural occurrences.
2 Peopling Australia	Aboriginal cultures and interactions with other cultures	Local themes	Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practises, past and present; with demonstrating distinctive ways of life; and with interactions demonstrating race relations.	Place name, camp site, midden, fish trap, trade route, massacre site, shipwreck contact site, missions and institutions, whaling station, pastoral workers camp, timber mill settlement, removed children's home, town reserve, protest site, places relating to self-determination, keeping place, resistance & protest sites, places of segregation, places of indentured labour, places of reconciliation

2 Peopling Australia	Convict	Local themes	Activities relating to incarceration, transport, reform, accommodation and working during the convict period in NSW (1788-1850) – does not include activities associated with the conviction of persons in NSW that are unrelated to the imperial 'convict system': use the theme of Law & Order for such activities	Prison, convict shipwreck, convict system document, ticket-of-leave and probationary living quarters, guards uniform, landscapes-of-control, lumber yard, quarry, gallows site, convict-built structure, convict ship arrival site, convict barracks, convict hospital, estate based on convict labour, place of secondary punishment.
2 Peopling Australia	Ethnic influences	Local themes	Activities associated with common cultural traditions and peoples of shared descent, and with exchanges between such traditions and peoples.	Blessing-of-the-fleet site, ethnic community hall, Chinese store, place or object that exhibits an identifiable ethnic background, marriage register, Coat of Arms, olive grove, date palm plantation, citizenship ceremony site, POW camp, register of ship crews, folk festival site, ethnic quarter in a town.
2 Peopling Australia	Migration	Local themes	Activities and processes associated with the resettling of people from one place to another (international, interstate, intrastate) and the impacts of such movements	Migrant hostel, customs hall, border crossing, immigration papers, bus depot, emigrant shipwreck, Aboriginal mission, quarantine station, works based on migrant labour, detention centre.
3 Developing local, regional and national economies	Agriculture	Local themes	Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Hay barn, wheat harvester, silo, dairy, rural landscape, plantation, vineyard, farmstead, shelterbelt, silage pit, fencing, plough markings, shed, fish farm, orchard, market garden, piggery, common, irrigation ditch, Aboriginal seasonal picking camp.

3 Developing local, regional and national economies	Commerce	Local themes	Activities relating to buying, selling and exchanging goods and services	Bank, shop, inn, stock exchange, market place, mall, coin collection, consumer wares, bond store, customs house, trade routes, mint, Aboriginal trading places, Aboriginal ration/blanket distribution points, Aboriginal tourism ventures
3 Developing local, regional and national economies	Communication	Local themes	Activities relating to the creation and conveyance of information	Post office, telephone exchange, printery, radio studio, newspaper office, telegraph equipment, network of telegraph poles, mail boat shipwreck, track, airstrip, lighthouse, stamp collection.
3 Developing local, regional and national economies	Environment - cultural landscape	Local themes	Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	A landscape type, bushfire fighting equipment, soil conservation structures, national park, nature reserve, market garden, land clearing tools, evidence of Aboriginal land management, avenue of trees, surf beach, fishing spot, plantation, place important in arguments for nature or cultural heritage conservation.
3 Developing local, regional and national economies	Events	Local themes	Activities and processes that mark the consequences of natural and cultural occurrences	Monument, photographs, flood marks, memorial, ceremonial costume, honour board, blazed tree, obelisk, camp site, boundary, legislation, place of pilgrimage, places of protest, demonstration, congregation, celebration.
3 Developing local, regional and national economies	Exploration	Local themes	Activities associated with making places previously unknown to a cultural group known to them.	Explorers route, marked tree, camp site, explorer's journal, artefacts collected on an expedition, captain's log, surveyor's notebook, mountain pass, water source, Aboriginal trade route, landing site, map.

