

Appendix 3: Summary Table of Site Descriptions






















Table 1 Summary of Site Descriptions

Site no	Landform	Slope	Vegetation type	Vegetation quality	Stability	Features	Elders comment	Potential impacts	Site specific controls
WOC-003 (MNP)	Lunette, west facing slope Assessed area 1ha	Mid slope, falling away on three sides, long slope to west	Mixed Shrublands	Moderate, five flora species including Hopbush, drought affected	65% bare ground, sandy clay soils, stable, but erosion gullies to north & south	High in landscape, overlooking lakebed, 1km walk to site, stone artefacts west side in existing AHIMS extent	Excellent, keep reburials close to centre of plot, liked the high view of lakebed	Soil erosion, artefacts (existing AHIMS), vehicle tracks on slope could cause water erosion	Keep burials close to centre to avoid erosion gullies north and south and artefacts to west. Vehicle to be parked on tourist road, approx. 1km west of the site
WOC-001 (MNP)	Lunette, north facing slope Assessed area 1ha	5% to north, short slope, site near crest and toe	Mixed Shrublands, including a few Rosewood	Low, five flora species, drought affected	92% bare ground, incipient wind erosion	No artefacts observed, centre point just outside existing AHIMS extent, Rosewood nearby	Excellent site, essential to keep vehicles off site	Vehicles on slope may cause erosion	Vehicles to be parked on existing track 300m away
MA-001 (MNP)	Lunette, north facing slope Assessed area 1ha	2-3% slope, not far from lakebed	Mixed Shrublands, including a few Hopbush and Rosewood	Low, five flora species, drought affected	94% bare ground, incipient wind erosion	No artefacts observed, centre point is 80m north of existing AHIMS extent, Rosewood, sandy soil	OK, keep vehicles off site	Wind erosion due to disturbance, Rosewood	Reburials to be deep due to sandy soil, avoid Rosewood west of centre point
WOC-005 WOC-145 (MNP)	Lakebed, intermittent gilgais Assessed area 1ha	Flat with local undulations	Bluebush/Saltbush Shrublands	Low, seven flora species, drought affected	70% bare ground, clay soils, incipient wind erosion	Stone artefacts observed, will be new or amended AHIMS extent, flat site, with gilgais, catch drain to east	OK, keep vehicles off site	Wind erosion due to disturbance, artefacts	Avoid gilgais for reburials Park vehicles on existing access track
WOC-152 (MNP)	Lunette, toe of northern slope Assessed area 0.5ha	Site nearly flat, advancing steep sand face	Mallee Open Shrublands including a few mallee and Pittosporum	Low, five flora species, drought effected	94% bare ground, sandy soils, incipient wind erosion	No artefacts observed, advancing sand wall will protect reburials, mallee	Excellent site, liked the advancing sand wall to cover burial sites	Wind erosion due to disturbance, mallee within site	Avoid mallee, reburials to be along toe of advancing sand wall, keep vehicle north of fence
LW-004 (MNP)	Dune, lower northern slope Assessed area 1ha	Flat rising, gently rising on all sides	Mixed Shrublands, including a few Pittosporum and Hopbush	Very low, nine flora species, drought affected	95% bare ground, sandy soil, incipient wind erosion between shrubs	No artefacts observed, easy digging, 400m from nearest track	OK, walk to site	Wind erosion due to disturbance	Keep off western end due to instability of sandy soil, reburials to be deep due to sandy soil, Vehicles to be parked on existing access track, reburials must be at lowest point, ie close to centre point
LW-009 (MNP)	Lunette, lower slope on northern side Assessed area 1ha	Flat to 1%	Bluebush/Saltbush Shrublands	Very low, three flora species, drought affected	>99% bare ground, red sandy loam soil, incipient wind erosion	Stone artefacts to north east will be new or extended AHIMS site, sandy soil	OK. Keep vehicles off site	Stone artefacts, wind erosion due to disturbance of sandy soils	Reburials to be deep due to sandy soil, keep off clay pan
WCW-006 (Top Hut)	Floodplain of Willandra Creek Assessed area 1ha	Low mound, 1-3% on all sides	Bluebush/Saltbush Shrublands	Low, two flora species, drought affected	90% bare ground, sandy clay, incipient wind erosion	Artefacts observed, centre point is in existing AHIMS extent	OK, site selected is the best in local area	Artefacts, wind erosion due to disturbance	Park vehicles on existing track
LP-001 (MNP)	Lunette Assessed area 1ha	Localised small mounds and hollows, 3% to south east	Bluebush/Saltbush Shrublands	Low, three flora species	85% bare ground, sandy clay over clay, incipient wind and water erosion	Stone artefacts on north western & western side, elevated site	OK, liked the view over lakebed	Stone artefacts observed, centre point is within existing AHIMS extent, sandy crest nearby	Avoid placing reburials on small localised mounds
GL-024 (MNP)	Lunette, eastern side Assessed area 0.5ha	Flat plain at toe of sand wall	Bluebush/Saltbush Shrublands	Very low, two flora species, drought affected	95% bare ground, fine sand, incipient wind erosion, unstable sand wall	Stone artefacts (fireplace) to north east will be new AHIMS site, existing AHIMS extent is 76m from centre point, advancing sand wall	OK, liked the advancing sand wall to cover burial sites	Stone artefacts Unstable sand wall	Reburials to be at foot of sand wall, and near centre point
GL-013 (MNP)	Lunette, plain at toe Assessed area 0.5ha	Flat plain at toe of sand face	Bluebush/Saltbush Shrublands	Low, two flora species, drought affected	97% bare ground on plain, sandy clay, wind erosion, unstable sand wall	Stone artefacts observed will be new AHIMS site, existing AHIMS extent is 50m from centre point, unstable sand wall	OK, liked the advancing sand wall to cover burial sites	Stone artefacts Sand wall	Reburials to be at foot of sand wall, and near centre point
GL-020 (MNP)	Lunette, eastern lower slope, east of sand face Assessed area 0.5ha	Locally undulating up to 5%	Bluebush/Saltbush Shrublands	Low, three flora species, drought affected	95% bare ground, fine sand, incipient wind erosion	No artefacts observed, unstable sand wall	OK, liked the advancing sand wall to cover burial sites	Sand wall, wind erosion due to disturbance	Reburials to be along foot of advancing sand dune and near centre point.

GL-001 (MNP)	Lunette, east of eastern escarpment on plain Assessed area 0.5ha	Flat plain east of steep sand face	Bluebush/Saltbush Shrublands	Moderate on plain, two flora species, low on dunes	40% bare ground on plain, surface stable	No artefacts observed, unstable sand wall, shrub cover	OK, liked the advancing sand wall to cover burial sites	Sand wall, shrub layer	Reburials to be along foot of sand dune and close to centre point, park vehicles in existing track.
GL-005 (MNP)	Lunette, western side lower slope Assessed area 1ha	Up to 2%, gently undulating	Bluebush/Saltbush Shrublands, includes two Cypress Pine,	Low, four flora species, drought affected	96% bare ground, sandy loam, incipient wind erosion,	No artefacts observed, two Cypress pine trees, depression to north will run water	OK, slight elevation a positive	Pine trees, depression to north could erode	Avoid Cypress Pine trees, avoid water flow depression to north, reburials to be deep due to sandy soil
GL-002 (MNP)	Lunette, toe of east facing slope Assessed area 0.5ha	Local hollow with gentle slopes on three sides, steep sand face	Bluebush/Saltbush Shrublands	Very low, two flora species, drought affected	>99% bare ground, sand, wind erosion, advancing sand wall to west	No artefacts observed, but centre point is 20m east of AHIMS extent, advancing sand wall	Excellent site, liked the advancing sand wall to cover burial sites	Wind erosion on plain	Reburials to be at foot of advancing sand wall, close to centre point
GL-026 (MNP)	Jumbled dune complex Assessed area 0.5 ha	Local hollow rising on all sides, up to 10% slopes	Mallee Open Shrublands & Spinifex, mallee is outside of site	Moderate, five flora species, drought affected	80% bare ground, sand and sandy loam, incipient wind erosion	No artefacts observed, centre point is 22m southeast of existing AHIMS site extent, rugged dune complex, advancing sand, shrub layer.	Excellent site, liked the advancing sand wall to cover burial sites	Shrubs and Spinifex Disturbance may cause wind erosion	Reburials to be along toe of steep sand wall, avoid shrubs, reburials to be deep due to sandy soil
GL-028 (MNP)	Lakebed, low rise (lunette to north east) Assessed area 1ha	Low crest, sloping 5% in all directions	Bluebush/Saltbush Shrublands	Low, two flora species, drought affected	95% bare ground, sandy clay over clay, clay pan, incipient wind erosion	No artefacts, mainly on clay pan, new or extended AHIMS site, centre point is 100m west of existing AHIMS extent, slight elevation	OK, liked the view due to slight elevation	Stone artefacts on clay pan and elsewhere	Avoid traffic and reburials on clay pan
GG-025 (MNP)	Lunette, western side mid slope Assessed area 1ha	5% to flat	Mixed Shrublands	Low, five flora species, drought affected	92% bare ground, sandy clay, incipient wind erosion	Stone artefacts (south west) in assessment area, centre point is 122m south west of existing AHIMS site extent, site is high in landscape	OK, liked the view due to elevation	Stone artefacts, vehicles on slope may cause erosion	Keep vehicles well away from assessment area
GG-018 (MNP)	Lunette, foot of slope, eastern crest Assessed area 0.5ha	Flat with local undulations, steep sand wall	Bluebush/Saltbush Shrublands	Low to moderate, two flora species, drought affected	70% bare ground, sand, minor wind erosion	No artefacts observed, centre point is within existing AHIMS site extent, moderate elevation with a view to east, sand wall	OK, liked sand wall	Vehicle traffic may cause erosion	Reburials to be close to toe of sand wall, and near centre point
GL-025 (MNP)	Lunette (low rise) Assessed area 1ha	Flat to 1%	Bluebush/Saltbush Shrublands	Moderate, two flora species, drought affected	85% bare ground, sandy clay, minor wind erosion	No artefacts observed, view due to slight elevation	Not present for assessment	Inherent erosion	Keep vehicles away from assessment area
GG-001 (MNP)	Lunette, dune complex within Assessed area 1ha	Local basin with 3% slopes	Bluebush/Saltbush Shrublands	Very low, one flora species, drought affected	>99% bare ground, sandy loam, moderate wind erosion	No artefacts observed, assessment area is in existing AHIMS extent, eroding site	Not present for assessment	Inherent erosion	Reburials to be deep due to sandy soil
GG-016 (MNP)	Lunette, dune complex within Assessed area 1ha	Local basin with 1-3% slopes	Bluebush/Saltbush Shrublands	Moderate, one flora species, healthy shrubs	70% bare ground, sandy loam over clay, stable surface	No artefacts observed, centre point is 70m west of existing AHIMS site extent, basin is near find site, has slight elevation	Not present for assessment	Damage to shrubs	Reburials to be deep if profile is sandy. Reburials to be at lowest point
ML-003 (MNP)	Lunette, facing north east Assessed area 1ha	3-5%	Bluebush/Saltbush Shrublands, including Hopbush	Moderate, four flora species, healthy shrubs	80% bare ground, fine sand over clay, incipient wind erosion	No artefacts observed, centre point is 96m north of existing AHIMS site extent, view of lakebed due to slight elevation	Not present for assessment	Erosion, damage to shrubs	Park vehicles in existing track
ME-001 (Mulurulu)	Lunette, western toe of slope Assessed area 1ha	Up to 10% to east sloping gently (1%) to west	Grassland/Herbland, including Pittosporum	Very low, three flora species, drought affected	98% bare ground, fine sand, moderate wind erosion	No artefacts observed, centre point is within existing AHIMS site extent, view of lakebed due to slight elevation	Not present for assessment	Inherent wind erosion (all land in local area in the same condition)	Reburials should be deep as soil is sandy and bare
ME-002 (Mulurulu)	Lunette, western toe of slope Assessed area 1ha	1% sloping to south west,	Grassland/Herbland	Very low, three flora species, drought affected	>99% bare ground, fine sand, moderate wind erosion	No artefacts observed, centre point is 35m south west of an existing AHIMS site extent view of lakebed due to slight elevation, water flows in depressions to north & south	Not present for assessment	Inherent wind erosion (all land in local area in the same condition) Depressions to north and south would convey runoff and may erode	Burials should be deep as soil is sandy and bare, keep reburials out of depressions to north and south
GS-010 (Gol Gol)	Lunette, south of main crest, but high in landscape Assessed area 1ha	3-4% gently sloping to south, falls away rapidly further to north	Bluebush/Saltbush Shrublands	Low, one flora species present, drought affected	96% bare ground, fine sand over clay, incipient wind erosion	Stone artefacts: hearth stone & flakes 50m west, one shell to east, grindstone to north east, reburial point is 20m south of existing site extent.	Not present for assessment	Stone artefacts damaged by vehicles or foot traffic, wind and water erosion, steep escarpment to north	Avoid foot traffic on escarpment to north and the clay pan Park vehicles on existing track to south

Appendix 5: Search of NSW Threatened Species, Mungo National Park

Data from the BioNet BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°; ^^ rounded to 0.01°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Entities in Mungo NP NPWS Reserve returned a total of 214 records of 22 species. Report generated on 1/05/2019 11:24 AM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Reptilia	Scincidae	5003	<i>Cyclodomorphus melanops elongatus</i>		Mallee Slender Blue-tongue Lizard	E1,P		1	
Animalia	Aves	Megapodiidae	0007	<i>Leipoa ocellata</i>		Malleefowl	E1,P	V	7	      
Animalia	Aves	Accipitridae	0218	<i>Circus assimilis</i>		Spotted Harrier	V,P		1	
Animalia	Aves	Accipitridae	0226	<i>Haliaeetus leucogaster</i>		White-bellied Sea-Eagle	V,P	C	1	
Animalia	Aves	Accipitridae	0225	<i>Hieraaetus morphnoides</i>		Little Eagle	V,P		2	
Animalia	Aves	Otididae	0176	<i>Ardeotis australis</i>		Australian Bustard	E1,P		1	
Animalia	Aves	Cacatuidae	0270	^ <i>Lophochroa leadbeateri</i>		Major Mitchell's Cockatoo	V,P,2		28	
Animalia	Aves	Psittacidae	0709	^^ <i>Polytelis anthoepus monarchoides</i>		Regent Parrot (eastern subspecies)	E1,P,3	V	1	
Animalia	Aves	Climacteridae	8127	<i>Climacteris picumnus victoriae</i>		Brown Treecreeper (eastern subspecies)	V,P		4	
Animalia	Aves	Meliphagidae	0448	<i>Epthianura albifrons</i>		White-fronted Chat	V,P		5	  
Animalia	Aves	Psophodidae	0437	<i>Cinlosoma castanotum</i>		Chestnut Quail-thrush	V,P		4	
Animalia	Aves	Neosittidae	0549	<i>Daphoenositta chrysoptera</i>		Varied Sittella	V,P		4	
Animalia	Aves	Petroicidae	8367	<i>Melanodryas cucullata cucullata</i>		Hooded Robin (south-eastern form)	V,P		5	
Animalia	Mammalia	Dasyuridae	1055	<i>Ningau yvonneae</i>		Southern Ningau	V,P		104	       
Animalia	Mammalia	Burramyidae	1151	<i>Cercartetus concinnus</i>		Western Pygmy Possum	E1,P		2	
Animalia	Mammalia	Vespertilionidae	1352	<i>Chalinolobus picatus</i>		Little Pied Bat	V,P		3	
Animalia	Mammalia	Vespertilionidae	T315	<i>Nyctophilus corbeni</i>		Corben's Long-eared Bat	V,P	V	2	
Animalia	Mammalia	Vespertilionidae	1382	<i>Vespadelus baverstocki</i>		Inland Forest Bat	V,P		4	
Animalia	Mammalia	Muridae	1400	<i>Rattus villosissimus</i>		Long-haired Rat	V,P		1	
Animalia	Reptilia	Diplodactylidae	2055	<i>Strophurus elderi</i>		Jewelled Gecko	V,P		19	

Plantae	Flora	Asteraceae	6893	<i>Brachyscome papillosa</i>	Mossgiel Daisy	V	V	11
Plantae	Flora	Fabaceae (Faboideae)	8538	<i>Swainsona sericea</i>	Silky Swainson-pea	V		4



Appendix 6: Search of NSW Threatened Ecological Communities, Mungo National Park

Data from the BioNet BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°; ^^ rounded to 0.01°). Copyright the State of NSW through the Office of Environment and Heritage.

Search criteria : Public Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Communities in Mungo NP NPWS Reserve returned 0 records for 4 entities.

Report generated on 1/05/2019 11:36 AM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Community				<i>Acacia loderi shrublands</i>		Acacia loderi shrublands	E3		K	
Community				<i>Acacia melvillei Shrubland in the Riverina and Murray-Darling Depression bioregions</i>		Acacia melvillei Shrubland in the Riverina and Murray-Darling Depression bioregions	E3		K	
Community				<i>Halosarcia lylei low open-shrubland in the Murray Darling Depression Bioregion</i>		Halosarcia lylei low open-shrubland in the Murray Darling Depression Bioregion	E3		K	
Community				<i>Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregions</i>		Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregions	E3		P	

Heritage Assessment

Willandra Lakes Aboriginal Ancestors Reburial Project

Report by Heritage NSW

October 2020

Heritage Assessment

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Premier
& Cabinet

Contents

1.0	Introduction	6
1.1	Background	6
1.2	The Study Area	6
1.3	Methodology	7
1.4	Authorship	7
2.0	Historical Overview	9
2.1	Landform	9
2.2	Aboriginal Occupation: Pre-European	10
2.3	Aboriginal People after European Invasion	11
2.4	European Occupation, Land Acts and Pastoral Runs	12
2.5	Gol Gol Station	13
2.6	Closer Settlement/ Soldier Settlement	15
2.7	Mungo Station	15
2.8	Zanci Station	16
2.9	Leahgur Station	16
2.10	Mulurulu	17
2.11	Garpung	18
2.12	Arumpo/Top Hut	18
2.13	Tourism and Scientific Research	19
2.14	Mungo National Park	20
3.0	Consultation	22
3.1	Repatriation and Community Consultation	22
4.0	Proposed Works	26
4.1	Proposed Works Locations	26
4.2	Proposed Works Areas	26
4.3	Proposed Works	26
5.0	Previous Investigations	30
5.1	Summary of Previous Investigations	30
5.2	Summary of Previously Recorded Aboriginal Sites	40
6.0	Site Assessments	45
6.1	Introduction	45
6.2	Methodology	45
6.3	Location 1 (WOC-003)	46

6.4	Location 2 (WOC-001)	46
6.5	Location 3 (MA-001)	47
6.6	Location 4 (WOC-005 & WOC-145)	48
6.7	Location 5 (WOC-152)	48
6.8	Location 6 (LW-004)	49
6.9	Location 7 (LW-009)	49
6.10	Location 8 (WCW-006)	50
6.11	Location 9 (LP-001)	51
6.12	Location 10 (GL-024)	51
6.13	Location 11 (GL-013)	52
6.14	Location 12 (GL-020)	52
6.15	Location 13 (GL-001)	53
6.16	Location 14 (GL-005)	54
6.17	Location 15 (GL-002)	54
6.18	Location 16 (GL-026)	55
6.19	Location 17 (GL-028)	55
6.20	Location 18 (GG-025)	56
6.21	Location 19 (GG-018)	57
6.22	Location 20 (GL-025)	57
6.23	Location 21 (GG-001)	58
6.24	Location 22 (GG-016)	58
6.25	Location 23 (ML-003)	59
6.26	Location 24 (ME-001)	60
6.27	Location 25 (ME-002)	60
6.28	Location 26 (GS-010)	61
6.29	Site Assessment Summary	61
7.0	Assessment of Significance	64
7.1	Introduction	64
7.2	Existing Heritage Listings	64
7.3	Key Planning Documents	75
9.0	Statutory Framework	79
9.1	NSW National Parks and Wildlife Act 1974	79
9.2	NSW Heritage Act 1977	80
10.0	Assessment of Heritage Impacts	82
10.1	Impact on World and National Heritage Values	82
10.2	Impact on State Heritage Values	82

10.3	Impact on Archaeological Values	89
10.4	Impact on Cultural Heritage Values	91
10.5	Impact on Local Heritage Values	92
11.0	Mitigation Measures	95
11.1	General Mitigation Measures	95
11.2	Site Specific Mitigation Measures	97
12.0	Recommendations	100
13.0	References	101
14.0	Appendix CONFIDENTIAL	106
14.1	Proposed Reburial Location Maps (CONFIDENTIAL)	107
14.2	Property details for the proposed work locations (CONFIDENTIAL)	133

Cover Photograph: Mick Kelly

Acronyms

3TTGs	3 Traditional Tribal Groups
AAG	Willandra Lakes Region Aboriginal Advisory Group
CMC	WLRWHA Community Management Council (now replaced by the WLRWHAC)
Mungo NP	Mungo National Park
TSAC	WLRWHA Technical and Scientific Advisory
WLRWHA	Willandra Lakes Region World Heritage Area
WLRWHAC	Willandra Lakes Region World Heritage Advisory Committee
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>

1.0 Introduction

1.1 Background

Between 1968 and the early 1980s some 108 Willandra Lakes Aboriginal Ancestors, including the internationally renowned remains of Mungo Woman and Mungo Man, were removed from Mungo NP and the Willandra Lakes and taken to the Australian National University for study (Bowler, Jones, Allen, & Thorne, 1970; Mulvaney J. , Prehistoric man in Australia, 1972). See also Webb (2018; 1989) for a detailed inventory of the collection. The discovery and subsequent recognition of the great age (now estimated at ca. 41,000 years) of Mungo Woman and Mungo Man were fundamental in establishing the cultural heritage significance of the Willandra Lakes. This recognition formed a part of the justification for the nomination of the Willandra Lakes to the World Heritage List (Australian Heritage Commission, 1980).

The purpose of this report is to provide a heritage assessment of the 26 locations that are proposed for the reburial of the 108 Aboriginal Ancestors, including Mungo Man and Mungo Woman. All these Aboriginal Ancestors are currently held at Mungo National Park (Mungo NP) and will be returned to locations close to their origin.

The proposed works will fulfil the long-term aspirations of the Aboriginal community, including Barkindji/Paakantji, Mutthi Mutthi and Ngilyampaa peoples, who have a strong and special association of the property with the Willandra Lakes and the Willandra Lakes Aboriginal Ancestors. The proposed works are aligned with the *Willandra Lakes World Heritage Area Plan of Management* (Department of Environment, Sport & Territories, 1996) and *Mungo National Park Plan of Management* (NSW National Parks and Wildlife Service, 2006).

All the proposed locations are within the *Willandra Lakes Region World Heritage Area* (WLRWHA). The *Willandra Lakes* is also on the National Heritage List, while some of the Willandra Lakes is also on the State Heritage Register and the Balranald and Wentworth Shire Local Environment Plans (LEPs) as an item of local heritage significance. This report provides an assessment of the historic and Aboriginal cultural heritage of the proposed reburial areas including archaeological potential, impact assessment and mitigation measures.

This Heritage Assessment Report is to accompany an application to the NSW Heritage Council under Section 60 of the NSW *Heritage Act 1977*, the Statement of Heritage Impact, a Review of Environmental Factors and notification to Crown Lands and Balranald and Wentworth Shire Councils for the work associated with the proposed reburials.

Policy coordination and funding are joint responsibilities of the State and Commonwealth with advice from the Willandra Lakes Region World Area Advisory Council, and the Willandra Lakes Region World Area Aboriginal Advisory Group. Day-to-day management of the World Heritage area is the responsibility of the New South Wales National Parks and Wildlife Service.

1.2 The Study Area

The proposed reburials will take place at 26 locations across the Willandra Lakes (see Figure 1 and Appendix 14.1). Twenty-two of the proposed locations are on Mungo NP (Mungo NP) which is situated in the rangelands of south western New South Wales (NSW)

and part of the Willandra Lakes Region World Heritage Area). Mungo NP is 110 kilometres north east of the Victorian and NSW border towns of Mildura and Wentworth and 140 kilometres north west of the NSW town of Balranald.

Four of the proposed reburial locations are on private western lands leases (Gol Gol Station, Mulurulu Station, and Top Hut Station) nearby to Mungo NP, and outside the State Heritage listed area.

The location information is included in Appendix 14.2.

The appendices show a high level of detail on the reburial locations. This information is considered culturally sensitive and confidential and it is not in the public interest, or in best interests of providing safety and security for the remains, to make this information widely available.

1.3 Methodology

This report has been prepared with consideration of the principles established by *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013).

This report relies upon a site assessment, including for historic archaeology and Aboriginal cultural heritage, conducted by Sunraysia Environmental, The Office of Environment and Heritage (now Heritage NSW, Department of Premier and Cabinet) and representatives of the Aboriginal community in 2019.

The report has been prepared with reference to the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage, 2011).

This report is supported by information prepared for:

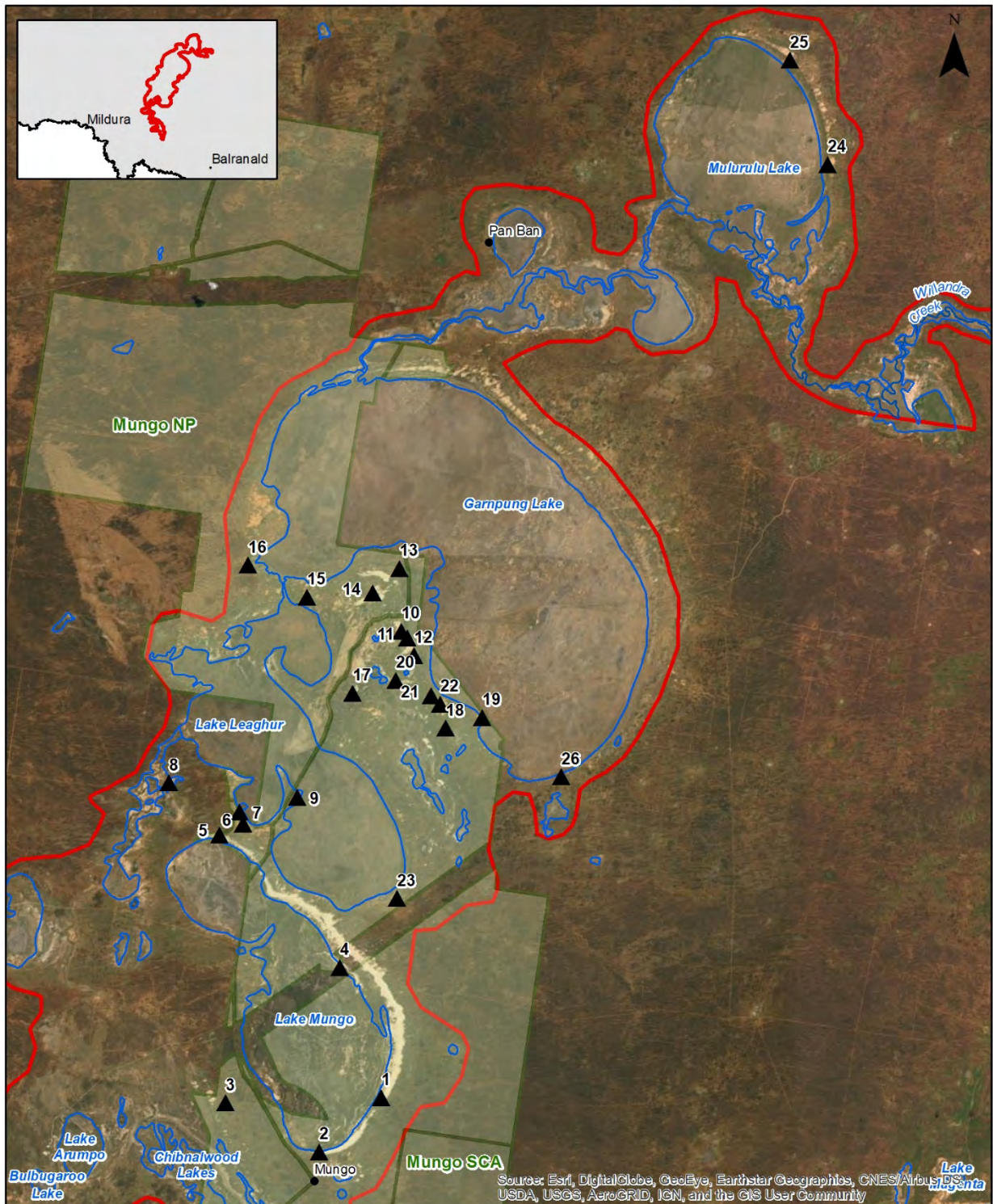
Smith, A., Travers, I., & James, L. (2019). *Willandra Lakes: Assessment of impacts of reburial on matters on national environmental significance*. Unpublished report to Office of Environment & Heritage.

Sunraysia Environmental & Heritage NSW. (2020). *Willandra Lakes Reburial Project: Review of Environmental Factors*. Unpublished report to Heritage NSW.

1.4 Authorship

This report has been prepared by Ashley Edwards, South West Region, Heritage NSW, NSW Department of Premier and Cabinet.

Figure 1: The proposed reburial locations within the Willandra Lakes Region World Heritage Area



Willandra Lakes Aboriginal Ancestors Reburial Project

Datum/Projection: GCS GDA 1994

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Legend

- ▲ Reburial Locations
- NPWS Estate
- World Heritage Areas

0 2.5 5 10 15 20 Kilometers

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2.0 Historical Overview

The following landform overview is based the World Heritage List information for the Willandra Lakes Region (Department of Agriculture, Water and the Environment, n.d.). The following historical information is a summary of the detailed histories of the Willandra Lakes region developed by Godden Mackay Logan for the *Mungo National Park Historic Heritage: Conservation Management and Cultural Tourism Plan* (2003) and by Ashley Built Heritage for the *Leaghur Pastoral Station, Mungo National Park Heritage Assessment* (2017).

2.1 Landform

The following background is taken from the World Heritage List information for the Willandra Lakes Region (Department of Agriculture, Water and the Environment, n.d.).

The Willandra Lakes Region is an extensive area that contains a system of ancient lakes formed over the last two million years. Aborigines lived on the shores of the lakes for at least 50,000 years, and the remains of a 40,000-year-old female found in the dunes of Lake Mungo are believed to be the oldest ritual cremation site in the world.

The lakes in the region are now dry and are fringed on the eastern shore by a crescent-shaped dune, referred to as a 'lunette', that was formed by the prevailing winds.

Today, the lake beds are flat plains vegetated by salt tolerant low bushes and grasses. Part of the World Heritage property is gazetted as the Mungo NP, which covers about two-thirds of Lake Mungo and includes the spectacular Walls of China lunette. The remaining parts of the World Heritage property comprises pastoral leasehold properties.

There are five large interconnected, dry lake basins and 14 smaller basins varying in area from 6 to 350km². The original source for the lakes was a creek flowing from the Eastern Highlands to the Murray River. When the Willandra Billabong Creek ceased to replenish the lakes, they dried in series from south to north over a period of several thousand years, each becoming progressively more saline.

The lunettes are stratified into layers of sediments that were deposited at different stages in the lakes' history.

The lakes were full of deep, relatively fresh water for a period of 30,000 years that came to an end 19,000 years ago. The earliest lunette sediments are more than 50,000 years old and are orange-red in colour. Above are clays, clean quartz sand and soil that were deposited along the lakes' edges when the lakes were full. The top layer is composed largely of wind-blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up.

The vegetation in the region, sparse though it is, is typical of the semi-arid zone. It plays an important role in stabilising the landscape and hence maintaining its sediment strata and many species of native fauna.

Small scrubby multi-stemmed mallee eucalypts are found on the dunes, with an understorey of herbs and grasses. Rosewood-belah woodland is common on the sand plains. In the lake beds, several species of saltbush are able to thrive in the saline conditions.

The remains of a large number of animals have been found in the Willandra Lakes Region. More than 55 species have been identified, 40 of which are no longer found in the region, and 11 of which are extinct.

Twenty-two species of mammals are currently recorded. Bats are the most diverse group, and there are some 40 species of reptiles and amphibians.

The bird life of the Willandra Lakes Region is similar to that in many other semiarid areas of Australia. Parrots, cockatoos and finches are the most conspicuous of the 137 recorded species.

2.2 Aboriginal Occupation: Pre-European

Aboriginal people have lived in the Willandra Lakes Region for at least 50,000 years. Excavations in 1968 uncovered the cremated remains of 'Mungo Lady' in the dunes of Lake Mungo. At 40,000 years old, this is believed to be the oldest site of ritual cremation in the world. In 1974, the ochred burial of a male Aborigine was found nearby. The skeleton, known as 'Mungo Man', is also believed to be around 40,000 years old.

In 2003, nearly 460 fossilised human footprints were discovered, the largest collection of its kind in the world. The prints were made by children, adolescents and adults 19,000 to 23,000 years ago in wet clay. The clay, containing calcium carbonate, hardened like concrete, and a layer of clay and sand protected the prints.

During the last Ice Age, when the lakes were full, the Mungo people camped along the lake shore, taking advantage of a wide range of food including freshwater mussels, yabbies, golden perch and Murray cod, large emus and a variety of marsupials, which probably included the now extinct giant kangaroos.

Aboriginal people who lived at Lake Mungo had a rich and complex social life. The discovery of the Mungo I cremation and the Mungo III burial gives a glimpse of their cultural practices including 'anointing the remains with ochre' (Godden Mackay Logan, 2003, pp. 13-14). The presence of that ochre, sourced from 200km away is evidence of established trade networks (Godden Mackay Logan, 2003, p. 14).

When the lake system began to dry between 25,000 and 19,000 BP, previously plentiful resources such as fish and mussels to disappear in archaeological deposits. Seed grinding technologies begin to emerge in response to encroaching vegetation. Evidence of seed grinding and hunting of grazing animals has been found in archaeological deposits on the shoreline of the lake system from 24,000 BP (Ashley Built Heritage, 2017).

The human history of the region is not restricted just to an ancient episode. Evidence so far points to an extraordinary continuity of occupation over long periods of time. In the top layers of sediments there is abundant evidence of occupation over the last 10,000 years.

Information about the period immediately prior to European invasion is complemented by the observations of early settlers, missionaries and explorers, however there are few accounts of Aboriginal people from Lake Mungo (Godden Mackay Logan, 2003, p. 15). General information on the area comes from explorers such as Sturt and Mitchell.

One of the few early written sources on Aboriginal dreamtime stories for the Willandra Lakes comes from A.L.P. Cameron, Manager of Mulurulu Station in the 1880's. In 1885 Cameron recorded and published a 'tradition' that relates how the Willandra Creek and lakes were formed. In summary, the tradition recounts that two dreamtime figures, or Bookoomuri,

chased a giant kangaroo south from Hillston along the Willandra Creek until they lost sight of it. They followed the kangaroo's track for some days and came upon another Bookoomuri, who, with the help of his dog, had killed and partly cooked the exhausted kangaroo. The two Bookoomuri refused an offer to share the kangaroo meat and instead restored it to life. The two Bookoomuri placed a spell over the dog to prevent it from chasing the kangaroo, and then resumed the chase. The Willandra Creek is the track of the Kangaroo as it fled the Bookoomuri. The hills (lunettes) are the camps of the Bookoomuri as they followed the kangaroo. The Bookoomuri chased the kangaroo and finally killed it near the junction of the Murray and Darling Rivers (Cameron, 1885, p. 369).

When Europeans arrived in the Willandra Lakes area, the region was within lands of the Barkandji, Mutthi Mutthi and Ngayimpaa tribes (Godden Mackay Logan, 2003, pp. 15-16). While Aboriginal people probably lived a traditional lifestyle around Lake Mungo at the time the first stations were established in the late nineteenth century, they had been almost totally removed from the area with the establishment of Mungo and Zanci Stations in 1922. A number of government reserves had been established by this time at Yelta (near Wentworth), Pooncarrie, Menindee, Carowra Tank (near Ivanhoe) and Balranald where Aboriginal people were progressively 'rounded up and forcibly removed to these establishments' (Godden Mackay Logan, 2003, pp. 15-16).

2.3 Aboriginal People after European Invasion

Aboriginal people of the region were already suffering from European disease by the time Sturt reached the Darling River in 1829. He recorded that 'a violent cutaneous disease raged through the tribe, sweeping them off in great numbers' (in Godden Mackay Logan, 2003, p. 17). In 1839, Mitchell recorded that 'the populations of the Darling seemed to have been much reduced by smallpox' (in Godden Mackay Logan, 2003, p. 17). Europeans settled along the Darling River from 1850 (Godden Mackay Logan, 2003, p. 17). While there are few accounts of Aboriginal people from that time, there is evidence of frontier violence including the killing of Aboriginal people on the Darling River in 1835 and the massacre at Mount Dispersion on the Murray River in 1836. Aboriginal people of the Darling and Murray Rivers also had a series of battles with Europeans driving stock to Adelaide between 1839 and 1841 (Godden Mackay Logan, 2003, p. 17). Violence on the Darling River forced many stations to be abandoned by the 1850s (Godden Mackay Logan, 2003, p. 17). However, increases in the price of meat and wool provided the incentive for Europeans to retake the Darling by 1859 (Godden Mackay Logan, 2003, p. 17).

Burke and Wills recorded that the Yita Yita people camped near the Pringle Station homestead south of Lake Mungo in 1860 and Becker sketched their Guide, Watpipa, who led them through the southern Willandra to Arumpo (see Figure 2).

Burke and Wills guide from Arumpo (Rimpool) north west to Pooncarrie was Dr Benson whose account was recorded by Degaris (1907):

'Me first meet them,' he says, 'at Rimpool, and me take them to Tarcoola. Next day they send me back to Rimpool with message to overseer. Me join them at Tarcoola again, and take them to Pooncarrie, where they stay three day. Me stay two day and return to Para Station. Burke and Wills offer me wages to go on with them, but station need me so me could not go.'



Figure 2: Watpipa, the “Old Man”, by Ludwig Becker 1860 (Tipping, 1979). Drawn on the 24th September, 1860 approximately 10 miles southeast of Arumpo Station, in the vicinity of Willandra Creek just southeast of Lake Mungo.

With the manpower shortages following the gold rush, Aboriginal people became an important part of the pastoral industry as labour on Turlee and Gol Gol stations. Allen (in Godden Mackay Logan, 2003, p. 17) reports that:

They were employed extensively as shepherds. Stations at this stage were huge runs covering up to 1,000 square miles, minded by shepherds, who lived at outstations situated near permanent or regular water supplies.

While no records from Turlee or Gol Gol describe Aboriginal people either in the area or the workforce, it is likely that were employed there in some capacity and were also able to maintain traditional practices such as hunting (in Godden Mackay Logan, 2003, p. 17).

2.4 European Occupation, Land Acts and Pastoral Runs

While government-sanctioned expeditions such as those led Sturt, Boyle and Mitchell opened the country up for settlement, it was the pastoralists who followed that were responsible for much of the actual exploration in the region. Searching for viable land, they rapidly settled the regions along the major waterways, and when these were taken up, began to settle the inland areas as well.

Settlement in the region was officially recognised with the proclamation of the Darling Pastoral District in 1847 and the survey and subsequent gazettal of Balrandald and Euston in 1851 and later by Wentworth on the junction of the Darling and Murray Rivers (Godden Mackay Logan, 2003, p. 18).

In 1861, the Robertson Land Act sought to regulate the settlement of the western lands district and provide access to land for the migrants of the 1850s and 1860s (Godden Mackay

Logan, 2003, p. 18). However, the new pastoralists found that most of the best grazing land had already been selected by squatters under the regulations derived from the Orders of Council (Godden Mackay Logan, 2003, p. 18). These orders allowed the leasing of up to 32,000 acre runs in the 'unsettled districts' for five years with the right to purchase one in every 75 square miles at £1 an acre (Godden Mackay Logan, 2003, p. 18).

These first pastoralists preferred land with access to water, primarily along the rivers of the western districts, leaving the drier back-block areas to the next wave of settlers. The 1861 legislation had little effect on the back blocks, however it did flag the government's intention to break up the early runs so that more owner-operators would be attracted to the region (Godden Mackay Logan, 2003, p. 19). The *Lands Act 1884* established a system that would close off the loopholes from the 1861 legislation and designated three separate divisions each managed by a separate Land Board, East, Central and Western (Godden Mackay Logan, 2003, p. 19). The Willandra Lakes Regions falls within the boundary of the Western Lands Division. Potential conflict between squatters and selectors following the 1884 legislation was avoided by the government resuming half of land available for selection (Godden Mackay Logan, 2003, p. 19). According to Godden Mackay Logan (2003, p. 19):

Areas retained by squatters were held under a Pastoral Lease for 15 years in the Western Division, but they were also permitted to occupy the resumed area for grazing purposes under the terms of an annual licence. To buy under the conditions of the new legislation, each of the pastoralists was required to provide documentation of their holdings and improvements to the government. These lists provide a valuable insight into improvements and priorities on the stations in the late nineteenth century.

Several back-block properties were established in what was later known as the Willandra Lakes region. Turlee Station was taken up by George Lee in 1850. William Nash took up North Turlee and North Turlee Block A from 1864 (Mungo and Zanci Stations were originally part of the North Turlee properties). John Ettershank assumed control of Nash's holdings in 1869. Both Nash and Ettershank had utilised the Mungo area of the Turlee holdings as a headstation for the property. Robert Patterson, a Victorian pastoralist, purchased the leases for the properties North Turlee and North Turlee A in 1874 (Godden Mackay Logan, 2003, p. 20).

2.5 Gol Gol Station

Gol Gol Station was taken up by James McLeod in 1859, part of which incorporates the present Mungo National Park. McLeod sold the property to the Peppin brothers in 1867. As with Turlee, Gol Gol was a back-block station far from water which meant that little development could take place without infrastructure. Robert Patterson's nephew, John Patterson, bought Gol Gol Station from the Peppin brothers in 1875. Patterson, from a wealthy family familiar with large properties, was the first to owner of Gol Gol with enough capital to make it viable (Godden Mackay Logan, 2003, p. 20). John Patterson acquired the two Turlee blocks acquired from his uncle in 1877 with the combined property equalling 345,407 acres of leasehold land (Godden Mackay Logan, 2003, p. 20). The Patterson family ran the Turlee properties for the next 44 years until the land was separated from the main station for use as soldier settlement blocks (Godden Mackay Logan, 2003, p. 20). Patterson was typical of many of the early leaseholders in that he owned several properties and left the day-to-day running to resident station managers while he resided in Melbourne (Godden Mackay Logan, 2003, p. 20).

Primarily a sheep station, the thirty stand woolshed at what was to become Mungo Station was erected on Gol Gol between 1869 and 1880 (Godden Mackay Logan, 2003, p. 20). The woolshed was probably built using contract labour. Oral tradition suggests the use of Chinese labourers in the construction of the shed and while there were some Chinese working on Gol Gol Station in the 1880s, there is no direct evidence that they were involved in the construction of woolshed (Godden Mackay Logan, 2003, p. 21). The woolshed was built in a drop-log style. According to Godden Mackay Logan (2003, p. 21) 'the technique involved the erection of vertical grooved holding posts at intervals along each wall. Timber slabs were then slipped between the struts to the height of the wall'.

Patterson purchased a wool press in 1881 for £131 from David Munro & Co in Melbourne (Godden Mackay Logan, 2003, pp. 21-22). The woolshed was converted to mechanical shearing by Patterson after 1888 with the removal of some shearing pens to accommodate the installation of the steam engine for the wool press and to drive the overhead mechanical shears (Godden Mackay Logan, 2003, pp. 21-22). Shearers quarters, managers cottage, scour tank were built near the shed (Godden Mackay Logan, 2003, pp. 21-22).

The first and most important improvement to the back-block stations was the sinking of wells and tanks to ensure a more reliable water supply (Godden Mackay Logan, 2003, p. 22). However, not every shaft sunk was a success, between March 1875 and September 1881, eighty-three trial shafts had been sunk on Gol Gol at a total cost of £1,260 (Godden Mackay Logan, 2003, p. 22).

According to Godden Mackay Logan (2003, p. 22):

The importance of the tanks to the properties is clearly illustrated in the lists of improvements to property given in 1885 in application for new leases. On Mungo, then still part of Patterson's Gol Gol Station, the cost of tanks, wells, drains and associated water-related improvements totalled some £3425, by far the largest combined expense for the property. On what was to become Zanci, the cost was given as £3810 for water-related improvements, while on Gol Gol improvements were estimated at £5985.⁴⁰ In 1896 John Hunter Patterson reported in front of a Leasehold Board that his property (the entire Gol Gol holding) included seven large sheep paddocks which were watered by two wells and fifteen tanks on freehold land, with a further seven tanks on Crown land. The total cost of the wells and tanks was claimed by Patterson to have been £8304.11.5 in 1896 with a total of 185,841 yards of excavation. The cost included maintenance to keep the tanks from silting up, with two teams of men employed solely to keep the tanks clear.⁴¹ Water tanks and good land management were imperative to the survival of the property, a fact that was illustrated during the late 1880s and early 1890s when the combined problems of drought and the arrival of rabbits affected the western districts. The provision of water in tanks and wells had led some property owners to seriously overestimate the grazing capacity of their land up to the 1880s.

Rabbits had started to appear in the area by 1879 and had become a major problem for landholders by the mid-1880s, with rabbits competing with sheep for resources (Godden Mackay Logan, 2003, p. 23).. The government recognised the problem in 1883 with the passing of the *Rabbit Nuisance Act* which offered a bounty. Other methods of control included rabbit-proof fencing and poisoning. However, it was not really until the use of myxomatosis from the 1950s that the rabbit population was controlled (Godden Mackay Logan, 2003, p. 23).

In 1911, John Patterson Jnr took over Gol Gol from his father and managed the property for another ten years until the soldier settlement stations were created (Godden Mackay Logan, 2003, p. 24).

2.6 Closer Settlement/ Soldier Settlement

A scheme to settle returned soldiers on available land was adopted in all the Australian states following the First World War (Godden Mackay Logan, 2003, p. 29). Each state proposed different schemes, New South Wales with small grazing leaseholds and Victoria preferring large irrigation colonies (Godden Mackay Logan, 2003, p. 29). By 1920, the Commonwealth allowed £1,000 per settler and by 1922 almost 28,000 soldiers had been assisted (Godden Mackay Logan, 2003, p. 29). Gol Gol Station was broken up under the soldier settlement scheme in 1921, creating Mungo and Zanci stations as well as neighbouring Joulni and Leaghur stations (Godden Mackay Logan, 2003, p. 29).

2.7 Mungo Station

The 16,000ha (39,520 acres) Mungo Station was taken up by the brothers Ewen and Angus Cameron in 1921 under the terms of Section 26 of the *Western Lands Act 1901* managed as an independent station with owner-occupiers (Godden Mackay Logan, 2003, p. 31). Unlike some other soldier settlers, the Cameron brothers were fortunate in that their block was already improved and they possessed experience on the land with Angus having been an overseer at Paika Station near Baranald (Godden Mackay Logan, 2003, p. 31). The brothers had prosperous years from 1922 to 1924, but were hit by droughts from 1926 to 1928 from which the property never recovered (Godden Mackay Logan, 2003, p. 31). The Camerons reduced the number of stands within the woolshed down to four stands and replaced the steam engine with a diesel one (Godden Mackay Logan, 2003, p. 31).

Mungo Station was sold to Albert Barnes in 1934 who had experience in the area. Barnes spent much of his first twelve months at Mungo sinking tanks and mending fences (Godden Mackay Logan, 2003, p. 31). Albert married Venda Stirrat in 1934, a niece of Roy Vigar of Zanci Station, making Mungo a centre for community activity in the area and to bringing the two stations closer together (Godden Mackay Logan, 2003, p. 31). In following years, Roy Vigar's second niece Jean married Alec Barnes of nearby Joulni Station (Godden Mackay Logan, 2003, p. 31).

Taking advantage of high rainfall and good wool prices in the 1950s, Barnes resurrected one of the shearing stands, enlarged the Mungo homestead (previously the manager's cottage) by adding two wings to the homestead and removing the drop-log kitchen/cook house (Godden Mackay Logan, 2003, p. 31). Venda Barnes states that during her association with Zanci and Mungo Stations (1925 to 1978), no Aboriginal people were employed on either station (Godden Mackay Logan, 2003, p. 31). However According to Godden Mackay Logan (2003, p. 32):

it is likely that a few Aboriginal people did have some temporary or transient contact with the study area during the twentieth century. A local Aboriginal man, Roy Kennedy, believes that his father drove sheep through Mungo (there is a Travelling Stock Route that passes through the property). The Barnes/Stirrat family members recall that an Aboriginal stockman, Harry Mitchell, passed through Zanci property to visit Roy Vigar as the two had worked together on Nulla Station located near Lake Victoria. It is also possible that Aboriginal shearers may have worked on the stations from time to time, although Roy Stirrat recalls never seeing an Aboriginal shearer on

either Mungo or Zanci. Nevertheless, the almost complete absence of Aboriginal people from the historic pastoral record during the last century is apparently not typical for this region. Hardy⁵⁷ maintains that Aborigines made up the workforce that helped carry the pastoral burden during the [First] war years when many young white men went off to enlist. These were relatively profitable years for the Barkindji Aboriginal people of the region when work was more plentiful. This period came to an end with the end of the war, the return of the white labourforce and the further breakup of the large landholdings through the soldier settlement scheme. Remoteness from other settlements, the relatively small size of these two properties and the co-operative family management arrangements between adjoining stations may be factors in why this is not a typical example in relation to Aboriginal pastoral involvement.

The families of Mungo and their neighbours held picnics on the sandhills behind the Mungo homestead and race days at the track on Joulni Station during the 1930s. Albert Barnes ran Mungo until 1978 when it was purchased by the newly-established NSW National Parks and Wildlife Service for \$116,000 (Godden Mackay Logan, 2003, p. 32). The NSW NPWS interest in the property was primarily due to the discovery of ancient Aboriginal burials and settlement sites around Lake Mungo (Godden Mackay Logan, 2003, p. 32).

2.8 Zanci Station

As with Mungo, Zanci was originally part of North Turlee Run managed by William Nash until it was incorporated into Gol Gol by the Pattersons in 1877 (Godden Mackay Logan, 2003, p. 37). Zanci was also separated from Gol Gol under Section 26 of the *Western Lands Act 1901* in 1921 for a soldier settlement property run by Joseph Vigar and his son Roy (Godden Mackay Logan, 2003, p. 37). In 1922, Joseph was killed in a horse and buggy accident and Roy continued to run the property with the help of his brother Harold (Godden Mackay Logan, 2003, p. 37). Unlike Mungo, Zanci had only fencing and a few water tanks with no substantial dwelling or other buildings, putting the Vigers at a disadvantage, as necessary infrastructure needed to be built before they could turn a profit (Godden Mackay Logan, 2003, p. 37). The families lived in tents while the first house was being built. A temporary two room house of galvanised iron and pressed kerosene tins was completed by 1925 with a detached kitchen of drop-log construction (Godden Mackay Logan, 2003, p. 37). A permanent homestead was completed in the early 1930s. Clad in galvanised iron, the single-storey house had a frame of locally obtained timbers (Godden Mackay Logan, 2003, p. 37). Other buildings included a cool room, drop-log sheds, yards and an underground dugout (Godden Mackay Logan, 2003, p. 37). The shed was replaced from 1943, using materials from Mungo woolshed that Albert Barnes had dismantled (Godden Mackay Logan, 2003, p. 37).

The property was owned by Russell and Rita Clothier from 1979 until it was purchased by NPWS in 1984 and incorporated into the Mungo National Park area (Godden Mackay Logan, 2003, p. 37).

2.9 Leahgur Station

While Leahgur was also created from the larger Gol Gol Station in 1921, there is little to suggest that it was part of the Soldier Settlement Act of 1916, but instead a product of the broader Closer Settlement schemes (Ashley Built Heritage, 2017, p. 10).

Leaghur station was taken up by William Archibald Warren (who was not a returned soldier) in 1922 and was due to expire in 1945 (Ashley Built Heritage, 2017, p. 10). The block was fenced and had five tanks on it, but no other improvements (Ashley Built Heritage, 2017, p. 10). Warren built a simple, weatherboard house with a deep and open verandah (one side was later closed in for an office) and began stocking the station with sheep (Ashley Built Heritage, 2017, p. 10). A shearing shed and two smaller cottages to house shearers during the clip were built by 1929 (Ashley Built Heritage, 2017, p. 10). Warren mortgaged the property with Goldsborough Mort & Co Ltd during the Great Depression. Warren's lease was extended to 1968 in 1932, then he was granted the lease to Leaghur in perpetuity in 1934 (Ashley Built Heritage, 2017, p. 10).

According to Ashley Built Heritage (2017, p. 13):

Warren made a number of improvements to Leaghur, including the construction of a small garage to shelter his car. Motor transport was a vital component to the successful operation of the estates in the Willandra area, including Leaghur, as they were isolated from the rail network and from the river boats that served the Murray. In October 1955 William Warren paid out the mortgage to Goldsborough Mort, by remortgaging his lease with Clarence Lindsay Barnes, who in turn purchased the leasehold from Warren in the same month. Barnes then leased the property back to Warren who lived at Leaghur until he retired and moved to Mildura in c1956. Warren died in 1961 aged 76 and his estate released the station to Charles Lindsay Barnes.

Clarence and Gladys Barnes took up residence on Leaghur in 1956, joining other members of the family already running the Mungo and Lethro stations nearby (Ashley Built Heritage, 2017, p. 14). The Barnes family continued to run Leaghur as a sheep station, shearing 4,000 sheep in a season up until the 1980s (Ashley Built Heritage, 2017, p. 14). Barnes employed a builder to renovate the homestead, enclosing the verandah with insect screens in 1956 (Ashley Built Heritage, 2017, p. 14). Barnes also renovated the shearers quarters and constructed a new meat house constructed and a holding paddock on a spit of land that extended into the lakebed (Ashley Built Heritage, 2017, p. 14).

The management of the water at Leaghur was an ongoing struggle with the remaining tanks from the Gol Gol era continuing to be used with new pipes to move water, new wells dug and windmills erected (Ashley Built Heritage, 2017, p. 14). Barnes also dug at least one new well close to the (Ashley Built Heritage, 2017, p. 14). Trucks were also used to move water around the station including an Austin flatbed truck with two 400 gallon tanks for that purpose. (Ashley Built Heritage, 2017, p. 15).

2.10 Mulurulu

John Robertson took over the lease of Mulurulu 1862 then transferred it to David Chrystal within two years (Donovan & Associates, 1985, p. 62). Chrystal remained lessee/manager for the next twenty-five years, living there until 1881 (Donovan & Associates, 1985, p. 62). However, the lease was taken over by the Trust and Agency Company in 1874 then passed to Reginald Bright and Francis Keating in 1887 (Donovan & Associates, 1985, p. 62). They also struggled to turn a profit in the drought conditions and the station was taken over by mortgagee Queensland Estates Ltd in 1903 (Donovan & Associates, 1985, p. 62). The previous owners had invested £15,000 in improvements including a substantial homestead and shearing shed together with a number of major water improvements (Donovan & Associates, 1985, p. 62). However, Queensland Estates bought the station for only £5,000 with 11,000 sheep. Queensland Estates passed the station to William Parker in 1907 who

extended the lease to perpetuity in 1936 (Donovan & Associates, 1985, p. 62). The property remained his estate until 1985.

2.11 Garnpung

Garnpung station was taken up in 1860 by John Robertson and David Chrystal (Donovan & Associates, 1985, p. 86). Struggling with no surface water, the lease passed to William Taylor three years later. Garnpung, along with East Tarcoola and East Tarcoola Block A became part of Taylor's the pastoral empire (Donovan & Associates, 1985, p. 86). A Scottish immigrant, it was Taylor and his partner and manager, John Bertram, who battled the rabbits and drought of the late nineteenth century and were responsible for the development of Garnpung (Donovan & Associates, 1985, p. 86). Taylor lived at Keilor in Victoria, Melbourne being the market for his interests (Donovan & Associates, 1985, p. 86).

A lack of water meant that the station was not permanently stocked until 1882 (Donovan & Associates, 1985, p. 87). Improvements by Taylor and Bertram included wells to secure a water supply for stock in all seasons, making Garnpung an attractive property (Donovan & Associates, 1985, p. 87). The station passed to Benjamin Chaffey in 1906 following Taylor's death, then to John Danson two years later, before being taken over by E.P.M. Richardson in 1911.

According to Donovan & Associates (Donovan & Associates, 1985, p. 89):

Unlike several stations further south, Garnpung retains many of the improvements which were associated with the early history of the station and testify to the early efforts to come to terms with the harsh environment. Perhaps the most significant of these is the complex of items about North Well which underscores the early significance of this. Indeed, this item is of particular significance because it retains evidence of a succession of devices which were used to water the stock, from the early timbered well to the later bore. It also features a concrete tank, together with its predecessor, which is perhaps much more important, a rectangular log-tank lined with concrete, and which once was evidently covered. The remains of the troughing leading from this tank are also evident. The other water improvements have not been so well preserved. The east well remains, but has been superseded by a bore and concrete tank: the south well has been filled in. The early drop-log homestead has also been preserved, and remains in reasonably good condition. Its integrity seems to be high, and while it is evident that alterations have been made from time to time, these are to be expected and, indeed, enhance the historical significance of the item.

2.12 Arumpo/Top Hut

James Scott took up the lease at Arumpo Station in 1859 (Donovan & Associates, 1985, p. 94). Burke and Wills visited the station during their expedition of 1860 when Ludwig Becker of the expedition party noted the presence of a hut on the station (Donovan & Associates, 1985, p. 94). Scott was transferred the lease to J. Macdonald, E.M. Bagot, and W.H. Charnock in 1875 (Donovan & Associates, 1985, p. 94). The station then changed hands rapidly to Joseph Annand & Co. who put it up for sale again in 1882 (Donovan & Associates, 1985, p. 94). At that time, Arumpo, included Buragy and Outer Back Bullennong runs and was worked in conjunction with Burtundy Station on the Darling River (Donovan & Associates, 1985, p. 94). The sale notice suggests that many of the built improvements had been erected. At the time of the sale improvements consisted of two homesteads, two woolsheds and drafting yards (Donovan & Associates, 1985, p. 94). Both stations passed to

Thomas Forrest Cumming, the Executor for John Cumming in 1882 (Donovan & Associates, 1985, p. 94). The sale was followed by drought and rabbit plague with Cumming's creditors, the Australian Mercantile Land and Finance Company suggesting in 1885 that such properties were unsaleable.

With no surface water, the water supply on Arumpo consisted of nineteen tanks in 1891 (Donovan & Associates, 1985, p. 96). Manager Charles Archer noted in 1888 that there was never sufficient rain to keep the tanks full (Donovan & Associates, 1985, p. 96). In 1884 Cumming destocked Arumpo to Burtundy when the tanks dried up (Donovan & Associates, 1985, p. 96). By 1888 the drought and rabbits had taken their toll with the indebtedness of the John Cumming estate at £48,000, well over its value (Donovan & Associates, 1985, p. 96). It was suggested then that the creditors foreclose on the properties when a profitable sale could be made (Donovan & Associates, 1985, p. 96).

Arumpo and Burtundy were taken over by the Australian Mercantile Land and Finance Company in 1891. Burtundy was sold off in 1892, while Arumpo was retained by the company and worked together with their other properties nearby who had suffered a similar fate (Donovan & Associates, 1985, p. 96). After 1893, Tarcoola, Arumpo and Pan Ban were known as the Tarcoola Group (Donovan & Associates, 1985, p. 97). The company achieved success through economies and efficiencies of scale and in poor seasons stock were transferred between their many stations in depending on the availability of water and feed (Donovan & Associates, 1985, p. 97).

The Australian Mercantile Land and Finance Company allowed the Arumpo lease to expire in 1946 however, by then large parts of the station had been whittled away (Donovan & Associates, 1985, p. 97). Parts of the resumed area was taken up by Charles Summers who set up Top Hut Station in 1905 and Albert Purches who set in Chibnalwood in 1921 (Donovan & Associates, 1985, p. 97). Top Hut Station remained in the Summers family until 1954 when it passed to Harold Wakefield (Donovan & Associates, 1985, p. 100). In 1951, the company surrendered its remaining freehold land at Arumpo to the Crown (Donovan & Associates, 1985, p. 97).

A new lease on Arumpo was taken up by Glengarry McIntosh Flower then handed to Ken Sue in 1955 (Donovan & Associates, 1985, p. 97). Since then, the homestead has been removed to elsewhere on property and many of the early buildings have been dismantled or fallen into disrepair (Donovan & Associates, 1985, p. 97).

2.13 Tourism and Scientific Research

The name 'Walls of China' has been used to describe the Mungo area since at least 1896, when it was described as such in evidence for a lease appraisalment by John Patterson (Godden Mackay Logan, 2003, p. 40).

Australian artist Russell Drysdale painted Walls of China on a visit there in 1945. This image and visits by photographic groups are evidence that the Walls existed as a site of scenic value before the archaeological discoveries of the 1970s (Godden Mackay Logan, 2003, p. 40). Tours, including groups in minibuses, to the Walls and Mungo were operating from the late 1960s. Venda Barnes even operated a shop out of the Mungo Homestead for tourists to the Walls of China (Godden Mackay Logan, 2003, p. 40).

Scientific researchers, including from the Australian National University, began investigations at Lake Mungo from 1968, beginning what is now over five decades of research (Godden Mackay Logan, 2003, p. 40). The results of this research are considered to be of world

importance and led to the creation of Mungo National Park and listing of the Willandra Lakes Region as a World Heritage Area (Godden Mackay Logan, 2003, p. 40).

2.14 Mungo National Park

A history of the Mungo National Park is provided by Godden Mackay Logan (Godden Mackay Logan, 2003, pp. 43-44).

The move toward the NSW National Parks and Wildlife Service ownership of Mungo and Zanci Stations began in 1971 with the visit to Mungo by a NPWS officer to investigate the Lake Mungo Aboriginal archaeological discoveries. Publicity about the finds had led to both an increase in the number of visitors to the area and an increase in professional anxiety over the preservation and future management of the site. By 1973 pressure was being put on the NPWS to implement some type of protection to the archaeological sites and the Walls of China. Researchers from the Australian National University had contacted NPWS to report on their excavations on site as well as to express concern over the number of tourists visiting the site, and the use of motorbikes and dune buggies on the Walls of China.⁶⁴ Concern had also been raised by Albert Barnes, who saw the tourist sideline as impacting on his management of the property.

In 1975 it was proposed that the area be considered by the Interim Committee of the National Estate for inclusion on its list. Throughout 1976 Barnes, the NPWS, ANU and the Western Lands Commission were in constant contact over the future of the station and the management of the resources. Included as an issue was that Albert and Venda Barnes had been on the land for 43 years and were beginning to consider leaving it altogether. With this as an option, and with their consent, NPWS finally made a bid on the property, and in 1978 purchased the Mungo Station for \$116,000 from the Barnes family, with businessman Dick Smith acting to facilitate the arrangements. The property was bought through the National Parks and Wildlife Foundation, a fund established in 1970 to raise money for the acquisition of land for national parks and for ongoing scientific research into conservation. In March 1979 the Mungo National Park was dedicated. Further recognition of the area's outstanding cultural heritage and landscape value was given in 1981 when the area joined the list of World Heritage Sites as the Willandra Lakes Region World Heritage Area.

The Willandra Lakes Region was listed under the natural values as an outstanding example representing major stages of the earth's evolutionary history. It was also found to be an outstanding example representing ongoing geological processes, biological evolution and human society's interaction with the natural environment, especially its communities of plants and animals, landforms and marine and freshwater bodies. Under the cultural values, it was regarded as outstanding in its exceptional archaeology that is unique, extremely rare, or of great antiquity. In 1996, a Plan of Management was prepared for the Willandra Lakes Region World Heritage Area and a number of committees established that represented various stakeholders.

To add to the national park area, in 1981 it was proposed to purchase part of the adjoining Zanci Station. Negotiations between the NPWS and the then owners Russell and Rita Clothier (who had purchased it from the Vigars in 1979) reached a figure of \$320,000 for portion WL 1030, which was purchased by the service in 1984. At Zanci a number of buildings were demolished or removed including one of the two

Homesteads, several sheds and outbuildings and the Shearers Quarters. This removal, on the basis of the poor condition and asbestos issues, probably also reflects the service's prevailing cultural philosophic view of the time, not always publicly articulated, that removing the buildings was part of the job of restoring nature. It is ironic that the historic record made of these buildings by the service at the time that they were being removed remains the only record of some buildings. Notwithstanding this bumpy start at Zanci, the service has been active in nature and cultural heritage conservation throughout Mungo National Park. A research and recording program was established in 1979 by contract archaeologist Peter Clark and this included the recording of numerous Aboriginal sites. In 1985, a Plan of Management was prepared for the Park. Several works programs have been undertaken on the Mungo and Zanci Woolsheds and the Stables at Zanci have been rethatched.

In 1984 a major initiative to interpret the heritage values of the Park was made with the construction of the Visitors Centre in the Mungo Station complex. The Visitors Centre was added to and refurbished in recent years to provide a high-quality interpretative experience that is coupled with the self-drive tour and commercial guided tours (see Section 8.0 for details). Visitation to Mungo National Park has been steadily increasing over the years and is now one of the regional tourist destinations.

In 1996, the NSW National Parks and Wildlife Service purchased the Leaghur Station from the Barnes family to add it to the existing Mungo National Park (Ashley Built Heritage, 2017, p. 16).

3.0 Consultation

As this project is not an activity that requires an Aboriginal Heritage Impact Permit (see Section 9.1), an alternative consultation methodology to the *Aboriginal Cultural Heritage Consultation Requirements For Proponents* (Department of Environment, Climate Change and Water NSW , 2010) has been followed.

3.1 Repatriation and Community Consultation

3.1.1 Lobbying for the Return of the Willandra Lakes Aboriginal Ancestors

Lobbying for the return and reburial of collected and removed ancestral Aboriginal remains gained intensity across Australia in the 1980s. At the first meeting of the Willandra Lakes World Heritage Area Consultative Committee in 1984, a request from Aboriginal Elders for the repatriation of removed Aboriginal Ancestors was tabled.

Concurrently with this local approach, the Australian Archaeological Association, without any consultation with Aboriginal people from the region, wrote to the Minister for Planning and Environment in 1984 to propose an underground keeping place at Mungo for the Mungo skeletal remains. Some Aboriginal people were prepared to consider this vault idea because they thought special protection from theft and vandalism would be needed when the famous skeletal remains were brought back to Mungo (Western Heritage Group, 2017).

The topic of repatriation has been discussed extensively between 1984 and 2016. Aboriginal community consultation on the specific topic of reburial vs. Keeping Place was undertaken and documented in detail in between 1985 and 1991 (Western Heritage Group, 2017). Providing a safe, secure and long-term reburial location is an issue that was repeated by numerous community members who were concerned about safety, theft and the idea that reburied remains could fall into 'restless hands'. A 1980s study, *The Mungo Report* (Western Heritage Group, 2017) undertook extensive consultation on these matters, and a range of quotes from the report are presented below.

I reckon they should bury them back in the sand and have people to keep an eye on them.

Irene Mitchell (Dareton, 1986)

About the vault and the skeletons down in Canberra: if we get them and bring them back and bury them in the ground, somebody might come out, dig them up and take them away, and we'll never see them again.

Badger Bates (Broken Hill, 1986)

I think they should be put in a fibreglass or plastic sarcophagus in the exact place they found them. Then if others want to study them, they can be dug up. But put it inside concrete to make it too heavy to steal.

Max Harris (Griffith, 1990)

I'd like to build a centre out there, a nice Keeping Place for the Mungo Lady. A Keeping Place would be better than burying them because it could fall into restless hands, or development could damage it - they're talking about building roads out

there. I want those remains safe in one place where they can't be disturbed. It's like a treasure, because it's a very, very vital link.

Alice Kelly (Balranald, 1987)

They should be put back where they belong. Not necessarily in the same spot, because you've got to think of security. We don't want them turning up in a museum in Europe in ten years. No monument. Because we don't know the name of the person.

Eric Ferguson (Dareton, 1987)

They should be brought back and re-buried and protected for all time so that they'll never be interfered with again. By respecting our dead the government will show that they'll respect our living.

Stewart Murray (Melbourne, 1986)

In the end they should bring them back and put it under security. If you put it in the earth, somebody's going to mess with it. You never know, some more clever person might take it overseas, and no Aboriginal person would want that to happen.

Isobel Bennett (Menindee, 1987)

I think there should be some way that the burials could be guarded from erosion - because they could be guarded with something around them, protected so the wind wouldn't blow them away. And, you know, if it's done properly, it could be something that's put around deep down in the soil, so that the sand wouldn't blow. Somebody else could have another idea, but that's my idea.

Elsie Jones (Wilcannia, 1986)

Mrs. Alice Bugmy (Aboriginal interests) says Mr. Clarke should go to Aboriginal communities first and ascertain what their requirements were in respect of the intended use of the bones and their return to Mungo. Dr. Hope says consideration was being given to the construction of a vault at Mungo for the interment of the bones. This would be underground but in a situation in which they could be brought up again for further study should this be needed. Mr. Bates was adamant that there should be no display of Aboriginal remains but that they should go back into the vault to be constructed at Mungo. However, there was currently some disagreement amongst the Aboriginal community as to whether they should go back in the ground to their original sites. There could be a problem of later exposure by deflation by wind and water erosion.

Minutes of the WLR Consultative Committee 14th June 1984

3.1.2 History of Discussions around Repatriation and Security

Some 70 Willandra World Heritage meetings have discussed repatriation, a research centre and reburial (Williams & Associates, 2016; Williams, 2016).

The Three Traditional Tribal Elders Council (3TTGs) (representing Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples) were the main advisory and consultation group forum for the Willandra Lakes region from the mid 1990's to 2013. In 2014, the Willandra Repatriation Traditional Custodians group (WRTC) was formed by the Heritage Division of what was then the Office of Environment and Heritage (OEH) (now Heritage, Department of Premier and

Cabinet) to focus specifically on, and direct, the repatriation of the Willandra Lakes Aboriginal Ancestors.

A repatriation Forum was held in February 2015 and brought together a wide range of scientists and traditional custodians (Williams & Associates, 2015). In November 2015, the Aboriginal Ancestors collection was repackaged and moved from the Australian National University to the Museum of Australia. At this time the WRTC set a two-year time frame to complete the transfer from Canberra to Mungo, which set November 2017 as the deadline.

In November 2016, a second Forum was held and options for repatriation and reburial outlined (Williams & Associates, 2016). This was followed by a third Forum in April 2017 that presented options for repatriation. Consensus was made to return all Aboriginal Ancestors to Mungo NP (Williams & Associates, 2017), and on 17 November 2017, the Willandra Lakes Aboriginal Ancestors collection was returned to Mungo. The role and purpose of the WRTC was completed with the return of the Willandra Lakes Aboriginal Ancestors to Mungo in 2017 and this committee has ceased to meet.

3.1.3 The Decision to Rebury the Willandra Lakes Aboriginal Ancestors

The Willandra Lakes Region Aboriginal Advisory Group (AAG) is a community elected Group and the peak Aboriginal body for the Willandra Lakes Region. The purpose of the AAG is to provide advice on Aboriginal Cultural Heritage matters within the World Heritage boundaries. It can also be consulted on matters within Mungo NP.

At a meeting of the AAG on the 6 November 2018 the following motion was passed:

In exercising our inalienable rights and as Traditional Owners the Willandra Lakes Region World Heritage Area Aboriginal Advisory Group as duly elected representatives of the 3TTGs unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3 Traditional Tribal Group representative bodies of the Willandra Lakes Region World Heritage Area over the last 40 years.

The proposed reburial was made public via a formal press release on the 18th December 2018.

3.1.4 Site Assessments and Engagement with the Aboriginal People of the Willandra Lakes

The AAG discussed the process of reburial in more detail at their March 2019 meeting, and from 1-5 April 2019, representatives of the AAG/3TTGs were part of the site assessment team which fine-tuned the location of assessment sites selected for reburials and informed the results of this Heritage Assessment and a Review of Environmental Factors (REF) (Sunraysia Environmental & Heritage NSW, 2020).

In August 2019, the results of this assessment and a draft REF was made available to a wide range of more than 200 individual Willandra stakeholders. Four weeks was allowed for comment. These stakeholders included a wide range of interest groups such as the previous Community Management Council (CMC) and Technical and Scientific Advisory Committee (TSAC) members, former World Heritage Executive Officers, universities, museums, academics, AAG members, Local Aboriginal Land Councils, Aboriginal organisations, native title holders, Elders, community members and NPWS Advisory committee members.

Researchers from universities and institutions in Australia, New Zealand and the United States were also included.

The assessment results and draft REF (including the proposed mitigation measures) were also made available to the new Willandra Lakes Region World Heritage Advisory Committee. This Committee held its first meeting in April 2019 and the committee received a briefing on this project at this meeting. All members have been kept informed on the progress of the draft REF and have been provided opportunity to comment. The proposed mitigation measures for this activity have been edited in light of the comments received during this phase of consultation.

4.0 Proposed Works

4.1 Proposed Works Locations

The proposal involves the reburial of 108 Aboriginal Ancestors at 26 sites close to their point of origin (see CONFIDENTIAL Appendices 14.1 and 14.2). Twenty-two assessment sites (101 reburials) will be in Mungo NP and within the State Heritage listed area while four sites (4 reburials) will be on grazing lands on three Western Lands Lease properties near the park.

4.2 Proposed Works Areas

The total impact area of the proposed works will be approximately 30 square metres. This assumes each grave disturbs an area 50 centimetres by 50 centimetres for small bundles and 1 metre by 2 metres for larger bundles, which allows for the temporary placement of soil and vegetation (if present) for backfilling.

The individual impact areas at each grave will vary considerably: many remains consist only of a single bone fragment and will require a very small hole that will be dug with an auger. Several remains (2) are of more complete skeletons and will require a larger pit. Most of the 26 burial sites will contain between one and three individuals. However, there are four locations that have 11, 9, 14 and 29 sets of Aboriginal Ancestors respectively to be reburied.

For small bundles of Aboriginal Ancestors, small burial pits will be excavated with surface dimensions approximately 30cm square and at least 60cm deep, using shovel and crowbar, ensuring subsoil is separated from the heaped topsoil and the mulch (if present).

For larger bundles of Aboriginal Ancestors, including two near complete skeletons in the collection, larger burial pits (approximately 50cm by 1m) will be excavated using a small backhoe.

4.3 Proposed Works

The proposed works are a series of reburial ceremonies including the excavation of graves and the reburial of the previously repatriated Willandra Lakes Aboriginal Ancestors (also known as Aboriginal Ancestral remains or Aboriginal Remains) within the Willandra Lakes area. Each reburial will be undertaken with a small private cultural ceremony as the remains are re-interred in the Willandra Lakes landscape. The reburial is the final stage in the return of the repatriated Aboriginal Ancestors collection currently held in secure storage at Mungo NP. The reburial is being conducted by Heritage NSW and NPSW on behalf of the Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples (represented by the Willandra Lakes Region AAG).

Aboriginal Remains are defined by the NPW Act as the body or the remains of the body of a deceased Aboriginal person, but does not include the remains of a body buried in a cemetery in which non-Aboriginal persons are also buried, or remains of a body that must be dealt with in accordance with a law of the State relating to medical treatment or the examination, for forensic or other purposes, of the bodies of deceased persons (see Section 5 of the NPW Act).

The only materials involved will be the Aboriginal Ancestors. These will be transported in boxes in a minimum number of vehicles to convey them from the Mungo Keeping Place to

respective sites on the day each reburial occurs. The boxes may be taken offsite on completion, or the Elders may choose to burn them on site. Vehicles will be parked away from reburial site and remain on existing tracks where possible.

A small party of Aboriginal Elders representing the AAG will be present for the reburials. The works will be directed by Heritage Officers from Heritage NSW (Department of Premier & Cabinet) and the work will not constitute harm or desecration under the NPW Act (Section 87A(a)) as the Officers will be principally involved in the administration of the NPW Act. The individual reburial sites will not be marked or identified on-site in any way.

The steps involved in the works will be:

- select a suitable grave site for the reburial which is not within the dripline of trees or close to shrubs; targeting the most stable areas away from artefacts as close to the previously assessed grid co-ordinate as possible
- rake off any surface mulch/seed (if present) to one side from an area approximately 2 metres diameter
- remove topsoil from the area to be excavated using a shovel and rake
- for small bundles of Aboriginal Ancestors, a hole will be excavated with surface dimensions approximately 30cm square and at least 60cm deep, using shovel and crowbar, ensuring subsoil is separated from the heaped topsoil and the mulch (if present)
- for larger bundles of Aboriginal Ancestors, including three near complete skeletons in the collection, larger burial pits (approximately 50cm by 1m) will be excavated using a small backhoe.
- place the remains in the hole and cover with subsoil
- compact the upper fill material sufficiently to prevent subsequent settlement
- respread topsoil over the disturbed area.

In instances where the remains to be reburied consist of only a fragment or two, a soil auger instead of a shovel may be used.

The proposed works are summarised in Table 1.

Table 1: Summary of proposed works at each reburial location

Location	Name	No. of Burials	Method	Works Area per grave	Total Impact Area m²
1	WOC-003	1	Mechanical Excavation	50cm by 1m	0.5 m ²
2	WOC-001	11	Manual & Mechanical Excavation	50cm by 50cm (10) 75cm by 2m (1)	2.5 m ² 1.5 m ²
3	MA-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
4	WOC-005, WOC-145	2	Manual Excavation	50cm by 50cm	0.5 m ²
5	WOC-152	4	Manual Excavation	50cm by 50cm	1 m ²
6	LW-004	2	Manual Excavation	50cm by 50cm	0.5 m ²
7	LW-009	2	Manual Excavation	50cm by 50cm	0.5 m ²
8	WCW-006	1	Manual Excavation	50cm by 50cm	0.25 m ²
9	LP-001	5	Manual Excavation	50cm by 50cm	1.25 m ²
10	GL-024	9	Manual Excavation	50cm by 50cm	2.25 m ²
11	GL-013	14	Manual Excavation	50cm by 50cm	3.5 m ²
12	GL-020	3	Manual Excavation	50cm by 50cm	0.75 m ²
13	GL-001	2	Manual Excavation	50cm by 50cm	0.5 m ²
14	GL-005	1	Manual Excavation	50cm by 50cm	0.25 m ²
15	GL-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
16	GL-026	4	Manual Excavation	50cm by 50cm	1 m ²
17	GL-028	1	Manual Excavation	50cm by 50cm	0.25 m ²

Location	Name	No. of Burials	Method	Works Area per grave	Total Impact Area m²
18	GG-025	1	Manual Excavation	50cm by 50cm	0.25 m ²
19	GG-018	2	Manual Excavation	50cm by 50cm	0.5 m ²
20	GL-025	3	Manual Excavation	50cm by 50cm	0.75 m ²
21	GG-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
22	GG-016	29	Manual Excavation	50cm by 50cm	7.25 m ²
23	ML-003	5	Manual Excavation	50cm by 50cm	0.25 m ²
24	ME-001	1	Manual Excavation	50cm by 50cm	1.25 m ²
25	ME-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
26	GS-010	1	Manual Excavation	50cm by 50cm	0.25 m ²
Total		108	Total Impact Area		28.5 m²
			Total Impact Volume (assuming 60cm depth)		17.1m³

5.0 Previous Investigations

5.1 Summary of Previous Investigations

Previous investigations at each of the proposed reburial locations are provided below. An extensive summary of previous investigations in the wider WLRWHA is provided by Godden Mackay Logan (2003).

5.1.1 Location 1 (WOC-003)

WOC-003 (AHIMS ID 40-5-0150) was first recorded in 1970 by Mike Barbetti and Jim Bowler. This site precinct encompasses a large eroded portion of the Lake Mungo lunette immediately south of the Mungo Visitor area and north of WOC-2. It contains similar material to other lunette sites. Fireplaces at the site were extensively investigated by Mike Barbetti for his PhD (Barbetti & Allen, 1972). Several hearths record the event known as the Mungo geomagnetic excursion circa. 30,000 B.P. The Mungo freshwater soak is located along the western margin of the site in the vicinity of the original lake beachline.

Clark (1987) noted the site covered an area of 1,500,000 m² and contained burials, faunal remains, stone artefacts and fireplace remnants.

One Aboriginal Ancestor (WLH 004) was excavated from this area in 1978 (Webb, 1989). Some details on the collection and burial location have been located (Dare-Edward, 2019).

5.1.2 Location 2 (WOC-001)

This site comprises the whole eroded south end of the Lake Mungo lunette. WOC-001 (AHIMS ID 40-5-0001) is the most significant single location in the WLRWHA. Archaeologically, the location has provided a forum for debate on the origins and physical characteristics of ancestral Australians (Thorne A. G., 1976; Brown, 2000; Pardoe, 2006), the antiquity of Aboriginal occupation of Australia (Bowler, et al., 2003; Thorne, et al., 1999) and on the development of Australian stone tool technology (Bowler, Jones, Allen, & Thorne, 1970; Allen & Holdaway, 2009). See Table 2 for a summary of previous investigations.

On the 5th July 1968, Jim Bowler observed a small deposit of burnt carbonate encrusted bones on the Lake Mungo lunette on Joulni Station. Bowler convinced archaeological colleagues at the Australian National University that the location had the potential to contain Pleistocene Aboriginal occupation. In March 1969, Bowler and archaeologists Harry Allen, Rhys Jones, John Mulvaney and C. Key (Bowler, Jones, Allen, & Thorne, 1970, p. 43) visited the site and removed a mass of carbonate encrusted human bone and the loose surface bone. A second field trip by Bowler, Jones and Alan Thorne the following week excavated and collected sub-surface components of the grave (Mulvaney J. , 2011).

The Willandra Lakes, and more specifically the Walls of China on Joulni Station, were propelled into archaeological fame by a publication (Bowler, Jones, Allen, & Thorne, 1970) on these remains of a young woman, Mungo Woman or Mungo 1. The remains proved to be one of the oldest indicators of Aboriginal occupation in Australia, the world's oldest cremated remains, and one of the earlier anatomically modern humans outside Africa.

Mungo Woman's grave was situated in the archaeologically rich lunette on the southern margin of Lake Mungo on Joulni Station. Following this initial discovery Mulvaney (1972) reported that ochre was found on the Mungo stratigraphic unit and surmised that some artistic function had occurred on the site. On the 26th February 1974, a largely complete

skeleton of Pleistocene age was discovered by Jim Bowler. Mulvaney's speculation was confirmed; the burial (Mungo Man, or Mungo III) and surrounding sediments were stained with ochre that was used in association with the burial (Bowler & Thorne, 1976, p. 127). The discovery of Mungo Man further enhanced the reputation of the region as an outstanding location for understanding the patterns of life, death, ceremony and burial within Australia's earliest Aboriginal people.

Since these original discoveries in 1968 and 1974, the antiquity of Mungo Woman and Mungo Man has been hotly debated. The original age estimates have been revised a number of times (Thorne, et al., 1999; Bowler & Magee, 2000; Bowler, et al., 2003) and at present the age of these burials appears resolved at 41- 42,000 years BP (Olley, Roberts, Yoshida, & Bowler, 2006). This age indicates the skeletal remains of Mungo Man and Mungo Woman are among the earliest modern *Homo sapiens* remains to have been found outside Africa.

Following Allen's initial research at Jolani, Australian National University staff (Peter Bellwood, Isabel McBryde and Wilfred Shawcross) undertook a grid collection over an area some 500m x 100m on the southwestern end of the Mungo lunette in 1973, and again over the same area in 1974, 1975, 1976 and 1978. The grid collection is referred to in Mulvaney (1974) and Shawcross (1975; 1998) but the most detailed description of the project is in Robinson (1980, p. 131) who analysed the stone artefacts from the latter period of collection (1975-1978, i.e. some 5,600 artefacts. Robinson found, amongst other things, that in general that there was a vertical erosion of approximately 1cm per year across the grid collection area from 1977 to 1979 (1980, p. 56).

In 1973 and 1974 Mulvaney excavated Trench A (Mulvaney D. , 1974; Shawcross, 1998). This 9m x 2.5m trench was excavated in an area where both Zanci and Mungo sedimentary units were represented and extended to a depth of ca. 3m. This deep excavation presented safety concerns and the collapse of the trench wall eventually called a halt to the excavation. While only limited details of this excavation have been published, a radiocarbon date was obtained from Spit 17 on stone artefacts at and below beach gravels at the base of the Mungo unit. The result of this date was 'greater than 40,000 years' and this result received wide publicity and '...gripped the imagination of a wider Australian, including Aboriginal, public' (Shawcross, 1998, p. 19).

Apart from Mungo Woman (WOC 1) and Mungo Man (WOC 3), at least nine other Aboriginal Ancestors have been recorded on the Walls of China, Jolani. Detailed descriptions of these remains have been presented in Clark (1987) and Webb (1989). These Aboriginal Ancestors are known as WLH 1, WLH 2, WLH 3, WLH 6, WLH 9, WLH 10, WLH 30, WLH 57, WLH 59. Two unprovenanced Ancestors labelled Ind-4 and Ind-5 are likely to be from this locality and will also be reburied at this location.

Most of these burials were found on the southern end of the lunette and cluster around the area where Mungo Man and Mungo Woman were first discovered, although some were found in higher and younger (ca. Arumpo and Zanci) sedimentary units. They consist mainly of individual bones or scattered fragments.

Table 2 Research on the Walls of China (WOC 001), Joulni 1967 - 2011

Researcher(s)	Year of research	Project area/topic	Key publications, reports, or notes
Bowler	1967 - 1998	Research on Mungo lunette stratigraphy and geology	Bowler (1970; 1973; 1998) and (1971)
Bowler, Jones, Allen & Thorne	1969	Archaeological survey and publication on Joulni, Mungo Woman, archaeology and geology	Bowler et. al. (1970)
Allen	1972	Detailed study of Joulni surface stone artefacts, fauna, middens	Allen (1972; 1974; 1998); Allen & Holdaway (2009); Barbetti & Allen (1972)
Mulvaney	1973-74	Excavation of Trench A	Mulvaney (1974)
Bellwood, McBryde & Shawcross	1973-78	Joulni surface grid collection of stone artefacts	Shawcross (1975; 1998); Robinson (1980)
Shawcross	1974-80	Excavation of Trench B	Shawcross (1975; 1998)
Donovan	1986	Inventory of some historical locations on Joulni Station	Donovan and Associates (1985)
Clark	1987	Initial investigation and report on Mungo Child	Clark (1987)
Walshe	1987	Analysis of faunal material from Trench B excavation	Walshe (1987; 1998)
Basgall, Beaton, and Giambastiani	1994	Field recording of stone artefacts on Joulni lunette	Basgall et. al. (1994)
Westbrooke and Miller	1992	Vegetation study of Mungo National Park, including parts of Joulni Station	Westbrooke and Miller (1995)

Researcher(s)	Year of research	Project area/topic	Key publications, reports, or notes
Oysten	1996	Thermoluminescence sampling and dating of Mungo Man burial location	Oysten (1996)
Spooner, Clark, Johnston, McBryde	1997	Collection of hearths and OSL dating samples	Thorne et. al. (1999)
Thorne, Spooner, Grun, Mortimer, Simpson, McCulloch, Taylor, Curnoe	1999	Dating of lunette stratigraphy and sediments near Mungo Man	Thorne et. al. (1999)
Adcock, Dennis, Eastel, Huttley, Jermiin, Peacock, Thorne	2001	Analysis of the DNA of Mungo Man	Adcock et. al. (2001)
Bowler, Johnston, Olley, Prescott, Roberts, Shawcross, Spooner	2000	Dating of the stratigraphy associated with Mungo Man and Mungo Woman, and Mungo B excavation site	Bowler et. al. (2003)
Olley, Roberts, Yoshida & Bowler	2006	Further Dating of sediments associated with the Mungo Man burial	Olley et. al. (2006)

5.1.3 Location 3 (MA-001)

Originally recorded by Peter Clark in June 1979, MA-001 (AHIMS ID 40-5-0039) is a deflation hollow located immediately east of the Outer Arumpo lunette on the Mungo/Joulni boundary fence. The red sandy sediments contain a stone assemblage of early and late Holocene elements. A very fragmented burial was observed eroding from the deepest area of the blowout.

The site was visited April 1995 as part of the Willandra Burials Project. At that time a cranial fragment, two fragments of mastoid process, two large fragments of long bone, one 5cm x 2cm were located. These were found eroding from the slope. This may be the original WLH 58 burial location. The bone was mineralised. All the bone on the site (30 fragments) was reburied in 1995.

One Aboriginal Ancestor (WLH 058) was collected from this location in June 1979. The precise details on the collection and burial location have not yet been identified.

5.1.4 Location 4 (WOC-005 & WOC-145)

WOC-145 (AHIMS ID 40-5-0003/40-5-0152) was first recorded in 1980 by Peter Clark. WOC-005 is a duplicate recording of WOC-145. It is a scalded area on the Mungo lunette near Double Tanks. Exposed sediments are likely to belong to the upper Mungo and Zanci units. Archaeological material including human remains, stone artefacts, faunal remains, and fireplaces are sparsely scattered across the surface over an area of 2,000m². Numerous very small fragments of a mineralised burial were collected from a station track where it crosses the western end of the site (Clark, 1987).

Two Aboriginal Ancestors (WLH 031 and 053) were collected from this location in February 1980. The precise details on the collection and burial location have not yet been identified.

5.1.5 Location 5 (WOC-152)

WOC-152 (AHIMS ID 40-5-0154) was first recorded by Mike McIntyre and Peter Clark in September 1976. The site encompasses the general area of the eroded north end of the Lake Mungo lunette. Clark (1987) noted the site covered an area of 150,000m². Human remains, Faunal material, stone artefacts and mussel shell were noted.

The site contains similar material to WOC-001 (southern end of the Mungo lunette).

Four Aboriginal Ancestors (WLH 051, 055, 056, and 127) were collected from this location in 1978 (Webb, 1989). The precise details on the collection and burial location have not yet been identified.

5.1.6 Location 6 (LW-004)

A series of blowouts in red coloured sediments along the SW shoreline of Lake Leaghur. The area was originally recorded as LW-004 (AHIMS ID 40-5-0111) by M. McIntyre in 1977. Human burials, shell midden, faunal remains, stone artefacts and fireplaces were noted. The site covers 80,000m² and contained 2 human burials, and numerous silcrete stone artefacts. All the blowouts contain broken pieces of grindstone. One has a fragment of greenstone edge-ground axe. Several pieces of red ochre (one with grinding facets) were also observed.

Two Aboriginal Ancestors (WLH 063 & 064) were collected from this location in 1981 (Webb, 1989). The precise details on the collection and burial location have not yet been identified.

5.1.7 Location 7 (LW-009)

LW-009 (AHIMS ID 40-5-0116) was first recorded by Mike McIntyre in November 1977. It was recorded as a blowout in the red sandhills on the southwest edge of Lake Leaghur. The site contains faunal remains and one apparently charred human long bone fragment. Of note was the

charring on the mineralised bone, likely to be evidence of cremation. The site covers approximately 10,000m².

Two Aboriginal Ancestors (WLH 032 and 033) were collected from this location in 1977. The precise details on the collection and burial location have not yet been identified.

5.1.8 Location 8 (WCW-006)

WCW-006 (AHIMS ID 40-4-0032) was first recorded by Mike McIntyre in 1977. This site occurs on the Willandra creek floodplain between the Leaghur lakebed and the Outer Lake Arumpo lakebed. Clark (1987) noted the site covered an area of 20,000m². Human remains, stone artefacts and hearths were recorded. McIntyre recorded a small tool assemblage which included geometric microliths at WCW-006, which he claims is associated with a fireplace radiocarbon dated to 8,200 B.P. (SUA-870). Unfortunately, no information relating to the site has been published.

One Aboriginal Ancestor (WLH 066) was collected from this location in 1977 (Webb, 1989). The precise details on the collection and burial location have not yet been identified.

5.1.9 Location 9 (LP-001)

LP-001 (AHIMS ID 40-5-0158) was originally recorded as Leaghur Peninsula I by Harry Allen in 1970 (1972). This site is located in a claypan area on the tip of the Leaghur peninsula. The site area covers approximately 20,000m². An outcrop of grey silcrete has been quarried and the resulting stone chippings strewn across adjacent areas. The site has been studied in detail and contains one of the densest concentrations of stone artefacts in the Willandra (Kurpiel, Pickering, & Stern, 2019). A human burial, faunal remains, fish and shell midden material have eroded from stratified sediments which date to the late Pleistocene.

One Aboriginal Ancestor (WLH 69) was collected from this location in 1978 (Webb, 1989). The precise details on the collection and burial location have not yet been identified. Four other unprovenanced Ancestors labelled Ind-1, Ind-3, Ind-6 and Tugger1 will also be reburied at this location.

5.1.10 Location 10 (GL-024)

GL-024 (AHIMS ID 40-5-0089) is a deflated lunette site is similar to and immediately north of GL-13, first recorded by Mike McIntyre in April 1977. Extensive quantities of stone and faunal material are scattered across the site. The site is de-vegetated and is rapidly eroding. The site was recorded as containing human burials, fireplaces, shell middens and stone artefacts and covers ca. 400,000m² (Clark, 1987).

A shell midden dated to 30,300 +/-800 (ANU 2206) (McIntyre, 1977 Clark 1987) was also recorded in this area.

Nine Aboriginal Ancestors (WLH 042, WLH 044, WLH 045, WLH 074, WLH 123, WLH 124, WLH 125, WLH 128, and WLH 130) were collected from this location in 1976, 1977, 1978. These ancestors have been further described and analysed in Westaway (2009). Precise details on collection and burial locations have not been located.

5.1.11 Location 11 (GL-013)

GL-013 (AHIMS ID 40-2-0011) was first recorded in April 1977 by Mike McIntyre. It is the eroded lunette of a small lake basin once fed by seepage waters from Lake Garnpung. The stratigraphy is similar to that of the Mungo lunette. Enormous quantities of archaeological material have been

preserved within calcareous sediments. Rapid erosion of the site is constantly revealing new material. Mike McIntyre surveyed, gridded and collected the site as part of his incomplete PhD project. Fuller (1986) analysed these collected materials with a focus on the fauna. Further research on the fauna and coprolites from this location has also been published recently. Uranium series dates were obtained from 5 fossil bettongs, indicating these specimens range from 36,000 years to 6,000 years BP (Westaway, et al., 2019).

Several middens have been dated at this site, which help provide some framework for dating the human fossils. Two carbon-14 dates have been taken directly from human bone, WLH 24 dating at 11,910 BP (18,600 calibrated) and WLH 122 at 11,100 (16,535 calibrated) (Webb, 1989). A midden date in association with WLH 24 has been dated to 16,100 \pm 220 (ANU-1913) (Westaway, 2009).

Fourteen Aboriginal Ancestors have been removed from this area WLH 024, WLH 025, WLH 026, WLH 027, WLH 028, WLH 029, WLH 039, WLH 117, WLH 118, WLH 119, WLH 120, WLH 121, WLH 122, WLH 133 (Webb, 1989). These ancestors have been studied and further described in Westaway (Westaway, 2009). The precise details on the collection and burial location have not yet been identified.

5.1.12 Location 12 (GL-020)

GL-020 (AHIMS ID 40-5-0087) was originally recorded in August 1979 by Mike McIntyre, Alan Thorne, Peter Clark and John Magee and contains burials, faunal remains, flaked stone artefacts and fireplaces over an area of 30,000m². It is a deflation hollow located between the GL-13 lake basin and Lake Garnpung, close to the shoreline. Exposed sediments are the result of erosion on a low lunette which formed on the east side of small seepage lake.

Three Aboriginal Ancestors have been collected from GL-020 (WLH 043, WLH 050 and WLH 062). The most well-known is WLH-50, and this individual is described in detail by Webb (1989) with particular emphasis on the extensive cranial thickening. WLH 50 has regularly been used in arguments for evolutionary continuity between the Indonesian and Australian regions (Hawkes, et al., 2000) but this link is disputed (Westaway & Groves, 2009). Caddie et al. (1987) reported an electron spin resonance date on bone of 29,000 \pm 5000 years BP for WLH 50. Simpson and Grün (1998) have published a U-series date of 12,000 to 18,000 years for WLH 50. More recent detailed stratigraphic and chronological analysis has placed the age of the WLH 50 remains between 12,200 \pm 1,800 and 32,800 \pm 4,600 years BP (Grün, et al., 2011).

The precise details on the collection and burial location of WLH 043 and 062 have not yet been identified.

5.1.13 Location 13 (GL-001)

GL-001 (AHIMS ID 40-2-0007) was labelled Garnpung I and recorded and studied in detail by Harry Allen (1972) who noted the site contained an extensive midden, described as 104m³. One of the most extensive archaeological exposures along the western shoreline of Lake Garnpung, the site covers some 240,000m². Clay and sandy sediments have preserved human burials, faunal material, and shell middens. Large numbers of stone artefacts and fireplace remains are scattered across all areas.

Shell dates from the midden area suggest occupation of the area extends at least to 15,000 B.P. (15,480 \pm 210, ANU 3738). A Tasmanian devil fossil from the site returned an age estimate of >5,100 years BP (Westaway, et al., 2019). Rapid erosion of the site is constantly uncovering new artefacts and burials, most of the latter remain in situ.

One Aboriginal Ancestor (WLH 011) was collected from this location in 1977. The precise details on the collection and burial location have not yet been identified. An unprovenanced Ancestor labelled 'Garnpung' will also be reburied at this location.

5.1.14 Location 14 (GL-005)

GL-005 (AHIMS ID 40-2-0010) was first recorded in May 1982 by Peter Clark. An Aboriginal Ancestor was found eroding from a blowout in white quartz sand dunes north of the Garnpang homestead. The burial mode was either bundle or flexed, the bone being heavily mineralised and carbonate encrusted. Only the eroded portion of the burial was collected. The individual was attributed a Pleistocene age. The erosional surface of the blowout also contains very few scattered flaked stone artefacts, mostly unmodified silcrete flakes.

This site was completed collected in 1982. In April 1995, the site was revisited and contained 200+ fragments of bone scattered over 7m x 7m area. Fragments were 1 to 4cm length, consisting of long bone fragments, heavily carbonate encrusted, cranial and post cranial fragments, and rib, though most were unidentifiable fragments. Located on a grey soil beneath a buff/yellow sand and above laminated clayey layers. All visible ancestral remains were collected & reburied in May 1995.

One Aboriginal Ancestor (WLH 067) was collected from this location in 1982. The precise details on the collection and burial location have not yet been identified.

5.1.15 Location 15 (GL-002)

GL-002 (AHIMS ID 40-2-0009) was first recorded in April 1977 by Mike McIntyre. It is a large blowout east of the interconnecting channel between Lake Garnpung and Lake Leaghur. The location contains numerous fireplaces and a scatter of flaked stone artefacts. Several large fragments of grindstone were present. Clark (1987) noted that most site elements appear to be late Holocene in age. The site was visited April 1995 as part of the Willandra Burials Project. No burials observed at that time.

One Aboriginal Ancestor (WLH 012) was located and later collected. The precise details on the collection and burial location have not yet been identified.

5.1.16 Location 16 (GL-026)

GL-026 (AHIMS ID 40-5-0091) was first recorded in April 1977 by Mike McIntyre. The site is located in a deflation hollow in buff coloured sands on the western shoreline of Lake Garnpung, north of the point where Willandra Creek exits the lake. The site covers an area of ca. 50,000m². Numerous stone artefacts of Holocene and late Pleistocene origin are scattered across the surface. The remains of numerous ancestors were observed eroding from the site.

Four Aboriginal Ancestors (WLH 013, 014, 015, and 134) were collected from this location in 1977. The precise details on the collection and burial location have not yet been identified.

5.1.17 Location 17 (GL-028)

GL-028 (AHIMS ID 40-5-0093) was first recorded in April 1977 by Mike McIntyre. The location is a scalded area on the southern slope of a very small lunette away from a small lake basin. The scald contains a diffuse area of eroded shell midden, none remaining in situ. The site covers an area of 1,000m².

One Aboriginal Ancestor (WLH 016) was collected from this location in 1977. The precise details on the collection and burial location have not yet been identified.

5.1.18 Location 18 (GG-025)

GG-025 (AHIMS ID 40-5-0086) was first recorded in November 1977 by Mike McIntyre. The location is a blowout between Lake Garnpung and Lake Gogolo with an exposure of recent brown soil overlying grey clayey sand and loose calcareous sandy core. The exposure contained a small number of stone artefacts and faunal remains megafauna (*Procoptodon sp.*). The site covers an area of 40,000m².

One Aboriginal Ancestor (WLH 131) was collected from this location in 1977. The precise details on the collection and burial location have not yet been identified.

5.1.19 Location 19 (GG-018)

GG-018 (AHIMS ID 40-5-0079) was originally recorded by Mike McIntyre in November 1977. The site is located in a deflation hollow in red sands along the western Lake Garnpung shoreline. The site contains evidence of a Aboriginal Ancestors, stone artefacts and preserved faunal remains over an area of 25,000m². Several well-preserved fragments of *Procoptodon sp.* were recovered from the site.

Two Aboriginal Ancestors (WLH 034 and 047) were collected from this locality in 1977. The precise details on the collection and burial location have not yet been identified.

5.1.20 Location 20 (GL-025)

GL-025 (AHIMS ID 40-5-0090) was first recorded in April 1977 by Mike McIntyre and is also recorded as North Gogolo Beach. No record of the original site recording is available. Clark (1987) notes the site contained human burials, fireplaces, shell middens and stone artefacts. The site covers an area of ca. 60,000m².

Three Aboriginal Ancestors (WLH 048, 049 and 075) were collected from this location in 1978 and 1980. The precise details on the collection and burial location have not yet been identified.

5.1.21 Location 21 (GG-001)

GG-001 (AHIMS ID 40-5-0069) was originally recorded by Mike McIntyre in November 1977 as Gogolo 1. The site is a small blowout covering some 8,000m² between GG-9 and Lake Gogolo on the southwest shore of Lake Garnpung. The site contains the eroded and fragmented remains of two burials in the northwest end in 'Zanci' like unit, and a wombat which is eroding from lower down the profile. A few stone artefacts are present at the site, one of which is a small piece of sandstone grinder.

One Aboriginal Ancestor (WLH 068) was collected from this area in 1978. The precise details on the collection and burial location have not yet been identified. Webb (1989) erroneously attributed this ancestor to GG-25.

5.1.22 Location 22 (GG-016)

GG-016 (AHIMS ID 40-5-0077) was originally recorded by Mike McIntyre in April 1977. An extensive deflation hollow in red sands along the western shoreline of Lake Garnpung. Eight Aboriginal Ancestor burials have been recorded at the site in addition to fragments of large extinct fauna. The fauna has eroded from older sediments than the burials. Clark (1987) notes the site is sparsely covered with stone artefacts, most of which are likely to be Holocene in age and derived from surface sediments. Studies on the fauna and coprolites from this location have been published recently (Westaway, et al., 2019).

Several burials were recorded and removed under a conservation program in 2002 (Webb, 2002), and dated to around 20,000 years BP. Megafauna has been recorded in the area and Genyornis egg shell was found eroding from the base of residuals in the area and dated to between 44-58,000 years BP (Miller, et al., 2016).

Twenty-nine Aboriginal Ancestors were removed from this location between 1977 and 2001: WLH 019, WLH 020, WLH 021, WLH 022, WLH 023, WLH 046, WLH 100, WLH 101, WLH 102, WLH 103, WLH 104, WLH 105, WLH 106, WLH 107, WLH 108, WLH 109, WLH 110, WLH 111, WLH 112, WLH 113, WLH 114, WLH 115, WLH 116, WLH 126, WLH 129, WLH 132, WLH 147, WLH 152, WLH 153. The precise details on the collection and burial locations have not yet been identified.

5.1.23 Location 23 (ML-003)

ML-003 (AHIMS ID 40-5-0127) was originally recorded in November 1977 by Mike McIntyre. It is a deflation hollow on the southern shoreline of Lake Leaghur. Fragmented human remains were collected from the area along with megafauna. Stone artefacts are scattered across the site, most eroding from the upper red/brown Holocene soil.

Clark (1987) noted the site covered an area of 40,000m² and recorded burials, faunal remains and stone artefacts.

One Aboriginal Ancestor (WLH 065) was collected from this location in 1977 (Webb, 1989). The precise details on the collection and burial location have not yet been identified. Four unprovenanced Willandra Ancestors will also be reburied at this location.

5.1.24 Location 24 (ME-001)

ME-001 (AHIMS ID 40-2-0004) was first recorded in 1969 by Harry Allen. It occurs in a deflation hollow on the southern end of the Mulurulu lunette and contains a series of small shell middens with faunal material and associated stone artefacts. The site, recorded as Mulurulu I, was extensively researched by Harry Allen as part of his PhD project in the early 1970s (Allen, 1972).

Allen (1972, pp. 301-305) noted a series of nine small shell middens running parallel to the lake shoreline. Two shell samples from these features gave consistent C14 results, one being 15,120 ~ 235 B.P., ANU 880A, and the other 15,450 ~ 240 B.P., ANU-880B. Faunal samples were collected from an area of 60m². Nine mammals, two fish and emu and mussel shell were recorded and analysed in detail.

Clark (1987) noted the site covered an area of 120,000 m² and noted middens, faunal remains, stone artefacts, a bone point, and fireplace remnants.

One Aboriginal Ancestor (WLH 072) was collected from this location in 1974 (Webb, 1989). The precise details on the collection and burial location have not yet been identified.

5.1.25 Location 25 (ME-002)

ME-002 (AHIMS ID 40-2-0036) was originally recorded by Mike McIntyre in 1976, and labelled Mulurulu 2. It was described as deflation hollow on the Lake Mulurulu lunette and contained extensive faunal remains (fish and mammal) and a scatter of stone tools and mussel shells. A scatter of human bones was observed eroding from sediments near the lakeside edge of the site. Artefact density decreases significantly towards the southeast end. All material appeared to be eroding from grey clayey sediments relatively close to the lake edge.

Clark (1987) noted the site covered an area of 30,000m² and noted a burial, shell midden, faunal remains, stone artefacts, and a bone point. In April 1995 (Willandra Burials Project fieldwork) no human bone was observed at this site. One large Procoptodon like bone fragment observed at the southern edge of the exposure.

One Aboriginal Ancestor (WLH 073) was collected from this location in 1974 (Webb, 1989). The precise details on the collection and burial location have not yet been identified.

5.1.26 Location 26 (GS-010)

A blowout located on the crest of the Garnpung lunette at the south eastern end. This site was first recorded as GS-010 (AHIMS ID 40-5-0105) in February 1980 and covers ca. 15,000m². A shell midden dated to 25,600 +/-500 BP, ANU 2969 (Clark, 1987) was found eroding from massive soil carbonate stratigraphically above a human burial which was observed eroding from the red dune core. Human burial, shell midden, faunal remains and flaked stone were observed. The site may well contain evidence of habitation which is contemporaneous with that on the south end of the Walls of China.

One Aboriginal Ancestor (WLH 052) was collected from this location in 1980. The precise details on the collection and burial location have not yet been identified.

5.2 Summary of Previously Recorded Aboriginal Sites

The Aboriginal Heritage Information Management System (AHIMS) documents the known and recorded Aboriginal cultural heritage sites and objects in New South Wales. AHIMS contains some errors regarding Aboriginal site location information for many of the Aboriginal sites listed at Mungo National Park and the wider WLRWHA. The original burial location and AHIMS information and additional previously recorded AHIMS sites in the vicinity of the proposed reburial locations based on available information are provided in Table 3.

Table 3: Previously recorded Aboriginal sites

Location	Name	Original AHIMS ID	Original AHIMS Name	Original Site Type/s	AHIMS Sites in Vicinity of Proposed Reburial Location	Within Previously Recorded Site Extent?
1	WOC-003	40-5-0150	WOC-003	Artefacts, Burials, Hearth, Potential Archaeological Deposit	40-5-0150 grid coordinate is 320m to the northeast.	Yes
2	WOC-001	40-5-0001	Joulni; Mungo ₁	Artefacts, Burials	40-5-0065 grid coordinate (artefacts) is 130m to the southwest. 40-5-0065 site extent is 20m to the south.	No
3	MA-001	40-5-0039	MA-001	Hearth, Potential Archaeological Deposit, Artefacts, Burials	40-5-0039 grid coordinate is 116m to the southwest. 40-5-0039 site extent is 80m to the south.	No
4	WOC-005/ WOC-145	40-5-0152/ 40-5-0003	WOC-005/ The Walls of China	Artefacts, burials, hearth, PAD/Artefacts	40-5-0003 grid coordinate is 1.65km to the southeast. The Walls of China site extent is located 213m to the northeast.	No
5	WOC-152	40-5-0154	WOC-007 WOC-152	Hearth, Potential Archaeological Deposit, Artefacts, Burials, Shell	The WOC-152 site extent is located 66m to the southwest.	No
6	LW-004	40-5-0111	LW-004	Artefacts, Burials, Hearth, Shell	40-5-0111 grid coordinate is 124m to the southwest. 40-5-0111 site extent is 70m to the west. 40-5-0113 site extent is 59m to the east.	No
7	LW-009	40-5-0116	LW-009	Burials, Potential Archaeological Deposit	40-5-0116 grid coordinate is 58m to the northeast. 40-5-0116 site extent is 58m to the southeast.	No

Location	Name	Original AHIMS ID	Original AHIMS Name	Original Site Type/s	AHIMS Sites in Vicinity of Proposed Reburial Location	Within Previously Recorded Site Extent?
8	WCW-006	40-4-0032	WCW-006	Artefacts, Burials, Hearth	40-4-0032 grid coordinate is 61m to the southwest.	Yes
9	LP-001	40-5-0158	LP-001	Artefacts, Burials, Potential Archaeological Deposit, Shell	40-5-0158 grid coordinate is 210m to the northeast.	Yes
10	GL-024	40-5-0089	Garnpung Leaghur 24; GL (24)	Artefacts, Burials, Shell	40-5-0089 grid coordinate is 261m to the west. 40-5-0089 site extent is 76m to the west.	No
11	GL-013	40-2-0011	Garnpung Leaghur 13; GL (13)	Burials, Artefacts	40-2-0011 grid coordinate is 451m to the south. 40-2-0011 site extent is 50m to the south.	No
12	GL-020	40-5-0087	Garnpung Leaghur 20; GL (20)	Burials, Artefacts	40-5-0087 grid coordinate is 164m to the west. 40-5-0087 site extent is 190m to the southwest.	No
13	GL-001	40-2-0007	GL-001	Artefacts, Burials, Hearth, Potential Archaeological Deposit, Shell	40-2-0007 grid coordinate is 166m to the south. 40-2-0007 site extent is 94m to the southwest.	No
14	GL-005	40-2-0010	Garnpung Leaghur 5; GL (5)	Burials	40-2-0010 grid coordinate is 250m to the northeast. 40-2-0010 site extent is 205m to the northeast.	No
15	GL-002	40-2-0009	Garnpung Leaghur 2; GL (2)	Burials, Artefacts	40-2-0009 grid coordinate is 115m to the north. 40-2-0009 site extent is 20m to the west.	No
16	GL-026	40-5-0091	Garnpung Leaghur 26; GL (26)	Burials, Shell, Artefacts	40-5-0091 grid coordinate is 35m to the north. 40-5-0091 site extent is 22m to the northwest.	No

Location	Name	Original AHIMS ID	Original AHIMS Name	Original Site Type/s	AHIMS Sites in Vicinity of Proposed Reburial Location	Within Previously Recorded Site Extent?
17	GL-028	40-5-0093	Garpung Leaghur 28; GL (28)	Shell, Artefacts	40-5-0093 grid coordinate is 55m to the southwest. 40-5-0093 site extent is 100m to the east.	No
18	GG-025	40-5-0086	Garpung Gogolo 25; G G (25)	Artefacts	40-5-0086 grid coordinate is 566m to the northeast. 40-5-0086 site extent is 122m to the northeast.	No
19	GG-018	40-5-0079	Garpung Gogolo 18; G G (18)	Shell, Artefacts, Burials	40-5-0079 grid coordinate is 120m to the southwest.	Yes
20	GL-025	40-5-0090	Garpung Leaghur 25; GL (25)	Burials, Shell, Artefacts	40-5-0090 grid coordinate is 145m to the southeast. 40-5-0090 site extent is 85m to the south.	No
21	GG-001	40-5-0069	Garpung Gogolo 1; G G (1)	Burials, Artefacts	40-5-0069 grid coordinate is 77m to the southeast.	Yes
22	GG-016	40-5-0077	Garpung Gogolo 16; G G (16)	Artefacts, Burials	40-5-0077 grid coordinate is 277m to the northeast. 40-5-0077 site extent is 70m to the east.	No
23	ML-003	40-5-0127	ML-003	Burials, Artefacts, Potential Archaeological Deposit	40-5-0127 grid coordinate is 66m to the southeast. 40-5-0127 site extent is 96m to the south.	No
24	ME-001	40-2-0004	ME-001	Shell, Hearth, Potential Archaeological Deposit, Artefacts	40-2-0004 grid coordinate is 244m to the northeast.	Yes

Location	Name	Original AHIMS ID	Original AHIMS Name	Original Site Type/s	AHIMS Sites in Vicinity of Proposed Reburial Location	Within Previously Recorded Site Extent?
25	ME-002	40-2-0036	ME-002	Burials, Shell, Potential Archaeological Deposit	40-2-0036 grid coordinate is 135m to the northeast. 40-2-0036 site extent is 35m to the northeast.	No
26	GS-010	40-5-0105	GS-010	Potential Archaeological Deposit, Burials, Shell, Artefacts	40-5-0105 grid coordinate is 98m to the northeast. 40-5-0105 site extent is 20m to the north.	No

6.0 Site Assessments

6.1 Introduction

An assessment of each of the proposed reburial locations/sites was conducted in April 2019 by Heritage NSW, Sunraysia Environmental, NPWS and representatives of the Aboriginal community. The confidential detailed maps and location information for each location can be found in Appendices 14.1 and 14.2.

This section includes the results of a site-specific assessment of the tangible historical (buildings and relics) and Aboriginal cultural heritage (objects) at each of the proposed reburial locations including an assessment of the potential for historical and Aboriginal archaeological deposits. Research has shown that there is background scatter of artefacts across much of Mungo National Park and the wider WLRWHA, including the lakebed (Godden Mackay Logan, 2003, p. 73). According to Godden Mackay Logan (2003), the identification of potential archaeological deposits cannot focus on the identification of individual objects or else the entire area would be regarded as a potential archaeological deposit. Instead, potential archaeological deposit is a term that should be used to identify areas 'likely to contain excavatable and therefore potentially archaeologically meaningful deposits' (Godden Mackay Logan, 2003, p. 74).

Assessments of the various levels of heritage values and significance of the broader Willandra Lakes landscape have been previously undertaken and are discussed further in Section 7.2. The methodology and results of the site assessments are presented below, and the results of the assessment are summarised in Table 4. An assessment of impacts is presented in Section 10.0.

6.2 Methodology

The site assessment team included one ecologist, one archaeologist, four Aboriginal rangers and three Elders representing the AAG.

The assessment of cultural heritage values was conducted at each location within an area (circular sites) of approximately 113m diameter (1ha). Eight sites were half of this area (semi-circular) due to the obstruction of landform features. The assessment areas were inspected by the field team using a systematic-targeted survey approach, with the field members aligned along the radius of the survey circle, walking in concentric circles around the centre co-ordinate. Less vegetated areas, and therefore greater ground surface visibility, were targeted where appropriate. The assessment included appropriate mapping, descriptions and images. The presence or absence of Aboriginal sites/objects, historic sites/relics, landscape features and vegetation or other wild resources of Aboriginal cultural landscape value was noted during the assessment. The reburial locations were selected to be close to the original burial location (where records existed) but avoided unstable land and areas of high cultural significance. If the site assessment revealed Aboriginal cultural heritage objects or sensitive biodiversity features, or soil instability, the site assessors moved the circular assessment area a short distance to avoid the sensitive feature or attribute or noted their presence when shifting the entire site was not an option. The new position of the centre point was captured on GPS and physically marked on the ground with a stake/flagging tape to clearly identify the final assessed area and give certainty that the reburials would occur on precisely the same land as the site assessment.

6.3 Location 1 (WOC-003)

6.3.1 Location

The 1ha assessment area is located 10.6 southeast of the Mungo Visitor Centre, on the southeast shore of Lake Mungo.

6.3.2 Description

The proposed reburial site is located on a lunette landform on a mid-west facing slope, facing the lake. The area is gently sloping to the west but falls away more steeply to the west, north and south. The soils in the area are characterised by fine white sand with and an area of sandy clay with limestone nodules. Vegetation in the area is characterised by mixed shrublands (degraded). Ground surface visibility was 65% due to total grazing pressure and drought conditions. Incipient sheet erosion was observed, but the area was largely stable due to moss and surface crust.