3 Developing local, regional and national economies	Fishing	Local themes	Activities associated with gathering, producing, distributing, and consuming resources from aquatic environments useful to humans.	Fishing boat, whaling station, marine reserve, fisher camp, seafood factory, fish shop, oyster lease, artificial reef, fishing boat wreck, mooring, dock, marina, wharf, fish farm, fish trap
3 Developing local, regional and national economies	Forestry	Local themes	Activities associated with identifying and managing land covered in trees for commercial timber purposes.	Forested area, forest reserve, timber plantation, forestry equipment, saw mill, mill settlement, arboretum, charcoal kiln, coppiced trees, forest regrowth, timber tracks, whim.
3 Developing local, regional and national economies	Health	Local themes	Activities associated with preparing and providing medical assistance and/or promoting or maintaining the well being of humans	Hospital, sanatorium, asylum, surgical equipment, ambulance, nurses quarters, medical school, baby clinic, hospital therapy garden, landscaped grounds, herbalist shop, pharmacy, medical consulting rooms.
3 Developing local, regional and national economies	Industry	Local themes	Activities associated with the manufacture, production and distribution of goods	Factory, workshop, depot, industrial machinery, timber mill, quarry, private railway or wharf, shipbuilding yard, slipway, blacksmithy, cannery, foundry, kiln, smelter, tannery, brewery, factory office, company records.
3 Developing local, regional and national economies	Mining	Local themes	Activities associated with the identification, extraction, processing and distribution of mineral ores, precious stones and other such inorganic substances.	Mine, quarry, race, mining field or landscape, processing plant, manager's office, mineral specimen, mining equipment, mining license, ore laden shipwreck, collier, mine shaft, sluice gate, mineral deposit, slag heap, assay office, water race.

3 Developing local, regional and national economies	Pastoralism	Local themes	Activities associated with the breeding, raising, processing and distribution of livestock for human use	Pastoral station, shearing shed, slaughter yard, stud book, photos of prize-winning stock, homestead, pastoral landscape, common, fencing, grassland, well, water trough, freezer boat shipwreck, wool store.
3 Developing local, regional and national economies	Science	Local themes	Activities associated with systematic observations, experiments and processes for the explanation of observable phenomena	Laboratory, experimental equipment, text book, observatory, botanical garden, arboretum, research station, university research reserve, weather station, soil conservation area, fossil site, archaeological research site.
3 Developing local, regional and national economies	Technology	Local themes	Activities and processes associated with the knowledge or use of mechanical arts and applied sciences	Computer, telegraph equipment, electric domestic appliances, underwater concrete footings, museum collection, office equipment, Aboriginal places evidencing changes in tool types.
3 Developing local, regional and national economies	Transport	Local themes	Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Railway station, highway, lane, train, ferry, wharf, tickets, carriage, dray, stock route, canal, bridge, footpath, aerodrome, barge, harbour, lighthouse, shipwreck, canal, radar station, toll gate, horse yard, coach stop.
4 Building settlements, towns and cities	Towns, suburbs and villages	Local themes	Activities associated with creating, planning and managing urban functions, landscapes and lifestyles in towns, suburbs and villages	Town plan, streetscape, village reserve, concentrations of urban functions, civic centre, subdivision pattern, abandoned town site, urban square, fire hydrant, market place, abandoned wharf, relocated civic centre, boundary feature, municipal Coat of Arms

4 Building settlements, towns and cities	Land tenure	Local themes	Activities and processes for identifying forms of ownership and occupancy of land and water, both Aboriginal and non-Aboriginal	Fence, survey mark, subdivision pattern, land title document, boundary hedge, stone wall, shelterbelt, cliff, river, seawall, rock engravings, shelters & habitation sites, cairn, survey mark, trig station, colonial/state border markers.
4 Building settlements, towns and cities	Utilities	Local themes	Activities associated with the provision of services, especially on a communal basis	Water pipeline, sewage tunnel, gas retort, powerhouse, County Council office, garbage dump, windmill, radio tower, bridge, culvert, weir, well, cess pit, reservoir, dam, places demonstrating absence of utilities at Aboriginal fringe camps
4 Building settlements, towns and cities	Accommodation	Local themes	Activities associated with the provision of accommodation, and particular types of accommodation – does not include architectural styles – use the theme of Creative Endeavour for such activities.	Terrace, apartment, semi-detached house, holiday house, hostel, bungalow, mansion, shack, house boat, caravan, cave, humpy, migrant hostel, homestead, cottage, house site (archaeological).
5 Working	Labour	Local themes	Activities associated with work practises and organised and unorganised labour	Trade union office, bundy clock, time-and-motion study (document), union banner, union membership card, strike site, staff change rooms, servants quarters, shearing shed, green ban site, brothel, kitchen, nurses station, hotel with an occupational patronage.
6 Educating	Education	Local themes	Activities associated with teaching and learning by children and adults, formally and informally.	School, kindergarten, university campus, mechanics institute, playground, hall of residence, text book, teachers college, sail training boat wreck, sportsfield, seminary, field studies centre, library, physical evidence of academic achievement (e.g. a medal or certificate).