Gully erosion to the north and south of the reburial location however the immediate area is stable. The reburial location is high in the landscape with an excellent view.

6.3.3 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded extent of WOC-003 (AHIMS ID 40-5-0150). Flaked stone artefacts were present in the assessment area including within 20m of the proposed reburial location.

6.3.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.3.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.4 Location 2 (WOC-001)

6.4.1 Location

The 1ha assessment are is located 10.7km southeast of the Mungo Visitor Centre on the southern shore of Lake Mungo.

6.4.2 Description

The proposed reburial site is located on a lunette landform on a short north facing slope near the crest and shoreline. Soil in the assessment area was pale sandy clay on the surface over clay with 92% ground surface visibility (due to total grazing pressure and drought conditions) and evidence of incipient wind erosion observed. The vegetation of the area is characterised by mixed Shrublands (degraded).

6.4.3 Aboriginal Cultural Heritage

The proposed reburial location is just north of the lunette and is 20m north of the previously recorded WOC-001 site extent (AHIMS ID 40-5-0001). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the assessment.

6.4.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.4.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.5 Location 3 (MA-001)

6.5.1 Location

The 1ha assessment area is located 6.7km south-southwest of the Mungo Visitor Centre, between Lake Mungo and Chibnalwood Lakes.

6.5.2 Description

The proposed reburial location is situated on a lunette landform on the lower north facing gentle slope, not far from lakebed. Soil in the assessment area was characterised by red sandy loam (deep) with 94% ground surface visibility (due to total grazing pressure and drought conditions) and incipient sheet erosion by wind observed. Vegetation in the assessment area was characterised by mixed shrublands

6.5.3 Aboriginal Cultural Heritage

The proposed reburial location is 80m north of the previously recorded MA-001 (AHIMS ID 40-5-0039) site extent and is situated north of a vehicle track. No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.5.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.5.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.6 Location 4 (WOC-005 & WOC-145)

6.6.1 Location

The 1ha site assessment area is located 6.3km northeast of the Mungo Visitor Centre on the northeastern shore of Lake Mungo.

6.6.2 Description

The proposed reburial location is situated on a lakebed landform with intermittent gilgais on a flat area. The soils in the assessment area were clay with 70% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.6.3 Aboriginal Cultural Heritage

The proposed reburial location is 213m southwest of the previously recorded site extent of WOC-145/WOC-005 (AHIMS ID 40-5-0152/40-5-0003), however flaked stone artefacts are present within the assessment area, away from the proposed reburial location. These objects have been recorded as a new Aboriginal site WLRWHA RP4 (AHIMS ID 40-5-0312).

6.6.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.6.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.7 Location 5 (WOC-152)

6.7.1 Location

The 0.5ha assessment area is located 10.8km north of the Mungo Visitor Centre on the north shore of Lake Mungo.

6.7.2 Description

The proposed reburial location is situated on a lunette landform on the toe of the northern slope. The area is nearly flat and is adjacent to the advancing steep sand face. Soils in the area are sandy with 94% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the area is characterised by mallee open shrublands including a few mallee and pittosporum.

6.7.3 Aboriginal Cultural Heritage

The proposed reburial location is 66m northeast of the previously recorded site extent of WOC-152 (AHIMS ID 40-5-0154). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.7.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.7.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.8 Location 6 (LW-004)

6.8.1 Location

The 1ha assessment area is located 11.4km north of the Mungo Visitor Centre between Lake Mungo and Lake Leaghur. The proposed reburial location is 400m from the nearest vehicle track.

6.8.2 Description

The proposed reburial location is situated on the lower slope of a dune landform. Soils in the area are sandy with 95% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the area is characterised by mixed shrubland including a few pittosporum and hopbush.

6.8.3 Aboriginal Cultural Heritage

The proposed reburial location is situated between LW-004 (AHIMS ID 40-5-0111) and LW-006 (AHIMS ID 40-5-0113), outside their previously recorded site extents. No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.8.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.8.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.9 Location 7 (LW-009)

6.9.1 Location

The 1ha assessment area is located 12.1km north of the Mungo Visitor Centre on the southwest shore of Lake Leaghur.

6.9.2 Description

The proposed reburial location is situated on the lower northern slope of a dune landform. The soils in the area are red sandy loam with over 99% ground surface visibility and evidence of

incipient wind erosion observed. Vegetation in the assessment area is characterised by bluebush/saltbush shrublands.

6.9.3 Aboriginal Cultural Heritage

The proposed reburial location is 58m northwest of the previously recorded site extent of LW-009 (AHIMS ID 40-5-0116). Flaked stone artefacts in assessment area, away from the proposed reburial location. These objects have been recorded as a new Aboriginal site WLRWHA RP7 (AHIMS ID 40-5-0311).

6.9.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.9.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.10 Location 8 (WCW-006)

6.10.1 Location

The 1ha assessment area is located 14.9km north-northwest of the Mungo Visitor Centre, on the eastern shore of an unnamed lake that is connected to Lake Leaghur. The proposed reburial location is 45m southeast of the nearest vehicle of track.

6.10.2 Description

The proposed reburial location is situated on the Willandra Creek floodplain on a low rise. Soils in the area were sandy clay with 90% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.10.3 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded site extent of WCW-006 (AHIMS ID 40-4-17). Flaked stone artefacts were observed in the assessment area, away from the proposed reburial location.

6.10.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.10.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.11 Location 9 (LP-001)

Location

The 1ha assessment area is located 13.5 north-northeast of the Mungo Visitor Centre on the southwest shore of Lake Leaghur.

6.11.1 Description

The proposed reburial location is situated on a lunette landform with localised rises and hollows. The soils in the area were sandy clay over clay with 85% ground surface visibility and evidence of incipient wind and water erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.11.2 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded site extent of LP-001 (AHIMS ID 40-5-0158). Flaked stone artefacts were observed 30m to the northwest and west of the proposed reburial location.

6.11.3 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.11.4 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.12 Location 10 (GL-024)

6.12.1 Location

The 0.5ha assessment area is located 25.9km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.12.2 Description

The proposed reburial location is situated near the eastern side of a lunette landform, on a flat area the toe of an unstable sand wall. The soil in the area was fine sand with 95% ground surface visibility and evidence of incipient wind erosion observed. The vegetation in the assessment area was characterised by bluebush/saltbush shrubland.

6.12.3 Aboriginal Cultural Heritage

The proposed reburial location is 76m east of the previously recorded site extent of GL-024 (AHIMD ID 40-5-0089). Flaked stone artefacts and hearth material were observed in the assessment area, away to the north east of the proposed reburial location. These objects have been recorded as a new Aboriginal site, WLRWHA RP10 (AHIMS ID 40-5-0313).

6.12.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.12.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.13 Location 11 (GL-013)

6.13.1 Location

The 0.5ha assessment was is located 25.5km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.13.2 Description

The proposed reburial location is situated near a lunette, on a flat area at the toe of an unstable sand wall. The soil in the area was sandy clay with 97% ground surface visibility and evidence of wind erosion observed. The vegetation in the assessment area was characterised by bluebush/saltbush shrubland.

6.13.3 Aboriginal Cultural Heritage

The proposed reburial location is 50m north of the previously recorded site extent of GL-013 (AHIMS ID 40-2-0011). Flaked stone artefacts were observed in the assessment area, away from the proposed reburial location. These objects have been recorded as a new Aboriginal site, WLRWHA RP11 (AHIMS ID 40-5-0314).

6.13.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.13.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.14 Location 12 (GL-020)

6.14.1 Location

The 0.5ha assessment area is located 24.7km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.14.2 Description

The proposed reburial location is situated on the eastern lower slope of a lunette landform, east of a sand face in a locally undulating area. Soils in the area were fine sand with 95% ground surface

visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.14.3 Aboriginal Cultural Heritage

The proposed reburial location is 190m northeast of the previously recorded site extent of GL-020 (AHIMS ID 40-5-0087). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.14.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.14.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.15 Location 13 (GL-001)

6.15.1 Location

The 0.5ha assessment area is located 29.5km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur, northeast of a sand face next to a vehicle track.

6.15.2 Description

The proposed reburial location is situated on a flat area east of the eastern escarpment/sand face of a lunette landform. Soils in the area were grey fine sand overlying grey clay with 40% ground surface visibility observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrubland.

6.15.3 Aboriginal Cultural Heritage

The proposed reburial location is 94m northeast of the previously recorded site extent of GL-001 (AHIMS ID 40-2-0007). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.15.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.15.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.16 Location 14 (GL-005)

6.16.1 Location

The 1ha assessment area is located 27.5km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.16.2 Description

The proposed reburial location is situated on the gently undulating western lower slope of a lunette landform. Soils in the area were sandy loam with 96% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands and two Cypress pines.

6.16.3 Aboriginal Cultural Heritage

The proposed reburial location is 205m southwest of the previously recorded site extent of GL-005 (AHIMS ID 40-2-0010). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.16.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.16.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.17 Location 15 (GL-002)

6.17.1 Location

The 0.5 assessment area is located 26.1km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.17.2 Description

The proposed reburial location is situated on a lunette landform, at the toe of an east facing sand face in local hollow with gentle slopes on three sides. Soils in the area were sand with over 99% ground surface visibility and wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.17.3 Aboriginal Cultural Heritage

The proposed reburial location is 20m east of the previously recorded site extent of GL-002 (AHIMS ID 40-2-0009). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.17.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.17.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.18 Location 16 (GL-026)

6.18.1 Location

The 0.5ha assessment area is located 28km north of the Mungo Visitor Centre, 600m west of Garnpung Lake.

6.18.2 Description

The proposed reburial location is situated on a jumbled dune complex landform in a local hollow rising on all sides. Soils in the area were sand and sandy loam with 80% ground surface visibility and incipient wind erosion observed. The vegetation in the assessment area is characterised by mallee open shrublands and spinifex.

6.18.3 Aboriginal Cultural Heritage

The proposed reburial location is 22m southeast of the previously recorded site extent of GL-026 (AHIMS ID 40-5-0091). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.18.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.18.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.19 Location 17 (GL-028)

6.19.1 Location

The 1ha assessment area is located 20.8km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.19.2 Description

The proposed reburial location is situated on a low rise in a lakebed landform, southwest of a lunette. Soils in the area were sandy clay over clay and clay pan with 95% ground surface visibility and incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.19.3 Aboriginal Cultural Heritage

The proposed reburial location is 100m west of the previously recorded site extent of GL-028 (AHIMS ID 40-5-0093), north of the clay pan. Flaked stone artefacts were observed in assessment area, mainly on the clay pan, away from the proposed reburial location. These objects have been recorded as a new Aboriginal site, WLRWHA RP17 (AHIMS ID 40-5-0315).

6.19.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.19.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.20 Location 18 (GG-025)

6.20.1 Location

The 1ha assessment area is located 21.7km northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.20.2 Description

The proposed reburial location is situated on the western mid slope of a lunette landform. Soils in the area were sandy clay with 92% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by mixed shrublands.

6.20.3 Aboriginal Cultural Heritage

The proposed reburial location is 122m southwest of the previously recorded site extent of GG-025 (AHIMS ID 40-5-0086). Flaked stone artefacts were observed in assessment area, southwest of the proposed reburial location. These objects have been recorded as a new Aboriginal site, WLRWHA RP18 (AHIMS ID 40-5-0310).

6.20.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.20.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.21 Location 19 (GG-018)

6.21.1 Location

The 0.5ha assessment area is located 23.7km northeast of the Mungo Visitor Centre, on the southwest shore of Garnpung Lake, 235m southwest of a vehicle track and fenceline.

6.21.2 Description

The proposed reburial location is situated on a lunette landform, on a flat area with local undulations at the foot of a steep sand wall (eastern crest). Soils in the area were sand with 70% ground surface visibility and evidence of minor wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.21.3 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded site extent of GG-018 (AHIMS ID 40-5-0079), however no Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.21.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.21.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.22 Location 20 (GL-025)

6.22.1 Location

The 1ha assessment area is located 27.5km north-northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.22.2 Description

The proposed reburial location is situated on a low rise of a lunette landform. Soils in the area were sandy clay with 85% ground surface visibility and evidence of minor wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.22.3 Aboriginal Cultural Heritage

The proposed reburial location is 85m north of the previously recorded site extent of GL-025 (AHIMS ID 40-5-0090). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.22.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.22.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.23 Location 21 (GG-001)

6.23.1 Location

The 1ha assessment area is located 23km northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.23.2 Description

The proposed reburial location is situated on a dune complex within a lunette landform. Soils in the area were sandy loam with over 99% ground surface visibility and evidence of moderate wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.23.3 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded site extent of GG-001 (AHIMS ID 40-5-0069), however no Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.23.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.23.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.24 Location 22 (GG-016)

6.24.1 Location

The 1ha assessment area is located 22.8km northeast of the Mungo Visitor Centre, between Garnpung Lake and Lake Leaghur.

6.24.2 Description

The proposed reburial location is situated in a dune complex of a lunette landform. Soils in the area were sandy loam over clay with 70 ground surface visibility and a stable surface observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands.

6.24.3 Aboriginal Cultural Heritage

The proposed reburial location is 70m west of the previously recorded site extent GG-016 (AHIMS ID 40-5-0077). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.24.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.24.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.25 Location 23 (ML-003)

6.25.1 Location

The 1ha assessment area is located 11.7km northeast of the Mungo Visitor Centre, 750m southeast of Lake Leaghur and 272m southeast of the nearest vehicle track.

6.25.2 Description

The proposed reburial location is situated on a lunette landform facing northeast. Soils in the area were fine sand over clay with 80% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands including hopbush.

6.25.3 Aboriginal Cultural Heritage

The proposed reburial location is 96m north of the previously recorded site extent of ML-003 (AHIMS ID 40-5-0127). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.25.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.25.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.26 Location 24 (ME-001)

6.26.1 Location

The 1ha assessment is located 65.6km northeast of the Mungo Visitor Centre, on the eastern shore of Mulurulu Lake.

6.26.2 Description

The proposed reburial location is situated at the western toe of a lunette landform. Soils in the area were fine sand with 98% ground surface visibility and evidence of moderate wind erosion observed. Vegetation in the assessment area was characterised by grassland/herbland including pittosporum.

6.26.3 Aboriginal Cultural Heritage

The proposed reburial location is within the previously recorded site extent of ME-001 (AHIMS ID 40-2-0004), however no Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.26.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.26.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.27 Location 25 (ME-002)

6.27.1 Location

The 1ha assessment area is located 70km northeast of the Mungo Visitor Centre, on the eastern shore of Mulurulu Lake.

6.27.2 Description

The proposed reburial location is situated at the western toe of a lunette landform. Soils in the area were fine sand with over 99% ground surface visibility and evidence of moderate wind erosion observed. Vegetation in the assessment area was characterised by grassland/herbland.

6.27.3 Aboriginal Cultural Heritage

The proposed reburial location is 35m southwest of the previously recorded site extent of ME-002 (AHIMS ID 40-2-0036). No Aboriginal cultural heritage sites or objects were observed in the assessment area during the site assessment.

6.27.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.27.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is low.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.28 Location 26 (GS-010)

6.28.1 Location

The 1ha assessment area is located 24.9km northeast of the Mungo Visitor Centre, on the southern shore of Garnpung Lake.

6.28.2 Description

The proposed reburial location is situated on a lunette landform, south of main crest but high in landscape. Soils in the area were fine sand over clay with 96% ground surface visibility and evidence of incipient wind erosion observed. Vegetation in the assessment area was characterised by bluebush/saltbush shrublands

6.28.3 Aboriginal Cultural Heritage

The proposed reburial location is 20m south of the previously recorded site extent of GS-010 (AHIMS ID 40-5-0105). Shell and a grindstone were observed within the assessment area. Flaked stone artefacts and hearth material were observed 50m from the proposed reburial location. These objects have been recorded as a new Aboriginal site, WLRWHA RP26 (AHIMS ID 40-5-0309).

6.28.4 Historic Heritage

No items or areas of historic heritage significance were identified at this location during the site assessment.

6.28.5 Archaeological Potential

The potential for Aboriginal archaeological deposits is moderate.

No relics or potential historic archaeological deposits were identified during the site assessment. There is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low.

6.29 Site Assessment Summary

The site assessment results are summarised in Table 4 below.

Table 4: Summary of Site Assessment Results

Location	Name	Landform	Historic Heritage	Historical Archaeological Potential	Aboriginal Heritage	Aboriginal Archaeological Potential
1	WOC-003	Lunette	x	Low	40-5-0150	Moderate
2	WOC-001	Lunette	x	Low	40-5-0001	Moderate
3	MA-001	Lunette	x	Low	x	Low
4	WOC-005, WOC-145	Lakebed	x	Low	40-5-0312	Low
5	WOC-152	Lunette	x	Low	x	Low
6	LW-004	Dune	x	Low	x	Low
7	LW-009	Lunette	x	Low	40-5-0311	Moderate
8	WCW-006	Floodplain	x	Low	40-4-0032	Low
9	LP-001	Lunette	x	Low	40-5-0158	Moderate
10	GL-024	Lunette	x	Low	40-5-0313	Moderate
11	GL-013	Lunette	x	Low	40-5-0314	Moderate
12	GL-020	Lunette	x	Low	x	Low
13	GL-001	Lunette	x	Low	x	Low
14	GL-005	Lunette	x	Low	x	Low
15	GL-002	Lunette	x	Low	x	Low
16	GL-026	Dune	x	Low	x	Low
17	GL-028	Lakebed	x	Low	40-5-0315	Moderate
18	GG-025	Lunette	x	Low	40-5-0310	Moderate

Location	Name	Landform	Historic Heritage	Historical Archaeological Potential	Aboriginal Heritage	Aboriginal Archaeological Potential
19	GG-018	Lunette	x	Low	40-5-0079	Moderate
20	GL-025	Lunette	x	Low	x	Low
21	GG-001	Lunette	x	Low	40-5-0069	Moderate
22	GG-016	Lunette	x	Low	x	Low
23	ML-003	Lunette	x	Low	x	Low
24	ME-001	Lunette	x	Low	40-2-0004	Moderate
25	ME-002	Lunette	x	Low	x	Low
26	GS-010	Lunette	x	Low	40-5-0309	Moderate

7.0 Assessment of Significance

7.1 Introduction

The various levels of heritage significance and values of the proposed reburial locations at a World, National, State and Local level have been previously assessed. These assessments are summarised below and in Table 5.

7.2 Existing Heritage Listings

The proposed reburial locations are:

- included within the boundary of the *Willandra Lakes Region* inscribed on the World Heritage List (Figure 3)
- contained within the boundary of *Willandra Lakes Region* which is included on the National Heritage List
- encompassed by the curtilage of *Willandra Lakes*, a heritage item listed on the NSW State Heritage Register (19 locations only; see Table 5 above and Figure 4)
- included within the curtilage of *Willandra Lakes*, a heritage item listed in the Heritage Schedule of Wentworth Local Environmental Plan (LEP) 2011 and Balranald LEP 2010 (13 locations only; Figure 5)
- encompassed by the *Willandra Lakes World Heritage Area Heritage Conservation Area* listed in the Heritage Schedule of Wentworth Local Environmental Plan 2011 (Figure 5).

7.2.1 World Heritage Significance: Willandra Lakes Region

About 240,000ha, 35 kilometres north east of Robinvale, located in the Murray Darling Basin in south western New South Wales, comprising the revised boundary as endorsed by the World Heritage Committee in 1995. The revised boundary is a reduced area of that originally inscribed into the World Heritage List in 1981 (see Figure 3).

The Statement of Outstanding Universal Value is as follows:

Brief Synthesis

The Willandra Lakes Region, in the semi-arid zone in southwest New South Wales (NSW), contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of a low-altitude, non-glaciated Pleistocene landscape. It also contains an outstanding record of the glacial-interglacial climatic oscillations of the late Pleistocene, particularly over the last 100,000 years. Ceasing to function as a lake ecosystem some 18,500 years ago, Willandra Lakes provides excellent conditions to document life in the Pleistocene epoch, the period when humans evolved into their present form.

*The undisturbed stratigraphic context provides outstanding evidence for the economic life of *Homo sapiens sapiens* to be reconstructed. Archaeological remains such as hearths, stone tools and shell middens show a remarkable adaptation to local resources and a fascinating interaction between human culture and the changing natural environment. Several well-preserved fossils of giant marsupials have also been found here.*

*Willandra contains some of the earliest evidence of *Homo sapiens sapiens* outside Africa. The evidence of occupation deposits establishes that humans had dispersed as far as Australia by*

42,000 years ago. Sites also illustrate human burials that are of great antiquity, such as a cremation dating to around 40,000 years BP, the oldest ritual cremation site in the world, and traces of complex plant-food gathering systems that date back before 18,000 years BP associated with grindstones to produce flour from wild grass seeds, at much the same time as their use in the Middle East. Pigments were transported to these lakeshores before 42,000 years BP. Evidence from this region has allowed the typology of early Australian stone tools to be defined.

Since inscription, the discovery of the human fossil trackways, aged between 19,000 and 23,000 years BP, have added to the understanding of how early humans interacted with their environment.

Criterion (iii): The drying up of the Willandra Lakes some 18,500 years BP allowed the survival of remarkable evidence of the way early people interacted with their environment. The undisturbed stratigraphy has revealed evidence of *Homo sapiens sapiens* in this area from nearly 50,000 years BP, including the earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources, all of which provide an exceptional testimony to human development during the Pleistocene period.

Criterion (viii): The Australian geological environment, with its low topographic relief and low energy systems, is unique in the longevity of the landscapes it preserves, and the Willandra Lakes provides an exceptional window into climatic and related environmental changes over the last 100,000 years. The Willandra Lakes, largely unmodified since they dried out some 18,500 years BP, provide excellent conditions for recording the events of the Pleistocene Epoch, and demonstrate how non-glaciated zones responded to the major glacial-interglacial fluctuations.

The demonstration at this site of the close interconnection between landforms and pedogenesis, palaeochemistry, climatology, archaeology, archaeomagnetism, radiocarbon dating, palaeoecology and faunal extinction, represents a classic landmark in Pleistocene research in the Australasian area. Willandra Lakes Region is also of exceptional importance for investigating the period when humans became dominant in Australia, and the large species of wildlife became extinct, and research continues to elucidate what role humans played in these events.

Integrity

The property as nominated covered some 3,700 km², following cadastral boundaries and including the entire Pleistocene lake and river systems from Lake Mulurulu in the north to the Prungle Lakes in the south, thereby including all elements contributing to its Outstanding Universal Value. In 1995 boundaries for the property were revised in order to 'better define the area containing the World Heritage values and ... facilitate the management of the property'. The revised boundary follows topographic features, with an appropriate buffer within the boundary, to more closely delineate the entire lake and river system but exclude extraneous pastoral areas. The area of the property now covers ~2,400 km².

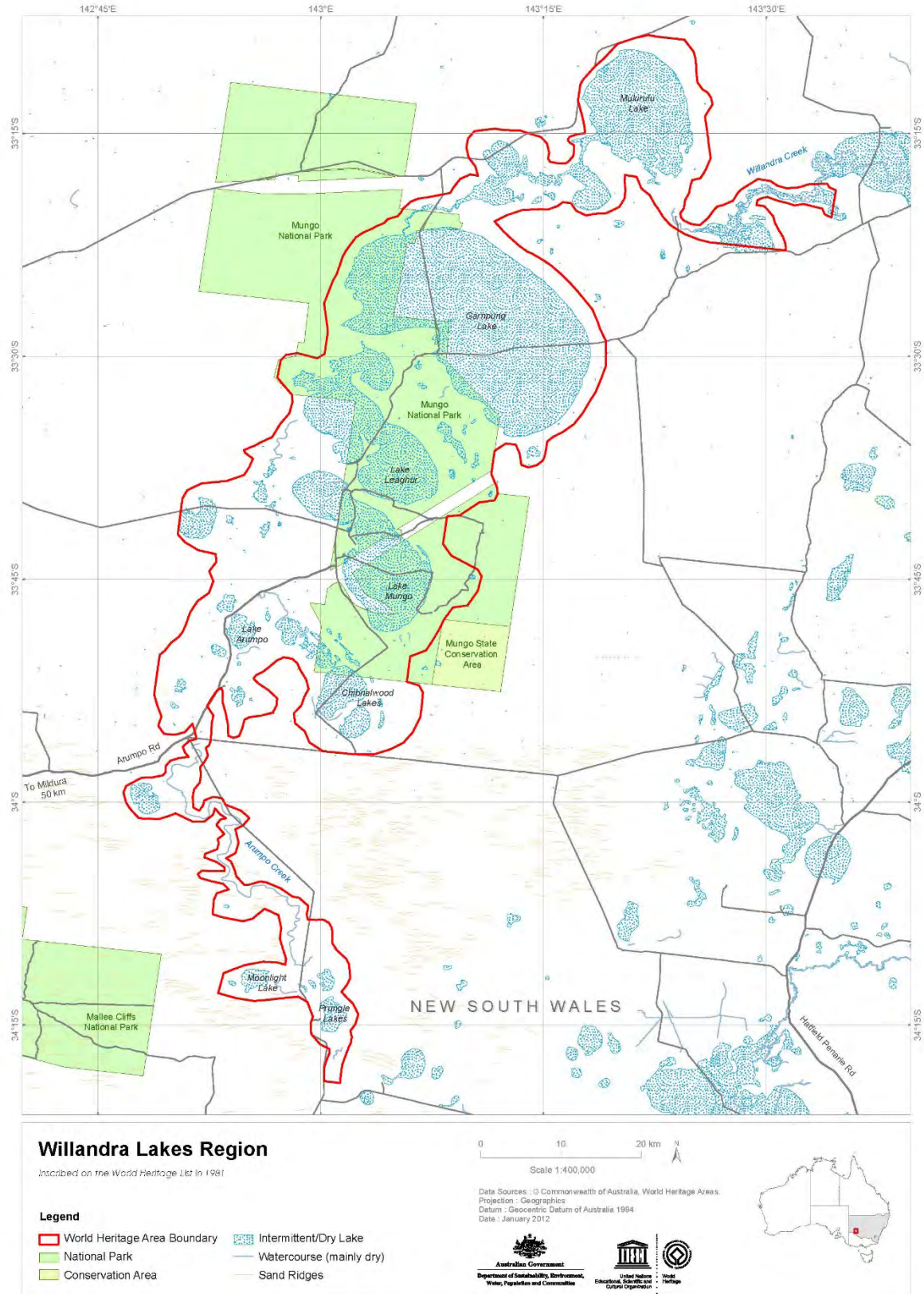
Although pastoral development has resulted in ecological changes, stocking rates are low and dependent on natural unimproved pasture and the area remains predominantly vegetated in its natural condition. For leasehold properties within the property, Individual Property Plans (IPPs) have been developed and implemented, including actions such as excluding grazing from sensitive areas and relocating watering points to minimise the impact of grazing, to protect Outstanding Universal Value while also allowing sustainable land uses. There have also been significant additions to Mungo National Park, including some of the most archaeologically significant areas of the property.

Much of the scientific and cultural significance of the property is related to the values embedded in or associated with the lunettes. Erosion and deflation continues to expose material in already



disturbed areas of the lunettes. At time of listing approximately 8% was extensively eroded, while 72% remained vegetated and intact, with the remaining area partly eroded.

Figure 3: Map of the inscribed property (Source: Willandra Lakes Region World Heritage listing webpage - http://whc.unesco.org/en/list/167/multiple=1&unique_number=185)



Authenticity

The authenticity of the natural and Aboriginal cultural heritage values of the Willandra has been established in the first instance, in a western or European cultural sense, by rigorous scientific investigation and research by leading experts in their fields. Researchers have established the great antiquity and the richness of Aboriginal cultural heritage at Willandra which brought about a reassessment of the prehistory of Australia and its place in the evolution and the dispersal of humans across the world.

For the Traditional Tribal Groups (TTGs) that have an association with the area there has never been any doubt about the authenticity of the Willandra and any particular sites it contains. The TTGs have maintained their links with the land and continue to care for this important place and participate in its management as a World Heritage property. Aboriginal people of the Willandra take great pride in their cultural heritage and maintain their connection through modern day cultural, social and economic practices.

Protection and management requirements

The majority of the area comprises pastoral stations leased from the State and administered by the NSW Land and Property Management Authority. The remaining land contains a large part of the Mungo National Park, which is managed by the NSW National Parks and Wildlife Service (NPWS), and which has grown from 4.2% of the property at time of inscription to 29.9% in 2012. There are also some small areas of freehold land within the property. The NSW Office of Environment and Heritage provides archaeological expertise over all land tenures within the property. The statutory basis for management is established under New South Wales legislation by the Willandra Lakes Region Environmental Plan. This provides for a Community Management Council, Technical and Scientific Advisory Committee, Elders Council of Traditional Tribal Groups affiliated with the Willandra, and Landholders Protection Group to input advice on the management of the World Heritage Area.

Upon listing, the World Heritage Committee requested that a management plan be ‘rapidly established for the whole area.’ This process was begun in 1989 with the first property management plan – Sustaining the Willandra –finalised in 1996 following extensive consultation with all stakeholders. Individual Property Plans have been developed to protect World Heritage values on the pastoral stations. Similarly, Mungo National Park, managed jointly by the NPWS and Traditional Tribal Groups under a Joint Management Agreement, is subject to a management plan which aims to maximise conservation of both natural and cultural heritage values while also conserving biodiversity and facilitating appropriate visitor access. Visitor access to sensitive areas is carefully controlled, and in some areas excluded, to mitigate adverse impacts on World Heritage values.

All World Heritage properties in Australia are ‘matters of national environmental significance’ protected and managed under national legislation, the Environment Protection and Biodiversity Conservation Act 1999. This Act is the statutory instrument for implementing Australia’s obligations under a number of multilateral environmental agreements including the World Heritage Convention. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Importantly, this Act also aims to protect matters of national environmental significance, such as World Heritage properties, from impacts even if they originate outside the property or if the values of the property are mobile (as in fauna). It thus forms an additional layer of protection designed to protect values of World Heritage properties from external impacts. In 2007 the Willandra Lakes Region World Heritage Area was added to the National Heritage List in recognition of its national heritage significance.

The property management plan identifies issues for management, outlines strategies for responses and identifies responsible parties. Among the issues and threats to values being addressed through coordinated action are the occurrence of invasive pest species (including European rabbits and feral goats), balancing increased visitation with asset protection, controlling total grazing pressure to provide for perennial vegetation regeneration, and limiting accelerated erosion where practicable.

According to Smith, Travers & James (2019):

The Willandra Ancestral Remains removed from WLR between 1968 and the early 1980s are not referred to as attributes of the World Heritage values of the property in the [Statement of Outstanding Universal Value]. The [Statement of Outstanding Universal Value] consistently emphasises that the undisturbed stratigraphic units containing occupation deposits of various kinds of cultural material—stone tools, grindstones, middens and trackways—and in-situ burials as the primary attributes that hold each of the values listed above. The oldest ritual cremation site in the world is specifically described as an attribute without acknowledging that the ancestral remains were removed from the site.

7.2.2 National Heritage Significance: Willandra Lakes Region

The Willandra Lakes Region was included on the National Heritage List in 2007. Prior to this it had been listed in the Register of the National Estate from 1978. The National Heritage Listing covers the same area as the World Heritage Listing (see Figure 1). The following statement of significance for *Willandra Lakes Region* is taken from the Australian Heritage Database (place ID. 105693).

The Willandra Lakes Region covers 240 000 hectares of a semi-arid landscape mosaic comprising dried saline lake bed plains vegetated with saltbush communities, fringing sand dunes and woodlands with grassy understoreys in the Murray Basin area in far south-western New South Wales. The region was inscribed on the World Heritage List for both outstanding cultural and natural universal values:

Natural

- *as an outstanding example representing the major stages in the earth's evolutionary history; and*
- *as an outstanding example representing significant ongoing geological processes.*

Cultural

- *bearing an exceptional testimony to a past civilisation.*

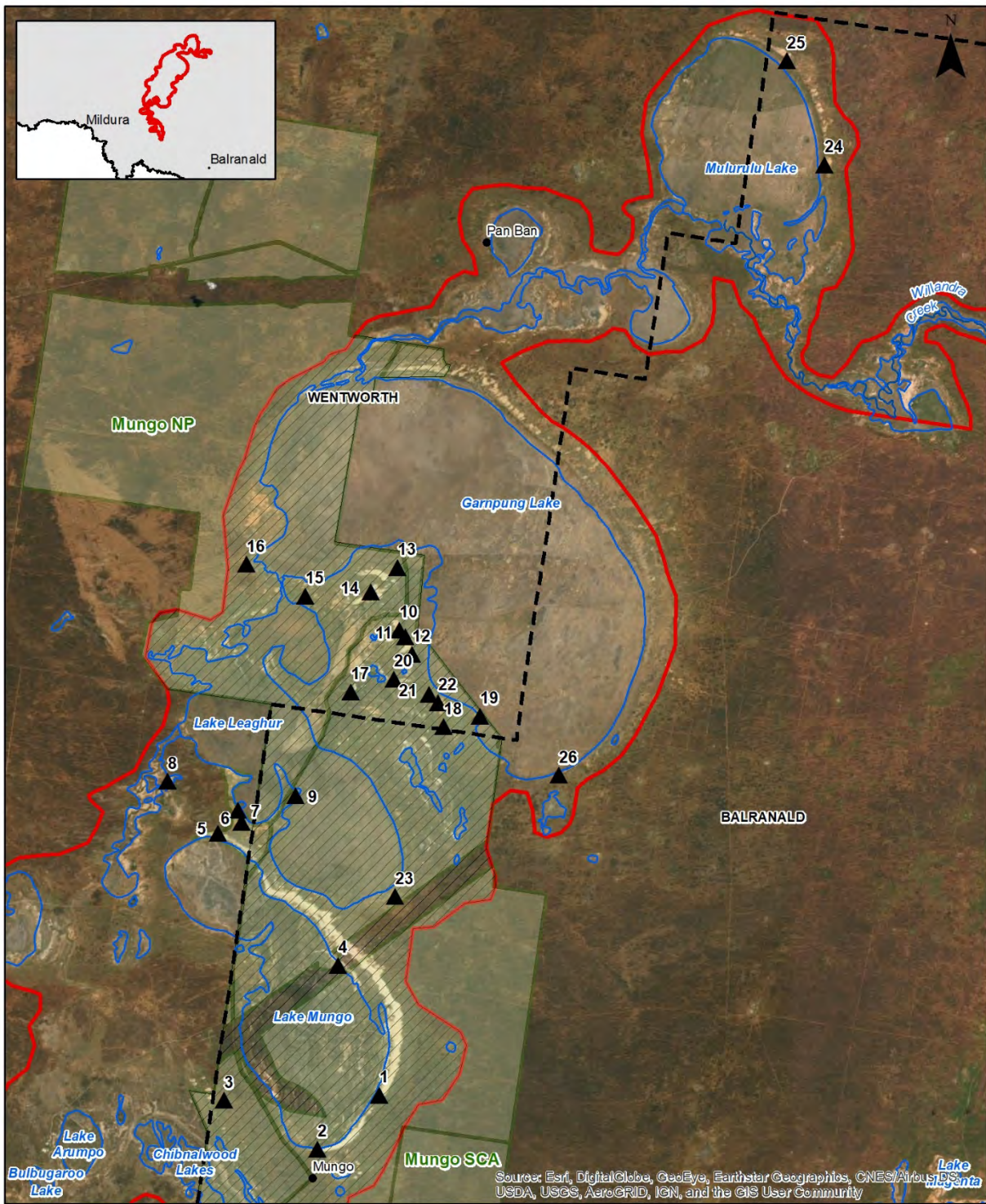
The region contains a system of Pleistocene lakes, formed over the last two million years. Most are fringed on the eastern shore by a dune or lunette formed by the prevailing winds. Today, the lake beds are flat plains vegetated by salt tolerant low bushes and grasses. About 10 per cent of the World Heritage area is gazetted as the Mungo National Park, which covers about two-thirds of Lake Mungo and includes the spectacular parts of the Walls of China lunette. The remaining area comprises pastoral leasehold properties. There are five large, interconnected, dry lake basins and fourteen smaller basins varying from 600 to 35 000 hectares in area. The original source for the

lakes was a creek flowing from the Eastern Highlands to the Murray River. When the Willandra Billabong Creek ceased to replenish the lakes, they dried in series from south to north over a period of several thousand years, each becoming progressively more saline. The ancient shorelines are stratified into three major layers of sediments that were deposited at different stages in the lakes' history. The earliest sediments are more than 50 000 years old and are orange-red in colour. Above are clays, clean quartz sand and soil that were deposited along the lakes' edges when the lakes were full of deep, relatively fresh water, between 50 000 and 19 000 years ago. The top layer is composed largely of wind-blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up. Aborigines lived on the shores of the Willandra Lakes from 50 000 to 40 000 years and possibly up to 60 000 years ago. Excavations in 1968 uncovered a cremated female in the dunes of Lake Mungo. At 26 000 years old, this is believed to be the oldest cremation site in the world. In 1974, the ochred burial of a male Aborigine was found nearby. The use of ochres for burial in Australia 30 000 years ago parallels their use in France at the same time. Radiocarbon dating established that these materials were some of the earliest evidence of modern humans in the world. During the last Ice Age, when the lakes were full, the Mungo people camped along the lake shore taking advantage of a wide range of food, including freshwater mussels and yabbies, golden perch and Murray cod, large emus and a variety of marsupials, which probably included the now extinct super roos. They also exploited plant resources, particularly when the lakes began to dry and food was less abundant. The human history of the region is not restricted just to an ancient episode. Evidence so far points to an extraordinary continuity of occupation over long periods of time. In the top layers of sediments there is abundant evidence of occupation over the last 10 000 years. The vegetation in the region, sparse though it is, is typical of the semi-arid zone. It plays an important role in stabilising the landscape and hence maintaining its sediment strata and many species of native fauna. On the dunes are found the small scrubby multi-stemmed mallee eucalypts with an understorey of herbs and grasses. Rose wood-belah woodland is common on the sand plains. In the lake beds, several species of salt bushes are able to thrive in the saline conditions. The remains of a large number of animals have been found in Willandra. More than 55 species have been identified, 40 of which are no longer found in the region, and 11 are totally extinct. Twenty-two species of mammals are currently recorded at Willandra, of which bats are the most diverse group. There are some 40 species of reptiles and amphibians. The bird life of the Willandra region is similar to that in many other semi-arid areas of Australia. Parrots, cockatoos and finches are the most conspicuous of the 137 recorded species.

7.2.3 State Heritage Significance: Willandra Lakes

Willandra Lakes was listed on the NSW State Heritage Register (SHR) in 1999 (gazette 2 April 1999) (see Figure 4) takes in only 19 of the 26 identified proposed works locations (see Figure 1; Appendices 14.1 and 14.2). The 19 locations in the SHR are in very remote locations within the Mungo NP.

Figure 4: Map showing the curtilage of the State Heritage listing for the Willandra Lakes (Source: NSW State Heritage Inventory)



Willandra Lakes Aboriginal Ancestors Reburial Project

Datum/Projection: GCS GDA 1994

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

Legend

- ▲ Reburial Locations
- NPWS Estate
- ▨ State Heritage Register Curtilage
- ▭ World Heritage Areas
- - - LGAs

0 2.5 5 10 15 20 Kilometers

NSW GOVERNMENT Premier & Cabinet

The following statement of significance for *Willandra Lakes* is taken from the State Heritage Inventory database for the State listing of the place (database no. 5045538):

Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field. (Moore 1977)

The Willandra Lakes Region comprising 240,000 acres was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values: as an outstanding example representing the major stages in the earth's evolutionary history; as an outstanding example representing significant ongoing geological processes; and for bearing an exceptional testimony to a past civilization.

The *Willandra Lakes* have been assessed as having the following State Heritage values:

SHR Criteria a) Historical significance

Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales (World Heritage Australia 1996).

SHR Criteria c) Aesthetic significance

The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world (World Heritage Australia, 1996).

SHR Criteria d) Social significance

Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency (World Heritage Australia, 1996).



SHR Criteria e) Research potential

The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field (Moore, 1977).

SHR Criteria g) Representativeness

The area is representative of south-east Australian lunettes or dry lake beds with windblown dunes on their eastern margins and flat floors (Moore, 1977).

The state heritage values are based on and closely align with the world heritage values (see Section 7.2.1).

7.2.4 Local significance: Willandra Lakes

Willandra Lakes is listed in the Heritage Schedules of both the Wentworth LEP 2011 and the Balranald LEP 2010 (Figure 5).

The following statement of significance for *Willandra Lakes* is taken from the State Heritage Inventory database for the Balranald local listing of the place (database no. 1050023).

Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field (Moore 1977).

The Wentworth LEP Listing is identical to the above with the addition of:

The Willandra Lakes Region comprising 240,000 acres was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values: as an outstanding example representing the major stages in the earth's evolutionary history; as an outstanding example representing significant ongoing geological processes; and for bearing an exceptional testimony to a past civilization.

A Statement of Significance for the *Willandra Lakes World Heritage Area Heritage Conservation Area* (Wentworth LEP listing) could not be found in the NSW heritage inventory online database nor on the Council's website.

Figure 5: Wentworth and Balranald LEP Heritage Items

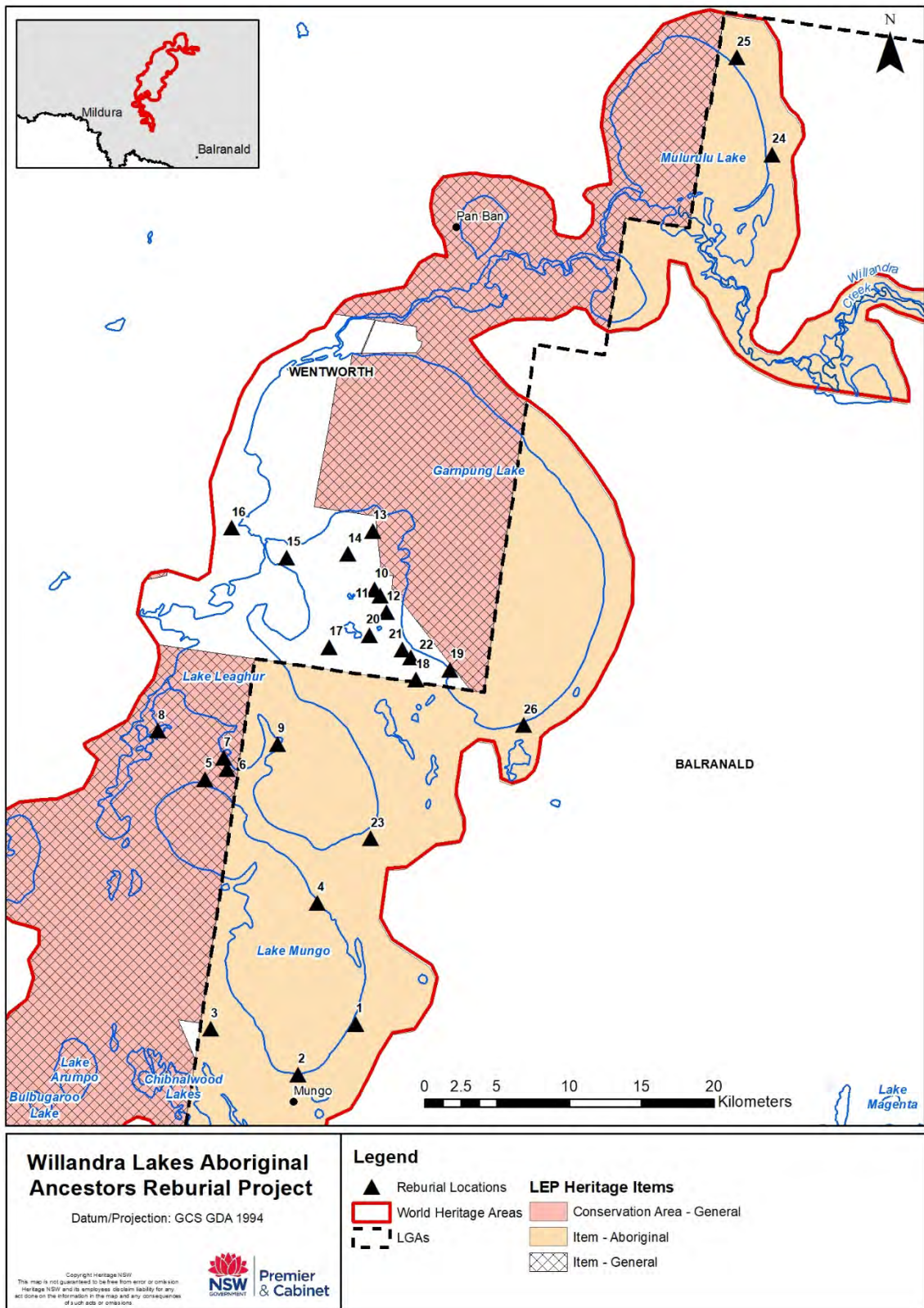


Table 5: Heritage Listings/Values

Location	World Heritage List	National Heritage List	State Heritage Register	Local Heritage Item	AHIMS Sites	Aboriginal Places	Historic Relics
1	✓	✓	✓	✓	✓	x	x
2	✓	✓	✓	✓	x	x	x
3	✓	✓	✓	✓	x	x	x
4	✓	✓	✓	✓	✓	x	x
5	✓	✓	x	✓	x	x	x
6	✓	✓	x	✓	x	x	x
7	✓	✓	x	✓	✓	x	x
8	✓	✓	x	✓	✓	x	x
9	✓	✓	✓	✓	✓	x	x
10	✓	✓	✓	x	✓	x	x
11	✓	✓	✓	x	✓	x	x
12	✓	✓	✓	x	x	x	x
13	✓	✓	✓	x	x	x	x
14	✓	✓	✓	x	x	x	x
15	✓	✓	✓	x	x	x	x
16	✓	✓	✓	x	x	x	x
17	✓	✓	✓	x	✓	x	x
18	✓	✓	✓	x	✓	x	x
19	✓	✓	✓	x	✓	x	x
20	✓	✓	✓	x	x	x	x
21	✓	✓	✓	x	✓	x	x
22	✓	✓	✓	x	x	x	x
23	✓	✓	✓	✓	x	x	x
24	✓	✓	x	✓	✓	x	x
25	✓	✓	x	✓	x	x	x
26	✓	✓	x	✓	✓	x	x

7.3 Key Planning Documents

7.3.1 Willandra Lakes World Heritage Region: European Cultural History Study (1985)

The Willandra Lakes World Heritage Region: European Cultural History Study (1985) does not specifically include a statement of significance for the region but does provide a thematic analysis of the key historic themes of the region including: exploration; land legislation; water improvements; home life; social life; overstocking; remoteness; Chinese and Aboriginal workers; pastoral workers; closer settlement; rabbits; and technological improvement.

7.3.2 Mungo National Park Plan of Management (2006)

Twenty-two of the proposed works locations are within Mungo NP. The Plan of Management states that Mungo NP, because of its status under the National Parks and Wildlife Act, has a special role within the World Heritage Area, the balance of which is leasehold land used for commercial grazing. The Plan identifies International, Regional and Local values. The historic features are described as of Local value; the only statement being 'the Park contains structures and relics of early pastoral history'.

The proposed works are a non-standard national park use. The proposed works are permissible under the *Mungo National Park Plan of Management* (2006), as it is an activity that is a ceremony, as defined under the 'Other Uses' heading:

- Ceremonial and hunting and gathering rights for members of the three traditionally affiliated tribal groups will be recognised and facilitated." (NSW National Parks and Wildlife Service, 2006, p. 37).

The proposed works are also consistent with the following Strategies, Outcomes and Actions of Mungo National Park Plan of Management (2006):

Aboriginal Heritage and Archaeology:

- Archaeological and Aboriginal cultural material will be protected from damage and inappropriate use and/presentation.
- the NPWS and others will assist the 3 Traditional Tribal Groups (TTGs) in promoting and presenting the Aboriginal cultural heritage values on the area in accordance with the wishes of the 3TTGs.

Historic Heritage:

- That the key structural indicators of the history of the area be preserved and adapted where necessary to facilitate ongoing use.

Research and Monitoring:

- Research is undertaken that enhances the information base and assists management of the park.
- Research programs have the full support and involvement of the three Traditional Tribal Groups.
- Research promotes an awareness and understanding of Mungo's importance in the global context.

Aboriginal Ancestors (cultural heritage material) were previously removed from their resting places and removed from country. The remains will be protected from damage and inappropriate

use/presentation by being securely returned to their original landscape. The proposed activity also will fulfil the long-term aspirations and wishes of the Aboriginal community or 3TTGs, including Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples.

No relics of early pastoral history or key structural indicators of the history of the area will be impacted by the proposed activity.

7.3.3 Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management (1996)

The *Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management* (Department of Environment, Sport & Territories, 1996) identified values, other than the World Heritage values, including cultural heritage, economic and social values. The cultural heritage values listed include the following:

- The Willandra Lakes Region was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales.
- The Aboriginal history of the area is integral to that of southeastern Australia, illuminating a process of cross-cultural interaction and Aboriginal dispossession. It reflects Aboriginal involvement in the pastoral industry, and the lives of local communities in the late nineteenth century and in more recent times.
- The area's historical archaeology (e.g. the 1860s Mungo Woolshed) provides a material record of the social, technological and economic history of pastoral settlement in western New South Wales.
- Archaeological sites of the nineteenth century provide valuable evidence of the interaction between Aboriginal people and European settlers in the period of first contact.

The social values identified include:

- The Willandra's traditionally affiliated Aboriginal people proudly identify themselves by this land. Their ancestors lived on this land for tens of thousands of years.
- The Willandra's primary producer landholder families have links with the European settlement of the region. They possess proud land management skills resulting from experience passed down from generation to generation.
- The remoteness of the area creates neighbourly support and a sense of community, particularly in times of need, for example during fire, flood and drought. At the same time the isolation promotes family self-sufficiency.

The economic values identified include:

- The region has increasing importance as a tourism destination, with tourists attracted to Lake Mungo, the World Heritage sites and pastoral environments close to Mildura and other parts of the Sunraysia tourist complex. Farm stays and guided tours provide an alternative income for regional communities.
- The region has value as a centre for research. Study tours and student work add to the regional economy and offer opportunities for regional tourism ventures based on research and education.
- The unique aesthetics of the Willandra landscape offer excellent visual and recreational opportunities that assist education and interpretation of its natural and cultural heritage within a regional, national and international context.

The proposed work is consistent with the *Willandra Lakes Region World Heritage Area Plan of Management* (Department of Environment, Sport & Territories, 1996) which also clearly articulates the long-term aspiration of the Aboriginal community that the rest of the Willandra Lakes Aboriginal Ancestors should also be returned. This plan requires the development of strategies and associated actions to:

- Locate and manage all Aboriginal human remains and other archaeological material to the satisfaction of the 3TTGs.

7.3.4 Willandra Lakes Region World Heritage Area Plan of Management (Draft Report)

The proposed work is consistent with the following Strategy of the Draft Willandra Lakes Region World Heritage Area Plan of Management (Context, 2014):

Rehabilitation and Protection of Heritage Values

- The repatriation of Mungo Man and other Aboriginal Ancestors to WLRWHA, specifically identifies the repatriation of Mungo Man and other Aboriginal Ancestors to WLRWHA (18.2) and the identification of a permanent culturally appropriate resting place for Mungo Man and other Aboriginal Ancestors (18.3) as a very powerful conservation action associated with the concepts of restoration and recovery of significance that is strongly in accordance with item (c) of the Australian Heritage Management principles to 'where appropriate, the rehabilitation of heritage values'.

7.3.5 Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan (2003)

The *Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan* (CMCTP) (Godden Mackay Logan, 2003) assesses the significance of historic heritage values and resources within Mungo NP and provides policy for the future management of these resources. It also addresses opportunities for cultural tourism. While the report did not revisit the natural and Aboriginal cultural values that led to the World Heritage Listing in 1981, it did address these values to provide a context for these values or where they interface with the historic values. The CMCTP was to inform future revisions of the *Mungo National Park Plan of Management*.

The CMCTP revealed important new findings about the Park's history:

- *Mungo Woolshed is likely to have been constructed after John Patterson purchased the lease in 1877 and before 1880, with around 1878 being the most likely date.*
- *The central section of Mungo Homestead was built during the Patterson Gol Gol period, not after 1921 as previously thought. As such it joins the Woolshed as important evidence of the first phase of pastoral occupation.*
- *Aboriginal people may have been involved in the pastoral activity on Gol Gol station in the later part of the nineteenth century, but not after 1922 when the soldier settlement properties were formed, apart from possible transient associations while sheep droving.*
- *Chinese workers were likely to have been involved in small numbers in the nineteenth century as farm workers, most likely to be in association with woolscouring, but no evidence of involvement in building construction, including the Woolshed, can be attributed.*

- *The ruin previously known as the Chinese Hut was most likely associated with woolscour operations that are known to have occurred in association with Mungo Woolshed and it was possibly used by Chinese workers involved in woolscouring and ground tank maintenance.*
- *The woolscour operations are one of a series of features that included ground tanks, underground logged tanks and wells associated with water conservation and use on these pastoral stations.*
- *A comprehensive understanding of the evolution of Mungo and Zanci Station complexes has, for the first time, been made possible through the kind assistance of former station owners and their descendants.*

According to the CMCTP:

The historic heritage resources and values of Mungo National Park, located within the Willandra Lakes Region World Heritage Property, are of considerable significance for the State of New South Wales. These resources, concentrated around the former Mungo and Zanci pastoral station complexes, but also found throughout Mungo National Park, are from three phases of occupation; as part of the large nineteenth-century back-block pastoral property Gol Gol; as the Mungo and Zanci pastoral station soldier settlement properties; and for almost a quarter of a century as Mungo National Park. These three phases sit within an overarching historic theme of human interaction with the environment. In this, the historic heritage complements the well-known deep history of Aboriginal interaction with the environment evidenced at Mungo, and part of the citation for the Willandra Lakes Region World Heritage Area listing. Within this theme are subthemes that underpin the significance of the place associated with the changing nature of the land tenure framework, pastoral processes, and awareness and appreciation of the natural and cultural environment.

The CMCTP also states that:

All conservation or adaptive works proposed for historic heritage should be preceded by Statements of Heritage Impact that form part of required environmental assessments.

None of the proposed works locations are near the former Mungo or Zanci Station Complexes including built heritage, relics or areas of historical archaeological potential as identified in the CMCTP. The proposed works will have no impact on the historic cultural landscape of Mungo NP including historic resources related to its pastoral use from the early 1860s and national park use from the late 1970s.

The proposed works are not in discordance with any of the conservation management policies outline in the CMCTP.

9.0 Statutory Framework

9.1 NSW National Parks and Wildlife Act 1974

The impacts of the proposed works on Aboriginal cultural heritage under the NSW *National Parks and Wildlife Act 1974* (NPW Act) have been considered in a recent Review of Environmental Factors prepared by Sunraysia Environmental (2020). Relevant points are duplicated here.

9.1.1 Objectives of the Act and Management Principles for National Parks

The proposed works are consistent with the broad objects of the NPW Act (Section 2A), including:

- (b) the conservation of objects, places or features (including biological biodiversity) of cultural value within the landscape, including:
 - (i) places, objects and features of significance to Aboriginal people,
- (c) fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation,
- (d) providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.

The proposed works are consistent with the following management principles for national parks:

- (1) The purpose of reserving land as a national park is to identify, protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features for landscape or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor or tourist use and enjoyment so as to enable those areas to be managed in accordance with subsection (2).
- (2) A national park is to be managed in accordance with the following principles:
 - b) The conservation of places, objects, features and landscapes of cultural value.

Comment

The values and significance of the cultural landscape of the Willandra Lakes will be rehabilitated and recovered by the reburial of Willandra Lakes Aboriginal Ancestors. The proposed reburial will achieve a rehabilitation of values that are currently incomplete/reduced and would reunite the attributes of World Heritage value with the place with which they are associated (Context, 2014). Therefore, the proposed activity may be considered to conserve and even enhance its cultural values and landscapes. Similarly, the Aboriginal objects (Aboriginal Ancestors), will be reunited with their original landscape. Both the Aboriginal Ancestors and the cultural landscape are of great significance to Aboriginal people.

The proposed reburial will also foster public appreciation and understanding of the association that the Aboriginal community have with the cultural heritage and cultural landscapes of the Willandra Lakes and the importance of their conservation.

The proposed reburial will take place on land reserved as National Park and Crown Land leased to private leasees. The proposed reburial is consistent with the management principles for national parks as discussed below.

The Aboriginal Ancestors have been returned to the Aboriginal community (represented by the AAG) by the Australian National University and the National Museum of Australia so that they can be treated with respect in accordance with their customs and beliefs rather than being available for scientific research. The AAG now wishes the Aboriginal Ancestors to be reburied at Willandra

Lakes. The reburial of the Aboriginal Ancestors fulfils the wishes of the AAG and also gives effect to the public interest in the protection of the cultural heritage values of Mungo NP which are restored and enhanced by the reburial.

9.1.2 Harm Provisions

Under Section 86(1)&(2) of the NPW Act, a person must not harm an Aboriginal object or harm or desecrate an object that the person knows is an Aboriginal object.

The NPW Act defines harm to an object or place as any act or omission that:

- (a) destroys, defaces or damages the object or place, or
- (b) in relation to an object—moves the object from the land on which it had been situated, or
- (c) is specified by the regulations, or
- (d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c),
- (e) but does not include any act or omission that:
- (f) desecrates the object or place, or
- (g) is trivial or negligible.

Under Section 87A of the NPW Act, Section 86 (1) to (4) do not apply in relation to:

- (a) work for the conservation or protection of an Aboriginal object or place that is carried out by an officer of the Service or a person under the direction of such an officer.

Section 87B of the NPW Act exempts Aboriginal people from the provisions of Section 86 (1), (2) and (4) to the extent to which those provisions would, but for this section, prohibit Aboriginal people from carrying out traditional cultural activities (except commercial activities). This section applies to and in respect of any dependants (whether Aboriginal or not) of Aboriginal people in the same way as it applies to and in respect of Aboriginal people.

Comment

The proposed works are exempt under Sections 87A and 87B of the NPW Act. The proposed works are conservation works and will not constitute harm or desecration under the NPW Act (Section 87A(a)) as an officer from NSW Heritage is principally involved in the supervision of the works under the NPW Act. The burying ancestors is a traditional Aboriginal activity. Conducting traditional Aboriginal cultural activities (but not commercial activities) will not constitute harm or desecration under Section 87B of the NPW Act. Therefore, an Aboriginal heritage impact permit (AHIP) is not required for the proposed works.

9.2 NSW Heritage Act 1977

The NSW *Heritage Act 1977* aims to promote understanding and conservation of the state's heritage, provide for identifying and registering items of state heritage significance, provide for the interim protection of items, pending an assessment of their state heritage significance, encourage the adaptive reuse of items of state heritage significance, and help owners conserve items of state heritage significance.

The NSW Heritage Act established the State Heritage Register, which consists of places and objects that contribute to the community's sense of identity, and which have been identified for protection and interpretation for future generations. It includes archaeological sites, built structures (bridges, buildings, monuments and industrial heritage), areas (gardens, streets, conservation precincts, landscapes), individual objects and shipwrecks.

When a place is listed on the State Heritage Register (SHR), Section 60 of the NSW Heritage Act requires the approval of the Heritage Council of NSW for any major work. The Heritage Council works to ensure that any changes or additions or new buildings on the site of a SHR item do not detract from the heritage significance of the place.

The Heritage Act also affords automatic statutory protection to relics (or land known or likely to contain relics), unless there is a relevant gazetted exception. The Act defines a 'relic' as:

any deposit, object or material evidence relating to the settlement of the area that comprises NSW, not being an Aboriginal settlement, and which is 50 or more years old.

A permit issued by the Heritage Council is required where the disturbance or excavation of land is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.

Comment

The WLRWHA is listed on the State Heritage Register (SHR No 01010), Gazette Date 2/4/1999, Local Government Area: Balranald. However, the identified SHR area is not as extensive as the World Heritage boundary and takes in only 19 of the 26 identified activity locations. The 19 locations in the SHR are in very remote locations within Mungo NP.

A Section 60 application for the proposed works is being submitted to Heritage NSW together with this Statement of Heritage Impacts. There is no built heritage, relics or areas likely to contain relics within the proposed works areas. Monuments and grave markers will not be placed on the site and the works will not be in conflict with the character of the place.

An exemption under Section 57(2) does not apply as landscape features and a place of Aboriginal heritage significance as described in the SHR Statement of Significance above will be disturbed.

An impact assessment on the State Heritage Values of the proposed works is presented in Section 10.2.

10.0 Assessment of Heritage Impacts

10.1 Impact on World and National Heritage Values

An independent assessment of impacts of reburial on Matters of Environmental Significance (MNES) has been prepared (Smith, Travers, & James, 2019). This assessment has determined that the proposed action of reburial of the Willandra Lakes Aboriginal Ancestors in WLR **will not** be a significant impact on:

- a World Heritage property, including its:
 - historic heritage values, and
 - cultural heritage values including Indigenous heritage values; and
- a National Heritage place, including its:
 - historic heritage values, and
 - Indigenous heritage values.

The assessment concluded that the proposed reburial of the Willandra Lakes Aboriginal Ancestors will not result in one or more of the National Heritage or World Heritage values of the WLR being lost, degraded or damaged, or notably altered, modified, obscured or diminished. The above being the case, it is concluded that:

- the proposed works will not have significant impacts on matters of national environmental significance.

Previously an EPBC Act Referral (2017/8040) was assessed by the Department of the Environment and Energy on 31/10/2017 for the repatriation of the Willandra Aboriginal Ancestors from the National Museum of Australia to Mungo NP, and the storage and keeping of the Willandra Aboriginal Ancestors at the Mungo Keeping Place. That activity was assessed as 'not a controlled action'.

The full results of this assessment and Matters of National Environmental Significance under the *EPBC Act 1999* are addressed in a separate Referral Application to the Commonwealth.

10.2 Impact on State Heritage Values

The assessment of the impact of the proposed work on the State Heritage significance of *Willandra Lakes* is undertaken in accordance with the requirements of the Heritage NSW *Statements of Heritage Impact* guideline (2002). This guideline has a number of general questions as well as questions targeted at specific proposed actions.

Response to General Questions of the Guideline

The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:

- The proposed works will not impact on the important archaeological record of the area.
- The important landscape features of *Willandra Lakes* will not be affected by the proposed works.

- The aesthetic values of *Willandra Lakes* will be retained as the proposed works will leave no long-term visual evidence of the reburial.
- The social significance of *Willandra Lakes* is respected as the repatriation and now reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the Aboriginal cultural heritage values by respecting the ancestors and continuing cultural protocols of caring for the dead.
- The proposed works will enhance Aboriginal cultural heritage values, through rehabilitation of the landscape.
- The social significance of *Willandra Lakes* is respected as the repatriation and now reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the use and association of the Aboriginal community with the place.
- The visual relationships between built heritage elements within the *Willandra Lakes* will be retained as the proposed works locations are not near any built heritage items.
- Views to, from, between and within landscapes of the *Willandra Lakes* will be maintained as the proposed works will leave no long-term visual evidence of the reburial.
- Longer term, the location of each reburial location will be kept confidential.
- The location of each reburial will only be available to the project and monitoring team within a secure GIS platform.
- Each of the locations will be monitored at four monthly intervals in years one and two following the reburials. Where possible monitoring will be done via photography taken from a drone. This method will:
 - eliminate the need for vehicle tracks to each location
 - minimise the environmental impact
 - reduce the visual impacts of site visits.

The following aspects of the proposal could detrimentally impact on heritage significance. The reasons are explained as well as the measures to be taken to minimise impacts:

- The proposed works are necessary to fulfil the wishes of the 3TTG and AAG and to recover Aboriginal cultural heritage values, through rehabilitation of the landscape.

An assessment of potential detrimental impacts on the State heritage values of the *Willandra Lakes* is presented in Table 6.

The following sympathetic solutions have been considered and discounted for the following reasons:

- An options analysis has been undertaken to investigate alternative options for the Willandra Lakes Aboriginal Ancestors.
- One of the options was placing the repatriated Willandra Lakes Aboriginal Ancestors in a permanent Keeping Place. The option for the construction of a Keeping Place has not been pursued by the AAG and has not been adopted as the AAG preferred course of action.
- Reburial of the Willandra Lakes Aboriginal Ancestors is the preferred option as this is consistent with past sentiments and views expressed by many Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years (Western Heritage Group, 2017).

Table 6: Impact Assessment by State Heritage Significance Criteria

State Heritage Value	Possible Impacts	Impact Assessment
<p>a) Historical significance</p> <p>Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales.</p>	<p>Permanently remove, destroy, damage or substantially disturb archaeological deposits relating to early human occupation of the area.</p> <p>Permanently remove, destroy, damage, disturb or detract from the history of early pastoral history of NSW.</p>	<p>The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish archaeological deposits relating to early human occupation of the area.</p> <p>The proposed works are exempt under Sections 87A and 87B of the NPW Act as they are conservation works and will not constitute harm or desecration under the NPW Act (Section 87A(a)) as an officer from NSW Heritage is principally involved in the supervision of the works under the NPW Act. Burying ancestors is a traditional Aboriginal activity. Conducting traditional Aboriginal cultural activities (but not commercial activities) will not constitute harm or desecration under Section 87B of the NPW Act. Therefore, an Aboriginal heritage impact permit (AHIP) is not required for the proposed works.</p> <p>No relics as defined in the Heritage Act are located on the proposed activity sites. The proposed works will not remove, destroy, degrade, damage, disturb or notably alter,</p>

State Heritage Value

Possible Impacts

Impact Assessment

c) Aesthetic significance

The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world.

Permanently remove, destroy, damage or substantially disturb lake sediments, geomorphology or soils containing a record of the Pleistocene landscape.

Permanently remove, destroy, damage or substantially disturb outstanding examples of clay lunettes.

modify, obscure or diminish the history of early pastoral history of NSW.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish lake sediments, geomorphology or soils containing a record of the Pleistocene landscape.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the outstanding examples of clay lunettes.

d) Social significance

Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency.

Permanently remove, destroy, damage, substantially disturb or detract from the aesthetic beauty of the Willandra Lakes. Permanently remove, destroy, damage, substantially detract from the traditional affiliation that Aboriginal people have with the Willandra Lakes.

Permanently remove, destroy, damage, substantially detract from how Aboriginal people identify with the Willandra Lakes.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the aesthetic beauty of the Willandra Lakes.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the traditional affiliation that Aboriginal people have with the Willandra Lakes.

State Heritage Value

Possible Impacts

Impact Assessment

Permanently remove, destroy, damage, substantially disturb or detract from the Willandra's primary producer landholder families have links with the European settlement of the region.

Permanently remove, destroy, damage, substantially disturb or detract from a sense of neighbourly support and community.

Permanently remove, destroy, damage, substantially disturb or detract from the promotion of self-sufficiency.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish how Aboriginal people identify with the Willandra Lakes.

The reburial of the Willandra Lakes Aboriginal Ancestors will enhance the use and association the Aboriginal community have with the place.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the links Willandra's primary producer landholder families have with the European settlement of the region. The historic links to the region have been documented in (Donovan & Associates 1985) and the proposed works will have no impact on any sites recorded in this study.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish a sense of neighbourly support and community.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the promotion of self-sufficiency.

State Heritage Value

Possible Impacts

Impact Assessment

e) Research potential

The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region.

The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field.

The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field.

Permanently remove, destroy, damage or substantially disturb significant Pleistocene archaeological records.

Make Aboriginal Ancestors inaccessible for the purposes of research which were removed from the Willandra Lakes prior to its State Heritage Listing.

Permanently remove, destroy, damage or substantially disturb relics as defined under the *Heritage Act 1977*.

Permanently remove, destroy, damage or substantially disturb information relating to the evolution of climates, environments and earth's magnetic field.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish significant Pleistocene archaeological records.

The loss of future scientific research opportunities through the reburial has been considered in detail in Smith et. al (2019) and is not assessed to have a significant impact on the historic or cultural heritage values of the area. Lack of access for research is an indirect impact of the proposed works but not a significant impact on the SHR values. Further opportunities for research on Aboriginal Ancestors in the Willandra Lakes is likely provided the appropriate research protocols are followed. There are numerous *in situ* burials in region, and the reburial of the Willandra Lakes Aboriginal Ancestors will not limit future study of these remains.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish relics as defined under the *Heritage Act 1977*.

State Heritage Value

Possible Impacts

Impact Assessment

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish information relating to the evolution of climates, environments and earth's magnetic field.

g) Representativeness

The area is representative of south-east Australian lunettes or dry lake beds with windblown dunes on their eastern margins and flat floors.

Permanently remove, destroy, damage or substantially disturb lunettes or dry lake beds with windblown dunes.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the Willandra Lakes lunettes or dry lake beds with windblown dunes.

Response to Specific Questions of the Guideline

The proposed reburial works do not relate to any of the specific questions about proposed changes to heritage items in the *Statement of Heritage Impact* (2002) Guideline.

Conclusion

The assessment concludes that the proposed reburial of the Willandra Lakes Aboriginal Ancestors will not result in one or more of the State Heritage values of the Willandra Lakes being removed, destroyed, degraded or damaged, or notably altered, modified, obscured or diminished. That being the case, it is concluded that the proposed works will not have significant impacts on matters of State Heritage.

10.3 Impact on Archaeological Values

10.3.1 Historical Archaeology

The site assessment identified that none of the proposed reburial locations are in proximity to any historic building, landscape, moveable heritage item or relics as defined under the *Heritage Act 1977*.

Given the remote location of the reburial locations well away from built heritage or pastoral occupation sites, there is low potential for the proposed reburial locations to contain historical archaeological deposits or relics. The potential significance of any deposits or relics is low. An assessment of the historical archaeological potential of each proposed reburial location is provided above in Section 6.0.

The proposed reburial will not impact known areas of historical archaeological sensitivity or potential and will have no long-term impact on the historical archaeological values (including research potential). No relics as defined under the *Heritage Act (1977)* will be impacted by the proposed reburial.

General mitigation measures are presented in Section 11.1. Specific mitigation measures for each proposed location are contained in Section 11.2.

10.3.2 Aboriginal Archaeology

Several of the locations assessed during the site assessment contained isolated or low-density surface scatters of Aboriginal objects (e.g. flaked stone tools) and several locations are within the site extents of previously recorded Aboriginal sites. These surface objects will be avoided by the activity.

The results of the site assessment including the Aboriginal archaeological potential of each proposed reburial location is provided above in Section 6.0 and Table 4. This assessment has concluded the potential for Aboriginal archaeological deposits is generally low to moderate and the potential scientific significance of any deposits is low. It is unlikely that previously unidentified archaeologically significant deposits will be encountered subsurface as the proposed reburial locations are very small and have been chosen in areas away from observed surface objects.

The assessment that the activity will have a low impact on Aboriginal objects is further supported by data from previous archaeological research in the region. Tumney (2018) undertook study of chipped stone artefacts within two erosional basins, both located on the lakeward side of the main Mungo lunette. Each of these locations was ca. 10,000 m² in area and the artefacts within each site tended to cluster in certain areas, but on average the artefact density was 1.12 artefacts/m²

(2018: 385). Tumney also summarised data from Allen's (1972, 1998) research and found artefact densities ranged from 0.03 artefacts/m² to 20 artefacts/m² (2011: Table 3.1). It is important to note that all the above densities were from within concentrated archaeological sites.

A more controlled estimate of artefact density across landscapes, rather than within individual sites comes from the archaeologically rich southern end of Lake Mungo where a grid collection over an area some 360m x 100m on the southwestern end of the Mungo lunette took place in 1973, and again over the same area in 1974, 1975, 1976 and 1978. It should be noted this area is where Mungo Woman and Mungo Man were found and is one of the richest archaeological areas in the region. This collection found some 5,600 artefacts, at a density of 1 artefact/9m² (Robinson, 1980, p. 131). Shawcross' Mungo 1 excavation, in the same area, removed some 320m³ of deposit, producing 669 artefacts or 2.09 artefact/m³ of deposit (1976; 1998). No Aboriginal Ancestors were found in either the grid collection or excavation, and therefore these occur substantially lower densities than stone artefacts.

However, the data that is most relevant to this activity comes from Stern (personal communication, September 26, 2020, see also Fitzsimmons, Stern & Murray-Wallace (2014)) who surveyed a large area (more than 200,000m²) of post lake aeolian sediments in the central Mungo lunette in 2010 and recorded archaeological features at a density of 0.0004 per m², or 1 feature per 2,378m². In this survey, archaeological features included all archaeological traces including hearths, bone clusters, stone clusters, and shell clusters with isolated *in situ* finds.

The context of this survey by Stern is comparable to the locations where reburials will take place – i.e. on recent aeolian sands. Based on the density data from Stern (pers. comm.) the number of archaeological features that could be expected to be found in the total area of the reburials (28.5m²) would be 0.012 artefacts.

The impact areas have been described in Table 1 (Section 4.3). This data from Stern (pers. comm) and Shawcross (1976; 1998) provides a basis to calculate the impact that the overall activity of this proposal may have on Aboriginal objects.

- On the basis that the total surface impact area is 28.5m², **approximately 0.012 artefacts** could be expected to be encountered, on average, for all the activity areas combined.
- On the basis that the total excavation impact area is 17m³, **approximately 36 artefacts** could be expected to be encountered, on average, for all the activity areas combined (Shawcross, 1976; 1998).
- **No Aboriginal ancestral remains** are likely to be encountered in any activity area.

It is very unlikely that the proposed reburials will have any adverse impact on the significant archaeological record of the WLRWHA. Where, in the unlikely event that an Aboriginal site will be impacted by ground disturbance, the degree of harm or impact will be partial at all proposed reburial locations, particularly given the small size of the proposed burial pits and the nature of the sparse 'background scatter' of flaked stone artefacts across the WLRWHA. The consequence of harm/impact, where there is recorded Aboriginal sites, will be that the natural stratigraphy of the discrete reburial locations will be disturbed. General mitigation measures are presented in Section 11.1 and Specific mitigation measures for each proposed location are contained in Section 11.2, however the following measure will also limit harm and impacts from the activity.

In the event that unexpected discoveries of objects or Aboriginal Ancestors occurs during the proposed works:

- *works will cease immediately*
- *the objects or Aboriginal Ancestors will be recorded and photographed*

- an AHIMS record card will be completed
- the excavation will be refilled
- a new grave site will be chosen elsewhere from within previously assessed area (see Section 11.1.3).

This measure will result in no loss of overall value. A summary of the impacts to Aboriginal sites is provided in Table 7.

Aboriginal cultural heritage including Aboriginal sites and objects are under the jurisdiction of the *National Parks and Wildlife Act 1974*. Consideration of the harm to Aboriginal cultural heritage is presented in Section 9.1.

10.4 Impact on Cultural Heritage Values

The assessment of heritage impacts above is largely focused on direct physical impacts. However, indirect impacts or harm must also be considered. According to the Code of Practice for *Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water NSW, 2010), when assessing likely harm on Aboriginal objects and places:

The principles of ecologically sustainable development (ESD) must be considered, in particular the precautionary principle and the principle of inter-generational equity. Indirect harm may affect sites or features located immediately beyond, or within, the area of the proposed activity.

The precautionary principle states that 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 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.

Consideration of ESD principles should result in:

- *An understanding of the cumulative impact of the proposal; for example, the nature and extent of the Aboriginal object or place proposed to be harmed in relation to other identified sites in the region*
- *ascertaining how, wherever practicable, harm to significant Aboriginal object(s) or place(s) can be avoided [...]*
- *establishing and assessing the risks and consequences of various options*
- *assessing the costs and benefits of various options to future generations*
- *suggesting actions (either on or off site) which are proposed to help to promote intergenerational equity.*

Comment

- Given the number (510 recorded sites, many with multiple features) and scale of the Aboriginal sites/objects identified the Willandra Lakes, the proposed reburial will have very little cumulative impact in relation to the other Aboriginal sites and objects in the region.
- Harm to Aboriginal objects can be avoided, minimised and mitigated by carrying out the proposed reburial in accordance with the mitigation measures in Section 11.0.
- The risk and consequence of harm is discussed in Table 7. Alternative options considered are discussed in 10.2.

- The reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the Aboriginal cultural heritage and social values for future generations by respecting the ancestors and continuing cultural protocols of caring for the dead.
- The reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the use and association of the Aboriginal community with the place for future generations.
- The proposed works will enhance Aboriginal cultural heritage values for future generations, through rehabilitation of the landscape.
- The proposed works will have a positive impact on the cultural safety of the Aboriginal community, including future generations. The removal and study of ancestors has caused long standing concern for the Aboriginal community and the reburial of the ancestors will resolve this concern.

10.5 Impact on Local Heritage Values

As the statements of significance and heritage values for the Balrandald and Wentworth LEP listings of *Willandra Lakes* are the same as that for the State listing, the impact on local values will be the same as that for State values (see Table 6). That is, there will be no impacts on the State or Local Heritage values.

Mitigation measures for each proposed location are contained in Sections 11.1 and 11.2.

Table 7: Impact on Aboriginal sites

Location	Aboriginal Sites Present	AHIMS Sites	Type of Harm	Degree of Harm	Consequence of Harm	Mitigations Measures required
1	✓	40-5-0150	Direct	Partial	No loss of value	General and Site Specific
2	✓	40-5-0001	Direct	Partial	No loss of value	General and Site Specific
3	✗	✗	None	None	No loss of value	General
4	✓	40-5-0312	Direct	Partial	No loss of value	General and Site Specific
5	✗	✗	None	None	No loss of value	General
6	✗	✗	None	None	No loss of value	General
7	✓	40-5-0311	Direct	Partial	No loss of value	General and Site Specific
8	✓	40-4-0032	Direct	Partial	No loss of value	General and Site Specific
9	✓	40-5-0158	Direct	Partial	No loss of value	General and Site Specific
10	✓	40-5-0313	Direct	Partial	No loss of value	General and Site Specific
11	✓	40-5-0314	Direct	Partial	No loss of value	General and Site Specific
12	✗	✗	None	None	No loss of value	General
13	✗	✗	None	None	No loss of value	General

Location	Aboriginal Sites Present	AHIMS Sites	Type of Harm	Degree of Harm	Consequence of Harm	Mitigations Measures required
14	x	x	None	None	No loss of value	General
15	x	x	None	None	No loss of value	General
16	x	x	None	None	No loss of value	General
17	✓	40-5-0315	Direct	Partial	No loss of value	General and Site Specific
18	✓	40-5-0310	Direct	Partial	No loss of value	General and Site Specific
19	✓	40-5-0079	Direct	Partial	No loss of value	General and Site Specific
20	x	x	None	None	No loss of value	
21	✓	40-5-0069	Direct	Partial	No loss of value	General and Site Specific
22	x	x	None	None	No loss of value	General
23	x	x	None	None	No loss of value	General
24	✓	40-2-0004	Direct	Partial	No loss of value	General and Site Specific
25	x	x	None	None	No loss of value	General
26	✓	40-5-0309	Direct	Partial	No loss of value	General and Site Specific

11.0 Mitigation Measures

The following general and site-specific measures must be implemented before, during and after the proposed reburial project in order to avoid, minimise and/or mitigate any impacts to Aboriginal cultural heritage or historic heritage values.

11.1 General Mitigation Measures

11.1.1 Pre-commencement and Access

- All reburials must be located within the 58m radius of the one-hectare reburial site or a lesser area (semi-circle of 0.5ha) for eight sites.
- Locate and flag out Aboriginal objects prior to reburial, so these can be avoided.
- The reburial party will travel to each site in a minimum number of vehicles.
- Park vehicles away from reburial site and remain on existing tracks where possible.
- Bare or weedy ground should be the preferred route where there is a justifiable need to travel away from an existing access track.
- Diesel powered vehicles must be used for transport and carry sufficient fuel to avoid the need to refuel from jerry cans while in the field.
- Vehicles used on site must be fitted with a fire extinguisher.

11.1.2 Burial Location Selection

- Conduct reburial/s near central grid coordinate (see Appendix 14.2) to avoid impacts to recorded or observed Aboriginal objects.
- Where reburials are to be located at the toe of an advancing sand wall (the 0.5ha sites) the reburial locations should be close to the centre point as the assessment area.
- Selection of the reburial sites in assessment area must be done on foot, ensuring that each reburial location is on bare or weedy ground and avoids established shrubs and outside the dripline of trees and avoids areas of severe wind or water erosion.
- At sites where the soil is sandy throughout the profile, reburials should be at a greater depth than sites with finer soil texture.
- Reburials should not be located within 10 metres of rabbit warrens as these areas could become unstable due to soil erosion or subject to further burrowing.

11.1.3 Reburial

- Most of the remains are very small fragments and only a small hole will be required. Wherever possible hand tools are to be used to excavate reburial sites. Several complete skeletons will require larger holes and a small backhoe will be used to excavate the holes.
- Topsoil and surface mulch/seed will be saved prior to excavation of the reburial hole, ensuring that these resources are not cross contaminated with subsoil. Topsoil is to be respread over the disturbed area after the hole is refilled. Then the area must be lightly raked, and the stored organic matter spread on the raked area to assist in natural regeneration.

- The surface area of each hole will be minimised according to the volume of Aboriginal Ancestors to be buried, with the lower limit based on the minimum diameter possible that can be excavated with a shovel (or manual soil auger if used).
- The upper fill material in the hole should be well compacted to avoid soil subsidence and thus avoid erosion or enable the burial site to be identified easily; special care must be taken during compaction to avoid damaging any unexpected Aboriginal objects or Aboriginal Ancestors below.
- In the event that unexpected discoveries of objects or Aboriginal Ancestors occurs during the proposed works:
 - works will cease immediately
 - the objects or Aboriginal Ancestors will be recorded and photographed
 - an AHIMS record card will be completed
 - the excavation will be refilled
 - a new grave site will be chosen elsewhere from within previously assessed area.
- Excavated holes must not be left open overnight to avoid entrapment of wildlife.
- It is preferable that reburials not be undertaken in Spring to minimise the potential of disturbance of breeding/nesting wildlife.
- It is preferable that reburials occur in Autumn to optimise natural regeneration while the soil is freshly disturbed, and to minimise the time period the ground at each reburial location remains bare and disturbed to avoid erosion.
- It is preferable that reburials occur in Autumn to avoid fire risk days/hot days in Summer.
- Reburials must avoid the period after heavy rainfall to ensure wheel tracks are not created in soft soil and vehicles don't become bogged.
- Special care must be taken during smoking ceremonies or any other use of naked flame (if such activities occur) to avoid starting a fire.
- Each site must be checked on completion of reburials to ensure that no items are left on the site (e.g. storage cartons, hand tools, drink bottles, food wrappers, cigarette butts and centre point reference stake).

11.1.4 Post Reburial Remediation

- After spreading topsoil, the disturbed area will be lightly raked by hand to restore the surface to a smooth surface and even profile similar to the original.
- Any mulch/seed that was set aside earlier must be respread. As the timing of the reburials is likely to occur in early Autumn, this is an ideal time to allow natural regeneration of grasses, forbs and shrubs on the disturbed areas when the seasonal "break of season" occurs (i.e. when annual native and exotic plant species naturally germinate from seed).
- The stake marking the centre point of each site will be removed on the same day as the reburials. No further action or remediation is planned.
- No fencing or marking of the locations are proposed, as this would draw attention to the location, and this project aims to obscure the location in the long term.

11.1.5 Post Reburial Security

Providing safe, secure and long-term reburial locations is an issue that has repeatedly been raised since the 1980s. A series of mitigation measures have been outlined below. Specifically, detailed measures have been proposed to:

- limit the environmental impact of the works and therefore minimise the potential for the locations to be relocated and disturbed
- limit the physical visibility of the reburial locations, in both the short term and long term
- minimise the potential for the locations to be subject to erosion (and therefore re-exposure) in the short and long term.

These measures are relevant at the time of the reburials. Longer term, the location of each reburial location will be kept confidential. The location of each reburial will only be available to the project and monitoring team within a secure GIS platform. Each of the locations will be monitored at four monthly intervals in years one and two following the reburials. Where possible monitoring will be done via photography taken from a drone. This method will:

- eliminate the need for vehicle tracks to each location
- minimise the environmental impact
- reduce the visual impacts of site visits.

11.1.6 Long Term Management

After 2 years have elapsed it is anticipated that the reburial locations will be revegetated and will not be visible. Regular scheduled monitoring will then change to yearly monitoring for 2 years. After this time regular scheduled monitoring will cease, though unscheduled monitoring may still occur.

If unexpected change is observed at any location during monitoring e.g. erosion, disturbance or visitation, appropriate site conservation or access constraint and monitoring will be implemented.

The above monitoring, reporting and follow up actions (if needed) are the responsibility of Heritage NSW and will be led by Heritage Operations Officers from Heritage NSW. Willandra Lakes WHA staff, AAG members and NPWS staff will also be involved.

11.2 Site Specific Mitigation Measures

In addition to the General Mitigation Measures above, the specific mitigation measures in Table 8 have been developed with the Aboriginal community and apply at each proposed reburial location.

Table 8: Site Specific Mitigation Measures

Location	Name	Site Specific Mitigation Measures
1	WOC-003	Keep burials close to centre to avoid erosion gullies north and south and artefacts to west. Vehicle to be parked on tourist road, approx. 1km west of the site.
2	WOC-001	Vehicles to be parked on existing track 300m away.
3	MA-001	Reburials to be deep due to sandy soil, avoid Rosewood west of centre point.
4	WOC-005, WOC-145	Avoid gilgais for reburials. Park vehicles on existing access track.
5	WOC-152	Avoid mallee, reburials to be along toe of advancing sand wall, keep vehicle north of fence.
6	LW-004	Keep off western end due to instability of sandy soil, reburials to be deep due to sandy soil, Vehicles to be parked on existing access track, reburials must be at lowest point, ie close to centre point.
7	LW-009	Reburials to be deep due to sandy soil, keep off clay pan.
8	WCW-006	Park vehicles on existing track.
9	LP-001	Avoid placing reburials on small localised mounds.
10	GL-024	Reburials to be at foot of sand wall, and near centre point.
11	GL-013	Reburials to be at foot of sand wall, and near centre point.
12	GL-020	Reburials to be along foot of advancing sand dune and near centre point.
13	GL-001	Reburials to be along foot of sand dune and close to centre point, park vehicles in existing track.
14	GL-005	Avoid Cypress Pine trees, avoid water flow depression to north, reburials to be deep due to sandy soil.

Location	Name	Site Specific Mitigation Measures
15	GL-002	Reburials to be at foot of advancing sand wall, close to centre point.
16	GL-026	Reburials to be along toe of steep sand wall, avoid shrubs, reburials to be deep due to sandy soil.
17	GL-028	Avoid traffic and reburials on clay pan.
18	GG-025	Keep vehicles well away from assessment area.
19	GG-018	Reburials to be close to toe of sand wall, and near centre point.
20	GL-025	Keep vehicles away from assessment area.
21	GG-001	Reburials to be deep due to sandy soil.
22	GG-016	Reburials to be deep if profile is sandy. Reburials to be at lowest point.
23	ML-003	Park vehicles on existing track.
24	ME-001	Reburials should be deep as soil is sandy and bare.
25	ME-002	Burials should be deep as soil is sandy and bare, keep reburials out of depressions to north and south.
26	GS-010	Avoid foot traffic on escarpment to north and the clay pan. Park vehicles on existing track to south.

12.0 Recommendations

An assessment of heritage in the proposed reburial locations and the impacts of the proposed reburials has been made and it is concluded that:

- The proposed works will not have any adverse impacts on the listed heritage values of the Willandra Lakes.
- While the proposed works will have some direct impacts on registered Aboriginal sites, the proposed works are exempt under Sections 87A and 87B of the NPW Act. Therefore, an Aboriginal heritage impact permit (AHIP) is not required for the proposed works.
- The proposed works will have a positive impact on the identified World, National, State and Local heritage significance of *Willandra Lakes* as it will enhance the social values of the place:
 - the reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the Aboriginal cultural heritage and social values by respecting the ancestors and continuing cultural protocols of caring for the dead
 - the reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the use and association of the Aboriginal community with the place
 - the proposed works will enhance Aboriginal cultural heritage values, through rehabilitation of the landscape.
- It is unlikely that previously unidentified archaeologically significant Aboriginal cultural heritage deposits will occur subsurface at the proposed reburial locations. Any direct harm will be partial and will result in no loss of overall value. Therefore, it is unlikely that the proposed reburials will have any adverse impact on the significant Aboriginal archaeological record of the WLRWHA.
- The proposed reburial of the Willandra Lakes Aboriginal Ancestors will not impact known areas of historical archaeological sensitivity and will have no long-term adverse impact on the *Willandra Lakes* historical archaeological values (including its research potential).

It is recommended that:

- the proposed reburials be carried out in accordance with the general and site specific mitigation measures outline in Sections 11.1 and 11.2
- site impact forms be completed for each AHIMS site following the proposed reburial and submitted to the AHIMS registrar.

13.0 References

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14.0 Appendix CONFIDENTIAL

The appendices show a high level of detail on the reburial locations. This information is considered culturally sensitive and confidential and it is not in the public interest, or in best interests of providing safety and security for the remains, to make this information widely available.

14.2 Property details for the proposed work locations (CONFIDENTIAL)

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
1	WOC-003	████████	1	40-5-0150	7305	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
2	WOC-001	████████	10	40-5-0001	1032	762247	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
3	MA-001	████████	1	N/A	7304	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
4	WOC-005, WOC-145	████████	2	40-5-0312	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
5	WOC-152	████████	4	N/A	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
6	LW-004	████████	2	N/A	1	1158414	Wentworth	WHL NHL	Mungo National	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
								LEP (Heritage Item and Conservation Area)	Park Estate	
7	LW-009		2	40-5-0311	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
8	WCW-006		1	40-4-0032	2	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Crown Lands (Western Lands Lease)	Top Hut Station
9	LP-001		1	40-5-0158	1029	762244	Balrandald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
10	GL-024		9	40-5-0313	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
11	GL-013		14	40-5-0314	6926	1029750	Wentworth	WHL NHL SHR	Mungo National	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
									Park Estate	
12	GL-020	██████	3	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
13	GL-001	██████	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
14	GL-005	██████	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
15	GL-002	██████	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
16	GL-026	██████	4	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
17	GL-028	██████	1	40-5-0315	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
18	GG-025	████████	1	40-5-0310	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
19	GG-018	████████	2	40-5-0079	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
20	GL-025	████████	3	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
21	GG-001	████████	1	40-5-0069	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
22	GG-016	████████	29	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
23	ML-003	████████	1	N/A	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
24	ME-001	████████	1	40-2-0004	4737	44270	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Mulurulu Station

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
25	ME-002	████████	1	N/A	369	761066	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Mulurulu Station
26	GS-010	████████	1	40-5-0309	4425	767320	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Gol Gol Station

*GDA 1994 MGA Zone 54

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Appendix 8: Willandra Lakes: Assessment of Impacts of reburial on Matters of Environmental Significance (MNES)

Willandra Lakes

Assessment of Impacts of Reburial on Matters of National Environmental Significance

Prepared for the Office of Environment and Heritage, NSW
Government

May 2019

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Executive summary

This report was commissioned as an independent specialist assessment of the impact of a proposed activity—the reburial of an ancestral human remains collection—on the Outstanding Universal Values (OUV) and National Heritage values of the Willandra Lakes Region (WLR).

Under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act), as both a World Heritage property and a National Heritage place, the WLR’s heritage values are considered matters of national environmental significance. Under the EPBC Act, an action that will have, or is likely to have, a significant impact on matters of national environmental significance will require approval from the Commonwealth Minister for the Environment and is considered a ‘controlled action’. This assessment will support a decision on whether or not to refer the proposed action of reburial to the Minister for approval and provide the basis for the preparation for any referral, should that be the decided course of action.

Heritage values of the Willandra Ancestral Remains

The Willandra Ancestral Remains comprise 105 individual sets of remains of ancestors of the three Traditional Owner groups for the WLR (known as the ‘Three Traditional Tribal Groups’ or ‘3TTG’). The excavation and archaeological analysis of the remains, which were removed from the WLR between 1968 and the early 1980s, resulted in internationally significant research findings. In particular, the Willandra Ancestral Remains included ‘Mungo Man’ and ‘Mungo Woman’, whose discovery and analysis provided evidence of *Homo sapiens sapiens* inhabiting the area since nearly 50,000 BP. These findings formed the basis for the recognition of the national and international cultural heritage significance of the site.

The Willandra Lakes was inscribed on the World Heritage List in 1981 (UNESCO 1981). At that time a Statement of Outstanding Universal Value (SoOUV) was not a requirement, and the decision of the World Heritage Committee to inscribe the property simply notes the World Heritage criteria on which the property was inscribed. No attributes are described, but the 1981 nomination document refers to the Willandra Ancestral Remains as a significant feature of the proposed World Heritage values. The introduction of the requirement for an SoOUV for each nominated World Heritage property in 2005 was also applied retrospectively for properties inscribed on the World Heritage List prior to 2005 to provide direction to management and protection through indicating what attributes of the property need to be maintained in order to sustain OUV. A Retrospective Statement of Outstanding Universal Value (RSoOUV) for Willandra Lakes, which was adopted in 2013, elaborates and describes the cultural values and attributes of the property under Criterion (iii) as being a record of:

- human development during the Pleistocene period and the way people interacted with their environment during this period;
- the dispersal of humans as far as Australia by 42,000 years ago;
- ritual burial of great antiquity; and
- the development of complex plant-food gathering systems dating before 18,000 years.

The Willandra Ancestral Remains removed from WLR between 1968 and the early 1980s are not referred to as attributes of the World Heritage values of the property in the RSoOUV. The RSoOUV consistently emphasises that the undisturbed stratigraphic units containing occupation deposits of various kinds of cultural material—stone tools, grindstones, middens and trackways—and in-situ burials as the primary attributes that hold each of the values listed above. The oldest ritual cremation site in the world is specifically described as an attribute without acknowledging that the ancestral remains were removed from the site.

Potential impacts on heritage values of the remains

In recent decades, the 3TTG have expressed their desire for the return of the Willandra Ancestral Remains to the WLR under their custodianship, and it is now proposed that the Willandra Ancestral Remains be reburied in twenty-nine locations within the WLR, as close as possible to the original grave locations. This reburial proposal is the action that is the subject of assessment in this report.

Recognising that the RSoOUV is the authoritative document describing the attributes that convey the OUV of the property, together with the *Significant Impact Guidelines* and the 2017 referral under EPBC Act, this assessment of impact on OUV and NHL values of WLR considers whether the reburial of the ancestral remains will have a significant impact in relation to:

- the attributes of the property, described in the RSoOUV;
- the damage/destruction of ancestral remains as evidence of the values for which the property was inscribed in 1981; and the loss of research opportunity.

In May 2007, in accordance with the *Environment and Heritage Legislation Amendment Act (No.1) 2003* (Cwlth), the WLR (along with Australia's other World Heritage properties) was added to the National Heritage List (NHL). For this assessment, the values and attributes identified in the 2013 RSoOUV have also been adopted as the National Heritage values and their attributes have been utilised for the purposes of assessing the impact of the proposed action.

This assessment analyses the impact the action of reburial would have on the OUV and National Heritage values of the WLR, including the potential loss of research value. This assessment does not consider any physical impacts to the OUV or National Heritage values, such as disturbance from digging holes for reburial or natural deterioration of the remains. In this report we have assumed that the reburial will be permanent and irreversible.

The assessment has been made in relation to relevant policies, including the rights of Indigenous peoples, upheld by the United Nations, UNESCO, the International Council on Monuments and Sites (ICOMOS) and the Australian Government. The assessment has also been made in line with the management context established by the endorsed plan of management for the property (DEST 1996) and, additional plans, the 3TTG plan of management (AASC 2004), the Mungo National Park plan of management (DEC 2006) and the draft WLRWHP plan of management (Context 2014).

We have not identified any previous assessments under the EPBC Act 1999 that would assist in determining whether the reburial of human remains will have a significant impact on matters

of national environmental significance. Comparison has been made with relevant international case studies of World Heritage properties in South Africa and the USA. In all three cases examined, reburial of ancestral remains at the request of descendent communities has not been considered an impact to the OUV of the property. These examples have also raised that, by reinstating ancestral values and continuing cultural protocols of caring for the dead, reburial could be argued to have a beneficial impact on the values of the properties. With reference to the NHL listing, this would be seen as enhancing the social/spiritual values recognised under NHL Criterion (g).

In summary, this assessment of significant impacts of reburial of the Willandra Ancestral Remains on the OUV and National Heritage values of WLR has considered the activity within the following five frames of reference:

- international and Australian policy relevant to Indigenous heritage protection and management;
- management objectives and strategies for WLR;
- comparative case studies of International and Australian World Heritage properties;
- the relationship of the Willandra Ancestral Remains to the OUV of the property; and
- *Matters of National Environmental Significance: Significant Impact Guidelines* (Commonwealth Government. 2013).

Conclusions

The assessment has determined that the proposed action of reburial of the Willandra Ancestral Remains in WLR will not be a significant impact on:

- a World Heritage property, including its:
 - historic heritage values, and
 - cultural heritage values including Indigenous heritage values; and
- a National Heritage place, including its:
 - historic heritage values, and
 - Indigenous heritage values.

It concludes that the proposed reburial of the Willandra Ancestral Remains will not result in one or more of the National Heritage or World Heritage values of the WLR being lost, degraded or damaged, or notably altered, modified, obscured or diminished.

The above being the case, it is concluded that:

- **the proposed action will not have significant impacts on matters of national environmental significance.**

Contents

1.	Introduction and approach	1
1.1	Aims and background	1
1.2	Approach to the assessment.....	3
1.3	Project consultation/meetings	4
2.	Contextual background and heritage values	5
2.1	Attributes of Outstanding Universal Value	5
2.2	National Heritage Values and attributes	8
2.3	Summary: Willandra Ancestral Remains and attributes of OUV and NHL values	10
3.	Policy and management context	12
3.1	Policy context.....	12
3.2	Management context	19
4.	Comparative case studies.....	22
4.1	Reburial of human remains in World Heritage properties	22
4.2	Reinstating/rehabilitating/restoring cultural values in Australian World Heritage properties and National Heritage places	26
5.	Impact assessment for proposed activity	28
5.1	Assessment framework under EPBC Act	28
5.2	Description of the action.....	28
5.3	Assessment of impact on OUV	29
5.4	Assessment against significant impact criteria for World Heritage properties ...	30
5.5	Assessment against significant impact criteria for National Heritage places.....	31
5.6	Outcomes of assessment against Significant Impact Criteria	33
6.	Assessment of significant impacts of the action	34
6.1	Conclusion on significant impacts to matters of national environmental significance and referral.....	35
7.	Bibliography.....	36
	Appendix A. Brief for services	41
	Appendix B. Willandra Lakes WHA Retrospective Statement of Outstanding Universal Value (2013).....	58
	Appendix C. Other descriptions of values and attributes	62
	Appendix D. National Heritage listing	66
	Appendix E. Willandra Lakes Region National Heritage List Summary Statement of Significance.....	67

Appendix F. Criteria used to justify the original Willandra Lakes World Heritage listing (1981).....	69
Appendix G. Significant impact criteria for Australian World Heritage properties with cultural heritage values	70
Appendix H. Significant impact criteria for National Heritage properties with Indigenous heritage values.....	72

List of tables

Table 1. Retrospective Statement of Outstanding Universal Value	7
Table 2. National Heritage List criteria.....	9
Table 3. Details of comparative World Heritage case studies	25
Table 4. Assessment against DoEE significant impact criteria for Australian World Heritage properties.....	30
Table 5. Assessment of impact of reburial on Indigenous heritage values under criterion (g).....	32

1. Introduction and approach

1.1 Aims and background

This report was commissioned as an independent specialist assessment of the impact of a proposed activity—the reburial of an ancestral human remains collection—on the Outstanding Universal Values (OUV) and National Heritage values of the Willandra Lakes Region World Heritage Area (WLR). This assessment will support a decision on whether or not to refer the proposed action of reburial to the Commonwealth Environment Minister for approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and provide the basis for the preparation for any referral, should that be the decided course of action.

The ancestral human remains collection comprises 105 individual sets of remains of ancestors of the three Traditional Owner groups for the WLR (known as the ‘Three Traditional Tribal Groups’ or ‘3TTG’): the Barkindji/Paakantji, Mutthi Mutthi and Ngyiampaa peoples. These remains (hereafter the ‘Willandra Ancestral Remains’) were removed from the WLR between 1968 and the early 1980s. The excavation and archaeological analysis of the Willandra Ancestral Remains resulted in internationally significant research findings. In particular, the Willandra Ancestral Remains included ‘Mungo Man’ and ‘Mungo Woman’, whose discovery and analysis provided evidence of *Homo sapiens sapiens* inhabiting the area since nearly 50,000 BP. These findings formed the basis for the recognition of the national and international cultural heritage significance of the site. Yet, in ensuing decades, the 3TTG have expressed their desire for the return of the Willandra Ancestral Remains to the WLR under their custodianship. These aspirations have been realised in stages, beginning with transfer of the Willandra Ancestral Remains from the Australian National University to a purpose-built interim repatriation storage facility at the National Museum of Australia in November 2015, followed by repatriation to the WLR in November 2017 where they now lie in secure storage.

At a meeting on 6 November 2018, the WLR Aboriginal Advisory Group (AAG), the community-elected peak body representing the 3TTG, passed the following motion:

In exercising our inalienable rights and as Traditional Owners the WLRWHA AAG ... unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years.

In line with this resolution, it is now proposed that the Willandra Ancestral Remains be reburied in twenty-nine locations within the WLR, as close as possible to the original grave locations. This reburial proposal is the action that is the subject of assessment in this report.

1.1.1 Scope of report and assumptions

In line with the ‘Brief for Services’ (Appendix A), this assessment analyses the impact the action of reburial would have on the OUV and National Heritage values of the WLR, such as the potential loss of research value. This assessment does not consider any physical impacts to the OUV or National Heritage values, such as disturbance from digging holes for reburial or natural

deterioration of the remains. In this report we have assumed that the OUV of the WLR is the same as the ‘world heritage values’ protected under the EPBC Act, and references to either should be understood in this context. We have further assumed that the reburial will be permanent and irreversible. Noting that the WLR is inscribed on the World Heritage List and included in the National Heritage List for mixed cultural and natural values, it should further be noted that this assessment only considers impacts to the cultural values recognised under cultural criteria. While we understand that this assessment will guide the development of a Review of Environmental Factors under the *Environmental Planning and Assessment Act 1979* (NSW), we have not considered the requirements of this or any other New South Wales legislation.

1.1.2 Legislative context—Commonwealth

Environment Protection and Biodiversity Conservation Act 1999 (Cwlth) (EPBC Act)

Under the EPBC Act, an action will require approval from the Commonwealth Environment Minister if the action has, will have, or is likely to have, a significant impact on matters of national environmental significance. If an approval is required, the action is considered a ‘controlled action’.¹ As an extant World Heritage property, the Willandra Lakes Region was included in the National Heritage List and taken to meet particular National Heritage criteria in 2007.² As both a World Heritage property and a National Heritage place, its heritage values are considered matters of national environmental significance.

Existing referral for repatriation (EPBC 2017/8040)

The repatriation of the Willandra Ancestral Remains from the National Museum of Australia to the WLR was referred to the Commonwealth Environment Minister under the EPBC Act. It was decided that the repatriation was not a controlled action ‘if undertaken in a particular manner’, and in this regard a range of measures was prescribed to ensure secure transit and safekeeping of the Willandra Ancestral Remains. The decision further specified that ‘reburial of the Willandra Ancestral Remains is not part of the action [the subject of that referral] and that it cannot be undertaken as part of this action’.

We understand that the referral was submitted, and it would seem assessed, on the basis that the Willandra Ancestral Remains were part of the matters of national environmental significance—that is, the ‘World Heritage values’ and National Heritage values—of the WLR. In Part 2, however, we revisit that assumption through a close analysis of both these values and their attributes.

¹ EPBC Act, Part 3 Division 1; Part 7 Divisions 1 & 2.

² In accordance with subitem 1A of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003 (Cwlth), the (then) Environment Minister, on 21 May 2007, signed a gazette to include the Willandra Lakes Region (as a World Heritage Property) in the National Heritage List, under which mechanism each of its so-called ‘World Heritage values’ was deemed to satisfy a National Heritage criterion.

1.1.3 Legislative context—international

Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) (‘World Heritage Convention’)

Pursuant to the World Heritage Convention, the WLR (as the ‘Willandra Lakes Region’) was included in the World Heritage List as a World Heritage Property in 1981 (UNESCO 1981). As a State Party to the Convention, Australia has a duty to ensure the conservation and protection of the World Heritage Area and to take appropriate measures necessary to do so.³ The primary Australian legislative vehicle for doing so is the EPBC Act, discussed above.

The Operational Guidelines for the implementation of the World Heritage Convention (Operational Guidelines) set out further provisions relevant to the governance of the World Heritage Convention.⁴ Of particular relevance in this case, they provide that partners in the protection and conservation of World Heritage properties can include Indigenous people (Paragraph 40), whose participation in the nomination process (including free, prior and informed consent) is deemed essential to enable shared responsibility (Paragraph 123).⁵

As noted at Part 1.1.1, we have assumed that the OUV of the WLR are the same as the ‘World Heritage values’ protected under the EPBC Act. Given that OUV is interpreted by reference to the World Heritage Convention, we have also taken the view that it is relevant to consider comparable case studies in respect of other World Heritage properties outside Australia (refer to Part 4.1).

1.2 Approach to the assessment

This assessment broadly follows the approach developed by the International Council on Monuments and Sites (ICOMOS), the Advisory Body to the World Heritage Committee for cultural properties, which has proposed that

World Heritage properties need to be seen as single entities that manifest OUV. Their OUV is reflected in a range of attributes, and in order to sustain OUV it is those attributes that need to be protected. Thus the HIA [Heritage Impact Assessment] process needs to consider the impact of any proposed project or change on those attributes, both individually and collectively, rather than on a standard range of receptors (ICOMOS 2011, 1).

It therefore considers that impacts to values are to be assessed through impacts to the attributes of those values. The first step therefore is to identify the attributes of OUV and/or the National Heritage values of WLR and determine whether the Willandra Ancestral Remains, removed from the property prior to its inscription on the WHL, can be considered as attributes. To do so, in Part 2 we consider the documented OUV and National Heritage values and attributes of those values.

³ Refer to Articles 4 and 5(d) of the World Heritage Convention.

⁴ As updated from time to time. Unless stated otherwise, this document refers to the 2017, and most recent, iteration.

⁵ Refer paragraphs 40 and 123 of the Operational Guidelines.

This assessment is guided by a range of domestic and international policies related to the rights to self-determination of Indigenous peoples in respect of their culture, including repatriation of human remains, as well as the heritage management policies for the WLR.

The policy and management context and its relevance to the assessment is set out in Part 3.

In Part 4 we consider World Heritage and National Heritage case studies that may inform this assessment, including specific cases of reburial of human remains in World Heritage properties.

In Part 5 we then describe, analyse and evaluate the impact of the proposed action, drawing on the guidelines for assessing impact for EPBC referrals, and we include consideration of possible beneficial impacts to values. Several lines of evidence are sought to bear on the nature of impact, including consideration of how reburial is an impact, and the relative level of impact in relation to the values.

Finally, in Part 6 the outcome of the assessment detailed in Part 5 is discussed in relation to the values, attributes, policy context and case studies discussed in Parts 2, 3, and 4.

1.3 Project consultation/meetings

The preparation of this report was informed by teleconference meetings with Harvey Johnston and other officers of the New South Wales Office of Environment and Heritage on 20 February, 26 March and 13 May 2019.

2. Contextual background and heritage values

2.1 Attributes of Outstanding Universal Value

Attributes are said to express, convey or hold the OUV of World Heritage properties.

Attributes include the physical elements of the property, and may include the relationships between physical elements, essence, meaning, and at times related processes, that need to be protected and managed in order to sustain OUV. (ICOMOS 2010, 6)

An assessment of the potential impacts of an action on the OUV of a property is an assessment of the potential impacts of the action on the attributes of OUV.

In this assessment, the potential impact of the reburial of the ancestral remains on the OUV of WLR needs to be considered in relation to potential impacts to all attributes that convey OUV. Determining what those attributes are and, in particular, whether the ancestral remains themselves are an attribute of OUV, is critical to understanding whether the action of reburial is likely to have a significant impact on the OUV and National Heritage values of the property.

In 1981, the World Heritage Committee's decision to inscribe WLR on the World Heritage List simply noted that WLR was to be included on the World Heritage List under Criterion (iii)—that is, 'be unique, extremely rare, or of great antiquity' (UNESCO 1977). The OUV of the property as agreed by the Committee was not detailed and no attributes were identified. In line with the practice of the day, the cultural values put forward in the 1981 nomination for WLR were evaluated by ICOMOS and accepted as OUV. These statements of cultural values are provided in full in Appendix C. The recognised cultural values focus on the burials in the Mungo lunette that provide evidence of *Homo sapiens* in south eastern Australia before 30,000 years ago and specifically the evidence for ritual burial practices provided by the 26,000-year-old cremation of Mungo Woman and the 30,000-year-old ochre burial of Mungo Man. In 1981, the skeletal remains provided the earliest evidence of *Homo sapiens* anywhere in the world. The values also refer to the hearths, cultural deposits and artefacts indicative of the Pleistocene use of plant foods and freshwater resources. WLR is also identified as highly significant for future research documenting the culture of early *Homo sapiens* due to the types of sites and extensive stratigraphic deposits that constitute a permanent resource (1981, 3).

The ICOMOS evaluation of the 1981 nomination supported these values, noting the world-wide importance of WLR 'owing to the abundance of the vestiges of very early human occupation which have been identified there' (Appendix C).

Since the inscription of WLR in 1981, evolving approaches to the concept of OUV, protection and conservation have resulted in changes to the Operational Guidelines, notably in requirements for increasingly rigorous and detailed description of WH properties, their OUV and the attributes of OUV. As a result, the OUV and attributes of the WHR described in the 1981 nomination document have been substantially elaborated in various statements of significance, also included in Appendix C.

Sustaining the Willandra: The Willandra Lakes Region World Heritage Property Plan of Management (DEST 1996), which remains in effect, emphasises the cultural values of the region as a remarkable documentation of early Aboriginal society's culture and adaptation to environmental change, providing rare insights into human interaction with the landscape of lakes, lunettes and sand dunes over at least 40,000 years, evidenced in the archaeological record. The values listed in the plan refer to Mungo Lady as providing the earliest known record of cremation, and human remains as providing outstanding information on the physical features of Australia's populations of the Pleistocene period.

The World Heritage values of WLR were further elaborated in 2010 by the NSW Government in a discussion paper to support development of a World Heritage State Environmental Planning Policy. The World Heritage values and attributes listed in the discussion paper describe the sediments, archaeological and palaeontological evidence that demonstrate how WLR provides an 'exceptional sequence of Aboriginal cultural occupation extending over tens of thousands of years, including an outstanding record of human responses to major changes over time in climate and environments'. Burial sites of global significance are noted, but ancestral remains are only indirectly referred to as evidence of ritual burials that demonstrate the antiquity of particular burial practices and the development of religious beliefs and systems over time.

In 2005, Statements of OUV (SoOUV) were introduced as a requirement for inscription of properties on the World Heritage List, to provide a clear statement of why the property is of OUV, how it satisfies the relevant criteria, the conditions of integrity and authenticity, and how it meets the requirements for protection and management. A key aim of the SoOUV was to give direction to the management of the property through indicating what attributes of the property need to be maintained in order to sustain OUV (ICOMOS 2010:4). Attributes that are key or important to conveying OUV are referenced or described in the SoOUV (ICOMOS 2010, 6).

The requirement for World Heritage properties to have a SoOUV was applied retrospectively. All properties inscribed prior to 2005 were required to have a Retrospective Statement of OUV (RSoOUV).

The RSoOUV for WLR, developed by Australia and adopted by the World Heritage Committee in 2013 provides a detailed description of OUV and the attributes that convey OUV under current Criterion (iii) 'to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared'. A summary is provided in Table 1.

Table 1. Retrospective Statement of Outstanding Universal Value

Description of values	Associated attributes
Criterion (iii) 'bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared' (UNESCO 2013 Paragraph 77)	
<p>Remarkable evidence of the way early people interacted with their environment</p> <p>Outstanding evidence for the economic life of <i>Homo sapiens sapiens</i></p> <p>Shows a remarkable adaptation to local resources and a fascinating interaction between human culture and the changing natural environment.</p>	<p>The undisturbed stratigraphy contains evidence including:</p> <ul style="list-style-type: none"> ▪ Occupation deposits dating to 42,000 years ago ▪ Archaeological remains such as hearths, stone tools and shell middens ▪ Pigments transported to the lakeshores before 42,000 years BP ▪ Fossil trackways dated to between 19,000 years BP and 23,000 years BP ▪ Evidence for the early use of grindstone technology ▪ Evidence for the exploitation of fresh water resources
<p>Exceptional testimony to human development during the Pleistocene period</p> <p>Willandra Lakes provides excellent conditions to document life in the Pleistocene epoch, the period when humans evolved into their present form.</p>	<p>Evidence of <i>Homo sapiens sapiens</i> in this area from nearly 50,000 years BP</p> <p>Oldest ritual cremation site in the world, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources</p>
<p>Some of the earliest evidence of <i>Homo sapiens sapiens</i> outside Africa.</p> <p>Evidence establishing humans had dispersed as far as Australia by 42,000 years ago.</p>	<p>The undisturbed stratigraphy that contains evidence of <i>Homo sapiens sapiens</i> in this area from nearly 50,000 years BP,</p> <p>Occupation deposits dating to 42,000 years ago</p>
<p>Sites also illustrate human burials that are of great antiquity,</p>	<p>The oldest ritual cremation site in the world dating to around 40,000 years BP</p>
<p>Traces of complex plant-food gathering systems that date back before 18,000 years BP at much the same time as their use in the Middle East</p>	<p>Grindstones used to produce flour from wild grass seeds</p>
<p>Evidence has allowed the typology of early Australian stone tools to be defined</p>	<p>Stone artefacts</p>

The RSoOUV for the WLR emphasises the undisturbed stratigraphy of the property—the landscape—and the cultural deposits within the undisturbed stratigraphy the include various kinds of cultural material—stone tools, grindstones, middens and trackways—and burial sites as the attributes that hold each of the values listed above, and states that:

Much of the scientific and cultural significance of the property is related to the values embedded in or associated with the lunettes.

The Willandra Ancestral Remains removed from WLR between 1968 and the early 1980s are not specifically referred to as attributes in the RSoOUV. The evidence that their excavation and analysis has provided in justification of the OUV of the property is indirectly referenced:

The undisturbed stratigraphy has revealed evidence of *Homo sapiens sapiens* in this area from nearly 50,000 years BP.

Notably, the oldest ritual cremation site in the world is specifically described as an attribute without acknowledging the remains of Mungo Woman:

Sites also illustrate human burials that are of great antiquity, such as a cremation dating to around 40,000 years BP, the oldest ritual cremation site in the world.

2.2 National Heritage Values and attributes

In May 2007, in accordance with the *Environment and Heritage Legislation Amendment Act (No.1) 2003*, the Willandra Lakes Region (along with Australia's other World Heritage properties) was added on the National Heritage List (NHL) on the basis of the World Heritage values of the place. By virtue of sub-item 1A of Schedule 3 of that Act, the National Heritage criteria for the WLR were deemed as (a), (b), (c) and (g), on the basis of the World Heritage cultural criterion (iii) under which it was inscribed on the World Heritage List.⁶

2.2.1 National Heritage Criteria

The criteria under which the Willandra Lakes Region is listed on the National Heritage List are as follows:

- (a) the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history
- (b) the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history
- (c) the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history
- (g) the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons

In 2007, at the time of inclusion in the NHL, no specific attributes of the National Heritage values were identified for the Willandra Lakes Region against any of the NHL criteria and the RSoOUV for the property had not been developed.

⁶ Criteria (a) and (c) were also deemed on the basis of World Heritage natural criterion (viii) under which it was also inscribed.

In this project, the values and attributes identified in the 2013 Retrospective Statement of OUV have been adopted as the National Heritage values and their attributes for the purposes of assessing impact of the proposed action, as set out below.