7 Governing	Defence	Local themes	Activities associated with defending places from hostile takeover and occupation	Battle ground, fortification, RAAF base, barracks, uniforms, military maps and documents, war memorials, shipwreck lost to mines, scuttled naval vessel, POW camp, bomb practice ground, parade ground, massacre site, air raid shelter, drill hall,
7 Governing	Government and administration	Local themes	Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs – includes both principled and corrupt activities.	Municipal chamber, County Council offices, departmental office, legislative document, symbols of the Crown, State and municipal flags, official heraldry, ballot box, mayoral regalia, places acquired/disposed of by the state, customs boat, pilot boat, site of key event (eg federation, royal visit), protest site, physical evidence of corrupt practises.
7 Governing	Law and order	Local themes	Activities associated with maintaining, promoting and implementing criminal and civil law and legal processes	Courthouse, police station, lock-up, protest site, law chambers, handcuffs, legal document, gaol complex, water police boat, police vehicle, jail, prison complex (archaeological), detention centre, judicial symbols
7 Governing	Welfare	Local themes	Activities and process associated with the provision of social services by the state or philanthropic organisations	Orphanage, retirement home, public housing, special school, trades training institution, employment agency,
8 Developing Australia's cultural life	Domestic life	Local themes	Activities associated with creating, maintaining, living in and working around houses and institutions.	Domestic artefact scatter, kitchen furnishings, bed, clothing, garden tools, shed, arrangement of interior rooms, kitchen garden, pet grave, chicken coop, home office, road camp, barrack, asylum.

8 Developing Australia's cultural life	Creative endeavour	Local themes	Activities associated with the production and performance of literary, artistic, architectural and other imaginative, interpretive or inventive works; and/or associated with the production and expression of cultural phenomena; and/or environments that have inspired such creative activities.	Opera house, theatre costume, film studio, writer's studio, parade tableau, manuscripts, sound recording, cinema, exemplar of an architectural style, work of art, craftwork, and/or public garden, bandstand, concert hall, rock art site, rotunda, library, public hall; and/or a, particular place to which there has been a particular creative, stylistic or design response.
8 Developing Australia's cultural life	Leisure	Local themes	Activities associated with recreation and relaxation	Resort, ski lodge, chalet, cruise ship, passenger rail carriage, swimming pool, dance hall, hotel, caravan park, tourist brochures, park, beach, clubhouse, lookout, common, bush walking track, Aboriginal Christmas camp site, fishing spot, picnic place, swimming hole.
8 Developing Australia's cultural life	Religion	Local themes	Activities associated with particular systems of faith and worship	Church, monastery, convent, rectory, presbytery, manse, parsonage, hall, chapter house, graveyard, monument, church organ, synagogue, temple, mosque, madrasa, carved tree, burial ground
8 Developing Australia's cultural life	Social institutions	Local themes	Activities and organisational arrangements for the provision of social activities	CWA Room, Masonic hall, School of Arts, Mechanic's Institute, museum, art gallery, RSL Club, public hall, historical society collection, public library, community centre, Aboriginal mission hall or school room.
8 Developing Australia's cultural life	Sport	Local themes	Activities associated with organised recreational and health promotional activities	Oval, race course, swimming pool, bowling club, bowling green, trophies, calendar of fixtures, cricket set, yacht pens, tennis court, rugby field, speedway, sporting equipment, bocce court.

9 Marking the phases of life	Birth and Death	Local themes	Activities associated with the initial stages of human life and the bearing of children, and with the final stages of human life and disposal of the dead.	Birth control clinic, maternity hospital, nursery, baby clinic, baptism register, circumcision equipment, and Hospice, nursing home, funeral parlour, grave furnishings, cremation site, cemetery, burial register, disaster site, memorial plantings, shipwreck with loss of life,
9 Marking the phases of life	Persons	Local themes	Activities of, and associations with, identifiable individuals, families and communal groups	A monument to an individual, a family home, a dynastic estate, private chapel, a birthplace, a place of residence, a gendered site, statue, Coat of Arms, commemorative place name, place dedicated to memory of a person (e.g. hospital wing).

Notes:

Editorial

- The table is arranged numerically in the order of the national themes, and then within each national theme alphabetically in order of the state themes – no other particular order is intended.

Thematic usages

- The inclusion of an example against one theme does not exclude its consideration against one or more of the other themes (e.g. Asylum) to indicate that the physical development of an item can be shaped by more than one historical process of theme during its existence.
- Aboriginal histories can be analysed using any theme(s) relevant to the place or object being considered – it is not necessary to restrict analysis to the theme of 'Aboriginal cultures and interactions with other cultures' only
- The theme of 'Domestic Life' can be used to explore the historical contexts for interior or private, domestic spaces and objects.
- The theme of 'Forestry' can be used for the active management of natural and regrowth trees for timber production while the theme of 'Agriculture' can be used for the intensive cultivation of exotic trees for purposes other than timber production.