Table 2. National Heritage List criteria

Criterion	Associated (cultural) attributes
a. the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.	<p>The undisturbed stratigraphy contains evidence including:</p> <ul style="list-style-type: none"> Occupation deposits dating to 42,000 years ago Archaeological remains such as hearths, stone tools and shell middens Fossil trackways dated to between 19,000 years BP and 23,000 years BP Evidence for the early use of grindstone technology Evidence for the exploitation of fresh water resources Pigments transported to the lakeshores before 42,000 years BP
b. the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.	<ul style="list-style-type: none"> Evidence of <i>Homo sapiens sapiens</i> in this area from nearly 50,000 years BP Earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources The oldest ritual cremation site in the world dating to around 40,000 years BP
c. the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history. (Refer note below)	<ul style="list-style-type: none"> The undisturbed stratigraphy that contains evidence of <i>Homo sapiens sapiens</i> in this area from nearly 50,000 years BP, Occupation deposits dating to 42,000 years ago
d. the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. (Refer note below)	

Note regarding criteria (c) and (g): Although the World Heritage values were the legal basis for inclusion on the NHL and the Minister's gazettal notice deems the World Heritage criteria to correspond with the NHL criteria above, there are no World Heritage values described in the RSoOUV that specifically correspond with either criterion. Nevertheless, we have included attributes against these criteria using our best professional judgment, noting that:

- the potential of the property to yield information that will contribute to an understanding of Australia's cultural history that is recognised under criterion (c)—commonly referred to as 'research value'— is interpreted consistently with our view that such value refers to attributes (or potential attributes) existing in the property at the time of its inscription and development of the

RSoOUV. In this regard, it is noted that the attributes for criterion (c) refer primarily to the undisturbed stratigraphy.

- the strong and special association of the property with the 3TTG—Barkindji/Paakantji, Mutthi Mutthi and Ngyiampaa peoples—that is recognised under NHL Criterion (g) is further discussed in Part 3 in relation to policy and management principles that are relevant to the assessment, and the possibility of beneficial impacts in Part 4.2 below.

2.3 Summary: Willandra Ancestral Remains and attributes of OUV and NHL values

The 1981 nomination and the RSoOUV both emphasise that the undisturbed stratigraphy of the landscape, and cultural deposits, including burials, hearths and artefacts, that are contained within that stratigraphy, are the key attributes of OUV for the WLR. It is the place itself that is inscribed on the World Heritage List.

Although Retrospective Statements of OUV are to reflect the OUV of the property at the time of inscription, the RSoOUV for the WLR differs significantly from the 1981 nomination in relation to ancestral remains. In the 1981 nomination ancestral remains are described as evidence of the World Heritage values of the WLR, whereas the RSoOUV does not directly refer to the ancestral remains but only to the cremation site and the property containing evidence of *Homo sapiens sapiens* in this area from nearly 50,000 years BP.

The RSoOUV is intended as a guiding document giving direction to management and protection through indicating what attributes of the property need to be maintained in order to sustain OUV. For the World Heritage Committee and ICOMOS the RSoOUV is the essential reference point for monitoring, including Periodic Reporting and potential reactive monitoring, boundary modifications, changes to the name of a property, and possible inclusion on the List of World Heritage in Danger (ICOMOS 2010, 4).

The absence of direct reference in the RSoOUV to the 105 individual sets of ancestral remains including Mungo Man and Mungo Woman that were removed from WLR between 1968 and the early 1980s strongly suggests that the skeletal remains may not be considered as attributes of OUV, and certainly not as important attributes. The reburial of the ancestral remains would therefore not impact the OUV of the property and not be significant impact to a matter of national environmental significance.

However, in 2017, the repatriation of the Willandra Ancestral Remains from the National Museum of Australia, Canberra, to Mungo National Park warranted an impact assessment and referral under the EPBC Act (EPBC 2017/8040) because the ancestral remains were considered to be part of the World Heritage values and National Heritage values of the WLR.

The *Matters of National Environmental Significance: Significant Impact Guidelines* notes that an action may have a significant impact on 'a part, element, or feature of a World Heritage property, which embodies, manifests, shows, or contributes to the values of that property' (Commonwealth Government 2013, 18). In this sense, the ancestral remains may be considered as an element of the Willandra Lakes Region that shows or contributes to the values of the property although not necessarily an attribute of OUV.

Recognising that the RSoOUV is the authoritative guiding document describing the important attributes that convey or hold the OUV of the property, and considering this together with the guidance provided by the *Significant Impact Guidelines*, this assessment considers whether the reburial of the ancestral remains will have a significant impact in relation to:

- the attributes described in the RSoOUV;
- the damage/destruction of ancestral remains as evidence of or contributory to the values for which the property was inscribed in 1981; and
- the loss of research opportunity (as recognised in National Heritage criterion (c)).

The relationship of collections of cultural material removed from World Heritage properties to the OUV of the property and National Heritage values is considered further in Part 5 below.

3. Policy and management context

3.1 Policy context

Further to our summary above of the relevant Commonwealth and international legal context under which the reburial of the Willandra Ancestral Remains would be considered (in Parts 1.1.2 and 1.1.3), we set out below the domestic and international policies that bear on this assessment. These policies include United Nations (UN) and United Nations Educational, Scientific and Cultural Organization (UNESCO) declarations and policies on the rights of Indigenous peoples generally, and in relation to their cultural heritage; UNESCO World Heritage policies; non- intergovernmental international heritage policies and charters; and an Australian government policy specifically on Indigenous repatriation. This breadth of declarations, charters and policies inform the assessment owing to its significance at both national and international level. We assume that the Australian Government would interpret concepts such as 'significant impact' consistent with domestic and international policies that it has developed or adopted.

3.1.1 Australian Government

*Australian Government Policy on Indigenous Repatriation (2011)*⁷

The Australian Government Policy on Indigenous Repatriation was published in 2011, with the overarching objective of addressing past injustice relating to the removal of ancestral remains and sacred objects. The policy recognises that:

Communities of origin are the rightful custodians of their ancestral remains, and should be consulted prior to any return. They should determine when and how repatriation should be undertaken. Accordingly, except where otherwise determined by the local community, the Australia Government will seek the unconditional return of ancestral remains and associated notes and data. (2011, 5)

This policy further states that the Australian Government recognises as a cultural protocol that 'Aboriginal and Torres Strait Islander peoples have a responsibility to their ancestors to bring them back to country according to the Traditional Owners' customs and laws' and that 'ancestral remains should be treated with respect and dignity at all times by all involved' (2011, 5).

3.1.2 International

3.1.2.1 United Nations

*UN Declaration on the rights of Indigenous peoples (UNDRIP)*⁸

Adopted by the UN General Assembly in 2007, UNDRIP confirms the application of existing human rights instruments to Indigenous peoples, including freedom from discrimination, the

⁷ <https://www.arts.gov.au/sites/g/files/net1761/f/australian-government-policy-on-Indigenous-repatriation-august2011.pdf>.

⁸ https://www.un.org/development/desa/Indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf.

right to self-determination and to pursue their cultural development. UNDRIP emerged from the work of the Working Group on Indigenous Populations established under the UN Economic and Social Council, that developed a draft declaration which finally was adopted by the Human Rights Council and UN General Assembly. As a declaration, rather than a multilateral treaty (i.e. a 'convention'), UNDRIP is legally non-binding. The Australian Government initially voted against UNDRIP, but subsequently endorsed the Declaration in 2009.

The following are particular articles relevant to cultural self-determination:

Article 3: Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.

Article 4: Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions.

Article 5: Indigenous peoples have the right to maintain and strengthen their distinct political, legal, economic, social and cultural institutions, while retaining their right to participate fully, if they so choose, in the political, economic, social and cultural life of the State.

Article 8: (1) Indigenous peoples and individuals have the right not to be subjected to forced assimilation or destruction of their culture. (2) States shall provide effective mechanisms for prevention of, and redress for: (a) Any action which has the aim or effect of depriving them of their integrity as distinct peoples, or of their cultural values or ethnic identities; (b) Any action which has the aim or effect of dispossessing them of their lands, territories or resources; ...

Article 9: Indigenous peoples and individuals have the right to belong to an Indigenous community or nation, in accordance with the traditions and customs of the community or nation concerned. No discrimination of any kind may arise from the exercise of such a right.

Article 10: Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the Indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.

Article 11: 1. Indigenous peoples have the right to practise and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.

Article 11.2. States shall provide redress through effective mechanisms, which may include restitution, developed in conjunction with Indigenous peoples, with respect to their cultural, intellectual, religious and spiritual property taken without their free, prior and informed consent or in violation of their laws, traditions and customs.

Article 12 1. Indigenous peoples have the right to manifest, practise, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains. 2. States shall seek to enable the access and/or repatriation of ceremonial objects and human remains in their

possession through fair, transparent and effective mechanisms developed in conjunction with Indigenous peoples concerned.

Article 31.1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

Article 32.2. In conjunction with Indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights.

UN General Assembly (Human Rights Council) Expert Mechanism advice No.8 (2015) 'Promotion and protection of the rights of Indigenous peoples with respect to their cultural heritage Study by the Expert Mechanism on the Rights of Indigenous Peoples'⁹

This report was prepared by the Expert Mechanism on the Rights of Indigenous Peoples on request by a UN Human Rights Council resolution. The report refers to the 2011 submission from the Australian Government which noted that Australia had adopted a policy on Indigenous repatriation that facilitates the return of Aboriginal and Torres Strait Islanders' ancestral remains from overseas institutions to their communities of origin. By 2011, this programme has facilitated the return of over 1,400 ancestral remains and over 1,400 sacred objects from within Australian collections and brought home more than 1,200 ancestral remains to Australia from overseas (2015, 18).

The report includes the following excerpts from its advice for states on the cultural heritage of Indigenous peoples.

Para 19. States should take effective measures to assess, redress and remedy the effects of past injustices and violations of the rights of Indigenous peoples by ensuring the restitution and repatriation of their cultural heritage.

Para 71. The repatriation of the cultural heritage of Indigenous peoples is an important aspect of such restitution. The ancient burial grounds of many Indigenous communities have been disrespected and the communities concerned have asked for the repatriation of human remains and sacred and cultural objects, whether held in private or public collections. The General Assembly affirmed and recognized the importance of repatriating Indigenous peoples' ceremonial objects and human remains.

3.1.2.2 UNESCO

UNESCO policy on engaging with Indigenous peoples (2018)¹⁰

UNESCO Policy on Engaging with Indigenous Peoples, supported by the UNESCO General Assembly in 2017, guides the organisation's work in all areas of its mandate, including the work

⁹ <https://undocs.org/A/HRC/30/53>.

¹⁰ https://unesdoc.unesco.org/ark:/48223/pf0000262748_eng.

of the World Heritage Committee, that involves or is relevant for Indigenous peoples and of potential benefit or risk to them. It ensures that all UNESCO's policies, planning, programming and implementation uphold the UNDRIP (see 3.1.2.1 above).

The policy contains the following paragraphs that are relevant to Indigenous peoples and/or repatriation:

Para 12. 'Cultural heritage, knowledge, traditional cultural expressions and languages' is especially relevant to the repatriation of human remains, stating, in accordance with Article 31 of UNDRIP that Indigenous peoples also have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures.

Para 72. For UNESCO, and in line with the UNDRIP and general provisions of this Policy, Indigenous peoples must therefore be considered as stakeholders and rights-holders in social, human and cultural development

Para 77. [Sets out the following provisions to guide UNESCO's work in the field of culture in accordance with UNDRIP]:

(k) Indigenous peoples should play a significant role in determining what constitutes threats to their cultural (tangible and intangible) and natural heritage and in deciding how to prevent and mitigate such threats.

...

(m) Customary restrictions on access to their heritage sites and the related Indigenous peoples' right to maintain, protect, and have access in privacy to their religious and cultural sites, should be fully respected even where these may limit broader public access.

(n) Many natural and cultural heritage sites constitute home to or are located within land managed by Indigenous peoples, whose land use, knowledge and cultural and spiritual values and practices may depend on, shape or constitute part of the heritage. In such places, Indigenous peoples have the right to their traditional lands, territories and resources, and are partners in site conservation and protection activities that recognize traditional management systems as part of new management approaches.

...

(p) Policies, interventions and practices of conservation and management in and around cultural and natural heritage sites should recognise, respect, and take into account the spiritual and cultural values, the interconnections between biological and cultural diversity as well as cultural and environmental knowledge of Indigenous peoples.

...

(r) Indigenous peoples have the right to repatriation of their human remains and States should seek to enable access and/ or repatriation of ceremonial objects and human remains in states' possession through fair, transparent and effective mechanisms developed in conjunction with the Indigenous peoples concerned.

3.1.2.3 UNESCO World Heritage Committee

Policy on the integration of a sustainable development perspective into the processes of the World Heritage Convention (World Heritage and sustainable development policy) (2015)¹¹

The General Assembly of States Parties to the World Heritage Convention adopted this policy in 2015 to incorporate a sustainable development perspective into the implementation of the convention.

Relevantly, the policy includes the following paragraphs related to the rights and interests of Indigenous peoples:

Para 17. The World Heritage Convention in Article 5 calls upon States Parties to “adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community”. States Parties should recognise that inclusive social development is at the heart of the implementation of this provision of the Convention. States Parties should further recognise that full inclusion, respect and equity of all stakeholders, including local and concerned communities and Indigenous peoples, together with a commitment to gender equality, are a fundamental premise for inclusive social development ...

Para 21. The World Heritage Convention includes, as one of its strategic objectives (the fifth 'C') ‘to enhance the role of communities in (its) implementation’ (Decision 31 COM 13B). The World Heritage Committee specifically encourages the effective and equitable involvement and participation of Indigenous peoples and local communities in decision-making, monitoring and evaluation of World Heritage properties and the respect of Indigenous peoples’ rights in nominating, managing and reporting on World Heritage properties in their own territories (Decision 35 COM 12E). Recognising rights and fully involving Indigenous peoples and local communities, in line with international standards is at the heart of sustainable development.

Para 22. To fulfil this strategic objective of the Convention and ensure policy coherence for sustainable development, States Parties should:

- i. Develop relevant standards, guidance and operational mechanisms for Indigenous peoples and local community involvement in World Heritage processes;
- ii. Ensure adequate consultations, the free, prior and informed consent and equitable and effective participation of Indigenous peoples where World Heritage nomination, management and policy measures affect their territories, lands, resources and ways of life¹⁴;
- iii. Actively promote Indigenous and local initiatives to develop equitable governance arrangements, collaborative management systems and, when appropriate, redress mechanisms;
- iv. Support appropriate activities contributing to the building of a sense of shared responsibility for heritage among Indigenous people and local communities, by recognising both universal and local values within management systems for World Heritage properties.

¹¹ <https://whc.unesco.org/document/139747>.

3.1.2.4 International Council on Monuments and Sites (ICOMOS)

The International Council on Monuments and Sites is an international cultural heritage professional organisation and the official cultural Advisory Body under the World Heritage Convention.

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (2013 [1979])¹²

First introduced in 1979, and most recently revised in 2013, the Australia ICOMOS Burra Charter guides Australian heritage practice and has been internationally influential. It is routinely consulted by the Commonwealth and state and territory governments when evaluating or managing impacts to heritage places.

The following articles are relevant:

Article 10. Contents, fixtures and objects which contribute to the cultural significance of a place should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and preservation; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate. [This article includes the following note: For example, the repatriation (returning) of an object or element to a place may be important to Indigenous cultures, and may be essential to the retention of its cultural significance.]

Article 24.2 Significant meanings, including spiritual values, of a place should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.

Article 33. Significant fabric which has been removed from a place including contents, fixtures and objects, should be catalogued, and protected in accordance with its cultural significance. Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place.

Nara Document on Authenticity (1994)¹³

The Nara document emerged from an expert meeting on the requirement under the World Heritage Operational Guidelines that a property meet the requirement of authenticity in order to be considered to express (or retain) OUV, noting the expansion of the Convention to diverse cultural contexts.

The Nara document contains the following principle regarding values and authenticity:

Para 11. All judgements about values attributed to cultural properties ... may differ from culture to culture, and even within the same culture. It is thus not possible to base judgements of values and authenticity within fixed criteria. On the contrary, the respect due to all cultures requires

¹² <https://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>.

¹³ <https://www.icomos.org/charters/nara-e.pdf>.

that heritage properties must be considered and judged within the cultural contexts to which they belong.

ICAHM Charter for the Protection and Management of the Archaeological Heritage (1990)¹⁴

The ICOMOS International Scientific Committee on Archaeological Heritage Management (ICAHM) Charter for the Protection and Management of the Archaeological Heritage was agreed by the ICOMOS General Assembly in 1990.

It contains the following article regarding the objective of archaeological heritage management:

Article 6. The overall objective of archaeological heritage management should be the preservation of monuments and sites in situ, including proper long-term conservation and curation of all related records and collections etc. Any transfer of elements of the heritage to new locations represents a violation of the principle of preserving the heritage in its original context.

3.1.3 Key policy considerations for the assessment

Having considered the above declarations, charters and policies, we have identified the following key considerations for the assessment.

3.1.3.1 Indigenous heritage policies (including repatriation)

The National Heritage Values of Willandra Lakes Region recognise the special association with the three Traditional Tribal Groups of the region, the Barkindji/Paakantji, Mutthi Mutthi and Ngyiampaa peoples, under Criterion (g) ‘the place has outstanding heritage value to the nation because of the place’s strong or special association with a particular community or cultural group for social, cultural or spiritual reasons’. Within the United Nations, Indigenous peoples are considered a special group by virtue of them being inheritors of unique cultures and ways of relating to people and the environment. As noted by the United Nations Indigenous People’s Permanent Forum, ‘the international community now recognises that special measures are required to protect the rights [of Indigenous peoples] and maintain their distinct cultures and way of life.’¹⁵ In particular, there is recognition that Indigenous peoples have retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live.

The United Nations developed and adopted the *UN Declaration on the rights of Indigenous Peoples* (2007) to acknowledge special recognition of Indigenous peoples, which has been accompanied by a framework of policies that recognise these rights within the specific mandates of many of the UN agencies. UNESCO is the UN organisation chiefly responsible for culture, including administering the World Heritage Convention, and the UNESCO policies in relation to the rights of Indigenous peoples are most relevant to this assessment.

¹⁴ <http://wp.ica hm.icosos.org/wp-content/uploads/2017/01/1990-Lausanne-Charter-for-Protection-and-Management-of-Archaeological-Heritage.pdf>.

¹⁵ <https://www.un.org/development/desa/Indigenouspeoples/about-us.html>.

Commonwealth and international policies are clear in relation to the rights of Indigenous peoples to have control over their cultural heritage. They provide that ultimately decisions about Indigenous heritage should be made by Indigenous peoples. Many of these policy documents, including the *Australian Government Policy on Indigenous Repatriation* (2011), specifically support the repatriation of human remains to the community from which these remains were removed. These policy documents recognise that human remains have a particular sensitivity and significance for Indigenous peoples.

3.1.3.2 General heritage policies

The heritage policies considered above, including the World Heritage and sustainable development policy and ICOMOS (both Australia and international) policies, increasingly acknowledge the right of self-determination of Indigenous peoples in the management and decision-making in relation to their cultural heritage. This is explicit in the World Heritage and sustainable development policy, and implicit in ICOMOS policies which recognise that repatriation contributes to the cultural significance of a place and that significant fabric removed from a place should be kept at a place. Further, the Nara document proposes that judgments about the value of a place (including, by extension, judgments about how those values manifest in attributes and impacts to those values) should occur in the cultural context to which a place belongs.

3.1.3.3 Summary of implications

The reburial of ancestral remains repatriated to descendent communities is not specifically referred to in the above policy documents. But when considered in light of the sections of relevant policies discussed above, the right to rebury ancestral remains is consistent with the rights of Indigenous peoples to control and to make decisions in relation to their cultural heritage, the return of significant fabric to a place and the need to make judgements about values in the cultural context to which a place belongs.

The rights of 3TTG of WHRWHA to rebury the Willandra Ancestral Remains within the World Heritage Area are therefore consistent with international and national policy on the rights of Indigenous peoples and the protection and management of their heritage.

3.2 Management context

In line with good heritage practice, the guidance provided in relation to the self-assessment for an EPBC referral indicates that proponents should consult the management plan(s) for the place to ensure the proposal is consistent with the relevant management recommendations and/or conservation policies.¹⁶ In addition, we have considered the Australian World Heritage management principles, as set out in the EPBC Regulations.¹⁷

Principles 1.01 and 2.02(c) acknowledge that rehabilitation of the World Heritage Values of the property may be appropriate.

¹⁶ <http://www.environment.gov.au/heritage/management/referrals/preparing>.

¹⁷ http://www8.austlii.edu.au/cgi-bin/viewdoc/au/legis/cth/consol_reg/epabcr2000697/sch5.html.

3.2.1 Is reburial consistent with management policies and recommendations?

Since it became a World Heritage site, the following three plans of management have been prepared for the Willandra Lakes:

- *Sustaining the Willandra: The Willandra Lakes Region World Heritage Property Plan of Management* (DEST 1996);
- *Our Past, Our Future: The Willandra. Willandra Lakes Region World Heritage Area Three Traditional Tribal groups (Mutthi Mutthi; Ngyiampaa; Paarkinji) Plan of Management, Employment Strategy and Keeping Place Education and Research Centre Feasibility Study* (Australian Archaeological Survey Consultants Pty Ltd 2004); and
- 'Willandra Lakes World Heritage Area Plan of Management' (Context Pty Ltd 2014) (Draft only—not adopted).

In addition, the Mungo National Park plan of management was prepared in 2006 (DEC).

It is helpful to briefly summarise the context in which each of these documents was produced, their relationship and current status. The 1996 plan of management (DEST 1996)—which remains in effect—was produced jointly by the NSW and Commonwealth governments primarily to satisfy Australia's obligations under the World Heritage Convention in respect of the status of Willandra Lakes as a World Heritage property. It nevertheless recognises that the place also has local, state and national significance. The 2004 management plan, which specifically focuses on the involvement of the 3TTG, was produced to complement the 1996 plan of management rather than to supersede it. The 2006 management plan concerns the Mungo National Park, which is partly within but does not represent the entirety of the WLWHA, and has a natural heritage and environmental protection emphasis. Finally, the 2014 draft management plan—the only one produced subsequent to the site's inclusion on the National Heritage List and production of the RSoOUV—while comprehensive, has not been adopted as final and we understand that this document is not proposed to be finalised in its current form (Pers. comm, Harvey Johnston, 13 May 2019).

3.2.1.1 Conservation policies

1996 plan of management

The 1996 plan of management (DEST 1996), which remains in effect, contains the following relevant conservation policies:

Strategy 33.1: Locate and manage all Aboriginal Human Remains and other archaeological material to the satisfaction of the three Traditional Tribal Groups.

Strategy 28.1: Recognise Aboriginal cultural custodianship to ensure the three Traditional Tribal Groups have control over their cultural issues.

Operational plan issue 33.1.2: (under 'Aboriginal Rights and Responsibilities') Aboriginal human remains and other archaeological and cultural material were taken away without the permission of the three Traditional Tribal Groups. The three Traditional Tribal Groups 1998 ban

on research or collection of any Aboriginal burials will continue until material is returned (1996, C46)

3TTG plan of management

The 3TTG plan of management (AASC 2004) contains the following relevant conservation policies:

Strategic plan issue 32: Locate and manage all Aboriginal human remains and other archaeological material to the satisfaction of the 3TTG. Facilitate the return of all human remains, especially when a Keeping Place is established. (AASC 2004, 14)

Draft WLRWHP plan of management

The draft WLRWHP plan of management (Context 2014) contains the following relevant conservation policies:

Recovering significance through repatriation. Requirement (c) of the Australian World Heritage Management Principles provides for, if appropriate, the rehabilitation of the values of a place. Key to protecting the values of WLRWHA will be the rehabilitation/recovery of association between place and elements that have been removed from the place; including ancestral remains such as Mungo Man, as well as evidence of significant research. (Context 2014, 28)

3.2.1.2 Management recommendations

3TTG plan of management

All 3TTG agree that all cultural material should be returned to country, some wanted items returned to their original sites, others wanted a keeping place established to house the material. (AASC 2004, 28)

Draft WLRWHP plan of management

Aboriginal people associated the WLRWHA feel a strong sense of loss associated with removal of Mungo Man and other ancestral remains. Strategy 18 specifically identifies the repatriation of Mungo Man and other ancestral remains to WLR (18.2) and the identification of a permanent culturally appropriate resting place for Mungo Man and other ancestral remains (18.3) as a very powerful conservation action associated with the concepts of restoration and recovery of significance that is strongly in accordance with item (c) of the Australian Heritage Management principles to 'where appropriate, the rehabilitation of heritage values'. (Context 2014, 9, 40)

Key strategies will be establishing research and recording frameworks for this cultural landscape and also rehabilitating values and recovering significance by returning ancestral remains and other important research evidence. (Context 2014, 27; emphasis added)

This action is described as achieving a rehabilitation of values that are currently incomplete/reduced and would reunite the attributes of World Heritage value with the place with which they are associated. (Context 2014, 40)

During consultation for this plan options identified for the permanent safekeeping for ancestral remains returned included a purpose built 'keeping place' or reburial in the landscape. A secure purpose-built keeping place would allow for controlled access and potentially allow for future research using techniques currently unknown, while reburial may reduce these opportunities

but accord with the wishes of some stakeholders. While final determination of this matter should rest with the Aboriginal TOs, open communication between stakeholders on factors relating to these and any other options should be pursued. (Context 2014, 40–41; emphasis added)

3.2.2 Key management considerations for the assessment

The repatriation of the Willandra Ancestral Remains is identified as an aim or objective of management in all three plans of management for the WLR (1996, 2004, 2014).

The decision of the 3TTG to rebury the Willandra Ancestral Remains is consistent with the recognition of Aboriginal cultural custodianship emphasised in the vision statements, and management policies of the current and draft management plans.

The reburial of the repatriated ancestral remains is referred to as a possible alternative to storage of the remains in the most recent draft Plan of Management (Context 2014). The Plan identifies options for the permanent safekeeping of the ancestral remains that include ‘a purpose-built keeping place or reburial in the landscape—a decision that should rest with the Aboriginal TOs’ (2014, 41; emphasis added).

The Draft WLRWHP plan of management (Context 2014) emphasises that the management objective of repatriation of ancestral remains will recover the significance of the values of WLR in line with Principle 1.01 and 2.02(c) of the *Australian World Heritage Management Principles* that provide for, if appropriate, the rehabilitation of the values of a place. Repatriation of the ancestral remains is considered to rehabilitate or recover association between place and elements—in this case the ancestral remains—that have been removed from the place.

Recovery or enhancement of the cultural values of the property through reburial of the now repatriated ancestral remains is discussed below in Part 4.2.

4. Comparative case studies

We have not identified any previous assessments under EPBC Act that would assist in determining whether the reburial of human remains will be a significant impact on matters of national environmental significance.

There are thus no Australian precedents to provide guidance on:

- the significance of the impacts of reburial of ancestral remains, or
- the relationship of a collection of ancestral remains to the OUV of the World Heritage property or the values of a National Heritage place from which ancestral remains have been removed in the past.

4.1 Reburial of human remains in World Heritage properties

Given the significance of ancestral remains and lack of clarity as to whether they can be considered as attributes of OUV, we sought comparative case studies of the reburial of ancestral

remains in World Heritage properties outside Australia. A search of the World Heritage List, academic literature and media reports identified three World Heritage properties inscribed on cultural criteria in which ancestral remains were removed from the property by archaeological or other collecting strategies and subsequently reburied at the request of descendent communities. These are:

- Mapungubwe Cultural Landscape, South Africa.
- Mesa Verde, USA.
- Papahanamokuakea, Hawaii, USA.

Details of the properties are provided in Table 3.

The three case studies offer examples of how the reburial of ancestral remains by descendent communities has been considered and managed in World Heritage properties. In all three properties, the reburied ancestral remains had been removed prior to inscription on the World Heritage List. In two properties, Mapungubwe Cultural Landscape and Mesa Verde, the archaeological excavation and analysis of burials provided evidence to support the World Heritage values of the property.

The ancestral remains removed from each property had been stored in research institutions and descendent communities had agitated for their repatriation and reburial. In each case, the reburial of ancestral remains was considered to reinstate or to restore the cultural values of the place for descendent communities. The remains of a large number of individuals were reburied in Mapungubwe Cultural Landscape (>100 individuals) and Mesa Verde (>1500 individuals). Several sets of remains were buried on the islands of Nihoa and Mokumanana in Papahanamokuakea.

The reburials in Mapungubwe Cultural Landscape and Mesa Verde took place some years after the inscription of the property on the World Heritage List. We did not find any evidence that the reburial of human remains in these properties was considered a potential or actual impact on the World Heritage values. The information available on the World Heritage Centre web page and online archive, including state of conservation reports for the properties and decisions of the World Heritage Committee, does not refer to the reburials, suggesting that the reburials did not come to the attention of the World Heritage Committee or that the potential impacts of the reburials were not considered a threat to the OUV of the properties. We asked Professor Maryna Steyn, Head of Anatomical Sciences at the University of Witwatersrand, Johannesburg, whether the World Heritage values of Mapungubwe had been a consideration during the negotiations around repatriation and reburial of Mapungubwe ancestral remains held by the university. She did not recall any concerns being raised about the impact reburial may have on World Heritage values (email correspondence, 9 March 2019).

In the Papahanamokuakea World Heritage property, the reburial of human remains by Native Hawaiian community representatives took place several years prior to inscription of the property. The reburials are not mentioned in the nomination dossier for Papahanamokuakea or the ICOMOS evaluation report, although they are referred to in descriptions of Hawaiian values of

the site.¹⁸ This suggests that, although the reburials are important for Native Hawaiians, the original excavation and reburial were not considered to have compromised the authenticity or state of conservation of the property at the time of inscription.

At the request of descendent communities, the ancestral remains were reburied in Mapungubwe Cultural Landscape as close as possible to the location from which they had been previously removed. The remains could not be buried in the exact locations from which they were excavated due to erosion having removed most of the sediment in the area. The location(s) of the reburial of ancestral remains in Mesa Verde are secret and their proximity to the place from which they were removed is unknown. In Papahanamokuakea, the remains were returned to the small islands from which they were excavated in the early 20th century, but we have no further information on the exact location of burial.

In a manner similar to the RSoOUV for WLR, ancestral human remains collections are not specifically referred to as attributes of OUV in either SoOUV for Mapungubwe Cultural Landscape or the RSoOUV for Mesa Verde (adopted in 2014), although archaeological research, excavation and analysis of burials in both properties provided supporting evidence for the World Heritage values proposed at the time of nomination. In Mapungubwe, archaeological excavation of burials provided evidence for the development of an elite social class and kingdom in South Africa between 900 and 1300AD, the values for which the property is inscribed.¹⁹ Mesa Verde is prehistoric settlement landscape of the Ancestral Puebloan culture (c. 450 to 1300AD) inscribed for the 'exceptional archaeological sites of the Mesa Verde landscape that provide eloquent testimony to the ancient cultural traditions of Native American tribes'²⁰ Papahanamokuakea is a mixed property inscribed for cultural values of living cultural traditions of Native Hawaiians—the reburial of ancestral remains accords with these cultural traditions.

In summary, the comparative case studies indicate that reburial of ancestral remains at the request of descendent communities, in the World Heritage property from which they were removed prior to property's inscription, has not been considered an impact to the OUV of the property.

In all three of the comparative case studies, the reburial of ancestral remains was considered culturally appropriate by the descendent communities and to restore the cultural values of the place.

¹⁸ Papahanaumokuakea National Marine Monument <https://www.papahanaumokuakea.gov/heritage>.

¹⁹ UNESCO World Heritage Centre 'Mapungubwe Cultural Landscape' <http://whc.unesco.org/en/list/1099>.

²⁰ UNESCO World Heritage Centre 'Mesa Verde' <http://whc.unesco.org/en/list/27>.

Table 3. Details of comparative World Heritage case studies

World Heritage property	Year of inscription	Year of reburial	WH cultural criteria	SoOUV: Reference to burials/ancestral remains
Mapungubwe Cultural Landscape South Africa (Nienaber et al 2008)	2003	2007	(ii), (iii), (iv), (v)	The SoOUV described the development of an elite social class that defined Kingdom of Mapungubwe but does not specifically mention but the excavation and analysis of burials that provided evidence to support these values
Mesa Verde National Park USA*	1978	1996 and 2006	(iii)	Human remains/burial not specifically referred to in RSoOUV. The landscape is described as ‘a remarkable archaeological laboratory for enhancing our understanding of the Ancestral Puebloan people’
Papahanamokuakea, USA (Aya and Tengan 2002)	2010	1997	(iii) (vi)	none

* https://www.heraldextra.com/news/local/ancient-puebloans-reburied-at-mesa-verde-national-park/article_2b9dfbd9-5e7e-5f13-9283-1b9f5db9d296.html; <https://www.deseretnews.com/article/625688/Anasazi-skeletons-to-be-reburied.html>; <https://www.denverpost.com/2006/04/24/a-proper-reburial-at-mesa-verde>.

4.1.1 Reburial of ancestral remains in Mapungubwe Cultural Landscape

The reburial of ancestral remains in Mapungubwe Cultural Landscape has clear parallels with the proposed reburial of ancestral remains in WLR, and so warrants closer examination.

On inscription in 2003, the World Heritage status emphasised the significance of the site and the objects associated with the site. The repatriation process began after inscription of the property but descendent ‘claimant’ communities had requested repatriation for some years prior. The repatriation process was complex and complicated due to the high cultural, social and political profile of the remains and the site; the multiple claimant groups; and a lack of precedent and legislative framework for repatriation in South Africa. Procedures for repatriation also needed to be established by the various institutions in which the ancestral remains were held.

Documentation and research of the remains was requested by the researchers prior to repatriation. Multiple forms of analysis were carried out, with the exception of destructive analyses. No bone samples from the Mapungubwe remains were retained by the institutions.

The claimant groups requested the remains be individually reburied within the ground at the locations from which they had been removed. Some of the original locations, known through documentation of archaeological excavations, were now devoid of soil and on a slope prone to erosion. Other nearby locations were considered too sensitive because excavation for reburial would be likely to impact on archaeological deposits and risk uncovering further graves. An adjacent area was agreed on for the reburial of each individual in a separate grave.

The impact of reburial on possible future studies through new techniques and technologies was a consideration during the repatriation and reburial process, and a compromise was reached between reburial and long-term preservation of the remains. Reburial graves were constructed as vaults of brick walls with concrete floor and roof with a manhole for access. These structures were built in the old excavation trenches to avoid disturbance of in situ cultural material. The remains were placed in the graves in containers, the graves backfilled and the concrete roof put in place. This process achieved a compromise between requirements of claimants and the long-term preservation of the remains. The remains were not destroyed and could potentially be accessed in future.

4.2 Reinstating/rehabilitating/restoring cultural values in Australian World Heritage properties and National Heritage places

The rehabilitation/restoration of the Indigenous cultural values of WHRWHA through the repatriation of the Willandra Ancestral Remains was discussed in Section 3.2 in relation to management policies of the current and draft management plans for the property. The reburial of the repatriated ancestral remains has been agreed by the 3TTG to be final stage of the repatriation process, and this enhances the cultural values of the place under NHL Criterion (g).

The restoring or rehabilitating of cultural heritage values through physical interventions in an Australian World Heritage or NHL place has some precedent, although we have not identified any examples in which the intervention was the reburial of ancestral remains.

Of relevance to this assessment are the reinstating of the 1880 western forecourt garden in the Royal Exhibition Building and Carlton Gardens World Heritage property and the restoration of Lake Condah in the Budj Bim National Heritage Landscape. The former was both included on the NHL and inscribed on the World Heritage List in 2004, whilst the latter was included on the NHL in 2004 and nominated for inscription on the World Heritage List in 2018.

4.2.1 Budj Bim National Heritage Landscape

Lake Condah (Tae Rak) feeds water to the extensive system of ponds channels and traps engineered by Gunditjmara people to trap and to harvest short-finned eels on the basalt lava flow of the Budj Bim volcano. Lake Condah was drained in the mid-20th century, but a project to restore the lake through the construction of a weir was completed in 2010. The restoration of the Lake ensures that water flows through the Gunditjmara aquaculture system, enabling the maintenance of the culturally significant practices of eel farming and harvesting.²¹ It is noted that despite a search of the EPBC Act public notices, we could not locate a referral for this project.

²¹ <https://www.gunditjmirring.com/lake-condah-restoration-project>.

4.2.2 Royal Exhibition Building and Carlton Gardens

In 2009 archaeological excavation and restoration work at the Royal Exhibition Building and Carlton Gardens reinstated the Western Forecourt garden and a circular driveway that were an integral part of the garden setting of the Royal Exhibition Building designed by architect Joseph Reed for the Melbourne International Exhibition, 1880-1881. At the opening of the Exhibition the forecourt featured a circular garden of informally planted garden beds and a central kiosk, around which a carriageway led to the western entrance of the building. The forecourt had been converted to an asphalt carpark in the 1950s.²²

4.2.3 Beneficial impact

Whilst the above examples have been examined to inform an assessment of potential adverse impact of reburial of human remains, conversely, they have suggested that descendant communities have seen these actions as reinstating values by respecting the ancestors and continuing cultural protocols of caring for the dead. These reburials could therefore be argued to have a positive, or beneficial, impact on the values of the properties.

Given that reburial is in line with the wishes of the 3TTG, the attribution of a beneficial impact to reburial would accord with Australian and international policy in regard to the rights of Indigenous peoples as discussed in the previous section. In this respect, reburial also enhances the social/spiritual values recognised under Criterion (g) of the NHL listing.

²² <https://collections.museumvictoria.com.au/articles/3541>.

5. Impact assessment for proposed activity

5.1 Assessment framework under EPBC Act

The EPBC Act defines an ‘Action’ as including a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things.

For the purposes of this assessment, the action is the reburial of human remains removed from the WLR between 1968 and the early 1980s. This assessment specifically considers whether the activity of reburial will have significant impact on the OUV and/or NHL values of the WLR.

Under the EPBC Act 1999, a significant impact is

an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. (Commonwealth Government 2013)

Significant impact criteria provided by Department of the Environment and Energy (Commonwealth Government 2013) for Australian World Heritage properties and National Heritage places are used in this assessment to determine whether the impacts of the reburial of human remains in WLR are likely to be significant impacts on the OUV of the property and/or the National Heritage values of the place.

5.2 Description of the action

Between 1968 and the early 1980s, 105 sets of ancestral remains of Aboriginal people (the ‘Willandra Ancestral Remains’) were removed from twenty-nine burial locations in what is now the WLR, and taken to the Australian National University for research purposes. These remains included ‘Mungo Man’ and ‘Mungo Woman’, whose discovery and analysis contributed as evidence of *Homo sapiens sapiens* inhabiting the area since nearly 50,000 BP.

In 1992, Mungo Woman was repatriated to the care of the local Willandra Aboriginal community. The rest of the Willandra Ancestral Remains were moved to a purpose-built interim repatriation storage facility at the National Museum of Australia in November 2015, before being repatriated to the Willandra Lakes Region World Heritage Area in November 2017, where they now lie in secure storage.

In November 2018, the Willandra Aboriginal Advisory Group (AAG) passed the following motion:

In exercising our inalienable rights and as Traditional Owners the WLRWHA AAG as duly elected representatives of the 3TTGs unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years.

The ‘activity’ addressed in this assessment is described by OEH as follows:

For the purposes of this assessment the ‘activity’ is the reburial of 105 individuals. The assessment will need to consider the following:

- reburial of the Willandra ancestral remains in individual graves. The remains were removed from approximately 29 separate locations, and the Aboriginal Advisory Group (AAG) intend to rebury the remains as close as possible to these original grave locations.

This assessment is to be an analysis of the act of reburial of the ancestral remains and the impact this activity will have on the OUV of the Willandra Lakes—for instance, the remains will therefore no longer be available for purposes such as scientific research or analysis (OEH 2019 Brief for Services)

5.3 Assessment of impact on OUV

Potential impacts to OUV are assessed as impacts to the attributes of OUV of a World Heritage property (ICOMOS 2011). The attributes of OUV are described in the SoOUV or in the case of WLR, the RSoOUV.

The *Matters of National Environmental Significance: Significant Impact Guidelines* do not refer to impact to the attributes of OUV. According to the Guidelines, an action may have a significant impact on ‘a part, element, or feature of a World Heritage property, which embodies, manifests, shows, or contributes to the values of that property (Commonwealth Government 2013, 18).

Central to the assessment of impact of the proposed action on the OUV of WLR is consideration of the relationship of the ancestral remains to the OUV of the property, that is, whether the ancestral remains that were removed from the property prior to its inscription on the World Heritage List can be considered an attribute of OUV. In this regard it is important to recognise that it is the place, the landscape of the Willandra Lakes Region, rather than the associated collection of ancestral remains, that is inscribed on the World Heritage List, and included on the National Heritage List.

The World Heritage Convention, the Operational Guidelines, and guidance on the preparation of nominations and management of cultural properties (WHC et al 2011) are silent in regard to any relationship between the OUV of a World Heritage property and cultural material has been removed from the property prior to inscription. Properties are agreed by the World Heritage Committee to have OUV on the basis of their values and their authenticity, integrity and state of conservation *at the time of inscription*, not as they may have been at some time in the past, prior to removal of cultural material from the property.

A well-known example is the Acropolis in Athens that was inscribed on the World Heritage List in 1987. A large amount of cultural material had been removed from the property prior to inscription including the Elgin Marbles, now held in the British Museum. The RSoOUV, adopted in 2015, does not refer to any cultural material previously removed from the property as an attribute of, or contributing, to OUV. Although the cultural material removed from the property, including the Elgin Marbles, is undoubtedly of international significance, the OUV of the property is not dependent on the continued existence of this cultural material.

Once the World Heritage Committee decides that a nominated place is of OUV, impact to OUV is considered in relation to any subsequent actions or activities. The impact of an action is

assessed in relation to the attributes of OUV that are within the boundary of the property regardless of whether the action takes place within or outside the property boundary.

The Willandra Ancestral Remains, notably Mungo Man and Mungo Woman, were recovered from burial contexts, recorded and analysed using scientific methods, that demonstrated the antiquity of the burials and human presence in the landscape. This provided essential supporting evidence for the OUV of the property at the time of inscription. However, as discussed in Section 2, the ancestral remains are not specifically referred to in the RSoOUV. The Retrospective Statement makes clear that it is the place, the landscape itself, that holds the OUV of WLR in undisturbed stratigraphic deposits that contain occupation deposits of various kinds of cultural material including stone tools, grindstones, middens, trackways and burials, that evidence nearly 50,000 years of Aboriginal social, cultural and economic life.

5.4 Assessment against significant impact criteria for World Heritage properties

An action is likely to have a significant impact on World Heritage values if there is a real chance or possibility that it will cause:

- one or more of the World Heritage values to be lost
- one or more of the World Heritage values to be degraded or damaged, or
- one or more of the World Heritage values to be notably altered, modified, obscured or diminished.

Significant impact criteria provided by Department of the Environment and Energy (Commonwealth Government 2013) for Australian World Heritage properties (cultural values) are listed in Appendix G.

Table 4 presents an assessment of the impact of reburial of the Willandra Ancestral Remains against significant impact criteria for assessing impact to historic heritage values. Four of the six criteria are relevant to this assessment.

Table 4. Assessment against DoEE significant impact criteria for Australian World Heritage properties

Possible impacts	Impact assessment of proposed activity
<i>An action is likely to have a significant impact on historic heritage values of a World Heritage property place if there is a real chance or possibility that the action will...</i>	
Permanently remove, destroy, damage or substantially alter the fabric of a World Heritage property	The activity will not permanently remove, destroy, damage or substantially alter the fabric of WLR. The action may damage/destroy and make inaccessible human remains which were removed from the property prior to its inscription on the World Heritage List.

Possible impacts	Impact assessment of proposed activity
Extend, renovate, refurbish or substantially alter a World Heritage property/ in a manner which is inconsistent with relevant values	The proposed activity will not extend, renovate, refurbish or substantially alter WLR in any manner.
Permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a World Heritage property	The proposed activity will not permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in WLR.
Involve activities in a World Heritage property with substantial and/or long-term impacts on its values	The activity will not have substantial or long-term impacts on the OUV or NHL values of WLR. The activity will have a substantial and long-term impact on ancestral remains which were removed from the property prior to its inscription on the World Heritage List.

5.5 Assessment against significant impact criteria for National Heritage places

An action is likely to have a significant impact on the National Heritage values if there is a real chance or possibility that it will cause:

- one or more of the National Heritage values to be lost;
- one or more of the National Heritage values to be degraded or damaged; or
- one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

As noted above, the National Heritage values (and attributes) of the Willandra Lakes Region correspond with the World Heritage values (and attributes) of the property, with the exception of research value under criterion (c) and Indigenous values under Criterion (g). Given that the criteria for the assessment of historic heritage values for National Heritage places mirror the criteria for World Heritage properties, the assessment of National historic heritage values will also be those presented in Table 4. We assess against significant impact criteria for research value (criterion (c)) and Indigenous heritage value (criterion (g)) below.

5.5.1 Research value

As noted above, the property was included in the NHL under criterion (c) for research value. The process for the proposed reburial of the human remains has not yet been finalised. In this assessment, it is assumed that reburial of the ancestral remains will be permanent, and may damage and potentially lead to the destruction of the human remains. Given this, the reburial of the ancestral remains will mean that they will not be available for research purposes.

However approximately 61 in situ burials are currently known to exist in WLR (Second repatriation forum, WLR 2016). These burials along with other cultural material maintain the research potential and value of WLR. The WLR World Heritage Area Aboriginal Advisory

Group’s draft Research Manual (WLRWHA AAG n.d.) outlines processes for the management of ancestral remains that include research on ancestral remains in situ and do not preclude future excavation and analysis where research is developed and undertaken by the Aboriginal Advisory Group with research partners.

Under the EPBC Act, an assessment of impacts should consider all adverse impacts that can reasonably be predicted to follow from an action. Indirect impacts are relevant where they are sufficiently close to the proposed action to be said to be a consequence of the action, and they can reasonably be imputed to be within the contemplation of the person proposing to take the action (Commonwealth Government 2013, 6).

The loss of future scientific research opportunities through the reburial of the ancestral remains is considered an indirect impact of the activity but not a significant impact on the World Heritage or National Heritage values of WLR.

5.5.2 Indigenous heritage value

The impact of reburial on Indigenous heritage values under criterion (g) is assessed against significant impact assessment criteria relevant to this assessment in Table 5.

Significant impact criteria provided by Department of the Environment and Energy (Commonwealth Government 2013) for assessment of impact on National Heritage List Indigenous values are listed in Appendices H.

Table 5. Assessment of impact of reburial on Indigenous heritage values under criterion (g)

Possible impacts	Impact assessment of proposed action
Restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time	The proposed activity will not restrict or inhibit use of the place as a cultural or ceremonial site. The proposed activity is in accord with the wishes of the 3TTG and will enhance Indigenous heritage values, through rehabilitation of the landscape.
Permanently diminish the cultural value of a National Heritage place for an Indigenous group to which its National Heritage values relate	The proposed activity will enhance the cultural value of the place for the 3TTG.
Remove, destroy, damage or substantially disturb archaeological deposits or cultural artefacts in a National Heritage place	The reburial will impact on the ancestral human remains that were removed from the property prior to inscription on the National Heritage List. [Note: the potential impact of the process of reburial on archaeological deposits or cultural artefacts is excluded from this assessment].
Destroy, damage or permanently obscure rock art or other cultural or ceremonial, artefacts, features, or objects in a National Heritage place	Reburial has the potential to damage or destroy the human remains that were removed from the property prior to inscription on the National Heritage List.
Notably diminish the value of a National Heritage place in demonstrating creative or technical achievement	The proposed activity will not diminish the value of a National Heritage place in demonstrating creative or technical achievement

Possible impacts	Impact assessment of proposed action
Involve activities in a National Heritage place with substantial and/or long-term impacts on the values of the place.	The proposed activity will not have a substantial and/or long-term impact on the values of Willandra Lakes Region and will enhance the Indigenous values of the place through rehabilitation of the landscape.

5.6 Outcomes of assessment against Significant Impact Criteria

In summary, reburial of the Willandra Ancestral Remains:

- will impact on the ancestral remains;
- will present an indirect impact on the scientific research potential of the ancestral remains;
- will not be a significant impact on the cultural values (OUV) of a World Heritage property;
- will not be a significant impact on the historic heritage values of a National Heritage place; and
- will be a beneficial impact on the Indigenous values of the National Heritage place.

6. Assessment of significant impacts of the action

This assessment of significant impacts of reburial of the Willandra Ancestral Remains on the OUV and National Heritage values of WLR has considered the activity within the following five frames of reference:

- International and Australian policy relevant to Indigenous heritage protection and management (Part 2):

International and Australian policies, including UNESCO's cultural heritage policies, support the rights of Indigenous peoples to have control over, and to practice, their cultural heritage, to share or to withhold their heritage, and to have access to their heritage in privacy. The decision by the 3TTG to rebury of the Willandra Ancestral Remains in the WHRWHA is consistent with the rights of Indigenous peoples that are defined in the *United Nations Declaration on the Rights of Indigenous Peoples* (2007), which Australia has adopted, and the various policies that action the Declaration.

- Management objectives and strategies for WLR (Part 2):

The reburial of the Willandra Ancestral Remains is a decision of the 3TTG and consistent with the recognition of Aboriginal cultural custodianship of WHRWHA emphasised in the management strategies and objectives of the 1996 plan of management (DEST 1996), the 3TTG plan of management (AASC 2004) and the Draft WLRWHP plan of management (Context 2014).

- Comparative case studies of International and Australian World Heritage properties (Part 3):

The reburial of ancestral remains at the request of descendant communities in three World Heritage properties has not been considered to impact on the OUV of the properties even though scientific excavation and analysis of the ancestral remains provided supporting evidence for the World Heritage values. In all three cases, the reburial of ancestral remains was considered by the descendent communities to restore the Indigenous cultural values of the property.

- The relationship of the Willandra Ancestral Remains to the OUV of the property (Part 4):

The ancestral remains were removed from the property prior to its inscription on the World Heritage List. Places are agreed by the World Heritage Committee to have OUV at the time of inscription, not as they may have been at some time in the past, prior to removal of cultural material from the property. It is therefore questionable whether the reburial of the ancestral remains can be considered an impact on the OUV of WLR.

- *Matters of National Environmental Significance: Significant Impact Guidelines* (Commonwealth Government. 2013) (Part 4):

Impact assessment of reburial against each of the relevant Significant Impact Criteria concluded that the activity would not result in World Heritage or National Heritage values being lost; degraded or damaged, or notably altered, modified, obscured or diminished, and

that therefore the activity would not be considered a significant impact to the World Heritage and National Heritage values of WLR.

The assessment has determined that the proposed action of reburial of the Willandra Ancestral Remains in WLR will not be a significant impact on:

- a World Heritage property, including its:
 - historic heritage values, and
 - cultural heritage values including Indigenous heritage values; and
- a National Heritage place, including its:
 - historic heritage values, and
 - Indigenous heritage values.

The proposed reburial of the Willandra Ancestral Remains will not result in one or more of the National Heritage or World Heritage values of the WLR being lost, degraded or damaged, or notably altered, modified, obscured or diminished.

6.1 Conclusion on significant impacts to matters of national environmental significance and referral

The above being the case, it is concluded that:

- **the proposed action will not have a significant impact on a matter of national environmental significance**

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Appendix A. Brief for services

Brief for Services
for the development of
an Assessment of impacts of reburial on
Matters of National Environmental
Significance

Prepared by South Branch, Heritage Division
January 2019



Contents

1	Purpose	3
2	Background	3
2.1	The Activity	3
2.2	Brief timeline of events.....	4
3	Services	5
3.1	Detail of the Assessment Required: The Activity	5
3.1	Format of the Assessment Document	6
4	Consultant.....	7
4.1	Project timetable and deliverables	7
4.2	Associated documents, policies and statements for consideration	8
5	The Principal and Project Supervision	8
6	Confidentiality.....	8
7	Fee Payments and Reporting.....	8
8	Change requests	9
9	Copyright.....	9
10	Conflict of Interest	9
11	Quotation Submissions	9
12	Appendix A World Heritage Listing criteria (current full list of criteria 2013)	10
12.1	Original Willandra Lakes WHA listing criteria (1981).....	10
12.2	Willandra Lakes WHA Retrospective Statement of Outstanding Universal Value (2013)	10
13	Appendix B National Heritage Listing Criteria.....	12
14	Appendix C Review of Environmental Factors.....	13
15	References	15

1 Purpose

The purpose of this Brief for Services is to commission an assessment of the impacts associated with the 'Willandra repatriation project' and prepare an independent specialist assessment on the impact of the 'activity' (reburial of the ancestral remains collection) on the Outstanding Universal Values (OUV) and the National Heritage Values of the Willandra Lakes Region World Heritage Area (WLRWHA).

The services are viewed largely as a desk top review, however a site visit may be facilitated to assist in orientation and understanding of the issues, if requested.

2 Background

One hundred and five (105) individual sets of ancestral Aboriginal remains were repatriated to the WLRWHA in November 2017. One well-known individual, Mungo Man, was included as part of this repatriation. Another well-known individual, Mungo Woman, was returned to Mungo and placed in the care of the Aboriginal community in 1992.

Management of the Willandra ancestral remains collection has been debated extensively at community consultation forums from 1984 (Williams, 2016) to the present (Michael Williams and Associates, 2015, 2016, 2017). A decision was taken in April 2017 to move the collection to Mungo National Park and place them in storage. That action took place in November 2017.

At a meeting of the Willandra Aboriginal Advisory Group (AAG), which is a community elected Group and the peak Aboriginal body for the Willandra, on the 6th November 2018 the following motion was passed:

In exercising our inalienable rights and as Traditional Owners the WLRWHA AAG as duly elected representatives of the 3TTGs unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years

This will require a referral under the federal *Environment and Biodiversity Protection Act 1999* (EPBC Act) as the remains are viewed to be part of the national and world heritage values of the WLRWHA. OEHL are preparing this referral on behalf of the Willandra Aboriginal community.

As part of this referral OEHL requires an independent specialist assessment on the impact of the 'activity' on the Outstanding Universal Values (OUV) and the National Heritage Values of the WLRWHA. (An EPBC Act referral from OEHL (on behalf of the Willandra Aboriginal community) to transfer the ancestral remains from Canberra to Mungo National Park was previously submitted and approved in October 2017. That referral was also required as the remains were viewed to be part of the world heritage values of the Willandra Lakes region).

2.1 The Activity

For the purposes of this assessment the 'activity' is the reburial of 105 individuals. The assessment will need to consider the following:

- reburial of the Willandra ancestral in individual graves. The remains were removed from approximately 29 separate locations, and the AAG intend to rebury the remains as close as possible to these original grave locations.

NB. This assessment is to be an analysis of the act of reburial of the ancestral remains and the impact this activity will have on the OUV of the Willandra Lakes – for instance, the remains will

therefore no longer be available for purposes such as scientific research or analysis. This assessment is not intended to assess any physical impacts to the World Heritage OUV such as disturbance from digging holes for reburial, natural deterioration of the remains, etc.

2.2 Brief timeline of events

- Between 1968 and early 1980s ca. 105 ancestral remains, including the internationally renowned remains of Mungo Lady and Mungo Man, were removed from the Willandra and taken to the Australian National University (ANU) for study.
- The discovery and subsequent recognition of the great age and significance of Mungo Lady and Mungo Man were fundamental in establishing the cultural heritage significance of the Willandra Lakes (Bowler et al., 1970, Bowler et al., 1972, Bowler and Thorne, 1976, Mulvaney, 1972). This recognition formed a key part of the justification for the nomination of the Willandra Lakes to the World Heritage list in 1981 (Australian Heritage Commission, 1980).
- Aboriginal community awareness and concern over the unauthorized removal and study of ancestral remains increased in the 1980s. Lobbying for the return and reburial of ancestral Aboriginal remains was intense in the late 1980s (cf. Cribb, 1990, Stannard, 1988), and in this context the participants in the Mungo Workshop in 1989 reached an agreement that the Willandra Ancestral Remains collection should be returned to Mungo, and that, as a symbol of reconciliation, keys should be held by both the Aboriginal community and researchers.
- Mungo Lady was returned to Mungo in January 1992, with keys to the safe held by both Traditional Custodians and researchers (Alan Thorne). The rest of the Willandra Ancestral Remains continue to be held in Canberra.
- Between 1984 and 2016 ca. 70 Willandra World Heritage meetings discussed repatriation, a research centre and reburial (D. Williams 2016).
- The Plan of Management for the Willandra Lakes (1996) called for the development of a series of strategies for the return of all human remains '*...to the satisfaction of the three Traditional Tribal Groups*' (Strategy 33.1).
- Three Traditional Tribal Groups Elders Council (3TTGs) were the main advisory and consultation group forum for the Willandra Lakes region from the mid 1990's – 2013. In 2004 the 3TTG developed a detailed Vision and Feasibility Study for a Keeping Place Education and Research Centre (KPERC). This centre has not been established.
- Between 2004 and 2011 the 3TTGs and the Willandra Lakes Region World Heritage Community Management Council (CMC) worked on 2 proposals for a keeping place for Ancestral remains at Mungo National Park; one simple structure based at Joulni (ca. 2005), and one a detailed and comprehensive plan, located near the edge of Lake Mungo (2011). These plans have not been fulfilled.
- Research on the ancestral remains continued through various studies e.g. (Durband, 2011, Durband et al., 2009, Malaspinas, 2016, Thorne et al., 1999, Westaway, 2006, Westaway and Groves, 2009)
- The Willandra Repatriation Traditional Custodians group (WRTC) was formed by the Heritage Division (OEH) in 2014 to direct the repatriation of the Willandra Ancestral Remains

- A repatriation Forum was held in February 2015 and brought together a wide range of scientists and traditional custodians. (M. Williams 2015).
- In November 2015, the Willandra ancestral remains collection were re-catalogued and transferred from ANU to the National Museum of Australia's (NMA) purpose built interim repatriation storage facility in Mitchell, ACT.
- Following the transfer from ANU to NMA in November 2015 the WRTC agreed on a two year timeframe to complete the transfer from NMA back to Country, which set November 2017 as the deadline.
- In November 2016 a second Forum was held, and options for repatriation and reburial outlined (M. Williams 2016).
- April 2017. Forum 3 held presenting options for repatriation. Consensus was made to return all ancestral remains back to Mungo National Park (M. Williams 2017).
- 17 November, 2017. The Willandra ancestral remains collection was returned to Mungo and placed in secure storage at Mungo National Park.
- 6 November, 2018. AAG decides to rebury the Willandra ancestral remains collection.

3 Services

This brief requires the development of an *Assessment of Impacts on Matters of National Environmental Significance* (Environmental Protection & Biodiversity Conservation Act (EPBC) 1999).

The **Assessment** will be used to support a referral to the Australian Government under the EPBC Act 1999.

The purpose of the **Assessment** is ultimately, however, to guide the development of a Review of Environmental Factors under the NSW Environmental Planning & Assessment Act.

3.1 Detail of the Assessment Required: The Activity

For the purposes of this brief for services, the 'activity' under the EPBC Act is the reburial of 105 individuals.

The **Assessment** will need to consider the following:

- reburial of the Willandra ancestral remains in individual graves. The remains were removed from approximately 29 separate locations, and the AAG intend to rebury the remains as close as possible to these original grave locations.

Inclusions:

The brief for Assessment is **ONLY** for the analysis of the impacts of the act of reburial of the ancestral remains and the impact this activity will have on the Outstanding Universal Value of the Willandra Lakes Region World Heritage property and the listed National Heritage values of the National heritage listed place in relation to the Ancestral remains themselves– for instance, when reburied, these particular Ancestral remains will no longer be available for purposes such as physical scientific research or analysis.

Exclusions:

The brief for Assessment **does not include** the assessment of any physical impacts on the Outstanding Universal Value such as disturbance from digging holes for reburial, natural deterioration of the remains, etc.

The assessment that is required is:

Will the 'activity' have a significant impact on the WLRWHA OUV according to the Australian Governments Significant Impact Guidelines 1.1 - Matters of National Environmental Significance?

These guidelines state that an action is likely to have a significant impact on the **World Heritage and National Heritage values** of a declared **World Heritage** property or a **National Heritage** place if there is a real chance or possibility that it will cause:

- one or more of the World Heritage or National Heritage values to be lost
- one or more of the World Heritage or National Heritage values to be degraded or damaged, or
- one or more of the World Heritage or National Heritage values to be notably altered, modified, obscured or diminished. (Department of the Environment, 2013, pp. 16-22).

In considering these guidelines, the assessment should also review associated matters such as:

- Is the activity consistent with the Willandra Lakes Plan of Management (Department of Environment, 1996)
- Is the activity consistent with the United Nations Declaration for the Rights of Indigenous Peoples (UNDRIP 2007)
- Is the activity consistent with the Australian Government Policy on Indigenous Repatriation (2016)

3.1 Format of the Assessment Document

The **Assessment** should be submitted in PDF in a Microsoft Office Word compatible format.

The **Assessment** should be written with its end uses in mind as described in the previous section of this brief.

The **Assessment** will need to be sufficiently detailed to ensure that the reader will be able to understand what the likely impacts of reburial, both positive and negative, would be on the World and National heritage listed values of the place.

It is suggested that the **Assessment** may identify, but not be limited to, the following headings

- **Executive Summary**
- **Introduction**
- **Background**
- **Outstanding Universal Value**
- **National Values**

- **Discussion**
- **Potential Significant Impacts – Positive and Negative**
- **Case Studies** – Comparative analysis of any other such activities where values of a WH property have been restored

4 Consultant

OEH requires a consultant with extensive operational experience with the machinery of the EPBC Act to prepare an *Assessment of Impacts of Reburial of Willandra Ancestral collection on Matters of National Environmental Significance* for the proposed activity of reburying the Willandra Ancestral collection.

4.1 Project timetable and deliverables

OEH requires the consultant to provide the **Assessment** within a relatively short timeframe.

The consultant must be available to provide updates to the project supervisor via email or telephone on the progress and delivery of the assessment.

The timetable below is a guide; the consultant is required to confirm their ability to meet this timetable. The table is not exhaustive and is to be read in conjunction with this brief for services and general tasks.

Phase	Deliverables	Indicative Time Frame
1. Introductory Briefing Meeting	Meeting 1 Brief confirmation and Project Orientation Confirm Project Program and Brief Requirements Teleconference allow 1.5 hours	Week of 18/02/2019
3. Mid Project Meeting	Meeting 2 Present and confirm work undertaken to date and confirm project scope – issues/opportunities. Teleconference allow 2 hours	Week of 4/3/2019
4. Submit Draft	Submit <i>Draft</i> Assessment for comment	26/4/2019
5. Final Draft Meeting	Meeting 3 Discuss <i>Draft</i> Assessment and any comments Teleconference allow 1.5 hours	Week of 3/5/2019
4. Submit Final Scope of Work	<i>Final</i> Assessment Submitted	17/5/2019

4.2 Associated documents, policies and statements for consideration

This assessment will need to refer to several documentary sources. These documents include:

- Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999.
<http://www.environment.gov.au/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance>
- World Heritage Listing criteria (current full list of criteria 2013). See Appendix A
- Australian National Heritage listing criteria. See Appendix B
- Australian Government Policy on Indigenous Repatriation
- The United Nations Declaration on the Rights of Indigenous Peoples
- *Sustaining Willandra*, Willandra Lakes World Heritage Area Plan of Management 1996
- *Our past, Our Future*, The Willandra: The Three Traditional Tribal Groups Plan of Management, 2004 (Australian Archaeological Survey Consultants Pty Ltd, 2004)
- ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties, 2011
- IUCN World Heritage Advice Note: Environmental Assessment. *NB. this relates to Natural heritage values*
- Outcomes of recent community consultation and background reports on the Willandra repatriation (Michael Williams and Associates, 2015, 2016, 2017, Williams, 2016)
- 2017 EPBC Act referral for the transfer of the Willandra ancestral remains from the National Museum of Australia to Mungo National Park (OEH, 2017a, b, c).

This assessment will be associated with, and will form a supporting document within, a separately commissioned Review of Environmental Factors (REF) (especially section 9.7 of the REF) that will address specific on-ground impacts of the proposed activity on cultural and natural heritage values. The REF will be an environmental assessment undertaken to meet the requirements of Part 5 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) (see Appendix C) and the EPBC Act referral.

5 The Principal and Project Supervision

The Principal for the consultancy is the Executive Director, Heritage Division of the Office of Environment and Heritage. The Project Supervisor will be:

Harvey Johnston
Senior Team Leader, Heritage Division, OEH.
harvey.johnston@environment.nsw.gov.au
PO Box 318
Buronga NSW 2739
03 5021 8914 or 0407 214 227

6 Confidentiality

The brief for the works is provided on a strictly confidential basis. The documents must not be copied or circulated to other persons without prior approval of the Project Supervisor.

7 Fee Payments and Reporting

Progress payments as a percentage of the agreed lump sum fee will be made after satisfactory completion of the following stages:

Acceptance of quote and commencement of study	25%
Submission of draft report	50%
Submission of final report	25%

8 Change requests

All changes, whether requested by the Principal, the Client or the Consultant, must be confirmed in writing to the Project Supervisor by the Consultant. Where a change is requested orally by the Principal or by Client, the Consultant must seek written confirmation from the Project Supervisor. Keep a running log of all changes requested and confirmed. Advise the Project Supervisor of time and cost implications no later than 7 days after confirmation of a change request. Obtain Project Supervisors written approval to proceed with changes prior to undertaking the changes.

9 Copyright

Subject to appropriate attribution the NSW Government Office of Environment and Heritage will own the copyright in any material you provide for the Assessment.

10 Conflict of Interest

You are asked to confirm that a conflict of interest will not arise in undertaking this brief for services to deliver an Assessment of Impacts of Reburial of the Willandra Ancestral Collection on Matters of National Environmental Significance.

11 Quotation Submissions

A written quotation to undertake this work will be received up until 1st February 2019. The submission is to be emailed to harvey.johnston@environment.nsw.gov.au in PDF format.

12 Appendix A World Heritage Listing criteria (current full list of criteria 2013)

12.1 Original Willandra Lakes WHA listing criteria (1981)

Until the end of 2004, World Heritage sites were selected on the basis of six cultural and four natural criteria. The Willandra Lakes region was inscribed on the World Heritage List October 1981 in recognition of its outstanding cultural and natural universal values, and was listed as it met the following criterion:

Natural Criterion i - as an outstanding example representing the major stages in the earth's evolutionary history; and

Natural Criterion ii – as an outstanding example representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.

Cultural Criterion iii – be unique, extremely rare or of great antiquity;
(AHC, 1980)

12.2 Willandra Lakes WHA Retrospective Statement of Outstanding Universal Value (2013)

At the time of this original 1981 listing no specific statement of Outstanding Universal Value was prepared. The criteria for listing of World Heritage sites are constantly under review and a Retrospective Statement of Outstanding Universal Value (RSOUV) for the Willandra Lakes was approved by the World Heritage Committee in 2013. This statement recognised the significance of the region under the revised and combined cultural and natural criteria as articulated in 2013:

Criterion (iii) to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared; and

Criterion (viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;

The Retrospective Statement of Outstanding Universal Value adopted in 2013 states:

Criterion (iii): *The drying up of the Willandra Lakes some 18,500 years BP allowed the survival of remarkable evidence of the way early people interacted with their environment. The undisturbed stratigraphy has revealed evidence of Homo sapiens sapiens in this area from nearly 50,000 years BP, including the earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources, all of which provide an exceptional testimony to human development during the Pleistocene period.*

Criterion (viii): *The Australian geological environment, with its low topographic relief and low energy systems, is unique in the longevity of the landscapes it preserves, and the Willandra Lakes provides an exceptional window into climatic and related environmental changes over the last 100,000 years. The Willandra Lakes, largely unmodified since they dried out some 18,500 years BP, provide excellent conditions for recording the events of the Pleistocene Epoch, and demonstrate how non-glaciated zones responded to the major glacial-interglacial fluctuations.*

Source: <http://whc.unesco.org/archive/2013/whc13-37com-8E-en.pdf> , see also <http://whc.unesco.org/en/list/167>

Full details of the current criteria for World Heritage is provided below

- (i) to represent a masterpiece of human creative genius;
- (ii) to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- (iii) to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- (iv) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- (v) to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- (vi) to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
- (vii) to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- (viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- (ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- (x) to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Source: <http://whc.unesco.org/en/criteria/>

13 Appendix B National Heritage Listing Criteria

The Willandra Lakes Region was placed on the Australian National Heritage List in May 2007. The National Heritage criteria for listing of the area are a), b), c) and g), as follows:

- a. *the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history*
- b. *the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history*
- c. *the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history*
- g. *the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons*

Source <https://www.environment.gov.au/system/files/pages/f82e987c-e5ea-423f-b757-ff0b80727e57/files/10569301.pdf>

Full details of all the current criteria for Australian National Heritage listings is provided below.

- (a) the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history;
- (b) the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;
- (c) the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;
- (d) the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:
 - (i) a class of Australia's natural or cultural places; or
 - (ii) a class of Australia's natural or cultural environments;
- (e) the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) the place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history;
- (i) the place has outstanding heritage value to the nation because of the place's importance as part of indigenous tradition.

14 Appendix C Review of Environmental Factors

The following are the headings and issues that may be addressed in Review of Environmental Factors (REF), as per the NPWS REF template

- 1 Brief description of the proposed activity
- 2 Proponent's details
- 3 Permissibility
 - 3.1 Legal permissibility
 - 3.2 Consistency with OEH policy
 - 3.3 Type of approval sought
- 4 Consultation – general
- 5 Consultation – Native Title
- 6 Proposed activity (or activities)
 - 6.1 Location of activity
 - 6.2 Description of the proposed activity
 - 6.3 Objectives of the proposal
- 7 Reasons for the activity and consideration of alternatives
- 8 Description of the existing environment
- 9 Impact assessment
 - 9.1 Physical and chemical impacts during construction and operation
 - 9.2 Biological impacts during construction and operation
 - 9.3 Community impacts during construction and operation
 - 9.4 Natural resource impacts during construction and operation
 - 9.5 Aboriginal cultural heritage impacts during construction and operation
 - 9.6 Other cultural heritage impacts during construction or operation
 - 9.7 Matters of national environmental significance under the EPBC Act
- 10 Proposals requiring additional information
 - 10.1 Lease or licence proposals under s.151 NPW Act
 - 10.2 Telecommunications facilities (s.153D, NPW Act)
 - 10.3 Activities within the Sydney Drinking Water Catchment

- 11 Threatened species assessment of significance (7 part test)
- 12 Summary of impacts
- 13 Conclusions
- 14 Supporting documentation

15 References

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Appendix B. Willandra Lakes WHA Retrospective Statement of Outstanding Universal Value (2013)

At the time of this original listing no specific statement of Outstanding Universal Value was prepared. The criteria for listing of World Heritage sites have changed over time and a Retrospective Statement of Outstanding Universal Value (RSOUV) for the Willandra Lakes was approved by the World Heritage Committee in 2013. This statement recognized the significance of the region under the revised and combined cultural and natural criteria as articulated in 2013:

Criterion (iii) to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared; and

Criterion (viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;

Retrospective Statement of Outstanding Universal Value

Brief synthesis

The Willandra Lakes Region, in the semi-arid zone in southwest New South Wales (NSW), contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of a low-altitude, non-glaciated Pleistocene landscape. It also contains an outstanding record of the glacial-interglacial climatic oscillations of the late Pleistocene, particularly over the last 100,000 years. Ceasing to function as a lake ecosystem some 18,500 years ago, Willandra Lakes provides excellent conditions to document life in the Pleistocene epoch, the period when humans evolved into their present form.

The undisturbed stratigraphic context provides outstanding evidence for the economic life of *Homo sapiens sapiens* to be reconstructed. Archaeological remains such as hearths, stone tools and shell middens show a remarkable adaptation to local resources and a fascinating interaction between human culture and the changing natural environment. Several well-preserved fossils of giant marsupials have also been found here. Willandra contains some of the earliest evidence of *Homo sapiens sapiens* outside Africa. The evidence of occupation deposits establishes that humans had dispersed as far as Australia by 42,000 years ago. Sites also illustrate human burials that are of great antiquity, such as a cremation dating to around 40,000 years BP, the oldest ritual cremation site in the world, and traces of complex plant-food gathering systems that date back before 18,000 years BP associated with grindstones to produce flour from wild grass seeds, at much the same time as their use in the Middle East. Pigments were transported to these lakeshores before 42,000 years BP. Evidence from this region has allowed the typology of early Australian stone tools to be defined.

Since inscription, the discovery of the human fossil trackways, aged between 19,000 years BP and 23,000 years BP, have added to the understanding of how early humans interacted with their environment.

Criterion (iii): The drying up of the Willandra Lakes some 18,500 years BP allowed the survival of remarkable evidence of the way early people interacted with their environment. The undisturbed stratigraphy has revealed evidence of *Homo sapiens sapiens* in this area from nearly 50,000 years BP, including the earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources, all of which provide an exceptional testimony to human development during the Pleistocene period.

Criterion (viii): The Australian geological environment, with its low topographic relief and low energy systems, is unique in the longevity of the landscapes it preserves, and the Willandra Lakes provides an exceptional window into climatic and related environmental changes over the last 100,000 years. The Willandra Lakes, largely unmodified since they dried out some 18,500 years BP, provide excellent conditions for recording the events of the Pleistocene Epoch, and demonstrate how non-glaciated zones responded to the major glacial-interglacial fluctuations.

The demonstration at this site of the close interconnection between landforms and pedogenesis, palaeochemistry, climatology, archaeology, archaeomagnetism, radiocarbon dating, palaeoecology and faunal extinction, represents a classic landmark in Pleistocene research in the Australasian area. Willandra Lakes Region is also of exceptional importance for investigating the period when humans became dominant in Australia, and the large species of wildlife became extinct, and research continues to elucidate what role humans played in these events.

Integrity

The property as nominated covered some 3,700 km², following cadastral boundaries and including the entire Pleistocene lake and river systems from Lake Mulurulu in the north to the Prungle Lakes in the south, thereby including all elements contributing to its outstanding universal value. In 1995 boundaries for the property were revised in order to 'better define the area containing the World Heritage values and facilitate the management of the property'. The revised boundary follows topographic features, with an appropriate buffer within the boundary, to more closely delineate the entire lake and river system but exclude extraneous pastoral areas. The area of the property now covers ~2,400 km². Although pastoral development has resulted in ecological changes, stocking rates are low and dependent on natural unimproved pasture and the area remains predominantly vegetated in its natural condition. For leasehold properties within the property, Individual Property Plans (IPPs) have been developed and implemented, including actions such as excluding grazing from sensitive areas and relocating watering points to minimise the impact of grazing, to protect outstanding universal value while also allowing sustainable land uses. There have also been significant additions to Mungo National Park, including some of the most archaeologically significant areas of the property. Much of the scientific and cultural significance of the property is related to the values embedded in or associated with the lunettes. Erosion and deflation continue to expose material in already disturbed areas of the lunettes. At time of listing approximately 8% was extensively eroded, while 72% remained vegetated and intact, with the remaining area partly eroded.

Authenticity

The authenticity of the natural and Aboriginal cultural heritage values of the Willandra has been established in the first instance, in a western or European cultural sense, by rigorous scientific

investigation and research by leading experts in their fields. Researchers have established the great antiquity and the richness of Aboriginal cultural heritage at Willandra which brought about a reassessment of the prehistory of Australia and its place in the evolution and the dispersal of humans across the world.

For the Traditional Tribal Groups (TTGs) that have an association with the area there has never been any doubt about the authenticity of the Willandra and any particular sites it contains. The TTGs have maintained their links with the land and continue to care for this important place and participate in its management as a World Heritage property. Aboriginal people of the Willandra take great pride in their cultural heritage and maintain their connection through modern day cultural, social and economic practices.

Management and protection requirements

The majority of the area comprises pastoral stations leased from the State and administered by the NSW Land and Property Management Authority. The remaining land contains a large part of the Mungo National Park, which is managed by the NSW National Parks and Wildlife Service (NPWS), and which has grown from 4.2% of the property at time of inscription to 29.9% in 2012. There are also some small areas of freehold land within the property. The NSW Office of Environment and Heritage provides archaeological expertise over all land tenures within the property. The statutory basis for management is established under New South Wales legislation by the Willandra Lakes Region Environmental Plan. This provides for a Community Management Council, Technical and Scientific Advisory Committee, Elders Council of Traditional Tribal Groups affiliated with the Willandra, and Landholders Protection Group to input advice on the management of the World Heritage Area.

Upon listing, the World Heritage Committee requested that a management plan be ‘rapidly established for the whole area.’ This process was begun in 1989 with the first property management plan—*Sustaining the Willandra* (DEST 1996)—finalised following extensive consultation with all stakeholders. Individual Property Plans have been developed to protect World Heritage values on the pastoral stations. Similarly, Mungo National Park, managed jointly by the NPWS and Traditional Tribal Groups under a Joint Management Agreement, is subject to a management plan which aims to maximise conservation of both natural and cultural heritage values while also conserving biodiversity and facilitating appropriate visitor access. Visitor access to sensitive areas is carefully controlled, and in some areas excluded, to mitigate adverse impacts on World Heritage values.

All World Heritage properties in Australia are ‘matters of national environmental significance’ protected and managed under national legislation, the Environment Protection and Biodiversity Conservation Act 1999. This Act is the statutory instrument for implementing Australia’s obligations under a number of multilateral environmental agreements including the World Heritage Convention. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Importantly, this Act also aims to protect matters of national environmental significance, such as World Heritage properties, from impacts even if they originate outside the property or if the values of the property are mobile (as in fauna). It thus forms an additional layer of protection designed to protect values of World Heritage properties from external impacts. In 2007 the Willandra Lakes Region World Heritage Area was added to the National Heritage List in recognition of its national heritage significance. The property management plan identifies issues for management, outlines strategies for responses and identifies responsible parties. Among the issues and threats to values being addressed through coordinated action are the occurrence of invasive pest species (including European rabbits and feral goats), balancing increased visitation with asset protection, controlling total grazing pressure to provide for perennial vegetation regeneration, and limiting accelerated erosion where practicable.

Source: <http://whc.unesco.org/archive/2013/whc13-37com-8E-en.pdf>, see also <http://whc.unesco.org/en/list/167>.

Appendix C. Other descriptions of values and attributes

Nomination dossier (1981, 19)

As a cultural property the region is an area of outstanding universal value because:

Description of values	Associated attributes
<ul style="list-style-type: none"> Archaeological evidence for modern man having dispersed as far as south eastern Australia before 30,000 years ago. Complex and symbolic systems by 30,000 years ago including ochre burial comparable in age to ochre burial sites in France and the oldest known cremation Amongst the earlier evidence of Homo sapiens anywhere that establish the antiquity of Australian Aborigines Some of the earliest substantial evidence for the exploitation of freshwater resources Evidence for use of grindstones to produce flour from wild grass seeds at much the same time as their use in the Middle East Typology of early Australian stone tools defined through research in WLR 	<ul style="list-style-type: none"> The remains of <i>Homo sapiens</i> in the Lake Mungo Lunette dated before 30,000 years ago 26,000-year-old cremation site 30,000-year-old ochre burial site Grindstones and mortars from 18,000years ago Pigments transported to the lakeshores before 32,000 BP Stone tools

ICOMOS evaluation (1981)

Description of values	Associated attributes
<p>Criterion (iii) 'be unique, extremely rare, or of great antiquity' (UNESCO 1977).</p>	
<p>World-wide importance owing to the abundance of the vestiges of very early human occupation which have been identified there</p>	<ul style="list-style-type: none"> Settlement of Homo Sapiens is attested to in the Lake Mungo region from ca.-40,000 years. Stone tools belonging to the first period have been recovered in an undisturbed stratigraphic context. Cremation grave with a carbon 14 dating of ca.-26,000 the earliest example of a cremation known to date numerous burial sites traces of agricultural exploitation slightly previous to -18,000
<p>Essential to the study of human development in Oceania</p>	<p>The complex of identified sites</p>

Sustaining the Willandra Plan of Management (*DEST 1996*)

Description of values	Associated attributes
The remarkable documentation of early Aboriginal society's culture and its adaptation to environmental change, especially in climate, the fluctuations in the lake levels creating major regional impacts on resources, and the eventual drying up of the system about 15,000 years ago	(No attributes described)
Rare insights into human interaction with this dramatic landscape of lakes, lunettes and sand dunes over great periods of time.	(No attributes described)
(In 1981) Earliest known fully modern humans provide outstanding information on the physical features of Australia's populations of the Pleistocene period.	Human remains including Mungo Lady
Earliest known record of a cremation burial	Mungo Lady, excavated in 1968/69, and dated to at least 26000 years
Insight into past care of the dead	Human remains
Aboriginal occupation more than at least 40,000 years	Willandra's archaeological record
Continuous record of Aboriginal occupation	(No attributes described)
Pleistocene & biological anthropology record	(No attributes described)
Documentation of economic, social and ritual life of early Aboriginal societies 40,000–10,000 years ago	Archaeological sites, stone artefacts, biological remains and human burials
Human, physical and cultural evolution	Pleistocene archaeological record
Refer pages A2-3; Table 1, Pages B4–B7	

NSW Planning World Heritage in NSW Discussion Paper (2010)

The World Heritage cultural values of Willandra Lakes Region are described as follows:

The Willandra Lakes Region demonstrates an exceptional sequence of Aboriginal cultural occupation extending over tens of thousands of years, including an outstanding record of human responses to major changes over time in climate and environments (e.g. due to increasing aridity). The world heritage values include:

- (a) landforms and locations which greatly extend our understanding of Australia's environmental and Aboriginal cultural history, including:
 - (i) exposures of sedimentary sequences which reveal Pleistocene sedimentary profiles and associated archaeological and palaeontological materials;
 - (ii) extensive intact lakeshore landforms that may contain extensive archaeological and palaeontological materials; and

- (iii) the remains of hearths, including those with considerable antiquity, which have provided an ideal source for palaeomagnetic measurements;
- (iv) archaeological sites which occur within stratified sedimentary sequences and provide evidence for the antiquity and continuing presence of human occupation;
- (v) archaeological sites which contain evidence of utilization of lacustrine resources during lake full phases, and rangeland resources during arid phases;
- (vi) archaeological sites which demonstrate continuity of human occupation for the region through fluctuations in lake levels drying of the system about 15,000 years ago through the Holocene period and up to historic times;
- (vii) archaeological sites which provide outstanding examples of hunting and gathering, a way of life that has dominated the Australian continent up to modern times, including:
 - evidence of human occupation of, and interaction with, the landscape of lakes, lunettes and sand dunes over time in the form of campsites, middens, fireplaces, quarries, knapping floors and burials; and
 - campsites and fireplaces that reflect people's hunting, gathering and fishing diet;
 - burial sites which are of global significance for the antiquity of burial practices represented and also for the information they provide on the development of human societies, including Pleistocene and Holocene burial sites; and
 - burial sites with associated mortuary goods and evidence of ritual burials that demonstrate the antiquity of particular burial practices and the development of religious beliefs and systems over time.

Potential National Heritage Values (Context 2014)

A draft Willandra Lakes World Heritage Area Plan of Management was completed by Context Pty Ltd in 2014, although not adopted as final and we understand that this document is not proposed to be finalised in its current form. The draft management plan identifies a number of values that are not included in the NHL citation but which are now recognised to be of potential national significance. These have been identified through ongoing discoveries and research and greater understanding of the area than is reflected in the NHL listing. Potential NHL values are as follows:

- The length of human occupation of the WLR is of great importance to Aboriginal people throughout Australia and the wider Australian society, especially in debates on Aboriginal cultural identity and land rights. Lake Mungo in WLR was uniquely crucial in changing the way Australians related to the country's Aboriginal past. It established the antiquity of Aboriginal culture beyond doubt. For Aboriginal Australians, the Willandra Lakes Region is iconic of a long history of attachment and care for the landscape, and a foundation for a collective sense of identity.

- The early Lake Mungo research, and the material evidence of this research such as soil samples and reports, may have outstanding historic significance in its own right.
- The working relationships developed at Willandra between scientists and the Aboriginal community have changed cultural heritage practice across Australia.
- This early Lake Mungo work defined stone tool typology in Australia.
- Complimentary to the extremely old sites are others which give insights into cultural developments of the more recent past (last 10,000 years), including interaction between Aboriginal and European people in the contact period.

Other cultural heritage values (Sustaining the Willandra plan of management [DEST 1996])

The Sustaining the Willandra plan of management (DEST 1996) was completed prior to the inclusion of WHRWHA on the National Heritage List. The plan of management lists the following cultural heritage values of the place that align with National Heritage Criterion (g):

- Aboriginal communities of the area have maintained their links with the land and are still involved in the care of its important places and its management as a World Heritage listed property.
- Aboriginal people of the Willandra take great pride in the archaeological and historical record of past and continuing cultural, social and economic practices [including] the ritual care for the dead, sophisticated subsistence regimes and trade links, group traditions of spiritual links to significant sites, and the care for country and its responsible management (Page B4).

Appendix D. National Heritage listing

The Willandra Lakes Region was included on the Australian National Heritage List in May 2007. The National Heritage criteria for listing of the area are a, b, c and g, as follows:

- a. The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.²³
- b. The place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.²⁴
- c. The place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.²⁵
- d. The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.²⁶

Source: <https://www.environment.gov.au/system/files/pages/f82e987c-e5ea-423fb757-ff0b80727e57/files/10569301.pdf>

²³ This place is taken to meet this National Heritage criterion in accordance with subitem 1A(3) of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003, as the World Heritage Committee has determined that this place meets World Heritage criteria (iii) and (viii).

²⁴ This place is taken to meet this National Heritage criterion in accordance with subitem 1A(3) of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003 as the World Heritage Committee has determined that this place meets World Heritage criterion (iii).

²⁵ This place is taken to meet this National Heritage criterion in accordance with subitem 1A(3) of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003, as the World Heritage Committee has determined that this place meets World Heritage criteria (iii) and (viii).

²⁶ This place is taken to meet this National Heritage criterion in accordance with subitem 1A(3) of Schedule 3 of the Environment and Heritage Legislation Amendment Act (No.1) 2003, as the World Heritage Committee has determined that this place meets World Heritage criterion (iii).

Appendix E. Willandra Lakes Region National Heritage List Summary Statement of Significance

The Willandra Lakes Region covers 240,000 hectares of a semi-arid landscape mosaic comprising dried saline lake bed plains vegetated with saltbush communities, fringing sand dunes and woodlands with grassy understoreys in the Murray Basin area in far south-western New South Wales.

The region was inscribed on the World Heritage List for both outstanding cultural and natural universal values:

- Natural
 - as an outstanding example representing the major stages in the earth's evolutionary history; and
 - as an outstanding example representing significant ongoing geological processes.
- Cultural
 - bearing an exceptional testimony to a past civilisation.

The region contains a system of Pleistocene lakes, formed over the last two million years. Most are fringed on the eastern shore by a dune or lunette formed by the prevailing winds.

Today, the lake beds are flat plains vegetated by salt tolerant low bushes and grasses. About 10 per cent of the World Heritage area is gazetted as the Mungo National Park, which covers about two-thirds of Lake Mungo and includes the spectacular parts of the Walls of China lunette. The remaining area comprises pastoral leasehold properties.

There are five large, interconnected dry lake basins and fourteen smaller basins varying from 600 to 35 000 hectares in area. The original source for the lakes was a creek flowing from the Eastern Highlands to the Murray River. When the Willandra Billabong Creek ceased to replenish the lakes, they dried in series from south to north over a period of several thousand years, each becoming progressively more saline.

The ancient shorelines are stratified into three major layers of sediments that were deposited at different stages in the lakes' history. The earliest sediments are more than 50 000 years old and are orange-red in colour. Above are clays, clean quartz sand and soil that were deposited along the lakes' edges when the lakes were full of deep, relatively fresh water, between 50 000 and 19 000 years ago. The top layer is composed largely of wind-blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up.

Aborigines lived on the shores of the Willandra Lakes from 50,000 to 40,000 years and possibly up to 60,000 years ago. Excavations in 1968 uncovered a cremated female in the dunes of Lake Mungo. At 26 000 years old, this is believed to be the oldest cremation site in the world. In 1974, the ochred burial of a male Aborigine was found nearby.

The use of ochres for burial in Australia 30 000 years ago parallels their use in France at the same time. Radiocarbon dating established that these materials were some of the earliest evidence of modern humans in the world.

During the last Ice Age, when the lakes were full, the Mungo people camped along the lake shore taking advantage of a wide range of food, including freshwater mussels and yabbies, golden perch and Murray cod, large emus and a variety of marsupials, which probably included the now extinct super roos. They also exploited plant resources, particularly when the lakes began to dry and food was less abundant.

The human history of the region is not restricted just to an ancient episode. Evidence so far points to an extraordinary continuity of occupation over long periods of time. In the top layers of sediments there is abundant evidence of occupation over the last 10 000 years.

The vegetation in the region, sparse though it is, is typical of the semi-arid zone. It plays an important role in stabilising the landscape and hence maintaining its sediment strata and many species of native fauna.

On the dunes are found the small scrubby multi-stemmed Mallee eucalypts with an understorey of herbs and grasses. Rose wood-belah woodland is common on the sand plains. In the lake beds, several species of salt bushes are able to thrive in the saline conditions.

The remains of a large number of animals have been found in Willandra. More than fifty-five species have been identified, forty of which are no longer found in the region, and eleven are totally extinct.

Twenty-two species of mammals are currently recorded at Willandra, of which bats are the most diverse group. There are some forty species of reptiles and amphibians.

The bird life of the Willandra region is similar to that in many other semi-arid areas of Australia. Parrots, cockatoos and finches are the most conspicuous of the 137 recorded species.

Appendix F. Criteria used to justify the original Willandra Lakes World Heritage listing (1981)

The region was inscribed on the World Heritage List in October 1981 in recognition of its outstanding cultural and natural values. At that time and until the end of 2004, World Heritage sites were selected on the basis of six cultural and four natural criteria. The Willandra was listed under the following three criteria:

- Natural Criterion i—as an outstanding example representing the major stages in the earth's evolutionary history; and
- Natural Criterion ii—as an outstanding example representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.
- Cultural Criterion iii—be unique, extremely rare or of great antiquity. (AHC 1980)

Appendix G. Significant impact criteria for Australian World Heritage properties with cultural heritage values

An action is likely to have a significant impact on cultural heritage values of a World Heritage property if there is a real chance or possibility that the action will:

Historic heritage values

- permanently remove, destroy, damage or substantially alter the fabric²⁷ of a World Heritage property
- extend, renovate, refurbish or substantially alter a World Heritage property in a manner which is inconsistent with relevant values
- permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a World Heritage property
- involve activities in a World Heritage property with substantial and/or long-term impacts on its values
- involve construction of buildings or other structures within, adjacent to, or within important sight lines of, a World Heritage property which are inconsistent with relevant values, and
- make notable changes to the layout, spaces, form or species composition in a garden, landscape or setting of a World Heritage property which are inconsistent with relevant values.

Other cultural heritage values including Indigenous heritage values

- restrict or inhibit the existing use of a World Heritage property as a cultural or ceremonial site causing its values to notably diminish over time;
- permanently diminish the cultural value of a World Heritage property for a community or group to which its values relate
- alter the setting of a World Heritage property in a manner which is inconsistent with relevant values
- remove, damage, or substantially disturb cultural artefacts, or ceremonial objects, in a World Heritage property, and

²⁷ 'Fabric' means physical material including structural elements and other components, fixtures, fittings, contents and items with historic value.

- permanently damage or obscure rock art or other cultural or ceremonial features with World Heritage values.

Notes:

- The above examples are general examples and their application will depend on the individual values of each World Heritage property. Alteration or disturbance which is small in scale may have a significant impact if a feature or component of a World Heritage property embodies values that are particularly sensitive or important.
- To have a significant impact on World Heritage values, it is not necessary for an action to impact upon the whole of a World Heritage property, all of the values of a World Heritage property, or a whole value of a World Heritage property. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a World Heritage property, which embodies, manifests, shows, or contributes to the values of that property.

Appendix H. Significant impact criteria for National Heritage properties with Indigenous heritage values

An action is likely to have a significant impact on Indigenous heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Indigenous heritage values

- restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time
- permanently diminish the cultural value of a National Heritage place for an Indigenous group to which its National Heritage values relate
- alter the setting of a National Heritage place in a manner which is inconsistent with relevant values
- remove, destroy, damage or substantially disturb archeological deposits or cultural artefacts in a National Heritage place
- destroy, damage or permanently obscure rock art or other cultural or ceremonial, artefacts, features, or objects in a National Heritage place
- notably diminish the value of a National Heritage place in demonstrating creative or technical achievement
- permanently remove, destroy, damage or substantially alter Indigenous built structures in a National Heritage place, and
- involve activities in a National Heritage place with substantial and/or long-term impacts on the values of the place.

Notes:

The above examples are general examples and their application will depend on the individual values of each National Heritage place. Alteration or disturbance which is small in scale may have a significant impact if a feature or component of a National Heritage place embodies values that are particularly sensitive or important.

To have a significant impact on National Heritage values, it is not necessary for an action to impact upon the whole of a National Heritage place, all of the values of a National Heritage place, or a whole value of a National Heritage place. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a National Heritage place which embodies, manifests, shows, or contributes to the values of that place.



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

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[Summary](#)

[Details](#)

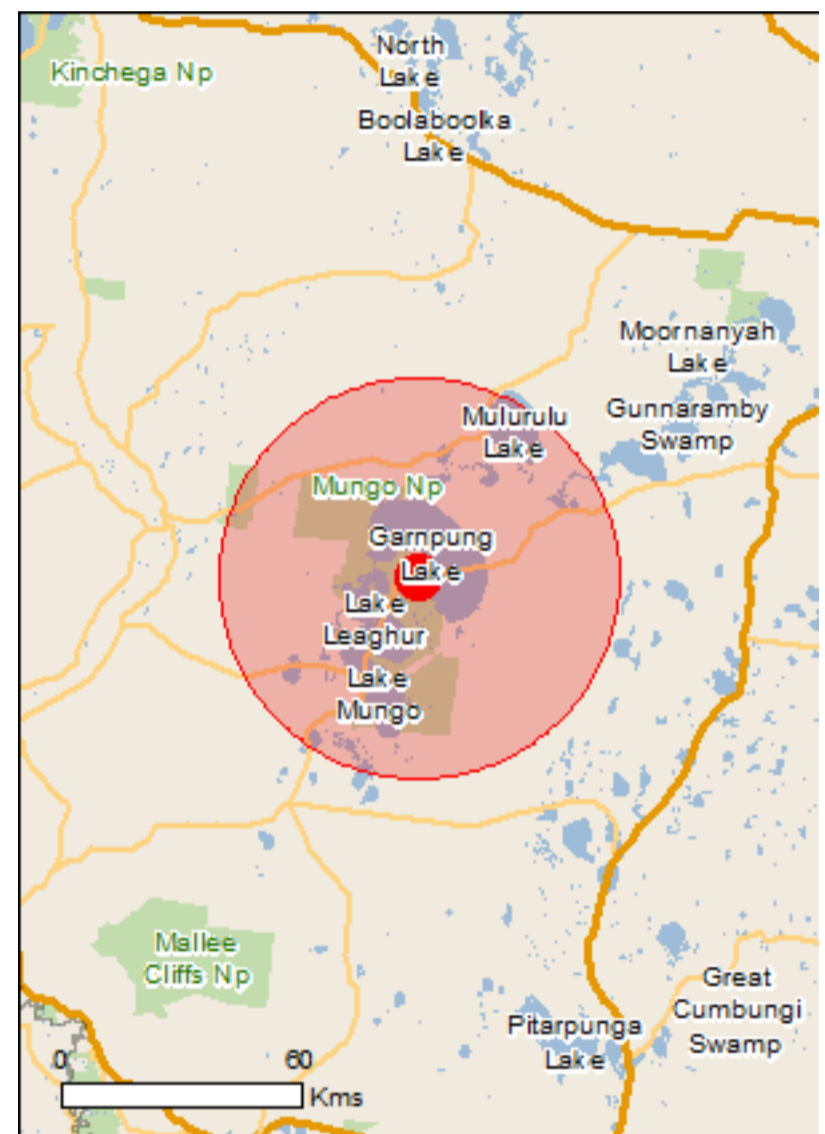
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

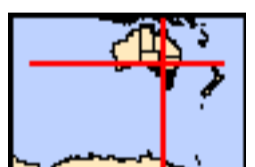
[Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
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[Coordinates](#)

Buffer: 50.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	1
National Heritage Places:	1
Wetlands of International Importance:	3
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	16
Listed Migratory Species:	8

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	3
Regional Forest Agreements:	None
Invasive Species:	16
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

World Heritage Properties [\[Resource Information \]](#)

Name	State	Status
Willandra Lakes Region	NSW	Declared property

National Heritage Properties [\[Resource Information \]](#)

Name	State	Status
Natural		
Willandra Lakes Region	NSW	Listed place

Wetlands of International Importance (Ramsar) [\[Resource Information \]](#)

Name	Proximity
Banrock station wetland complex	200 - 300km upstream
Riverland	150 - 200km upstream
The coorong, and lakes alexandrina and albert wetland	300 - 400km upstream

Listed Threatened Ecological Communities [\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area

Listed Threatened Species [\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Extinct within area
Polytelis anthoepus monarchoides Regent Parrot (eastern) [59612]	Vulnerable	Species or species habitat likely to occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area

Fish

Name	Status	Type of Presence
Maccullochella peelii Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area
Mammals		
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat known to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat may occur within area
Plants		
Brachyscome papillosa Mossgiel Daisy [6625]	Vulnerable	Species or species habitat known to occur within area
Lepidium monoplocoides Winged Pepper-cress [9190]	Endangered	Species or species habitat likely to occur within area
Solanum karsense Menindee Nightshade [7776]	Vulnerable	Species or species habitat likely to occur within area
Swainsona murrayana Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat likely to occur within area
Swainsona pyrophila Yellow Swainson-pea [56344]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species [Resource Information]		
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence area
------	------------	-----------------------

Other Matters Protected by the EPBC Act

Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
------	------------	------------------

Birds

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Mungo	NSW
Mungo	NSW
Southern Mallee	NSW

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
------	--------	------------------

Birds

<i>Alauda arvensis</i> Skylark [656]		Species or species habitat likely to occur within area
<i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<i>Passer domesticus</i> House Sparrow [405]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur within area
<i>Turdus merula</i> Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area

Mammals

<i>Canis lupus familiaris</i> Domestic Dog [82654]		Species or species habitat likely to occur within area
<i>Capra hircus</i> Goat [2]		Species or species habitat likely to occur within area
<i>Felis catus</i> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<i>Mus musculus</i> House Mouse [120]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
<p>Oryctolagus cuniculus Rabbit, European Rabbit [128]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Sus scrofa Pig [6]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Vulpes vulpes Red Fox, Fox [18]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Plants</p>		
<p>Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Carrichtera annua Ward's Weed [9511]</p>		<p>Species or species habitat may occur within area</p>
<p>Lycium ferocissimum African Boxthorn, Boxthorn [19235]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Prosopis spp. Mesquite, Algaroba [68407]</p>		<p>Species or species habitat likely to occur within area</p>

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-33.50766 143.14485

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

**Appendix 10: Statement of Heritage Impact
Redacted**

Statement of Heritage Impact

Willandra Lakes (SHR 01010)

Report by Heritage NSW

October 2020



**Premier
& Cabinet**

Statement of Heritage Impact

Willandra Lakes (SHR 01010)

Report by Heritage NSW

October 2020

Contents

1.0	Introduction	6
1.1	Purpose	6
1.2	The Site	6
1.3	Methodology	8
1.4	Authorship	8
2.0	Willandra Lakes	9
2.1	Willandra Lakes Background	9
2.2	Willandra Lakes Aboriginal Ancestors	10
2.3	Repatriation and Community Consultation	10
3.0	Proposed Work	14
3.1	Proposed Works Locations	14
3.2	Proposed Works Areas	14
3.3	Proposed Works	14
3.4	Options Considered	17
3.5	Justification for the Preferred Option	18
4.0	Planning Framework	20
4.1	Heritage Listings	20
4.2	Environment Protection and Biodiversity Conservation Act 1999	20
4.3	NSW National Parks and Wildlife Act 1974	20
4.4	Coroners Act 2009	22
4.5	Public Health Regulation 2012	22
4.6	NSW Heritage Act 1977	23
4.7	NSW Environment Planning and Assessment Act 1979	23
4.8	Crown Lands Management Act 2016	28
5.0	Key Planning and Policy Documents	29
5.1	Willandra Lakes World Heritage Region: European Cultural History Study (1985)	29
5.2	Mungo National Park Plan of Management (2006)	29
5.3	Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management (1996)	30
5.4	Willandra Lakes Region World Heritage Area Plan of Management (Draft Report)	31
5.5	Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan (2003)	31
5.6	Property Plans	32

5.7	Australian Government Policy on Indigenous Repatriation (2016)	33
5.8	UN Declaration on the rights of Indigenous peoples (UNDRIP)	33
5.9	Repatriation of Aboriginal Ancestors and Cultural Material Policy (2018)	33
6.0	Heritage Significance	34
6.1	Introduction	34
6.2	World Heritage Significance: Willandra Lakes Region	34
6.3	National Heritage Significance: Willandra Lakes Region	38
6.4	State Heritage Significance: Willandra Lakes	39
6.5	Local significance: Willandra Lakes	42
7.0	Assessment of Heritage Impacts	45
7.1	Impact on World and National Heritage Values	45
7.2	Impact on State Heritage Values	45
7.3	Impact on Archaeological Values	52
7.4	Impact on Local Heritage Values	53
8.0	Mitigation Measures	56
8.1	General Mitigation Measures	56
8.2	Site Specific Mitigation Measures	58
9.0	Conclusion	61
10.0	References	62
12.0	Appendix	64
12.1	AAG Press Release	91
12.2	Property details for the proposed work locations	92
12.3	Written Advice from Balranald Shire Council	97
12.4	Written Advice from Wentworth Shire Council	99
12.5	Written Advice from NSW National Parks & Wildlife Service	100
12.6	Written Advice from Lease Holders	102
12.7	Written Advice from Willandra Lakes Region World Heritage Advisory Committee	105
12.8	State Heritage Inventory Form	106

Cover Photograph: Mick Kelly

Acronyms

3TTGs	3 Traditional Tribal Groups
AAG	Willandra Lakes Region Aboriginal Advisory Group
CMC	WLRWHA Community Management Council (now replaced by the WLRWHAC)
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	Federal <i>Environmental Protection and Biodiversity Conservation Act 1999</i>
Mungo NP	Mungo National Park
TSAC	WLRWHA Technical and Scientific Advisory
WLRWHA	Willandra Lakes Region World Heritage Area
WLRWHAC	Willandra Lakes Region World Heritage Advisory Committee
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>

1.0 Introduction

1.1 Purpose

The purpose of this report is to prepare a Statement of Heritage Impact (SoHI) for the reburial of 108 Aboriginal Ancestors, including Mungo Man and Mungo Woman. The Aboriginal Ancestors were removed from the region from the 1960s to the 1980s. All these remains are currently held at Mungo NP and will be returned to locations close to their origin.

Nineteen of the proposed reburial locations are situated within the boundary of the *Willandra Lakes*, an item listed on the NSW State Heritage Register (SHR) (Figure 1). This Heritage Impact Statement primarily addresses the impacts of the proposal on the identified heritage significance of the SHR listing. As the proposed reburial locations are also located within a larger place that has World, National and local heritage listings, the impacts on these listings are considered.

The proposed works will fulfil the long-term aspirations of the Aboriginal community, including Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples, who have a strong and special association of the property with the Willandra Lakes and the Willandra Lakes Aboriginal Ancestors. The proposed works are aligned with the *Willandra Lakes World Heritage Area Plan of Management* (Department of Environment, Sport & Territories, 1996) and *Mungo National Park Plan of Management* (NSW National Parks and Wildlife Service, 2006).

This Heritage Impact Statement is to accompany an application to the NSW Heritage Council under Section 60 of the NSW *Heritage Act 1977* and notification to Balranald and Wentworth Shire Councils for the work associated with the proposed reburial.

1.2 The Site

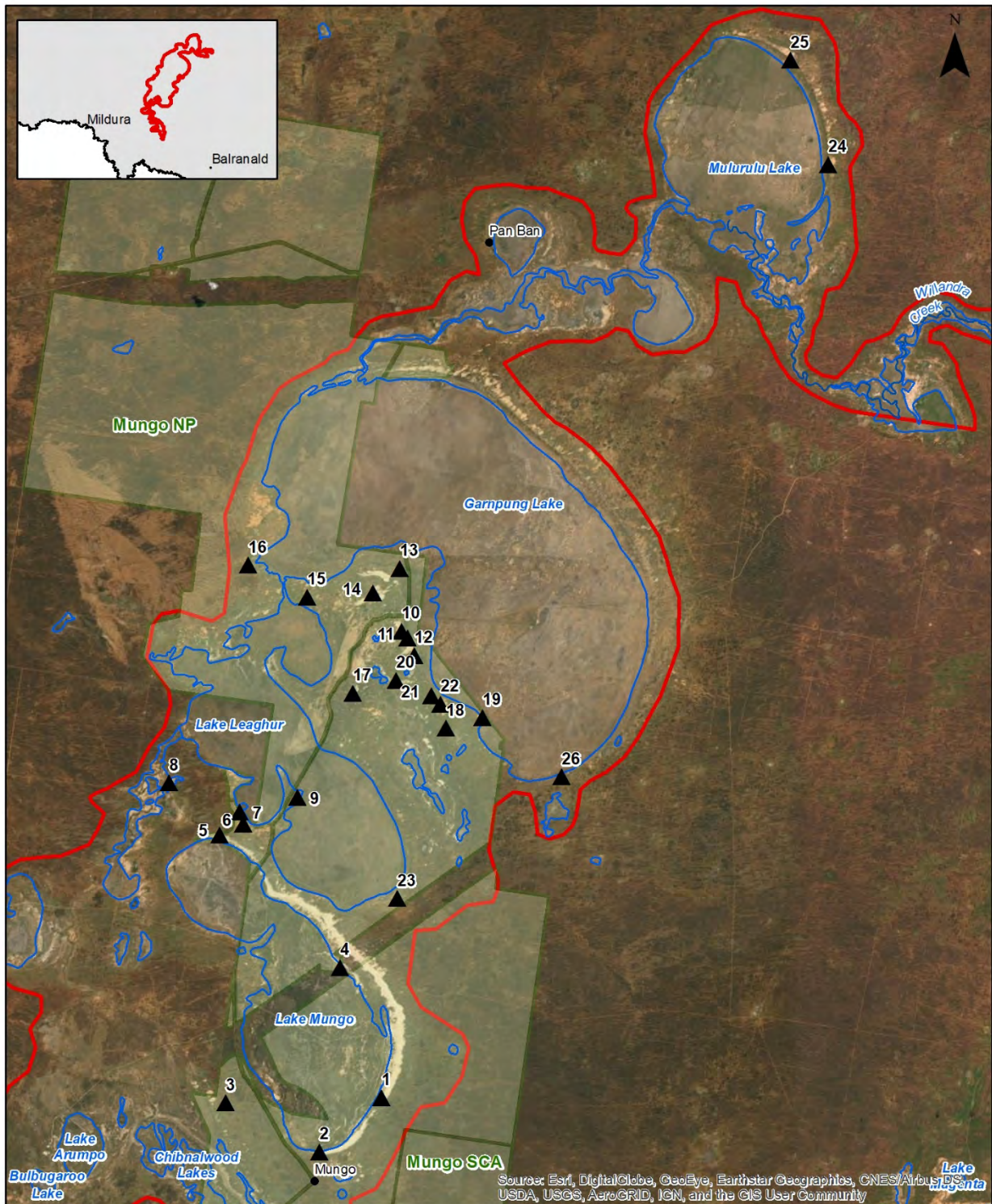
The proposed reburials will take place at 26 locations across the Willandra Lakes (see Appendix 12.1). Twenty-two of the proposed locations are on Mungo NP (Mungo NP) which is situated in the rangelands of south western New South Wales (NSW) and part of the Willandra Lakes Region World Heritage Area). Mungo NP is 110 kilometres (km) north east of the Victorian and NSW border towns of Mildura and Wentworth and 140km north west of the NSW town of Balranald.

Four of the proposed reburial locations are on private western lands leases (Gol Gol Station, Mulurulu Station, and Top Hut Station) nearby to Mungo NP, and outside the State Heritage listed area.

The location information is included in Appendix 12.3.

The appendices show a high level of detail on the reburial locations. This information is considered culturally sensitive and confidential and it is not in the public interest, or in best interests of providing safety and security for the remains, to make this information widely available.

Figure 1: The proposed reburial locations within the Willandra Lakes Region World Heritage Area



Willandra Lakes Aboriginal Ancestors Reburial Project

Datum/Projection: GCS GDA 1994

Legend

- ▲ Reburial Locations
- NPWS Estate
- World Heritage Areas

0 2.5 5 10 15 20 Kilometers

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Heritage NSW and its employees do claim liability for any
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NSW GOVERNMENT Premier & Cabinet

1.3 Methodology

This report has been prepared with consideration of the principles established by *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013).

This report relies upon a site assessment, including for historic archaeology and Aboriginal cultural heritage, conducted by Sunraysia Environmental, The Office of Environment and Heritage (now Heritage NSW, Department of Premier and Cabinet) and representatives of the Aboriginal community in 2019.

The report has been prepared with reference to the NSW OEH guidelines for the preparation of statements of heritage impact, *Statements of Heritage Impact* (Heritage Office and Department of Urban Affairs & Planning, 2002).

This report is supported by information prepared for:

Smith, A., Travers, I., & James, L. (2019). *Willandra Lakes: Assessment of impacts of reburial on matters on national environmental significance*. Unpublished report to Office of Environment & Heritage.

Sunraysia Environmental & Heritage NSW. (2020). *Willandra Lakes Reburial Project: Review of Environmental Factors*. Unpublished report to Heritage NSW.

Godden Mackay Logan. (2003). *Mungo National Park Historic Heritage: Conservation Management and Cultural Tourism Plan*. Report prepared for NSW National Parks and Wildlife Service.

The scope of this report excludes an assessment of significance.

1.4 Authorship

This report has been prepared by Ashley Edwards, South Branch, Heritage NSW, NSW Department of Premier and Cabinet.

2.0 Willandra Lakes

2.1 Willandra Lakes Background

The following background is taken from the World Heritage List information for the Willandra Lakes Region (Department of Agriculture, Water and the Environment, n.d.).

The Willandra Lakes Region is an extensive area that contains a system of ancient lakes formed over the last two million years. Aborigines lived on the shores of the lakes for at least 50,000 years, and the remains of a 40,000 year old female found in the dunes of Lake Mungo are believed to be the oldest ritual cremation site in the world.

The lakes in the region are now dry and are fringed on the eastern shore by a crescent-shaped dune, referred to as a 'lunette', that was formed by the prevailing winds.

Today, the lake beds are flat plains vegetated by salt tolerant low bushes and grasses. Part of the World Heritage property is gazetted as the Mungo NP, which covers about two-thirds of Lake Mungo and includes the spectacular Walls of China lunette. The remaining parts of the World Heritage property comprises pastoral leasehold properties.

There are five large, interconnected, dry lake basins and 14 smaller basins varying in area from 6 to 350 km². The original source for the lakes was a creek flowing from the Eastern Highlands to the Murray River. When the Willandra Billabong Creek ceased to replenish the lakes, they dried in series from south to north over a period of several thousand years, each becoming progressively more saline.

The lunettes are stratified into layers of sediments that were deposited at different stages in the lakes' history.

The lakes were full of deep, relatively fresh water for a period of 30,000 years that came to an end 19,000 years ago. The earliest lunette sediments are more than 50,000 years old and are orange-red in colour. Above are clays, clean quartz sand and soil that were deposited along the lakes' edges when the lakes were full. The top layer is composed largely of wind-blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up.

Indigenous people have lived in the Willandra Lakes Region for at least 50,000 years. Excavations in 1968 uncovered the cremated remains of 'Mungo Lady' in the dunes of Lake Mungo. At 40,000 years old, this is believed to be the oldest site of ritual cremation in the world. In 1974, the ochred burial of a male Aborigine was found nearby. The skeleton, known as 'Mungo Man', is also believed to be around 40,000 years old.

In 2003, nearly 460 fossilised human footprints were discovered, the largest collection of its kind in the world. The prints were made by children, adolescents and adults 19,000 to 23,000 years ago in wet clay. The clay, containing calcium carbonate, hardened like concrete, and a layer of clay and sand protected the prints.

During the last Ice Age, when the lakes were full, the Mungo people camped along the lake shore, taking advantage of a wide range of food including freshwater mussels, yabbies, golden perch and Murray cod, large emus and a variety of marsupials, which probably included the now extinct giant kangaroos. They also exploited plant resources, particularly when the lakes began to dry and food was less abundant.

The human history of the region is not restricted just to an ancient episode. Evidence so far points to an extraordinary continuity of occupation over long periods of time. In the top layers of sediments there is abundant evidence of occupation over the last 10,000 years.

The vegetation in the region, sparse though it is, is typical of the semi-arid zone. It plays an important role in stabilising the landscape and hence maintaining its sediment strata and many species of native fauna.

Small scrubby multi-stemmed mallee eucalypts are found on the dunes, with an understorey of herbs and grasses. Rosewood-belah woodland is common on the sand plains. In the lake beds, several species of saltbush are able to thrive in the saline conditions.

The remains of a large number of animals have been found in the Willandra Lakes Region. More than 55 species have been identified, 40 of which are no longer found in the region, and 11 of which are extinct.

Twenty-two species of mammals are currently recorded. Bats are the most diverse group, and there are some 40 species of reptiles and amphibians.

The bird life of the Willandra Lakes Region is similar to that in many other semiarid areas of Australia. Parrots, cockatoos and finches are the most conspicuous of the 137 recorded species.

Policy coordination and funding are joint responsibilities of the State and Commonwealth with advice from the Willandra Lakes Region World Area Advisory Council, and the Willandra Lakes Region World Area Aboriginal Advisory Group. Day-to-day management of the World Heritage area is the responsibility of the New South Wales National Parks and Wildlife Service.

2.2 Willandra Lakes Aboriginal Ancestors

Between 1968 and the early 1980s some 108 Willandra Lakes Aboriginal Ancestors, including the internationally renowned remains of Mungo Woman and Mungo Man, were removed from Mungo NP and the Willandra Lakes and taken to the Australian National University for study (Bowler, Jones, Allen, & Thorne, 1970; Mulvaney, 1972). See also Webb (2018; 1989) for a detailed inventory of the collection. The discovery and subsequent recognition of the great age (now estimated at ca. 41,000 years) of Mungo Woman and Mungo Man were fundamental in establishing the cultural heritage significance of the Willandra Lakes. This recognition formed a part of the justification for the nomination of the Willandra Lakes to the World Heritage List (Australian Heritage Commission, 1980).

2.3 Repatriation and Community Consultation

2.3.1 Lobbying for the Return of the Willandra Lakes Aboriginal Ancestors

Lobbying for the return and reburial of collected and removed ancestral Aboriginal remains gained intensity across Australia in the 1980s. At the first meeting of the Willandra Lakes World Heritage Area Consultative Committee in 1984, a request from Aboriginal Elders for the repatriation of removed Aboriginal Ancestors was tabled.

Concurrently with this local approach, the Australian Archaeological Association, without any consultation with Aboriginal people from the region, wrote to the Minister for Planning and Environment in 1984 to propose an underground keeping place at Mungo for the Mungo skeletal remains. Some Aboriginal people were prepared to consider this vault idea because they thought special protection from theft and vandalism would be needed when the famous skeletal remains were brought back to Mungo (Western Heritage Group, 2017).

Mungo Woman was repatriated to Mungo in January 1992 and her remains have been held in safekeeping since that time, awaiting the return of the rest of the Willandra ancestors.

The topic of repatriation has been discussed extensively between 1984 and 2016. Aboriginal community consultation on the specific topic of reburial vs. Keeping Place was undertaken and documented in detail in between 1985 and 1991 (Western Heritage Group, 2017). Providing a safe, secure and long-term reburial location is an issue that was repeated by numerous community members who were concerned about safety, theft and the idea that reburied remains could fall into 'restless hands'. A 1980s study, The Mungo Report (Western Heritage Group, 2017) undertook extensive consultation on these matters, and a range of quotes from the report are presented below.

I reckon they should bury them back in the sand and have people to keep an eye on them.

Irene Mitchell (Dareton, 1986)

About the vault and the skeletons down in Canberra: if we get them and bring them back and bury them in the ground, somebody might come out, dig them up and take them away, and we'll never see them again.

Badger Bates (Broken Hill, 1986)

I think they should be put in a fibreglass or plastic sarcophagus in the exact place they found them. Then if others want to study them, they can be dug up. But put it inside concrete to make it too heavy to steal.

Max Harris (Griffith, 1990)

I'd like to build a centre out there, a nice Keeping Place for the Mungo Lady. A Keeping Place would be better than burying them because it could fall into restless hands, or development could damage it - they're talking about building roads out there. I want those remains safe in one place where they can't be disturbed. It's like a treasure, because it's a very, very vital link.