Correlations

- The placement of the 36 State themes against the National themes was informed by the arrangement of the 84 national sub-themes and 116 national sub-sub-themes developed by the AHC for each of its National themes – the placements are not random.
- The development of local themes is accommodated within this framework with each local theme regarded as a correlation to a State theme in a similar manner to the relationship between the State and National themes
- Generally, local = local government area, but can also be used in other ways, such as a particular ethnic or social community, or a locality that is smaller than an LGA or straddles an LGA boundary, or a locality larger than an LGA such as a SHR historical region or an ecclesiastical diocese or an area smaller than the whole state but larger than an LGA, such as the area within an Aboriginal nation or Land Council.

APPENDIX E

REGISTER OF THE NATIONAL ESTATE LISTINGS

Place Details

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Environa Urban Conservation Area, Environa, NSW, Australia

Photographs	None
List	Register of the National Estate (Non-statutory archive)
Class	Historic
Legal Status	Indicative Place
Place ID	101922
Place File No	1/08/301/0030

Nominator's Statement of Significance

The layout of Environa is of significance as an example of Garden City Design concepts popular in the early 20th century, and for the marked influence of Burley Griffin's Canberra plan, notably in the curvilinear and radiating street patterns, the open space reserves and in the planning for community facilities.

It is an example of the work of H.F.Halloran, active as a subdivision designer and surveyor in the Queanbeyan and Canberra district in the 1920s. It is the most ambitious of his numerous projects.

Unlike most paper subdivisions which failed to eventuate, Environa shows physical evidence of its designer's intentions: timber structures, stonework, 'tree planting and surveyors' marks which enable the tracing of the design on the ground today.

Official Values Not Available

Description

HISTORY

This grandiose subdivision scheme was the brainchild of H.F.Halloran. surveyor, valuer, auctioneer and town planner. Halloran was active in town planning and land subdivision in the Canberra - Queanbeyan area in the 1920s. He purchased the first residential lease auctioned in Canberra in 1924. He applied to subdivide land at "Carwoola" on Bungendore Hill in 1925, and received approval in May 1925 from Yarrawluma Shire Council for a subdivision, "Letchworth", just north of "Environa", named after Letchworth Garden City in England. Like Environa, Letchworth was never developed.

Environa, approved for subdivision in March - April 1926, was to comprise about 1700 lots, designed for a population of 7000. Its planning bears a marked resemblance to Bufley Griffin's design for Canberra, with broad boulevards and sweeping circles and crescents and provision for offices, shops, a hospital, theatres, parks and recreational facilities. The street names proposed all made reference to the planned National Capital across the border. Halloran described it as:

"...a magnificent subdivision. the design a masterpiece of town planning on beautiful undulating land. with far reaching views. and overlooking the wonderful city of Canberra itself."

Halloran's advertising for Environa became the subject of investigation by the Minister for Works and Railways and of questions in the Commonwealth Parliament and the British House of Commons. for giving the impression that the freehold land to be sold was in Canberra. where all land was leasehold. and not in New South Wales. A Federal Minister connected with Halloran's company subsequently resigned. The marketing, sale and development of Environa was terminated by the slow development of Canberra and by the Great Depression.

Although extravagantly promoted in Australia and in England, Environa was never put on the market and no lots were sold. What distinguishes it from other unrealised subdivision schemes. however, is that rustic timber structures and stone monuments were erected and trees planted in projected public spaces and many of them remain. so that part at least of Halloran's vision for his new suburb can be viewed on site.

Four bandstands were built. of tree trunks and undressed timber with metal roofing, and two survive.

Stone structures, in Mugga porphyry with decorative inlays of white quartz and dark red jasper, include:

The Lobbies -- ornamental stone walls and columns

Parliament Boulevard -- stone arch. two pillars, rock garden and fernery, 12m column surmounted by a bust of Sir Henry Parkes

Tree planting was carried out to mark a number of projected parks. Deciduous exotic species planted in squares. and surviving, include cedars (*Cedrus deodara*), English oaks (*Quercus robur*), a Tree-of-Heaven (*Altissima* sp), London planes (*Platanus* sp) and pin oaks (*Quercus palustris*).

History Not Available

Condition and Integrity Not Available

Location

About 600ha between Hume, ACT and Jerrabomberra, NSW.

Bibliography

Larcombe. D.H.T. - "Environa - Proposal for Classification", unpubl., Queanbeyan, 1990

Otway-Smith. Wendy, "Interpretation of Cultural Landscape - Environa" Vol. 1, unpublished heritage study for A.N.U. Canberra, 1991

Report Produced Thu Dec 2 16:16:49 2021

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