Alice Kelly (Balranald, 1987)

They should be put back where they belong. Not necessarily in the same spot, because you've got to think of security. We don't want them turning up in a museum in Europe in ten years. No monument. Because we don't know the name of the person.

Eric Ferguson (Dareton, 1987)

They should be brought back and re-buried and protected for all time so that they'll never be interfered with again. By respecting our dead the government will show that they'll respect our living.

Stewart Murray (Melbourne, 1986)

In the end they should bring them back and put it under security. If you put it in the earth, somebody's going to mess with it. You never know, some more clever person might take it overseas, and no Aboriginal person would want that to happen.

Isobel Bennett (Menindee, 1987)

I think there should be some way that the burials could be guarded from erosion - because they could be guarded with something around them, protected so the wind wouldn't blow

them away. And, you know, if it's done properly, it could be something that's put around deep down in the soil, so that the sand wouldn't blow. Somebody else could have another idea, but that's my idea.

Elsie Jones (Wilcannia, 1986)

Mrs. Alice Bugmy (Aboriginal interests) says Mr. Clarke should go to Aboriginal communities first and ascertain what their requirements were in respect of the intended use of the bones and their return to Mungo. Dr. Hope says consideration was being given to the construction of a vault at Mungo for the interment of the bones. This would be underground but in a situation in which they could be brought up again for further study should this be needed. Mr. Bates was adamant that there should be no display of Aboriginal remains but that they should go back into the vault to be constructed at Mungo. However, there was currently some disagreement amongst the Aboriginal community as to whether they should go back in the ground to their original sites. There could be a problem of later exposure by deflation by wind and water erosion.

Minutes of the WLR Consultative Committee 14th June 1984

2.3.2 History of Discussions around Repatriation and Security

Some 70 Willandra World Heritage meetings have discussed repatriation, a research centre and reburial (Williams & Associates, 2016; Williams, 2016).

The Three Traditional Tribal Elders Council (3TTGs) (representing Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples) were the main advisory and consultation group forum for the Willandra Lakes region from the mid 1990's to 2013. In 2014, the Willandra Repatriation Traditional Custodians group (WRTC) was formed by the Heritage Division of what was then the Office of Environment and Heritage (OEH) (now Heritage, Department of Premier and Cabinet) to focus specifically on, and direct, the repatriation of the Willandra Lakes Aboriginal Ancestors.

A repatriation Forum was held in February 2015 and brought together a wide range of scientists and traditional custodians (Williams & Associates, 2015). In November 2015, the Aboriginal Ancestors collection was repackaged and moved from the Australian National University to the Museum of Australia. At this time the WRTC set a two-year time frame to complete the transfer from Canberra to Mungo, which set November 2017 as the deadline.

In November 2016, a second Forum was held and options for repatriation and reburial outlined (Williams & Associates, 2016). This was followed by a third Forum in April 2017 that presented options for repatriation. Consensus was made to return all Aboriginal Ancestors to Mungo NP (Williams & Associates, 2017), and on 17 November 2017, the Willandra Lakes Aboriginal Ancestors collection was returned to Mungo.

The role and purpose of the WRTC was completed with the return of the Willandra Lakes Aboriginal Ancestors to Mungo in 2017 and this committee has ceased to meet.

2.3.3 The Decision to Rebury the Willandra Lakes Aboriginal Ancestors

The Willandra Lakes Region Aboriginal Advisory Group (AAG) is a community elected Group and the peak Aboriginal body for the Willandra Lakes Region that followed on from the 3TTG. The purpose of the AAG is to provide advice on Aboriginal Cultural Heritage matters within the World Heritage boundaries. It can also be consulted on matters within Mungo NP.

At a meeting of the AAG on the 6 November 2018 the following motion was passed:

In exercising our inalienable rights and as Traditional Owners the Willandra Lakes Region World Heritage Area Aboriginal Advisory Group as duly elected representatives of the 3TTGs unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3 Traditional Tribal Group representative bodies of the Willandra Lakes Region World Heritage Area over the last 40 years.

The proposed reburial was made public via a formal press release on the 18th December 2018. The AAG press release is provided in Appendix 12.2.

2.3.4 Preparation of the Draft REF and Engagement with the Aboriginal People of the Willandra Lakes

The AAG discussed the process of reburial in more detail at their March 2019 meeting, and from 1-5 April 2019, representatives of the AAG/3TTGs were part of the field assessment team which fine-tuned the location of assessment sites selected for reburials and informed the Review of Environmental Factors (REF) (Sunraysia Environmental & Heritage NSW, 2020).

In August 2019, a draft REF was made available to a wide range of more than 200 individual Willandra stakeholders. Four weeks was allowed for comment. These stakeholders included a wide range of interest groups such as the previous Community Management Council (CMC) and Technical and Scientific Advisory Committee (TSAC) members, former World Heritage Executive Officers, universities, museums, academics, AAG members, Local Aboriginal Land Councils, Aboriginal organisations, native title holders, Elders, community members and NPWS Advisory committee members. Researchers from universities and institutions in Australia, New Zealand and the United States were also included.

The draft REF was also made available to the new Willandra Lakes Region World Heritage Advisory Committee. This Committee held its first meeting in April 2019 and the committee received a briefing on this project at this first meeting and all members have been kept informed of the draft REF and were provided opportunity to comment. A letter in support of the proposed reburial from the Advisory Committee is presented in Appendix 12.7.

The draft REF was edited in light of the comments received during this phase of consultation.

3.0 Proposed Work

3.1 Proposed Works Locations

The proposal involves the reburial of 105 Aboriginal Ancestors at 26 sites close to their point of origin (Appendix 12.1). Twenty-two assessment sites (104 reburials) will be in Mungo NP and within the State Heritage listed area while four sites (4 reburials) will be on grazing lands on three Western Lands Lease properties near the park.

Each of the 26 proposed works locations were informed by a site assessment of historical heritage, Aboriginal cultural heritage and ecological values (Sunraysia Environmental & Heritage NSW, 2020; Heritage NSW, 2020). The remains will not be returned to their specific original locations as many of these are not known and/or are in eroded and actively deflating sandy sediments that are not stable enough to ensure long term conservation of the remains. The reburial locations that have been chosen are nearby in uneroded, vegetated and level surfaces; these areas are expected to have limited erosion potential and therefore improved conservation potential.

3.2 Proposed Works Areas

The total impact area of the proposed works will be approximately 28.5 square metres (m²). This assumes each grave disturbs an area 50 centimetres (cm) by 1 metre (m) for small bundles and 1 metre by 2 metres for larger bundles, which allows for the temporary placement of soil and vegetation (if present) for backfilling.

The individual impact areas at each grave will vary considerably: many remains consist only of a single bone fragment and will require a very small hole that will be dug with an auger. Several remains (2) are of more complete skeletons and will require a larger pit. Most of the 26 burial sites will contain between one and three individuals. However, there are four one-hectare sites that will have 10, 9, 14 and 29 sets of Aboriginal Ancestors respectively to be reburied.

For small bundles of Aboriginal Ancestors, small burial pits will be excavated with surface dimensions approximately 30cm square and at least 60cm deep, using shovel and crowbar, ensuring subsoil is separated from the heaped topsoil and the mulch (if present).

For larger bundles of Aboriginal Ancestors, including three near complete skeletons in the collection, larger burial pits (approximately 50cm by 1m) will be excavated using a small backhoe.

3.3 Proposed Works

The proposed works are a series of reburial ceremonies including the excavation of graves and the reburial of the previously repatriated Willandra Lakes Aboriginal Ancestors (also known as Aboriginal Ancestral remains or Aboriginal Remains) within the Willandra Lakes area. Each reburial will be undertaken with a small private cultural ceremony as the remains are re-interred in the Willandra Lakes landscape. The reburial is the final stage in the return of the repatriated Aboriginal Ancestors collection currently held in secure storage at Mungo NP. The application for reburial is being submitted by Heritage NSW and NPWS on behalf of the Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples (represented by the Willandra Lakes Region AAG).

Aboriginal Remains are defined by the NPW Act as the body or the remains of the body of a deceased Aboriginal person, but does not include the remains of a body buried in a cemetery in which non-Aboriginal persons are also buried, or remains of a body that must be dealt with in accordance with a law of the State relating to medical treatment or the examination, for forensic or other purposes, of the bodies of deceased persons (see Section 5 of the NPW Act).

The only materials involved will be the Aboriginal Ancestors. These will be transported in boxes in a minimum number of vehicles to convey them from the Mungo Keeping Place to respective sites on the day each reburial occurs. The boxes may be taken offsite on completion, or the Elders may choose to burn them on site. Vehicles will be parked away from reburial site and remain on existing tracks where possible.

A small party of Aboriginal Elders representing the AAG will be present for the reburials. The works will be directed by Heritage Officers from Heritage NSW (Department of Premier & Cabinet) and the work will not constitute harm or desecration under the NPW Act (Section 87A(a)) as the Officers will be principally involved in the administration of the NPW Act. The individual reburial sites will not be marked or identified on-site in any way.

The steps involved in the works will be:

- select a suitable grave site for the reburial which is not within the dripline of trees or close to shrubs; targeting the most stable areas away from artefacts as close to the previously assessed grid co-ordinate as possible
- rake off any surface mulch/seed (if present) to one side from an area approximately 1 metre diameter
- remove topsoil from the area to be excavated using a shovel and rake
- for small bundles of Aboriginal Ancestors, a hole will be excavated with surface dimensions approximately 30cm square and at least 60cm deep, using shovel/crowbar or auger, ensuring subsoil is separated from the heaped topsoil and the mulch (if present)
- for larger bundles of Aboriginal Ancestors, including two near complete skeletons in the collection, larger burial pits (approximately 50cm by 1m) will be excavated using a small backhoe.
- place the remains in the hole and cover with subsoil
- compact the upper fill material sufficiently to prevent subsequent settlement
- summarise topsoil over the disturbed area.

In instances where the remains to be reburied consist of only a fragment or two, a soil auger instead of a shovel may be used.

The proposed works are summarised in Table 1.

Table 1: Summary of proposed works at each reburial location

Location	Name	No. of Burials	Method	Works Area per grave	Total Impact Area m²
1	WOC-003	1	Mechanical Excavation	50cm by 1m	0.5 m ²
2	WOC-001	11	Manual & Mechanical Excavation	50cm by 50cm (10) 75cm by 2m (1)	2.5 m ² 1.5 m ²
3	MA-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
4	WOC-005, WOC-145	2	Manual Excavation	50cm by 50cm	0.5 m ²
5	WOC-152	4	Manual Excavation	50cm by 50cm	1 m ²
6	LW-004	2	Manual Excavation	50cm by 50cm	0.5 m ²
7	LW-009	2	Manual Excavation	50cm by 50cm	0.5 m ²
8	WCW-006	1	Manual Excavation	50cm by 50cm	0.25 m ²
9	LP-001	5	Manual Excavation	50cm by 50cm	1.25 m ²
10	GL-024	9	Manual Excavation	50cm by 50cm	2.25 m ²
11	GL-013	14	Manual Excavation	50cm by 50cm	3.5 m ²
12	GL-020	3	Manual Excavation	50cm by 50cm	0.75 m ²
13	GL-001	2	Manual Excavation	50cm by 50cm	0.5 m ²
14	GL-005	1	Manual Excavation	50cm by 50cm	0.25 m ²
15	GL-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
16	GL-026	4	Manual Excavation	50cm by 50cm	1 m ²
17	GL-028	1	Manual Excavation	50cm by 50cm	0.25 m ²
18	GG-025	1	Manual Excavation	50cm by 50cm	0.25 m ²
19	GG-018	2	Manual Excavation	50cm by 50cm	0.5 m ²
20	GL-025	3	Manual Excavation	50cm by 50cm	0.75 m ²
21	GG-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
22	GG-016	29	Manual Excavation	50cm by 50cm	7.25 m ²
23	ML-003	5	Manual Excavation	50cm by 50cm	0.25 m ²
24	ME-001	1	Manual Excavation	50cm by 50cm	1.25 m ²
25	ME-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
26	GS-010	1	Manual Excavation	50cm by 50cm	0.25 m ²
Total		108	Total Impact Area		28.5 m²

3.4 Options Considered

Proposals for the alternative management of the Willandra Lakes Aboriginal Ancestors began in 1984 when the Australian Archaeological Association wrote to the Minister for Planning and Environment to propose an underground keeping place at Mungo for the Mungo skeletal remains.

In 2003 a study and plan were developed by the 3TTG Elders Council. This plan, *Keeping Place, Education and Research Centre* (KPERC) (Australian Archaeological Survey Consultants Ltd, 2004) outlined details of a KPERC. On this basis six alternatives, involving placing the Willandra Lakes Aboriginal Ancestors permanently in storage, were developed between 2003 and 2015. Some of the alternatives were accompanied by concept designs, costings and detailed design briefs, others were more conceptual.

A sample of one alternative view that formed part of these discussions, and as presented by John Mulvaney, is repeated below:

I'd just like to say that Mungo Man and Mungo Woman are among the world's earliest proof that human kind conducted a level of complex burials, one was a complex cremation, the other was a complex burial of a corpse that was covered with ochre and carried in from remote places over 40k years ago. There is just so much of significance to the history to Aboriginal people and globally humankind to those remains.

Finally, I wonder if indigenous people have considered what is the nature of a Keeping Place? I understood the Keeping Place was underground and was totally locked and could only be entered through permission of Aboriginal people.

If it was associated with this building we are talking about [i.e. Mungo Centre 2010] it could be underground, I think perhaps incorporating a sandy floor and so on symbolically reproducing the past but only reached through a passageway, an underground passageway of some length and in fact perhaps wide enough to have a doorway into the cellar where a particular ceremony could be performed. So that it really is reproducing burial, it is satisfying the isolation of these burials from outside contact and yet preserving them for future.

I just hope that some of those thoughts might be kept in mind because by reburying them just out in the open at some chosen spot, in a number of decades from now they're going to be eroded all over again. This way keeps them in perpetuity.

Emeritus Professor John Mulvaney, Mungo Centre planning workshop, La Trobe University Mildura Campus, 27th November, 2010.

A detailed review of these previous alternatives for the construction of a Keeping Place was commissioned in 2016 (Williams & Associates, 2016). These alternatives were explored in detail in, and at length, in community forums (Williams & Associates, 2016; 2017). In these discussions a Keeping Place was considered along the lines of the structure referred to by John Mulvaney, with the favoured sites being at Joulni and/or Leaghur.

The option for the construction of a Keeping Place has not been pursued by the AAG and has not been adopted as the AAG preferred course of action. Reburial of the Willandra Lakes Aboriginal Ancestors is the preferred option as this is consistent with past sentiments and views expressed by many Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years (Western Heritage Group, 2017).

3.5 Justification for the Preferred Option

A recurring point raised by the Willandra Lakes Aboriginal community since 1984 (Western Heritage Group, 2017; Williams & Associates, 2016) has been the desire to return the Willandra Lakes Aboriginal Ancestors to the region. Discussions focused on development of a Keeping Place between 2004 and 2015 but the preferred option for the AAG, who have agency of Aboriginal Cultural Heritage in the Willandra Lakes Region, is to rebury the Aboriginal Ancestors as close as practicable to their original find site, while ensuring that reburial is on land of low erosion hazard to avoid re-exposure in the long term.

The overall governance or decision-making process of the proposed activity is directly linked to the First repatriation workshop (Williams & Associates, 2015) where the following outcome was recorded:

We the Willandra Repatriation Traditional Custodians and 3TTG should make all the decisions on the repatriation process. We want the ancestral remains brought home as soon as possible and in a culturally appropriate manner.

In support of this view the following points are emphasised:

- The proposed activity and reburial of Aboriginal Ancestors is consistent with the NSW Repatriation of Aboriginal Ancestors and cultural material Policy (2018), which states in part:

The repatriation of Aboriginal cultural material by a Heritage Division officer or under the direction of a Heritage Division officer is considered to be 'conservation works'.

- This work will not constitute harm or desecration under the NPW Act (Section 87A(a)) provided that the Heritage Division officer is principally involved in the administration of the NPW Act.
- The activity is consistent with the 1996 Plan of Management for the WLRWHA which clearly articulated the long-term aspiration of the Aboriginal community that the rest of the Willandra Lakes Aboriginal Ancestors should also be returned. This plan requires the development of strategies and associated actions to... 'locate and manage all human remains and other archaeological material to the satisfaction of the three Traditional Tribal Groups' (Strategy 33.1) (Department of Environment, Sport & Territories, 1996).
- The proposed activity is consistent with the *Australian Government Policy on Indigenous Repatriation* (Department of Communications and the Arts, 2016) which states in part:

Communities of origin are the rightful custodians of their ancestral remains and should be consulted prior to any return. They should determine when and how repatriation should be undertaken. Accordingly, except where otherwise determined by the local community, the Australia Government will seek the unconditional return of ancestral remains and associated notes and data (Department of Communications and the Arts, 2016, p. 5).
- The Indigenous Repatriation policy also states that Aboriginal and Torres Strait Islander peoples have a responsibility to their ancestors to bring them back to country according to the Traditional Owners' customs and laws' and that 'ancestral remains should be treated with respect and dignity at all times by all involved (Department of Communications and the Arts, 2016, p. 5).
- The proposed activity is consistent with the UN Declaration on the rights of Indigenous peoples (UNDRIP). The Australia Government endorsed this Declaration in 2009. UNDRIP confirms the application of existing human rights instruments to Indigenous peoples, including freedom from discrimination, and the right to self-determination and to pursue their cultural development.

- Furthermore, whilst not directly undertaken or proposed by an archaeologist, the activity is consistent with the Australian Archaeological Association Code of Ethics, specifically;
 - Members acknowledge the importance of cultural heritage to Indigenous communities.
 - Members acknowledge the special importance to Indigenous peoples of ancestral remains and objects and sites associated with such remains. Members will treat such remains with respect.
 - Members acknowledge Indigenous approaches to the interpretation of cultural heritage and to its conservation.

4.0 Planning Framework

4.1 Heritage Listings

The proposed works areas are:

- included within the boundary of the *Willandra Lakes Region* inscribed on the World Heritage List
- contained within the boundary of *Willandra Lakes Region* which is included on the National Heritage List
- encompassed by the curtilage of *Willandra Lakes*, a heritage item listed on the NSW State Heritage Register (19 locations only; see Appendix 12.3).
- included within the curtilage of *Willandra Lakes*, a heritage item listed in the Heritage Schedule of Wentworth Local Environmental Plan (LEP) 2011 and Balranald LEP 2010
- encompassed by the *Willandra Lakes World Heritage Area Heritage Conservation Area* listed in the Heritage Schedule of Wentworth Local Environmental Plan 2011.

4.2 Environment Protection and Biodiversity Conservation Act 1999

World and National Heritage properties in Australia are 'matters of national environmental significance' protected and managed under national legislation, the *Environment Protection and Biodiversity Conservation Act 1999*. This Act is the statutory instrument for implementing Australia's obligations under a number of multilateral environmental agreements including the World Heritage Convention. Approval under the EPBC Act is required for any action occurring within or outside a declared World Heritage property that has, will have, or is likely to have a significant impact on the World or National Heritage values of the property. Substantial penalties apply for taking such an action without approval.

Previously, an EPBC Act Referral (2017/8040) was assessed by the Department of the Environment and Energy on 31 October 2017 for the repatriation of the Willandra Lakes Aboriginal Ancestors from the National Museum of Australia to Mungo NP, and the storage and keeping of the Willandra Lakes Aboriginal Ancestors at the Mungo Keeping Place.

This SoHI is prepared in conjunction with an EPBC Act Referral Application for the proposed reburial and will be submitted with that referral to the Department of the Environment and Energy.

4.3 NSW National Parks and Wildlife Act 1974

The impacts of the proposed works on Aboriginal cultural heritage under the NSW *National Parks and Wildlife Act 1974* (NPW Act) have been considered in a recent Review of Environmental Factors prepared by Sunraysia Environmental and Heritage NSW (2020). Relevant points are duplicated here.

4.3.1 Objectives of the Act and Management Principles for National Parks

The proposed works are consistent with the broad objects of the NPW Act (Section 2A), including:

- (b) the conservation of objects, places or features (including biological biodiversity) of cultural value within the landscape, including:
 - (i) places, objects and features of significance to Aboriginal people,
- (c) fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation,

- (d) providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.

The proposed works are consistent with the following management principles for national parks:

- (1) The purpose of reserving land as a national park is to identify, protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features for landscape or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor or tourist use and enjoyment so as to enable those areas to be managed in accordance with subsection (2).
- (2) A national park is to be managed in accordance with the following principles:
 - b) The conservation of places, objects, features and landscapes of cultural value.

Comment

The values and significance of the cultural landscape of the Willandra Lakes will be rehabilitated and recovered by the reburial of Willandra Lakes Aboriginal Ancestors. The proposed reburial will achieve a rehabilitation of values that are currently incomplete/reduced and would reunite the attributes of World Heritage value with the place with which they are associated (Context, 2014). Therefore, the proposed activity may be considered to conserve and even enhance its cultural values and landscapes. Similarly, the Aboriginal objects (Aboriginal Ancestors), will be reunited with their original landscape. Both the Aboriginal Ancestors and the cultural landscape are of great significance to Aboriginal people.

The proposed reburial will also foster public appreciation and understanding of the association that the Aboriginal community have with the cultural heritage and cultural landscapes of the Willandra Lakes and the importance of their conservation.

The proposed reburial will take place on land reserved as National Park and Crown Land leased to private leasees. The proposed reburial is consistent with the management principles for national parks as discussed below.

The Aboriginal Ancestors have been returned to the Aboriginal community (represented by the AAG) by the Australian National University and the National Museum of Australia so that they can be treated with respect in accordance with their customs and beliefs rather than being available for scientific research. The AAG now wishes the Aboriginal Ancestors to be reburied at Willandra Lakes. The reburial of the Aboriginal Ancestors fulfils the wishes of the AAG and also gives effect to the public interest in the protection of the cultural heritage values of Mungo NP which are restored and enhanced by the reburial.

4.3.2 Harm Provisions

Under Section 86(1)&(2) of the NPW Act, a person must not harm an Aboriginal object or harm or desecrate an object that the person knows is an Aboriginal object.

The NPW Act defines harm to an object or place as any act or omission that:

- (a) destroys, defaces or damages the object or place, or
- (b) in relation to an object—moves the object from the land on which it had been situated, or
- (c) is specified by the regulations, or
- (d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c),
- (e) but does not include any act or omission that:
- (f) desecrates the object or place, or

(g) is trivial or negligible.

Under Section 87A of the NPW Act, Section 86 (1) to (4) do not apply in relation to:

(a) work for the conservation or protection of an Aboriginal object or place that is carried out by an officer of the Service or a person under the direction of such an officer.

Section 87B of the NPW Act exempts Aboriginal people from the provisions of Section 86 (1), (2) and (4) to the extent to which those provisions would, but for this section, prohibit Aboriginal people from carrying out traditional cultural activities (except commercial activities). This section applies to and in respect of any dependants (whether Aboriginal or not) of Aboriginal people in the same way as it applies to and in respect of Aboriginal people.

Comment

The proposed works are exempt under Sections 87A and 87B of the NPW Act. The proposed works are conservation works and will not constitute harm or desecration under the NPW Act (Section 87A(a)) as an officer from NSW Heritage is principally involved in the supervision of the works under the NPW Act. The burying ancestors is a traditional Aboriginal activity. Conducting traditional Aboriginal cultural activities (but not commercial activities) will not constitute harm or desecration under Section 87B of the NPW Act. Therefore, an Aboriginal heritage impact permit (AHIP) is not required for the proposed works.

4.4 Coroners Act 2009

To dispose of Aboriginal Ancestors under 100 years in NSW, an appropriate authorisation for the disposal of the Aboriginal Ancestors needs to be obtained. This can be an order made by a coroner under Section 100 and 101 of the *Coroners Act 2009* authorising the disposal of the Aboriginal Ancestors. However, under Chapter 3, Part 3.1 (Section 19) of the *Coroners Act 2009*, a coroner does not have jurisdiction to hold an inquest concerning a death or suspected death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

It is NSW government policy (*OEH Repatriation of Aboriginal Ancestors and cultural material Policy*, 2018, p. viii) that re-burial of Aboriginal Ancestors older than 100 years do not require authorisation from the Coroner (ss 19, 100 and 101 of the *Coroners Act*). The archaeological context, extent of mineralization, and results from a wider variety of absolute dating samples indicates that all the Willandra Lakes Aboriginal Ancestors to be reburied are substantially more than 100 years old.

4.5 Public Health Regulation 2012

OEH Repatriation of Aboriginal Ancestors and cultural material Policy, 2018 requires that if, at the Aboriginal community's request, OEH is assisting in the burial of Aboriginal Ancestors on private or Crown land, then approval from the local council and the landowner consent must be obtained and cl. 66 of the *Public Health Regulation 2012* must be followed.

This proposed activity was referred to the local councils, NPWS, Crown Lands and the lease holders for approval. Responses from the councils and NPWS are provided in Appendices 12.4, 12.5, 12.6, 12.7 and 12.8.

4.6 NSW Heritage Act 1977

The NSW *Heritage Act 1977* aims to promote understanding and conservation of the state's heritage, provide for identifying and registering items of state heritage significance, provide for the interim protection of items, pending an assessment of their state heritage significance, encourage the adaptive reuse of items of state heritage significance, and help owners conserve items of state heritage significance.

The NSW Heritage Act established the State Heritage Register, which consists of places and objects that contribute to the community's sense of identity, and which have been identified for protection and interpretation for future generations. It includes archaeological sites, built structures (bridges, buildings, monuments and industrial heritage), areas (gardens, streets, conservation precincts, landscapes), individual objects and shipwrecks.

When a place is listed on the State Heritage Register (SHR), Section 60 of the NSW Heritage Act requires the approval of the Heritage Council of NSW for any major work. The Heritage Council works to ensure that any changes or additions or new buildings on the site of a SHR item do not detract from the heritage significance of the place.

The Heritage Act also affords automatic statutory protection to relics (or land known or likely to contain relics), unless there is a relevant gazetted exception. The Act defines a 'relic' as:

any deposit, object or material evidence relating to the settlement of the area that comprises NSW, not being an Aboriginal settlement, and which is 50 or more years old.

A permit issued by the Heritage Council is required where the disturbance or excavation of land is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.

Comment

The WLRWHA is listed on the State Heritage Register (SHR No 01010), Gazette Date 2/4/1999, Local Government Area: Balranald. However, the identified SHR area is not as extensive as the World Heritage boundary and takes in only 19 of the 26 identified activity locations. The 19 locations in the SHR are in very remote locations within Mungo NP.

A Section 60 application for the proposed works is being submitted to Heritage NSW together with this Statement of Heritage Impacts. There is no built heritage, relics or areas likely to contain relics within the proposed works areas. Monuments and grave markers will not be placed on the site and the works will not be in conflict with the character of the place.

An exemption under Section 57(2) does not apply as landscape features and a place of Aboriginal heritage significance as described in the SHR Statement of Significance above will be disturbed.

An impact assessment on the State Heritage Values of the proposed works is presented in Section 7.2.

4.7 NSW Environment Planning and Assessment Act 1979

A Review of Environmental Factors (REF) has been prepared for the proposed works on the lands reserved as Mungo NP under the *National Parks and Wildlife Act 1974* (NPW Act) and on the adjoining western lands leases (as private lands). The REF addresses the environmental impact assessment requirements for activities subject to Division 5.1 (Part 5) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). As this project is recognised as an activity for the purpose of Division 5.1 (Part 5) of that Act the follow planning framework applies.

4.7.1 Environmental Planning and Assessment Regulation 2000

Under Part 5 of the EP&A Act, the project must take into account the factors listed in clause 228(2) of the Regulations. Relevant factors that have been considered include:

- (e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations,

Comment

The effect of reburial of the Willandra Lakes Aboriginal Ancestors on the values of the World, National, State and Local level values have been considered. The impact assessment presented in Section 6 concludes that the proposed reburial will not have any adverse impact on the values of the place.

4.7.2 State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

Under Part 2, Division 1 (Clause 14) of the ISEPP, consultation with councils must take place for development with impacts on local heritage.

- (1) This clause applies to development carried out by or on behalf of a public authority if the development—
 - (a) is likely to affect the heritage significance of a local heritage item, or of a heritage conservation area, that is not also a State heritage item, in a way that is more than minor or inconsequential, and
 - (b) is development that this Policy provides may be carried out without consent.
- (2) A public authority, or a person acting on behalf of a public authority, must not carry out development to which this clause applies unless the authority or the person has—
 - (a) had an assessment of the impact prepared, and
 - (b) given written notice of the intention to carry out the development, with a copy of the assessment and a scope of works, to the council for the area in which the heritage item or heritage conservation area (or the relevant part of such an area) is located, and
 - (c) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.

Under Part 2, Division 1 (Clause 16) of this SEPP, consultation with public authorities other than councils is also required.

- (1) A public authority, or a person acting on behalf of a public authority, must not carry out specified development that this Policy provides may be carried out without consent unless the authority or person has—
 - (a) given written notice of the intention to carry out the development (together with a scope of works) to the specified authority in relation to the development, and
 - (b) taken into consideration any response to the notice that is received from that authority within 21 days after the notice is given.
- (2) For the purposes of subclause (1), the following development is specified development and the following authorities are specified authorities in relation to that development—
 - (a) development adjacent to land reserved under the *National Parks and Wildlife Act 1974* or to land acquired under Part 11 of that Act—the Office of Environment and Heritage,
 - (b) development on land in Zone E1 National Parks and Nature Reserves or in a land use zone that is equivalent to that zone—the Office of Environment and Heritage.

Under Part 3, Division 12 (Clause 65(1)(a)) of this SEPP, development for any purpose may be carried out without consent on land reserved under the *National Parks and Wildlife Act 1974*, or acquired under Part 11 of that Act, if the development is for a use authorised under that Act.

Comment

This report constitutes an assessment of the impact of the proposed works. Balranald and Wentworth Shire Councils have been given written notice of the intention to carry out the reburial of the Willandra Lakes Aboriginal Ancestors, including a copy of this assessment and a scope of works. Responses from the councils are provided in Appendices 12.4 and 12.5.

This report constitutes an assessment of the impact of the proposed works. NSW National Parks and Wildlife Service have been given written notice of the intention to carry out the reburial of the Willandra Lakes Aboriginal Ancestors, including a copy of this assessment and a scope of works. The response from NPWS is provided in Appendix 12.5.

As discussed above, the proposed works are conservation works and will not constitute harm or desecration under the NPW Act (Section 87A(a)) provided an officer from NSW Heritage is principally involved in the supervision of the works under the NPW Act. The burying of ancestors is a traditional Aboriginal activity. Conducting traditional Aboriginal cultural activities (but not commercial activities) will not constitute harm or desecration under Section 87B of the NPW Act.

4.7.3 Willandra Lakes Regional Environmental Plan No 1 - World Heritage Property 2010

From 1 July 2009 this Regional Environment Plan (REP) is taken to be a State Environmental Planning Policy (SEPP) (see clause 120 of Schedule 6 to the *Environmental Planning and Assessment Act 1979*).

The objectives of this REP are:

- to protect, conserve and manage the World Heritage Property in accordance with any strategic plan of management and any operational plans prepared for the Property, and
- to set up a consultation method for making decisions on conservation and development within the World Heritage Property.

Part 2 (Planning considerations and consultation) of this REP applies when:

- (a) a council prepares a local environmental plan, or
- (b) a consent authority determines a development application, or
- (c) a public authority or person proposes to carry out an activity as defined by Part 5 of the Act, or
- (d) a person prepares an individual property plan.

Under Part 2 Clause 10 if this REP the council, authority or person concerned is to take into account:

- (a) the aims and objectives of this plan, and
- (b) if relevant, the Mungo National Park Management Plan, and
- (c) any relevant strategic plan of management, and
- (d) any relevant operational plan, and
- (e) any relevant individual property plan.

Part 2 Clause 11 of this REP sets out the requirements for consultation:

- (1) Consultation under this clause is to be carried out before the relevant plan is made, application determined or activity carried out.
- (2) The council, authority or person concerned is to consult the Community Management Council about the impact of the plan, development or activity on the world heritage values identified in the strategic plan of management by:
 - (a) writing to the Community Management Council, giving a copy of the proposed plan or a description of the proposed development or activity, and
 - (b) requesting the Council to comment on the proposed plan, development or activity within 60 days of the Council receiving the request.
- (3) The council, authority or person is:
 - (a) as far as is practicable, to give effect to any requirements of the Community Management Council made within those 60 days about the proposed plan, development or activity, and
 - (b) to consider any comments of the Community Management Council about the proposed plan, development or activity made within those 60 days.
- (4) The Community Management Council may extend the 60-day period by up to 60 days by advising the council, authority or person in writing of the extension.
- (5) The Community Management Council may refer a proposed plan, development or activity to the Technical and Scientific Advisory Committee if the Council considers that the proposed plan, development or activity may have a significant impact on the world heritage values identified in the strategic plan of management.
- (6) The Community Management Council is to refer a proposed plan, development or activity to the Elders Council.
- (7) The Community Management Council must consider advice given by the Technical and Scientific Advisory Committee, and the Elders Council, in response to a referral if the advice is received within 28 days after the referral was made.
- (8) The Community Management Council may determine that consultation is not necessary in a particular case or class of case.

Comment

The proposed works are in accordance with the aim of the REP to protect, conserve and manage the World Heritage Property. The proposed works are also in accordance with:

- *Mungo National Park Management Plan (2006)*
- *Willandra Lakes Region World Heritage Area Plan of Management (1996)*
- *Willandra Lakes Region World Heritage Area Plan of Management (Draft Report 2014)*
- *Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan (2003)*
- *Top Hut Station: Individual Property Plan (1996)*
- *Mulurulu Station: Individual Property Plan (1996)*
- *Gol Gol Station: Individual Property Plan (1996)*

These plans are discussed further in Section 5.

The requirements under Clause 11 of the REP have been met by the provision of a copy of the REF (which included a proposed scope of works) and a request for comments to members of the Willandra Lakes World Heritage Property Advisory Council (formerly the Community Management Council) in August 2019 including details about the proposed reburial. The response is provided in Appendix 12.7.

4.7.4 Local Environmental Plans

Wentworth Local Environmental Plan 2011

The Wentworth Local Environmental Plan 2011, sets out the objectives for heritage conservation in Clause 5.10(1), which states:

The objectives of this clause are as follows:

- (a) to conserve the environmental heritage of Wentworth,*
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) to conserve archaeological sites,*
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.*

Under the Wentworth LEP Part 5, Clause 5.10(3) consent is not required if:

- (a) the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development:*
 - (i) is of a minor nature, or is for the maintenance of the heritage item, archaeological site, or a building, work, relic, tree or place within a heritage conservation area, and*
 - (ii) would not adversely affect the significance of the heritage item, archaeological site or heritage conservation area, or*
- (b) the development is in a cemetery or burial ground and the proposed development:*
 - (i) is the creation of a new grave or monument, or excavation or disturbance of land for the purpose of conserving or repairing monuments or grave markers, and*
 - (ii) would not cause disturbance to human remains, relics, Aboriginal objects in the form of grave goods, or to a place of Aboriginal heritage significance...*

According to the Wentworth Development Control Plan 2011:

A Heritage Impact Statement prepared by a suitably qualified heritage architect must be submitted to Council where the land, building or site is an identified heritage item, in the vicinity of a heritage item or within a heritage conservation area.

Balranald Local Environment Plan 2010

Balranald Local Environmental Plan 2010, sets out the objectives for heritage conservation in Part 5, Clause 5.10(1) which states:

The objectives of this clause are:

- (e) to conserve the environmental heritage of Balranald,*
- (f) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (g) to conserve archaeological sites,*
- (h) to conserve Aboriginal objects and Aboriginal places of heritage significance.*

Under the Balranald LEP Part 5, Clause 5.10(3) consent is not required if:

- (c) *the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development:*
 - (iii) *is of a minor nature, or is for the maintenance of the heritage item, archaeological site, or a building, work, relic, tree or place within a heritage conservation area, and*
 - (iv) *would not adversely affect the significance of the heritage item, archaeological site or heritage conservation area, or*
- (d) *the development is in a cemetery or burial ground and the proposed development:*
 - (iii) *is the creation of a new grave or monument, or excavation or disturbance of land for the purpose of conserving or repairing monuments or grave markers, and*
 - (iv) *would not cause disturbance to human remains, relics, Aboriginal objects in the form of grave goods, or to a place of Aboriginal heritage significance...*

Comment

The proposed works are in accordance with the objectives of Part 5 Clause 5.10(1) of the Wentworth and Balranald LEPs.

Under Clause 5.10(3) Wentworth and Balranald Shire Councils were notified of the proposed works and a request was made for them to provide written advice that they are satisfied that the proposed works are a minor nature and would not adversely affect the significance of the heritage item, archaeological site or heritage conservation area. Their responses are provided in Appendices 12.4 and 12.5. This Statement of Heritage Impacts meets the requirements of the Wentworth Development Control Plan 2011 in relation to the *Willandra Lakes World Heritage Area Heritage Conservation Area*.

4.8 Crown Lands Management Act 2016

Four of the proposed activity areas are on private western lands leases; Mulurulu Station (2 locations), Gol Gol Station (1 location) and Top Hut Station (1 location). Heritage NSW applied for use and occupation licences under the *Crown Land Management Act 2016* for the reburial locations on private western lands leases on 13 October 2020. These licences will provide formal certainty of access to the locations whenever needed.

Access to the sites will rely on informal permission from the lease holders. Written approval from each of the landholders has been received and is provided in Appendix 12.6.

For the purposes of Section 60 of the *Heritage Act 1977*, the four areas within the private western land leases are not within the gazetted State Heritage area.

5.0 Key Planning and Policy Documents

5.1 Willandra Lakes World Heritage Region: European Cultural History Study (1985)

The Willandra Lakes World Heritage Region: European Cultural History Study (1985) does not specifically include a statement of significance for the region but does provide a thematic analysis of the key historic themes of the region including: exploration; land legislation; water improvements; home life; social life; overstocking; remoteness; Chinese and Aboriginal workers; pastoral workers; closer settlement; rabbits; and technological improvement.

5.2 Mungo National Park Plan of Management (2006)

Twenty-two of the proposed works locations are within Mungo NP. The Plan of Management states that Mungo NP, because of its status under the National Parks and Wildlife Act, has a special role within the World Heritage Area, the balance of which is leasehold land used for commercial grazing. The Plan identifies International, Regional and Local values. The historic features are described as of Local value; the only statement being 'the Park contains structures and relics of early pastoral history'.

The proposed works are a non-standard national park use. The proposed works are permissible under the *Mungo National Park Plan of Management* (2006), as it is an activity that is a ceremony, as defined under the 'Other Uses' heading:

- Ceremonial and hunting and gathering rights for members of the three traditionally affiliated tribal groups will be recognised and facilitated." (NSW National Parks and Wildlife Service, 2006, p. 37).

The proposed works are also consistent with the following Strategies, Outcomes and Actions of Mungo National Park Plan of Management (2006):

Aboriginal Heritage and Archaeology:

- Archaeological and Aboriginal cultural material will be protected from damage and inappropriate use and/presentation.
- the NPWS and others will assist the 3 Traditional Tribal Groups (TTGs) in promoting and presenting the Aboriginal cultural heritage values on the area in accordance with the wishes of the 3TTGs.

Historic Heritage:

- That the key structural indicators of the history of the area be preserved and adapted where necessary to facilitate ongoing use.

Research and Monitoring:

- Research is undertaken that enhances the information base and assists management of the park.
- Research programs have the full support and involvement of the three Traditional Tribal Groups.

- Research promotes an awareness and understanding of Mungo's importance in the global context.

Aboriginal Ancestors (cultural heritage material) were previously removed from their resting places and removed from country. The remains will be protected from damage and inappropriate use/presentation by being securely returned to their original landscape. The proposed activity also will fulfil the long-term aspirations and wishes of the Aboriginal community or 3TTGs, including Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa peoples.

No relics of early pastoral history or key structural indicators of the history of the area will be impacted by the proposed activity.

5.3 Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management (1996)

The *Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management* (Department of Environment, Sport & Territories, 1996) identified values, other than the World Heritage values, including cultural heritage, economic and social values. The cultural heritage values listed include the following:

- The Willandra Lakes Region was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales.
- The Aboriginal history of the area is integral to that of southeastern Australia, illuminating a process of cross-cultural interaction and Aboriginal dispossession. It reflects Aboriginal involvement in the pastoral industry, and the lives of local communities in the late nineteenth century and in more recent times.
- The area's historical archaeology (e.g. the 1860s Mungo Woolshed) provides a material record of the social, technological and economic history of pastoral settlement in western New South Wales.
- Archaeological sites of the nineteenth century provide valuable evidence of the interaction between Aboriginal people and European settlers in the period of first contact.

The social values identified include:

- The Willandra's traditionally affiliated Aboriginal people proudly identify themselves by this land. Their ancestors lived on this land for tens of thousands of years.
- The Willandra's primary producer landholder families have links with the European settlement of the region. They possess proud land management skills resulting from experience passed down from generation to generation.
- The remoteness of the area creates neighbourly support and a sense of community, particularly in times of need, for example during fire, flood and drought. At the same time the isolation promotes family self-sufficiency.

The economic values identified include:

- The region has increasing importance as a tourism destination, with tourists attracted to Lake Mungo, the World Heritage sites and pastoral environments close to Mildura and other parts of the Sunraysia tourist complex. Farm stays and guided tours provide an alternative income for regional communities.
- The region has value as a centre for research. Study tours and student work add to the regional economy and offer opportunities for regional tourism ventures based on research and education.

- The unique aesthetics of the Willandra landscape offer excellent visual and recreational opportunities that assist education and interpretation of its natural and cultural heritage within a regional, national and international context.

The proposed work is consistent with the *Willandra Lakes Region World Heritage Area Plan of Management* (Department of Environment, Sport & Territories, 1996) which also clearly articulates the long-term aspiration of the Aboriginal community that the rest of the Willandra Lakes Aboriginal Ancestors should also be returned. This plan requires the development of strategies and associated actions to:

- Locate and manage all Aboriginal human remains and other archaeological material to the satisfaction of the 3TTGs.

5.4 Willandra Lakes Region World Heritage Area Plan of Management (Draft Report)

The proposed work is consistent with the following Strategy of the Draft Willandra Lakes Region World Heritage Area Plan of Management (Context, 2014):

Rehabilitation and Protection of Heritage Values

- The repatriation of Mungo Man and other Aboriginal Ancestors to WLRWHA, specifically identifies the repatriation of Mungo Man and other Aboriginal Ancestors to WLRWHA (18.2) and the identification of a permanent culturally appropriate resting place for Mungo Man and other Aboriginal Ancestors (18.3) as a very powerful conservation action associated with the concepts of restoration and recovery of significance that is strongly in accordance with item (c) of the Australian Heritage Management principles to 'where appropriate, the rehabilitation of heritage values'.

5.5 Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan (2003)

The *Mungo National Park Historic Heritage Conservation Management and Cultural Tourism Plan* (CMCTP) (Godden Mackay Logan, 2003) assesses the significance of historic heritage values and resources within Mungo NP and provides policy for the future management of these resources. It also addresses opportunities for cultural tourism. While the report did not revisit the natural and Aboriginal cultural values that led to the World Heritage Listing in 1981, it did address these values to provide a context for these values or where they interface with the historic values. The CMCTP was to inform future revisions of the *Mungo National Park Plan of Management*.

The CMCTP revealed important new findings about the Park's history:

- *Mungo Woolshed is likely to have been constructed after John Patterson purchased the lease in 1877 and before 1880, with around 1878 being the most likely date.*
- *The central section of Mungo Homestead was built during the Patterson Gol Gol period, not after 1921 as previously thought. As such it joins the Woolshed as important evidence of the first phase of pastoral occupation.*
- *Aboriginal people may have been involved in the pastoral activity on Gol Gol station in the later part of the nineteenth century, but not after 1922 when the soldier settlement properties were formed, apart from possible transient associations while sheep driving.*

- *Chinese workers were likely to have been involved in small numbers in the nineteenth century as farm workers, most likely to be in association with woolscouring, but no evidence of involvement in building construction, including the Woolshed, can be attributed.*
- *The ruin previously known as the Chinese Hut was most likely associated with woolscour operations that are known to have occurred in association with Mungo Woolshed and it was possibly used by Chinese workers involved in woolscouring and ground tank maintenance.*
- *The woolscour operations are one of a series of features that included ground tanks, underground logged tanks and wells associated with water conservation and use on these pastoral stations.*
- *A comprehensive understanding of the evolution of Mungo and Zanci Station complexes has, for the first time, been made possible through the kind assistance of former station owners and their descendants.*

According to the CMCTP:

The historic heritage resources and values of Mungo National Park, located within the Willandra Lakes Region World Heritage Property, are of considerable significance for the State of New South Wales. These resources, concentrated around the former Mungo and Zanci pastoral station complexes, but also found throughout Mungo National Park, are from three phases of occupation; as part of the large nineteenth-century back-block pastoral property Gol Gol; as the Mungo and Zanci pastoral station soldier settlement properties; and for almost a quarter of a century as Mungo National Park. These three phases sit within an overarching historic theme of human interaction with the environment. In this, the historic heritage complements the well-known deep history of Aboriginal interaction with the environment evidenced at Mungo, and part of the citation for the Willandra Lakes Region World Heritage Area listing. Within this theme are subthemes that underpin the significance of the place associated with the changing nature of the land tenure framework, pastoral processes, and awareness and appreciation of the natural and cultural environment.

The CMCTP also states that:

All conservation or adaptive works proposed for historic heritage should be preceded by Statements of Heritage Impact that form part of required environmental assessments.

None of the proposed works locations are near the former Mungo or Zanci Station Complexes including built heritage, relics or areas of historical archaeological potential as identified in the CMCTP. The proposed works will have no impact on the historic cultural landscape of Mungo NP including historic resources related to its pastoral use from the early 1860s and national park use from the late 1970s.

The proposed works are not in discordance with any of the conservation management policies outline in the CMCTP.

5.6 Property Plans

Individual Property Plans for the three Western Land Lease properties within the WLRWHA were developed in 1996 as practical tools for management of each property that are consistent with the *Sustaining the Willandra: Willandra Lakes Region World Heritage Property Plan of Management* (1996):

- *Top Hut Station: Individual Property Plan (1996)*
- *Mulurulu Station: Individual Property Plan (1996)*

- *Gol Gol Station: Individual Property Plan (1996)*

The Individual Property Plans form part of the Operational Plan and, together with the *Mungo National Park Plan of Management (2006)*, prescribe detailed measures for on-ground management of each property. These plans were developed with the landholder family and are tailored to their skills, vision and aspirations. The plans seek to balance the protection and conservation of World Heritage values with practical and sustainable property management. As such they seek to find and establish the middle ground where both goals are attainable, without compromising World Heritage values.

The proposed works are consistent with the Individual Property Plans and do not conflict with the landholder's visions and aspirations.

5.7 Australian Government Policy on Indigenous Repatriation (2016)

The *Australian Government Policy on Indigenous Repatriation (2016)* was originally published in 2011, with the overarching objective of addressing past injustice relating to the removal of Aboriginal Ancestors and sacred objects. The proposed works are consistent with the *Australian Government Policy on Indigenous Repatriation (2016)* which states:

Communities of origin are the rightful custodians of their ancestral remains, and should be consulted prior to any return. They should determine when and how repatriation should be undertaken. Accordingly, except where otherwise determined by the local community, the Australia Government will seek the unconditional return of ancestral remains and associated notes and data.

This policy further states:

Aboriginal and Torres Strait Islander peoples have a responsibility to their ancestors to bring them back to country according to the Traditional Owners' customs and laws' and that 'ancestral remains should be treated with respect and dignity at all times by all involved'.

5.8 UN Declaration on the rights of Indigenous peoples (UNDRIP)

The Australia Government endorsed the UN Declaration on the rights of Indigenous peoples (UNDRIP) in 2009. UNDRIP confirms the application of existing human rights instruments to Indigenous peoples, including freedom from discrimination, and the right to self-determination and to pursue their cultural development.

The proposed activity is consistent with this declaration. For more details see Smith, Travers & James (2019).

5.9 Repatriation of Aboriginal Ancestors and Cultural Material Policy (2018)

The repatriation and reburial of Aboriginal Ancestors is consistent with the *Repatriation of Aboriginal Ancestors and Cultural Material Policy* (Office of Environment & Heritage, 2018) that has been developed under the *National Parks and Wildlife Act 1974*, which states in part that 'the repatriation of Aboriginal cultural material by a Heritage Division officer or under the direction of a Heritage Division officer is considered to be conservation works'.

6.0 Heritage Significance

6.1 Introduction

The various levels of heritage significance and values of the proposed reburial locations at a World, National, State and Local level have been previously assessed. These assessments are summarised below and in Table 2.

6.2 World Heritage Significance: Willandra Lakes Region

About 240,000ha, 35km north east of Robinvale, located in the Murray Darling Basin in south western New South Wales, comprising the revised boundary as endorsed by the World Heritage Committee in 1995. The revised boundary is a reduced area of that originally inscribed into the World Heritage List in 1981 (see Figure 2).

The Statement of Outstanding Universal Value is as follows:

Brief Synthesis

The Willandra Lakes Region, in the semi-arid zone in southwest New South Wales (NSW), contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of a low-altitude, non-glaciated Pleistocene landscape. It also contains an outstanding record of the glacial-interglacial climatic oscillations of the late Pleistocene, particularly over the last 100,000 years. Ceasing to function as a lake ecosystem some 18,500 years ago, Willandra Lakes provides excellent conditions to document life in the Pleistocene epoch, the period when humans evolved into their present form.

The undisturbed stratigraphic context provides outstanding evidence for the economic life of Homo sapiens sapiens to be reconstructed. Archaeological remains such as hearths, stone tools and shell middens show a remarkable adaptation to local resources and a fascinating interaction between human culture and the changing natural environment. Several well-preserved fossils of giant marsupials have also been found here.

Willandra contains some of the earliest evidence of Homo sapiens sapiens outside Africa. The evidence of occupation deposits establishes that humans had dispersed as far as Australia by 42,000 years ago. Sites also illustrate human burials that are of great antiquity, such as a cremation dating to around 40,000 years BP, the oldest ritual cremation site in the world, and traces of complex plant-food gathering systems that date back before 18,000 years BP associated with grindstones to produce flour from wild grass seeds, at much the same time as their use in the Middle East. Pigments were transported to these lakeshores before 42,000 years BP. Evidence from this region has allowed the typology of early Australian stone tools to be defined.

Since inscription, the discovery of the human fossil trackways, aged between 19,000 and 23,000 years BP, have added to the understanding of how early humans interacted with their environment.

Criterion (iii): *The drying up of the Willandra Lakes some 18,500 years BP allowed the survival of remarkable evidence of the way early people interacted with their environment. The undisturbed stratigraphy has revealed evidence of Homo sapiens sapiens in this area from nearly 50,000 years BP, including the earliest known cremation, fossil trackways, early use of grindstone technology and the exploitation of fresh water resources, all of which provide an exceptional testimony to human development during the Pleistocene period.*

Criterion (viii): *The Australian geological environment, with its low topographic relief and low energy systems, is unique in the longevity of the landscapes it preserves, and the Willandra Lakes provides an exceptional window into climatic and related environmental changes over the last 100,000 years. The Willandra Lakes, largely unmodified since they dried out some 18,500 years BP, provide excellent conditions for recording the events of the Pleistocene Epoch, and demonstrate how non-glaciated zones responded to the major glacial-interglacial fluctuations.*

The demonstration at this site of the close interconnection between landforms and pedogenesis, palaeochemistry, climatology, archaeology, archaeomagnetism, radiocarbon dating, palaeoecology and faunal extinction, represents a classic landmark in Pleistocene research in the Australasian area. Willandra Lakes Region is also of exceptional importance for investigating the period when humans became dominant in Australia, and the large species of wildlife became extinct, and research continues to elucidate what role humans played in these events.

Integrity

The property as nominated covered some 3,700 km², following cadastral boundaries and including the entire Pleistocene lake and river systems from Lake Mulurulu in the north to the Prungle Lakes in the south, thereby including all elements contributing to its Outstanding Universal Value. In 1995 boundaries for the property were revised in order to 'better define the area containing the World Heritage values and ... facilitate the management of the property'. The revised boundary follows topographic features, with an appropriate buffer within the boundary, to more closely delineate the entire lake and river system but exclude extraneous pastoral areas. The area of the property now covers ~2,400 km².

Although pastoral development has resulted in ecological changes, stocking rates are low and dependent on natural unimproved pasture and the area remains predominantly vegetated in its natural condition. For leasehold properties within the property, Individual Property Plans (IPPs) have been developed and implemented, including actions such as excluding grazing from sensitive areas and relocating watering points to minimise the impact of grazing, to protect Outstanding Universal Value while also allowing sustainable land uses. There have also been significant additions to Mungo National Park, including some of the most archaeologically significant areas of the property.

Much of the scientific and cultural significance of the property is related to the values embedded in or associated with the lunettes. Erosion and deflation continues to expose material in already disturbed areas of the lunettes. At time of listing approximately 8% was extensively eroded, while 72% remained vegetated and intact, with the remaining area partly eroded.

Authenticity

The authenticity of the natural and Aboriginal cultural heritage values of the Willandra has been established in the first instance, in a western or European cultural sense, by rigorous scientific investigation and research by leading experts in their fields. Researchers have established the great antiquity and the richness of Aboriginal cultural heritage at Willandra which brought about a reassessment of the prehistory of Australia and its place in the evolution and the dispersal of humans across the world.

For the Traditional Tribal Groups (TTGs) that have an association with the area there has never been any doubt about the authenticity of the Willandra and any particular sites it contains. The TTGs have maintained their links with the land and continue to care for this important place and participate in its management as a World Heritage property. Aboriginal people of the Willandra take

great pride in their cultural heritage and maintain their connection through modern day cultural, social and economic practices.

Protection and management requirements

The majority of the area comprises pastoral stations leased from the State and administered by the NSW Land and Property Management Authority. The remaining land contains a large part of the Mungo National Park, which is managed by the NSW National Parks and Wildlife Service (NPWS), and which has grown from 4.2% of the property at time of inscription to 29.9% in 2012. There are also some small areas of freehold land within the property. The NSW Office of Environment and Heritage provides archaeological expertise over all land tenures within the property. The statutory basis for management is established under New South Wales legislation by the Willandra Lakes Region Environmental Plan. This provides for a Community Management Council, Technical and Scientific Advisory Committee, Elders Council of Traditional Tribal Groups affiliated with the Willandra, and Landholders Protection Group to input advice on the management of the World Heritage Area.

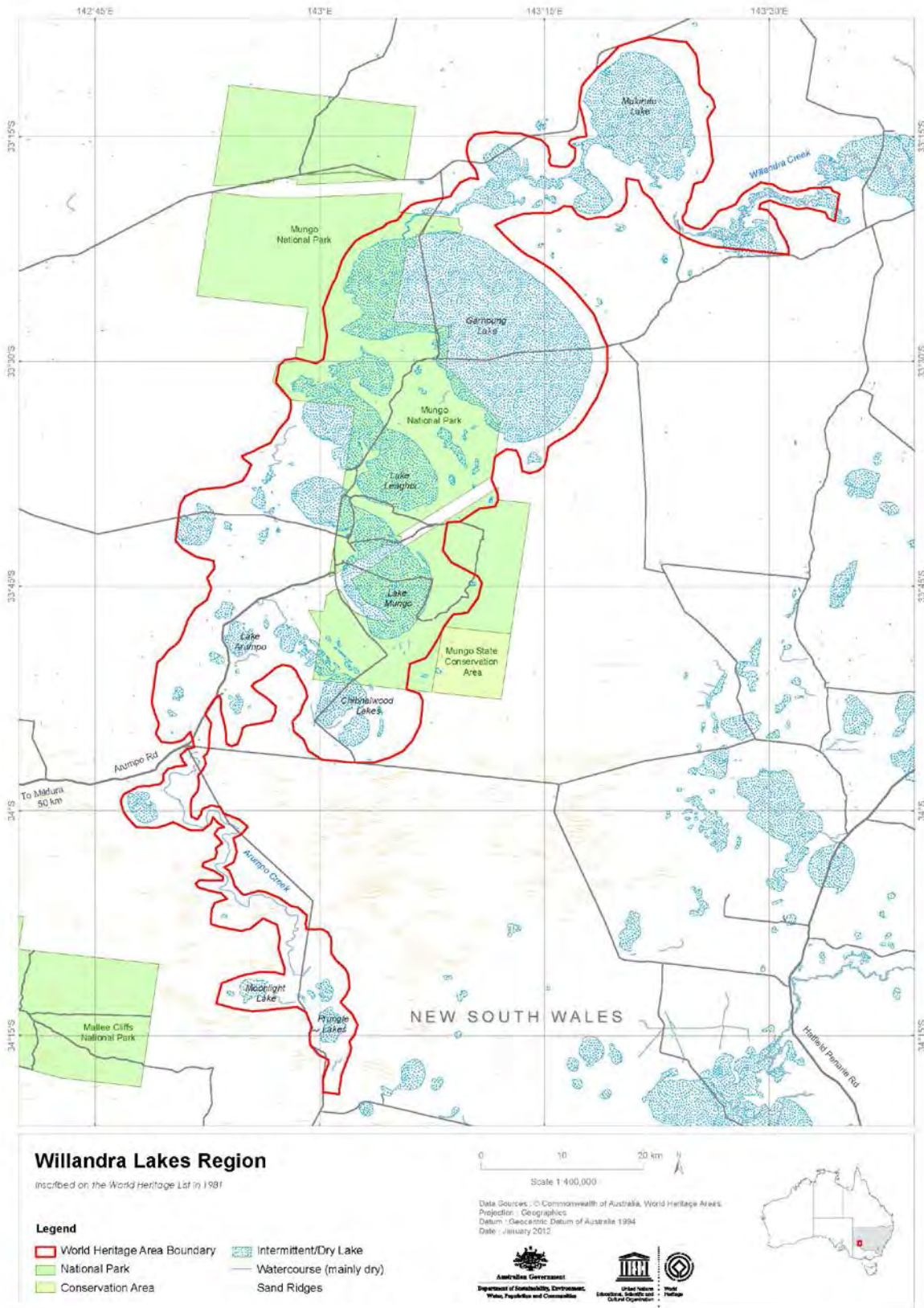
Upon listing, the World Heritage Committee requested that a management plan be 'rapidly established for the whole area.' This process was begun in 1989 with the first property management plan – Sustaining the Willandra –finalised in 1996 following extensive consultation with all stakeholders. Individual Property Plans have been developed to protect World Heritage values on the pastoral stations. Similarly, Mungo National Park, managed jointly by the NPWS and Traditional Tribal Groups under a Joint Management Agreement, is subject to a management plan which aims to maximise conservation of both natural and cultural heritage values while also conserving biodiversity and facilitating appropriate visitor access. Visitor access to sensitive areas is carefully controlled, and in some areas excluded, to mitigate adverse impacts on World Heritage values.

All World Heritage properties in Australia are 'matters of national environmental significance' protected and managed under national legislation, the Environment Protection and Biodiversity Conservation Act 1999. This Act is the statutory instrument for implementing Australia's obligations under a number of multilateral environmental agreements including the World Heritage Convention. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Importantly, this Act also aims to protect matters of national environmental significance, such as World Heritage properties, from impacts even if they originate outside the property or if the values of the property are mobile (as in fauna). It thus forms an additional layer of protection designed to protect values of World Heritage properties from external impacts. In 2007 the Willandra Lakes Region World Heritage Area was added to the National Heritage List in recognition of its national heritage significance.

The property management plan identifies issues for management, outlines strategies for responses and identifies responsible parties. Among the issues and threats to values being addressed through coordinated action are the occurrence of invasive pest species (including European rabbits and feral goats), balancing increased visitation with asset protection, controlling total grazing pressure to provide for perennial vegetation regeneration, and limiting accelerated erosion where practicable.

Figure 2: Map of the inscribed property (Source: Willandra Lakes Region World Heritage listing webpage - http://whc.unesco.org/en/list/167/multiple=1&unique_number=185)



According to Smith, Travers & James (2019):

The Willandra Ancestral Remains removed from WLR between 1968 and the early 1980s are not referred to as attributes of the World Heritage values of the property in the [Statement of Outstanding Universal Value]. The [Statement of Outstanding Universal Value] consistently emphasises that the undisturbed stratigraphic units containing occupation deposits of various kinds of cultural material—stone tools, grindstones, middens and trackways—and in-situ burials as the primary attributes that hold each of the values listed above. The oldest ritual cremation site in the world is specifically described as an attribute without acknowledging that the ancestral remains were removed from the site.

6.3 National Heritage Significance: Willandra Lakes Region

The Willandra Lakes Region was included on the National Heritage List in 2007. Prior to this it had been listed in the Register of the National Estate from 1978. The National Heritage Listing covers the same area as the World Heritage Listing (see Figure 1). The following statement of significance for *Willandra Lakes Region* is taken from the Australian Heritage Database (place ID. 105693).

The Willandra Lakes Region covers 240 000 hectares of a semi-arid landscape mosaic comprising dried saline lake bed plains vegetated with saltbush communities, fringing sand dunes and woodlands with grassy understoreys in the Murray Basin area in far south-western New South Wales. The region was inscribed on the World Heritage List for both outstanding cultural and natural universal values:

Natural

- *as an outstanding example representing the major stages in the earth's evolutionary history; and*
- *as an outstanding example representing significant ongoing geological processes.*

Cultural

- *bearing an exceptional testimony to a past civilisation.*

The region contains a system of Pleistocene lakes, formed over the last two million years. Most are fringed on the eastern shore by a dune or lunette formed by the prevailing winds. Today, the lake beds are flat plains vegetated by salt tolerant low bushes and grasses. About 10 per cent of the World Heritage area is gazetted as the Mungo National Park, which covers about two-thirds of Lake Mungo and includes the spectacular parts of the Walls of China lunette. The remaining area comprises pastoral leasehold properties. There are five large, interconnected, dry lake basins and fourteen smaller basins varying from 600 to 35 000 hectares in area. The original source for the lakes was a creek flowing from the Eastern Highlands to the Murray River. When the Willandra Billabong Creek ceased to replenish the lakes, they dried in series from south to north over a period of several thousand years, each becoming progressively more saline. The ancient shorelines are stratified into three major layers of sediments that were deposited at different stages in the lakes' history. The earliest sediments are more than 50 000 years old and are orange-red in colour. Above are clays, clean quartz sand and soil that were deposited along the lakes' edges when the lakes were full of deep, relatively fresh water, between 50 000 and 19 000 years ago. The top layer is composed largely of wind-blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up. Aborigines lived on the shores of the Willandra Lakes from 50 000 to 40 000 years and possibly up to 60 000 years ago. Excavations in 1968 uncovered a cremated female in the dunes of Lake Mungo. At 26 000 years old, this is believed to be the oldest cremation site in the world. In 1974, the ochred burial of a male Aborigine was found nearby. The use of ochres for burial in Australia 30 000 years ago parallels

their use in France at the same time. Radiocarbon dating established that these materials were some of the earliest evidence of modern humans in the world. During the last Ice Age, when the lakes were full, the Mungo people camped along the lake shore taking advantage of a wide range of food, including freshwater mussels and yabbies, golden perch and Murray cod, large emus and a variety of marsupials, which probably included the now extinct super roos. They also exploited plant resources, particularly when the lakes began to dry and food was less abundant. The human history of the region is not restricted just to an ancient episode. Evidence so far points to an extraordinary continuity of occupation over long periods of time. In the top layers of sediments there is abundant evidence of occupation over the last 10 000 years. The vegetation in the region, sparse though it is, is typical of the semi-arid zone. It plays an important role in stabilising the landscape and hence maintaining its sediment strata and many species of native fauna. On the dunes are found the small scrubby multi-stemmed mallee eucalypts with an understorey of herbs and grasses. Rose wood-belah woodland is common on the sand plains. In the lake beds, several species of salt bushes are able to thrive in the saline conditions. The remains of a large number of animals have been found in Willandra. More than 55 species have been identified, 40 of which are no longer found in the region, and 11 are totally extinct. Twenty-two species of mammals are currently recorded at Willandra, of which bats are the most diverse group. There are some 40 species of reptiles and amphibians. The bird life of the Willandra region is similar to that in many other semi-arid areas of Australia. Parrots, cockatoos and finches are the most conspicuous of the 137 recorded species.

6.4 State Heritage Significance: Willandra Lakes

Willandra Lakes was listed on the NSW State Heritage Register (SHR) in 1999 (gazette 2 April 1999). However, the identified SHR area is not as extensive as the World Heritage boundary and takes in only 19 of the 26 identified proposed works locations (see Figure 3; Appendices 12.1 and 12.3). The 19 locations in the SHR are in very remote locations within the Mungo NP.

6.4.1 Statement of Significance

The following statement of significance for *Willandra Lakes* is taken from the State Heritage Inventory database for the State listing of the place (database no. 5045538):

Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern

Australia. It has importance in understanding the reversal of the earth's magnetic field. (Moore 1977)

The Willandra Lakes Region comprising 240,000 acres was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values: as an outstanding example representing the major stages in the earth's evolutionary history; as an outstanding example representing significant ongoing geological processes; and for bearing an exceptional testimony to a past civilization.

6.4.2 State Heritage Values

The Willandra Lakes have been assessed as having the following State Heritage values:

SHR Criteria a) Historical significance

Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales (World Heritage Australia 1996).

SHR Criteria c) Aesthetic significance

The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world (World Heritage Australia, 1996).

SHR Criteria d) Social significance

Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency (World Heritage Australia, 1996).

SHR Criteria e) Research potential

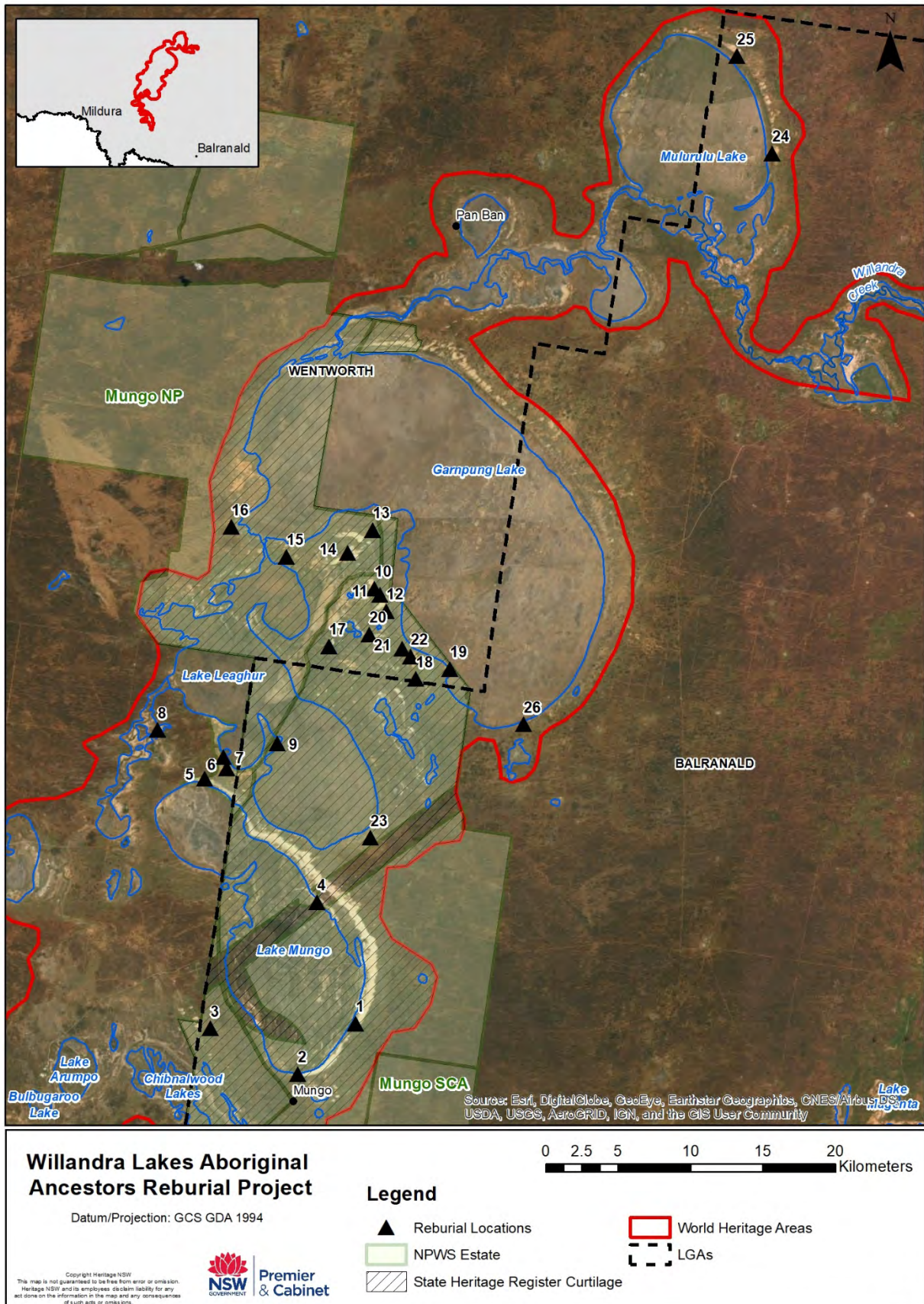
The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field (Moore, 1977).

SHR Criteria g) Representativeness

The area is representative of south-east Australian lunettes or dry lake beds with windblown dunes on their eastern margins and flat floors (Moore, 1977).

The state heritage values are based on and closely align with the world heritage values (see Section 4.1).

Figure 3: Map showing the curtilage of the State Heritage listing for the Willandra Lakes (Source: NSW State Heritage Inventory)



6.5 Local significance: Willandra Lakes

Willandra Lakes is listed in the Heritage Schedules of both the Wentworth LEP 2011 and the Balranald LEP 2010 (Figure 3 to Figure 7).

The following statement of significance for *Willandra Lakes* is taken from the State Heritage Inventory database for the Balranald local listing of the place (database no. 1050023).

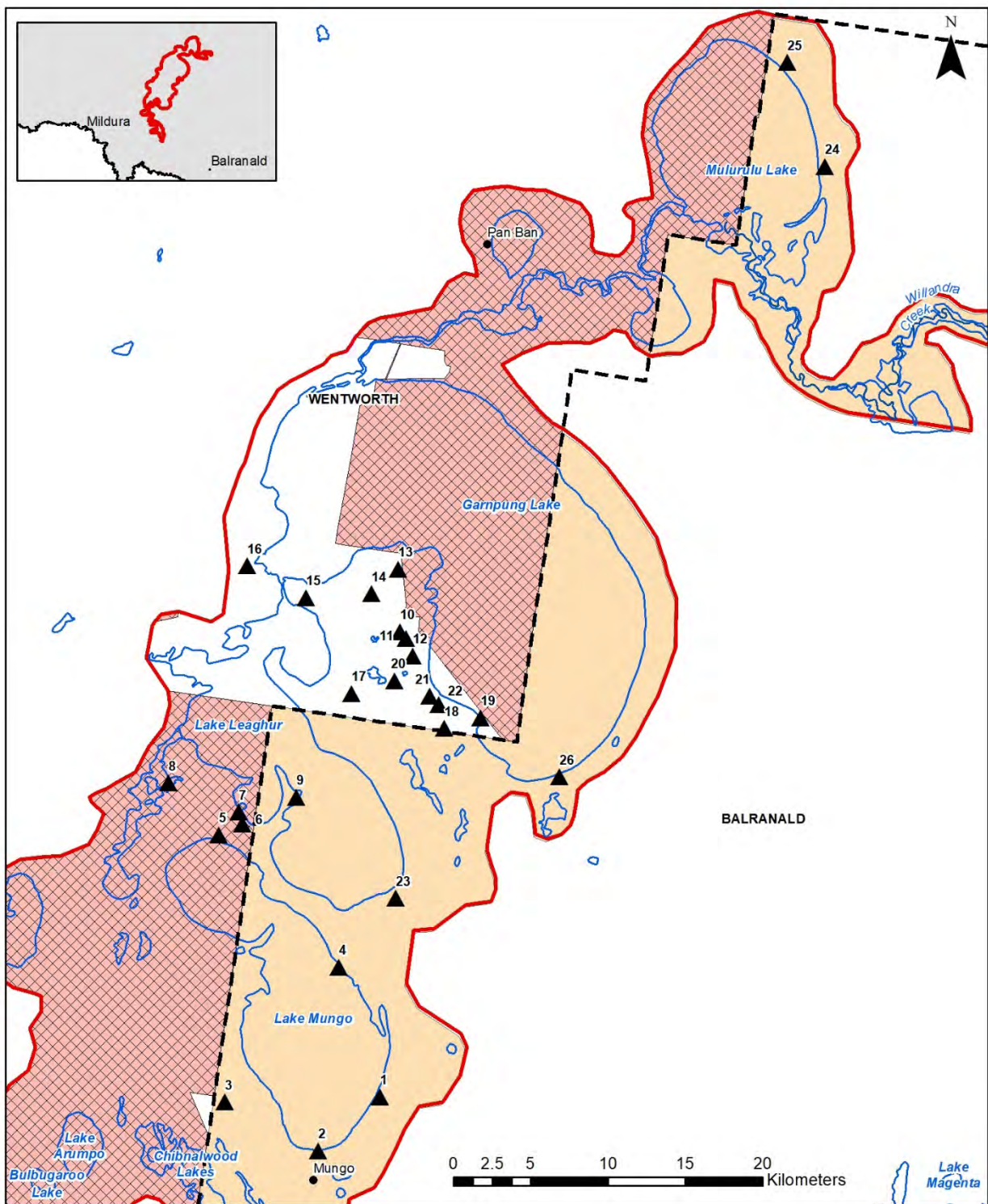
Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field (Moore 1977).

The Wentworth LEP Listing is identical to the above with the addition of:

The Willandra Lakes Region comprising 240,000 acres was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values: as an outstanding example representing the major stages in the earth's evolutionary history; as an outstanding example representing significant ongoing geological processes; and for bearing an exceptional testimony to a past civilization.

A Statement of Significance for the *Willandra Lakes World Heritage Area Heritage Conservation Area* (Wentworth LEP listing) could not be found in the NSW heritage inventory online database nor on the Councils' website.

Figure 4: Wentworth and Balranald LEP Heritage Items



<p>Willandra Lakes Aboriginal Ancestors Reburial Project</p> <p>Datum/Projection: GCS GDA 1994</p> <p><small>Copyright Heritage NSW This map is not guaranteed to be free from error or omission. Heritage NSW and its employees disclaim liability for any and all consequences of the information in the map and any consequences of a user's use or omissions.</small></p> <p> Premier & Cabinet</p>		<p>Legend</p> <ul style="list-style-type: none"> Reburial Locations World Heritage Areas LGAs <p>LEP Heritage Items</p> <ul style="list-style-type: none"> Conservation Area - General Item - Aboriginal Item - General 	
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Table 2: Heritage Listings/Values at Proposed Reburial Locations

Location	World Heritage List	National Heritage List	State Heritage Register	Local Heritage Item	AHIMS Sites	Aboriginal Places	Historic Relics
1	✓	✓	✓	✓	✓	x	x
2	✓	✓	✓	✓	x	x	x
3	✓	✓	✓	✓	x	x	x
4	✓	✓	✓	✓	✓	x	x
5	✓	✓	x	✓	x	x	x
6	✓	✓	x	✓	x	x	x
7	✓	✓	x	✓	✓	x	x
8	✓	✓	x	✓	✓	x	x
9	✓	✓	✓	✓	✓	x	x
10	✓	✓	✓	x	✓	x	x
11	✓	✓	✓	x	✓	x	x
12	✓	✓	✓	x	x	x	x
13	✓	✓	✓	x	x	x	x
14	✓	✓	✓	x	x	x	x
15	✓	✓	✓	x	x	x	x
16	✓	✓	✓	x	x	x	x
17	✓	✓	✓	x	✓	x	x
18	✓	✓	✓	x	✓	x	x
19	✓	✓	✓	x	✓	x	x
20	✓	✓	✓	x	x	x	x
21	✓	✓	✓	x	✓	x	x
22	✓	✓	✓	x	x	x	x
23	✓	✓	✓	✓	x	x	x
24	✓	✓	x	✓	✓	x	x
25	✓	✓	x	✓	x	x	x
26	✓	✓	x	✓	✓	x	x

7.0 Assessment of Heritage Impacts

7.1 Impact on World and National Heritage Values

An independent assessment of impacts of reburial on Matters of Environmental Significance (MNES) has been prepared (Smith, Travers, & James, 2019). This assessment has determined that the proposed action of reburial of the Willandra Lakes Aboriginal Ancestors in WLR **will not** be a significant impact on:

- a World Heritage property, including its:
 - historic heritage values, and
 - cultural heritage values including Indigenous heritage values; and
- a National Heritage place, including its:
 - historic heritage values, and
 - Indigenous heritage values.

The assessment concluded that the proposed reburial of the Willandra Lakes Aboriginal Ancestors will not result in one or more of the National Heritage or World Heritage values of the WLR being lost, degraded or damaged, or notably altered, modified, obscured or diminished. The above being the case, it is concluded that:

- the proposed works will not have significant impacts on matters of national environmental significance.

Previously an EPBC Act Referral (2017/8040) was assessed by the Department of the Environment and Energy on 31/10/2017 for the repatriation of the Willandra Aboriginal Ancestors from the National Museum of Australia to Mungo NP, and the storage and keeping of the Willandra Aboriginal Ancestors at the Mungo Keeping Place. That activity was assessed as 'not a controlled action'.

The full results of this assessment and Matters of National Environmental Significance under the *EPBC Act 1999* are addressed in a separate Referral Application to the Commonwealth.

7.2 Impact on State Heritage Values

The assessment of the impact of the proposed work on the State Heritage significance of *Willandra Lakes* is undertaken in accordance with the requirements of the NSW Heritage guideline *Statements of Heritage Impact* (2002). This guideline has a number of general questions as well as questions targeted at specific proposed actions.

Response to General Questions of the Guideline

The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:

- The proposed works will not impact on the important archaeological record of the area.
- The important landscape features of *Willandra Lakes* will not be affected by the proposed works.
- The aesthetic values of *Willandra Lakes* will be retained as the proposed works will leave no long-term visual evidence of the reburial.

- The social significance of *Willandra Lakes* is respected as the repatriation and now reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the Aboriginal cultural heritage values by respecting the ancestors and continuing cultural protocols of caring for the dead.
- The proposed works will enhance Aboriginal cultural heritage values, through rehabilitation of the landscape.
- The social significance of *Willandra Lakes* is respected as the repatriation and now reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the use and association of the Aboriginal community with the place.
- The visual relationships between built heritage elements within the *Willandra Lakes* will be retained as the proposed works locations are not near any built heritage items.
- Views to, from, between and within landscapes of the *Willandra Lakes* will be maintained as the proposed works will leave no long-term visual evidence of the reburial.
- Longer term, the location of each reburial location will be kept confidential.
- The location of each reburial will only be available to the project and monitoring team within a secure GIS platform.
- Each of the locations will be monitored at four monthly intervals in years one and two following the reburials. Where possible monitoring will be done via photography taken from a drone. This method will:
 - eliminate the need for vehicle tracks to each location
 - minimise the environmental impact
 - reduce the visual impacts of site visits.

The following aspects of the proposal could detrimentally impact on heritage significance. The reasons are explained as well as the measures to be taken to minimise impacts:

- The proposed works are necessary to fulfil the wishes of the 3TTG and AAG and to recover Aboriginal cultural heritage values, through rehabilitation of the landscape.

An assessment of potential detrimental impacts on the heritage significance of the *Willandra Lakes* is presented in Table 3.

The following sympathetic solutions have been considered and discounted for the following reasons:

- An options analysis has been undertaken to investigate alternative options for the Willandra Lakes Aboriginal Ancestors.
- One of the options was placing the repatriated Willandra Lakes Aboriginal Ancestors in a permanent Keeping Place. The option for the construction of a Keeping Place has not been pursued by the AAG and has not been adopted as the AAG preferred course of action.
- Reburial of the Willandra Lakes Aboriginal Ancestors is the preferred option as this is consistent with past sentiments and views expressed by many Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years (Western Heritage Group, 2017).
- Refer to Section 3.4 of this report for further discussion of options considered.

Table 3: Impact Assessment by State Heritage Significance Criteria

State Heritage Value	Possible Impacts	Impact Assessment
<p>a) Historical significance</p> <p>Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales.</p>	<p>Permanently remove, destroy, damage or substantially disturb archaeological deposits relating to early human occupation of the area.</p> <p>Permanently remove, destroy, damage, disturb or detract from the history of early pastoral history of NSW.</p>	<p>The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish archaeological deposits relating to early human occupation of the area.</p> <p>The proposed works are exempt under Sections 87A and 87B of the NPW Act as they are conservation works and will not constitute harm or desecration under the NPW Act (Section 87A(a)) as an officer from NSW Heritage is principally involved in the supervision of the works under the NPW Act. Burying ancestors is a traditional Aboriginal activity. Conducting traditional Aboriginal cultural activities (but not commercial activities) will not constitute harm or desecration under Section 87B of the NPW Act. Therefore, an Aboriginal heritage impact permit (AHIP) is not required for the proposed works.</p> <p>No relics as defined in the Heritage Act are located on the proposed activity sites. The proposed works will not remove, destroy, degrade, damage, disturb or notably alter,</p>

State Heritage Value

Possible Impacts

Impact Assessment

c) Aesthetic significance

The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world.

Permanently remove, destroy, damage or substantially disturb lake sediments, geomorphology or soils containing a record of the Pleistocene landscape.

Permanently remove, destroy, damage or substantially disturb outstanding examples of clay lunettes.

modify, obscure or diminish the history of early pastoral history of NSW.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish lake sediments, geomorphology or soils containing a record of the Pleistocene landscape.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the outstanding examples of clay lunettes.

d) Social significance

Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency.

Permanently remove, destroy, damage, substantially disturb or detract from the aesthetic beauty of the Willandra Lakes. Permanently remove, destroy, damage, substantially detract from the traditional affiliation that Aboriginal people have with the Willandra Lakes.

Permanently remove, destroy, damage, substantially detract from how Aboriginal people identify with the Willandra Lakes.

Permanently remove, destroy, damage, substantially disturb or detract from the Willandra's primary producer landholder

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the aesthetic beauty of the Willandra Lakes.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the traditional affiliation that Aboriginal people have with the Willandra Lakes.

The proposed works will not remove, destroy, degrade, damage, disturb or

State Heritage Value

Possible Impacts

Impact Assessment

families have links with the European settlement of the region.

Permanently remove, destroy, damage, substantially disturb or detract from a sense of neighbourly support and community.

Permanently remove, destroy, damage, substantially disturb or detract from the promotion of self-sufficiency.

notably alter, modify, obscure or diminish how Aboriginal people identify with the Willandra Lakes.

The reburial of the Willandra Lakes Aboriginal Ancestors will enhance the use and association the Aboriginal community have with the place.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the links Willandra's primary producer landholder families have with the European settlement of the region. The historic links to the region have been documented in (Donovan & Associates 1985) and the proposed works will have no impact on any sites recorded in this study.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish a sense of neighbourly support and community.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the promotion of self-sufficiency.

e) Research potential



State Heritage Value

Possible Impacts

Impact Assessment

The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region.

The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field.

The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field.

Permanently remove, destroy, damage or substantially disturb significant Pleistocene archaeological records.

Make Aboriginal Ancestors inaccessible for the purposes of research which were removed from the Willandra Lakes prior to its State Heritage Listing.

Permanently remove, destroy, damage or substantially disturb relics as defined under the *Heritage Act 1977*.

Permanently remove, destroy, damage or substantially disturb information relating to the evolution of climates, environments and earth's magnetic field.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish significant Pleistocene archaeological records.

The loss of future scientific research opportunities through the reburial has been considered in detail in Smith et. al (2019) and is not assessed to have a significant impact on the historic or cultural heritage values of the area. Lack of access for research is an indirect impact of the proposed works but not a significant impact on the SHR values. Further opportunities for research on Aboriginal Ancestors in the Willandra Lakes is likely provided the appropriate research protocols are followed. There are numerous *in situ* burials in region, and the reburial of the Willandra Lakes Aboriginal Ancestors will not limit future study of these remains.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish relics as defined under the *Heritage Act 1977*.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or

State Heritage Value

Possible Impacts

Impact Assessment

diminish information relating to the evolution of climates, environments and earth's magnetic field.

g) Representativeness

The area is representative of south-east Australian lunettes or dry lake beds with windblown dunes on their eastern margins and flat floors.

Permanently remove, destroy, damage or substantially disturb lunettes or dry lake beds with windblown dunes.

The proposed works will not remove, destroy, degrade, damage, disturb or notably alter, modify, obscure or diminish the Willandra Lakes lunettes or dry lake beds with windblown dunes.

Response to Specific Questions of the Guideline

The proposed reburial works do not relate to any of the specific questions about proposed changes to heritage items in the *Statement of Heritage Impact* (2002) Guideline.

Conclusion

The assessment concludes that the proposed reburial of the Willandra Lakes Aboriginal Ancestors will not result in one or more of the State Heritage values of the Willandra Lakes being lost, degraded or damaged, or notably altered, modified, obscured or diminished. That being the case, it is concluded that the proposed works will not have significant impacts on matters of State Heritage.

7.3 Impact on Archaeological Values

A site assessment was conducted at each of the proposed reburial locations in 2019, 19 of which are located within the SHR curtilage for the *Willandra Lakes* (Heritage NSW, 2020). The proposed reburial locations were as close as possible to historic records of the original locations of the Aboriginal Ancestors (where records existed) but avoided unstable land and areas of high cultural significance (e.g. Aboriginal objects such as flaked stone artefacts). Each assessment included a 1-hectare area (0.5 hectares at some sites where landforms restricted assessment) around the proposed reburial location. The site assessment team included one ecologist, one archaeologist, four Aboriginal rangers and three Elders representing the AAG.

7.3.1 Historic Archaeology

The 19 proposed reburial locations in the SHR are in very remote locations (see Appendix 12.1). The site assessment identified that none of the proposed locations are in proximity to any historic building, landscape, moveable heritage item or relics as defined under the *Heritage Act 1977*. The assessment also concluded that the historical archaeological sensitivity of the proposed reburial locations is low and that the potential for historical archaeological research is low.

The proposed reburial will not impact known areas of historical archaeological sensitivity and will have no long-term impact on the historical archaeological values (including research potential). No relics as defined under the *Heritage Act (1977)* will be impacted by the proposed reburial.

General and specific mitigation measures for each proposed reburial location are presented in Sections 8.1 and 8.2.

7.3.2 Aboriginal Archaeology

The site assessment fine-tuned the proposed reburial locations by selecting specific points in the landscape where Aboriginal objects were not present on the surface. These locations were recorded with a differential GPS (see Appendix 12.1).

Several of the locations assessed during the site assessment contained isolated or surface scatters of Aboriginal objects (e.g. flaked stone tools) and several locations are within the site extents of previously recorded Aboriginal sites (see Appendix 12.1). The potential for Aboriginal archaeological deposits is generally low to moderate and the potential scientific significance of any deposits is low.

It is unlikely that previously unidentified archaeologically significant deposits will occur subsurface at the proposed reburial locations. Therefore, it is unlikely that the proposed reburials will have any adverse impact on the significant archaeological record of the WLRWHA.

Where a recorded Aboriginal site will be impacted by ground disturbance, the degree of harm or impact will be partial at all proposed reburial locations, particularly given the small size of the proposed burial pits and the nature of the sparse 'background scatter' of flaked stone artefacts across the WLRWHA. The consequence of harm/impact, where there is recorded Aboriginal sites, will be that the natural stratigraphy of the discrete reburial locations will be disturbed and any Aboriginal objects that are present will not be in situ once they are reinterred along with the Aboriginal Ancestors and excavated soils. This consequence will result in no loss of overall value.

Aboriginal cultural heritage including Aboriginal sites and objects are under the jurisdiction of the *National Parks and Wildlife Act 1974*. Consideration of the harm to Aboriginal cultural heritage is presented in Section 4.3.

The results of the site assessment including the Aboriginal archaeological potential of each proposed reburial location are summarised in Table 4 and in the *Willandra Lakes Aboriginal Ancestors Reburial Project Heritage Assessment* report (Heritage NSW, 2020).

General and Specific mitigation measures are presented in Sections 8.1 and 8.2.

7.4 Impact on Local Heritage Values

As the statements of significance and heritage values for the Balrandald and Wentworth LEP listings of *Willandra Lakes* are the same as that for the State listing, the impact on local values will be the same as that for State values. That is, there will be no impacts on the State or Local Heritage values.

General and specific mitigation measures for each proposed reburial location are presented in Sections 8.1 and 8.2.

Table 4: Impact on Aboriginal sites

Location	Aboriginal Sites Present	AHIMS Sites	Type of Harm	Degree of Harm	Consequence of Harm	Mitigations Measures required
1	✓	40-5-0150	Direct	Partial	No loss of value	General and Site Specific
2	✓	40-5-0001	Direct	Partial	No loss of value	General and Site Specific
3	✗	✗	None	None	No loss of value	General
4	✓	40-5-0312	Direct	Partial	No loss of value	General and Site Specific
5	✗	✗	None	None	No loss of value	General
6	✗	✗	None	None	No loss of value	General
7	✓	40-5-0311	Direct	Partial	No loss of value	General and Site Specific
8	✓	40-4-0032	Direct	Partial	No loss of value	General and Site Specific
9	✓	40-5-0158	Direct	Partial	No loss of value	General and Site Specific
10	✓	40-5-0313	Direct	Partial	No loss of value	General and Site Specific
11	✓	40-2-0314	Direct	Partial	No loss of value	General and Site Specific
12	✗	✗	None	None	No loss of value	General
13	✗	✗	None	None	No loss of value	General
14	✗	✗	None	None	No loss of value	General

Location	Aboriginal Sites Present	AHIMS Sites	Type of Harm	Degree of Harm	Consequence of Harm	Mitigations Measures required
15	x	x	None	None	No loss of value	General
16	x	x	None	None	No loss of value	General
17	✓	40-5-0315	Direct	Partial	No loss of value	General and Site Specific
18	✓	40-5-0310	Direct	Partial	No loss of value	General and Site Specific
19	✓	40-5-0079	Direct	Partial	No loss of value	General and Site Specific
20	x	x	None	None	No loss of value	General
21	✓	40-5-0069	Direct	Partial	No loss of value	General and Site Specific
22	x	x	None	None	No loss of value	General
23	x	x	None	None	No loss of value	General
24	✓	40-2-0004	Direct	Partial	No loss of value	General and Site Specific
25	x	x	None	None	No loss of value	General
26	✓	40-5-0309	Direct	Partial	No loss of value	General and Site Specific

8.0 Mitigation Measures

8.1 General Mitigation Measures

8.1.1 Pre-commencement and Access

- All reburials must be located within the 58m radius of the one-hectare reburial site or a lesser area (semi-circle of 0.5ha) for eight sites.
- Locate and flag out all Aboriginal objects within assessment area prior to reburial, so these can be avoided.
- The reburial party will travel to each site in a minimum number of vehicles.
- Park vehicles away from reburial site and remain on existing tracks where possible.
- Bare or weedy ground should be the preferred route where there is a justifiable need to travel away from an existing access track.
- Diesel powered vehicles must be used for transport and carry sufficient fuel to avoid the need to refuel from jerry cans while in the field.
- Vehicles used on site must be fitted with a fire extinguisher.

8.1.2 Burial Location Selection

- Conduct reburial/s near central grid coordinate (see Appendix 12.3) to avoid impacts to recorded or observed Aboriginal objects.
- Where reburials are to be located at the toe of an advancing sand wall (the 0.5ha sites) the reburial locations should be close to the centre point as the assessment area.
- Selection of the reburial sites in assessment area must be done on foot, ensuring that each reburial location is on bare or weedy ground and avoids established shrubs and outside the dripline of trees and avoids areas of severe wind or water erosion.
- At sites where the soil is sandy throughout the profile, reburials should be at a greater depth than sites with finer soil texture.
- Reburials should not be located within 10 metres of rabbit warrens as these areas could become unstable due to soil erosion or subject to further burrowing.

8.1.3 Reburial

- Most of the remains are very small fragments and only a small hole will be required. Wherever possible hand tools are to be used to excavate reburial sites. Several complete skeletons will require larger holes and a small backhoe will be used to excavate the holes.
- Topsoil and surface mulch/seed will be saved prior to excavation of the reburial hole, ensuring that these resources are not cross contaminated with subsoil. Topsoil is to be respread over the disturbed area after the hole is refilled. Then the area must be lightly raked, and the stored organic matter spread on the raked area to assist in natural regeneration.
- The surface area of each hole will be minimised according to the volume of Aboriginal Ancestors to be buried, with the lower limit based on the minimum diameter possible that can be excavated with a shovel (or manual soil auger if used).

- The upper fill material in the hole should be well compacted to avoid soil subsidence and thus avoid erosion or enable the burial site to be identified easily; special care must be taken during compaction to avoid damaging any unexpected Aboriginal objects or Aboriginal Ancestors below.
- In the event that unexpected discoveries of objects or Aboriginal Ancestors occurs during the proposed works:
 - works will cease immediately
 - the objects or Aboriginal Ancestors will be recorded and photographed
 - an AHIMS record card will be completed
 - the excavation will be refilled
 - a new grave site will be chosen elsewhere from within previously assessed area.
- Excavated holes must not be left open overnight to avoid entrapment of wildlife.
- It is preferable that reburials not be undertaken in Spring to minimise the potential of disturbance of breeding/nesting wildlife.
- It is preferable that reburials occur in Autumn to optimise natural regeneration while the soil is freshly disturbed, and to minimise the time period the ground at each reburial location remains bare and disturbed to avoid erosion.
- It is preferable that reburials occur in Autumn to avoid fire risk days/hot days in Summer.
- Reburials must avoid the period after heavy rainfall to ensure wheel tracks are not created in soft soil and vehicles don't become bogged.
- Special care must be taken during smoking ceremonies or any other use of naked flame (if such activities occur) to avoid starting a fire.
- Each site must be checked on completion of reburials to ensure that no items are left on the site (e.g. storage cartons, hand tools, drink bottles, food wrappers, cigarette butts and centre point reference stake).

8.1.4 Post Reburial Remediation

- After spreading topsoil, the disturbed area will be lightly raked by hand to restore the surface to a smooth surface and even profile similar to the original.
- Any mulch/seed that was set aside earlier must be respread. As the timing of the reburials is likely to occur in early Autumn, this is an ideal time to allow natural regeneration of grasses, forbs and shrubs on the disturbed areas when the seasonal "break of season" occurs (i.e. when annual native and exotic plant species naturally germinate from seed).
- The stake marking the centre point of each site will be removed on the same day as the reburials. No further action or remediation is planned.
- No fencing or marking of the locations are proposed, as this would draw attention to the location, and this project aims to obscure the location in the long term.

8.1.5 Post Reburial Security

Providing safe, secure and long-term reburial locations is an issue that has repeatedly been raised since the 1980s. A series of mitigation measures have been outlined below. Specifically, detailed measures have been proposed to:

- limit the environmental impact of the works and therefore minimise the potential for the locations to be relocated and disturbed
- limit the physical visibility of the reburial locations, in both the short term and long term
- minimise the potential for the locations to be subject to erosion (and therefore re-exposure) in the short and long term.

These measures are relevant at the time of the reburials. Longer term, the location of each reburial location will be kept confidential. The location of each reburial will only be available to the project and monitoring team within a secure GIS platform. Each of the locations will be monitored at four monthly intervals in years one and two following the reburials. Where possible monitoring will be done via photography taken from a drone. This method will:

- eliminate the need for vehicle tracks to each location
- minimise the environmental impact
- reduce the visual impacts of site visits.

8.1.6 Long Term Management

After 2 years have elapsed it is anticipated that the reburial locations will be revegetated and will not be visible. Regular scheduled monitoring will then change to yearly monitoring for 2 years. After this time regular scheduled monitoring will cease, though unscheduled monitoring may still occur.

If unexpected change is observed at any location during monitoring e.g. erosion, disturbance or visitation, appropriate site conservation or access constraint and monitoring will be implemented.

The above monitoring, reporting and follow up actions (if needed) are the responsibility of Heritage NSW and will be led by Heritage Operations Officers from Heritage NSW. AAG members, Willandra Lakes WHA staff (NPWS) and local NPWS staff will also be involved.

8.2 Site Specific Mitigation Measures

In addition to the General Mitigation Measures above, the specific mitigation measures in Table 5 have been developed with the Aboriginal community and apply at each proposed reburial location.

Table 5: Site Specific Mitigation Measures

Location	Name	Site Specific Mitigation Measures
1	WOC-003	Keep burials close to centre to avoid erosion gullies north and south and artefacts to west. Vehicle to be parked on tourist road, approx. 1km west of the site.
2	WOC-001	Vehicles to be parked on existing track 300m away.
3	MA-001	Reburials to be deep due to sandy soil, avoid Rosewood west of centre point.
4	WOC-005, WOC-145	Avoid gilgais for reburials. Park vehicles on existing access track.
5	WOC-152	Avoid mallee, reburials to be along toe of advancing sand wall, keep vehicle north of fence.
6	LW-004	Keep off western end due to instability of sandy soil, reburials to be deep due to sandy soil, Vehicles to be parked on existing access track, reburials must be at lowest point, ie close to centre point.
7	LW-009	Reburials to be deep due to sandy soil, keep off clay pan.
8	WCW-006	Park vehicles on existing track.
9	LP-001	Avoid placing reburials on small localised mounds.
10	GL-024	Reburials to be at foot of sand wall, and near centre point.
11	GL-013	Reburials to be at foot of sand wall, and near centre point.
12	GL-020	Reburials to be along foot of advancing sand dune and near centre point.
13	GL-001	Reburials to be along foot of sand dune and close to centre point, park vehicles in existing track.
14	GL-005	Avoid Cypress Pine trees, avoid water flow depression to north, reburials to be deep due to sandy soil.

Location	Name	Site Specific Mitigation Measures
15	GL-002	Reburials to be at foot of advancing sand wall, close to centre point.
16	GL-026	Reburials to be along toe of steep sand wall, avoid shrubs, reburials to be deep due to sandy soil.
17	GL-028	Avoid traffic and reburials on clay pan.
18	GG-025	Keep vehicles well away from assessment area.
19	GG-018	Reburials to be close to toe of sand wall, and near centre point.
20	GL-025	Keep vehicles away from assessment area.
21	GG-001	Reburials to be deep due to sandy soil.
22	GG-016	Reburials to be deep if profile is sandy. Reburials to be at lowest point.
23	ML-003	Park vehicles on existing track.
24	ME-001	Reburials should be deep as soil is sandy and bare.
25	ME-002	Burials should be deep as soil is sandy and bare, keep reburials out of depressions to north and south.
26	GS-010	Avoid foot traffic on escarpment to north and the clay pan. Park vehicles on existing track to south.

9.0 Conclusion

An assessment of heritage impacts has been made and it is concluded that the proposed works will not have any adverse impacts on the heritage values of the Willandra Lakes. The proposed works will have a positive impact on the identified World, National, State and Local heritage significance of *Willandra Lakes* as it will enhance the social values of the place:

- The reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the Aboriginal cultural heritage and social values by respecting the ancestors and continuing cultural protocols of caring for the dead.
- The reburial of the Willandra Lakes Aboriginal Ancestors will recover and enhance the use and association of the Aboriginal community with the place.
- The proposed works will enhance Aboriginal cultural heritage values, through rehabilitation of the landscape.

The proposed reburial of the Willandra Lakes Aboriginal Ancestors will not impact known areas of historical archaeological sensitivity and will have no long-term adverse impact on the *Willandra Lakes* historical archaeological values (including its research potential).

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12.0 Appendix

The appendices show a high level of detail on the reburial locations. This information is considered culturally sensitive and confidential and it is not in the public interest, or in best interests of providing safety and security for the remains, to make this information widely available.

12.1 AAG Press Release

MUNGO MAN AND LADY TO BE REBURIED

Aboriginal remains known as the Willandra ancestral remains, including those of Mungo Man and Mungo Lady, will be reburied following a unanimous decision of the Willandra World Heritage Region Aboriginal Advisory Group.

The group made the decision at its November meeting with this motion: In exercising our inalienable rights and as Traditional Owners, the Willandra Lakes Region World Heritage Area Aboriginal Advisory Group as duly elected representatives of the 3 Traditional Tribal Groups unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years.

The resolution comes 12 months after the remains of Mungo Man were returned to Country.

Mungo Man and Mungo Lady were discovered in the dunes of dry Lake Mungo in the 1960s and 70s and led the way in showing the world that Aboriginal people had been in Australia for some 42,000 years.

The Aboriginal Advisory Group (AAG) has asked the Office of Environment and Heritage to now begin the administrative process to enable the 105 sets of remains to be reburied.

The AAG further resolved to rebury the majority of the remains as close as possible to the original locations from which they were taken.

The remains of Mungo Man, Mungo Lady and a further set of remains known as WLH 4 will be reburied separately but also as close as possible to their original grave sites.

AAG Chair and Barkandji man Ivan Johnston said the decision sent an important message.

“Mungo Man and Mungo Lady are among the most important human remains ever discovered in Australia, but they need to be laid to rest,” he said.

Mick Kelly, Ngayampaa representative and AAG In-Coming Chair said “It is only fair that we respect and uphold the wishes of the Elders who went before us. They always maintained that we should lay our old people to rest - back in the ground where they belong, not on a shelf in a university or museum. Once these wishes have been carried out we can start the healing process for Aboriginal people within the Willandra Lakes World Heritage Area.”

Patsy Winch, Mutthi Mutthi representative said: “Mungo Man and his kin needed to be reburied so they can be reunited with their country and their resting place in the sands of Mungo. This will allow the community to move on.”

Ivan Johnston (Barkandji) 0447 238 897

Mick Kelly (Ngayampaa) 0428 246243

Patsy Winch (Mutthi Mutthi) 0406 693 628

12.2 Property details for the proposed work locations

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
1	WOC-003	[REDACTED]	1	40-5-0150 WOC-003	7305	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
2	WOC-001	[REDACTED]	11	40-5-0001	1032	762247	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
3	MA-001	[REDACTED]	1	N/A	7304	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
4	WOC-005, WOC-145	[REDACTED]	2	40-5-0312	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
5	WOC-152	[REDACTED]	4	N/A	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
6	LW-004	[REDACTED]	2	N/A	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
								Conservation Area)		
7	LW-009	[REDACTED]	2	40-5-0311	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
8	WCW-006	[REDACTED]	1	40-4-0032	2	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Crown Lands (Western Lands Lease)	Top Hut Station
9	LP-001	[REDACTED]	5	40-5-0158	1029	762244	Balrandald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
10	GL-024	[REDACTED]	9	40-5-0313	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
11	GL-013	[REDACTED]	14	40-2-0314	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
12	GL-020	[REDACTED]	3	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
13	GL-001	[REDACTED]	2	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
14	GL-005	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
15	GL-002	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
16	GL-026	[REDACTED]	4	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
17	GL-028	[REDACTED]	1	40-5-0315	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
18	GG-025	[REDACTED]	3	40-5-0310	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
19	GG-018	[REDACTED]	2	40-5-0079	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
20	GL-025	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
21	GG-001	[REDACTED]	1	40-5-0069	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
22	GG-016	[REDACTED]	29	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
23	ML-003	[REDACTED]	5	N/A	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
24	ME-001	[REDACTED]	1	40-2-0004	4737	44270	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Mulurulu Station
25	ME-002	[REDACTED]	1	N/A	369	761066	Balranald	WHL NHL LEP	Crown Lands (Western	Mulurulu Station

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
									Lands Lease)	
26	GS-010	[REDACTED]	1	40-5-0309	4425	767320	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Gol Gol Station

*GDA 1994 MGA Zone 54

12.3 Written Advice from Balranald Shire Council



ALL COMMUNICATIONS
MUST BE ADDRESSED TO
THE GENERAL MANAGER

Content: PK:CH:D20.43485

BALRANALD SHIRE COUNCIL

9 Market Street, Balranald NSW 2715
PO Box 120, Balranald NSW 2715

Tel: 03 5020 1300
Fax: 03 5020 1620

Email: council@balranald.nsw.gov.au
Web: www.visitbalranald.com.au

7 October 2020

Heritage NSW
PO Box 318
BURONGA NSW 2739

Attention: Harvey Johnston

By email: harvey.johnston@environment.nsw.gov.au

Dear Sir:

Re: The Willandra Lakes Aboriginal Ancestors Reburial Project

Thank you for your letter dated 25 September 2020 regarding the above Project. Council has considered the material supplied and responds as follows:

Your letter proposes that the Reburial Project be considered under Part 5 of the *Environmental Planning & Assessment Act 1979* owing to the operation of Clause 5.10(3)(a) of the Balranald Local Environmental Plan 2010 permitting low impact activities to occur without Development Consent.

Council notes that Clause 66 of the *Public Health Regulation 2012* has implications in relation to burials, in this case specifically Clause 66(1)(c), which requires a landholding of at least 5ha and approval of the local government authority. Council's Burial on Private Land Policy speaks to the burial of family members and requires development consent for private land burials. However, the purpose of that policy is to regulate the establishment of a private cemetery to effect the burial of bodies of family members of the owner/s of private land. In this case the remains proposed to be repatriated are technically considered objects and are being repatriated to general locations of historic burial sites from which they were removed. Council is also mindful that a strict application of the policy through its identification requirements risks drawing unwanted attention to sites of cultural significance.

Council notes that protections under the *National Parks and Wildlife Act* appear to offer sufficient protection of the reburial sites, along with the private property sites being confidentially identified sites and recorded on the AHIMS database. Council does not propose any restriction on the title of the private land (such as a S.88b instrument).

In conclusion therefore, Council raises no objection to the project being considered under Part 5 of *Environmental Planning & Assessment Act 1979* and approves of the repatriation of the ancestral remains to the historical burial areas as shown in the Statement of Heritage Impact, Willandra Lakes (SHR 01010) Report by Heritage NSW and NSW National Parks and Wildlife Service, dated September 2020, as the proposal meets the requirements of Clause 66 of the *Public Health Regulation 2012*.

Yours faithfully



Peter Kozlowski
ACTING GENERAL MANAGER

12.4 Written Advice from Wentworth Shire Council

From: Matthew Carlin <Matthew.Carlin@wentworth.nsw.gov.au>
Sent: Tuesday, 13 October 2020 9:50 AM
To: Harvey Johnston <Harvey.Johnston@environment.nsw.gov.au>
Subject: Willandra Lakes Aboriginal Ancestors Reburial Project

I would like to thank the South West Heritage Operations Team for the opportunity to provide comment on this project.

Wentworth Shire Council support this project and have no objections.

Sincerely

Matthew Carlin

Director Health and Planning

Wentworth Shire Council

26 - 28 Adelaide Street | PO Box 81 WENTWORTH NSW 2648

P 03 5027 5027 | **M** 0438 729 809 | **F** 03 5027 5000 | **W**

www.wentworth.nsw.gov.au

12.5 Written Advice from NSW National Parks & Wildlife Service



NPWS Ref: DOC20//852545
NSW Heritage-DPC Ref: DOC20/757684

Mr Harvey Johnston
Heritage NSW
PO Box 318
BURONGA NSW 2739

By email: harvey.johnston@environment.nsw.gov.au

The Willandra Lakes Aboriginal Ancestors Reburial Project

Dear Harvey,

Thank you for your notification dated 7 October 2020 issued in line with clause 16 of the *State Environmental Planning Policy (Infrastructure) 2007* for the above project. The National Parks and Wildlife Service (NPWS) acknowledges the intent to carry out the proposed re-burial of the Willandra Ancestral Remains on and adjoining land reserved as Mungo National Park under the *National Parks and Wildlife Act 1974* (NPW Act).

The return of the Willandra Lakes Aboriginal Ancestors to Mungo National Park is a significant step in reuniting and restoring the cultural values of the landscape and fulfilling the long-term wishes of the Aboriginal people. As the re-burial represents the final step in the repatriation process for the Aboriginal Ancestors, NPWS continues to remain supportive of the intent, as a partner in the proposal.

NPWS recognises that the proposal is permissible under NPW Act, as it remains consistent with the objects of the Act, management principles of national parks and the adopted Mungo National Park Plan of Management. As a permissible activity under the NPW Act, it can therefore be authorised subject to determination of a Review of Environmental Factors (REF) under Division 5.1 of the *Environmental Planning and Assessment Act 1979*.

In addition, NPWS agrees that the re-burial of the Willandra Aboriginal Ancestors:

- will be undertaken with great care and respect as to not result in any additional harm or desecration to the significant cultural values of Mungo National Park.
- is defined as both a conservation work, as it will be overseen by authorised officers from Heritage NSW under Section 87A, and a traditional cultural burial activity undertaken by Aboriginal people, under Section 87B of the NPW Act – and therefore, is exempt from requiring an Aboriginal Heritage Impact Permit under Section 90 of the NPW Act
- involves Ancestral Remains that are substantially older than 100 years therefore no authorisation from the Coroner under Section 19 of the Coroners Act 2009 will be required

PO Box 1020, Dubbo, NSW 2830
92 Macquarie St, Dubbo, NSW
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ABN 20 770 707 465
www.environment.nsw.gov.au

- will require, under the Public Health Regulation 2012, an approval from NPWS as the land manager in the form of a consent (as an approval) issued under the National Parks and Wildlife Regulation 2019, the conditions of which will be identified through the REF determination process and which will need to be issued before works associated with the proposal may commence on park.

The final justification of the matters presented above are to be clearly documented in the revised and final version of the Aboriginal Ancestors Reburial Project REF, prior to submission to NPWS for determination.

Yours sincerely



EMMA BLEECHMORE
Acting Director, West
National Parks and Wildlife Service

19 October 2020

12.6 Written Advice from Lease Holders

Letter from Rhys and Sarah Harris
Mulurulu Station

From: Rhys Harris
To: [Daryl Pappin](mailto:Daryl.Pappin)
Subject: Re: Reburial of ancestral Aboriginal remains on Mulurulu
Date: Friday, 14 February 2020 6:21:53 AM

G'day Daryl

Sorry for the slow reply. Yes as we discussed on the 3rd of September 2019 Sarah and myself agree to the reburial on our property.
If theres anything else you need please let us now.

Rhys And Sarah

On 30 Jan. 2020, at 12:11 pm, Daryl Pappin
<Daryl.Pappin@environment.nsw.gov.au> wrote:

Hi Rhys and Sarah

Thanks for speaking to me about this today.

On the 3rd September 2019 myself, Harvey Johnston and Dan Rosendahl met with you and Sarah at Mulurulu homestead and discussed the reburial of two ancestral Aboriginal remains that were taken from Mulurulu Station many years ago. At that time you agreed to the reburial on your property. We have now been asked to provide further written evidence that you agree to the reburial of these remains on your property.

As discussed the aim is to return the remains to near their original burial locations, in an area that will not be eroded or disturbed. The locations will not be marked or fenced and will not be near any station tracks, fences, dams, etc.

Could you please let me know, via email, if you still support this activity on your property,

Yours sincerely

Daryl Pappin

Daryl Pappin | Heritage Operations Officer

Heritage, Community Engagement, Department of Premier and Cabinet
Melaleuca St, Buronga, NSW 2739 PO Box 318, Buronga, NSW 2739
T: 03 5021 8921 M: 0472827 951 E: daryl.pappin@environment.nsw.gov.au

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

If you are not the intended recipient, please notify the sender and then delete it immediately.

Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Letter from Ian Wakefield
Top Hut Station

On the 5th September 2019, Harvey Johnston and Dan Rosendahl met with Tom and Courtney Wakefield at Top Hut homestead and discussed the reburial of ancestral Aboriginal remains that were taken from Top Hut Station many years ago. At that time, Tom and Courtney agreed to the reburial on your property. We have now been asked to provide further written evidence that you agree to the reburial of these remains on your property.

As discussed, the aim is to return the remains to near their original burial locations, in an area that will not be eroded or disturbed. The locations will not be marked or fenced and will not be near any station tracks, fences, dams, etc.

Signed



Date

27/2/2020

Letter from Russell Clothier
Gol Gol Station

2-3-2020
Russell Clothier
Gol Gol Station
RMB 9085
Mildura 3500
Victoria


Dear Daryl

I'm writing regarding the reburial of
ancestral Aboriginal remains on Gol Gol.

As the owner of Gol Gol station I give
permission for this to happen.

On the condition this doesn't have any
impact to my grazing & business operation
that I carry out on Gol Gol.

RUSSELL ERNEST CLOTHIER



12.7 Written Advice from Willandra Lakes Region World Heritage Advisory Committee



To the Honourable Minister Kean MP
Suite 5, The Madison,
25-29 Hunter Street,
Hornsby NSW 2077

Dear Minister Kean,

Proposed Reburial of Willandra Lakes Region Aboriginal Ancestral Remains

I am writing to inform you of a recent motion passed at the Willandra Lakes Region World Heritage Advisory Committee (WLRWHAC) meeting, regarding the proposed reburial of the Willandra Lakes Region Aboriginal Ancestral remains. At its meeting on 29th November 2019 in Mildura, the WLRWHAC passed unanimously the following motion:

The WLRWH Advisory Committee support the Aboriginal Advisory Group's decision to rebury ancestral remains of high cultural significance at Willandra Lakes Region World Heritage area. That the reburial of these ancestral remains will not destroy cultural values of the Willandra Lakes Region but will reunite significant elements of the area that have been taken away.

We see that the proposed reburial activity will fulfil the long-term aspirations of the Aboriginal community and is aligned with the Willandra Lakes World Heritage Area Plan of Management (1996) and Mungo National Park Plan of Management (2006). It also aligns with the Three Traditional Tribal Groups Vision Statement, particularly "We act with integrity to ensure the preservation of our culture and heritage as representatives of our people who have given us these responsibilities" (AAG Terms of Reference 2019).

This activity will see the reburial of approximately 105 Ancestral Aboriginal remains that were removed from the region in the 1960s – 1980s. This will include Mungo Man and Mungo Woman. All these remains are currently held at Mungo National Park and will be returned to locations close to their origin. Small excavation pits will be dug, a small private reburial ceremony will be conducted, and the remains will be re-interred in the landscape. No markers will be installed to indicate the grave locations.

A Review of Environmental Factors under the NSW Environmental Planning & Assessment Act (1979), yet to be determined, describes the impacts of the proposed activity and concludes that the activity will have no significant impacts on:

- the environment;
- threatened species, populations, ecological communities or their habitats;
- critical habitat;
- matters of national environmental significance listed under the Commonwealth Environment Protection and Biodiversity Conservation Act

A referral under the Commonwealth's Environment Protection and Biodiversity Conservation Act (1999) regarding this activity, will be submitted to the Commonwealth Department of Environment and Energy in the near future.

Yours sincerely

A handwritten signature in black ink that reads 'Andrea Cashmere'.

Andrea Cashmere
Acting Chair on behalf of
The Willandra Lakes Region World Heritage Advisory Committee
January 2020

C- NSW National Parks & Wildlife Service, Buronga, NSW 2738 | nsws.willandra@environment.nsw.gov.au
The views expressed in this letter are those of the WLRWH AC and do not represent the views of NPWS

12.8 State Heritage Inventory Form

Heritage Database		HOD Number 5045538					
Heritage Division, Office of Environment and Heritage		SHR/IHO 01010					
Item Name: Willandra Lakes							
Location: 120km north, Balranald							
Addresses:	Street:	Suburb / Nearest Town:					
	120km north	Balranald NSW 2715					
	120km north	Balranald NSW 2715					
		Local Government Area:					
		Balranald					
		Wentworth					
County/Parish:							
Parcels:	LotCode	Number	Section	PlanCode	PlanNumber	Current	Date Entered
	LOT	6926		DP	1029750	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7300		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7301		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7302		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7303		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7304		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	7305		DP	1173617	<input checked="" type="checkbox"/>	08/06/2016
	LOT	1029		DP	762244	<input checked="" type="checkbox"/>	08/06/2016
	LOT	1030		DP	762245	<input checked="" type="checkbox"/>	08/06/2016
	LOT	1032		DP	762247	<input checked="" type="checkbox"/>	08/06/2016
Property Ident (old):							
Boundary / Curtilage:							
Item Type:	Landscape		Group:	Landscape - Natural		Category:	Arid environment
Owners:	Organisation:				Owner Category:		
	Office of Environment and Heritage				State Government		
Current Use:	Pastoralism, National Park						
Former Uses:	Aboriginal land, pastoralism						
Area/Group/Complex:							Group ID:
Other/Former Names:	Lake Mungo						
Assessed Significance:	State			Endorsed Significance:	State		
Statement of Significance:	<p>Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. The region has a Pleistocene</p>						
Heritage Division, Office of Environment and Heritage							
Date: 24/08/2020	Full Report				Page 1		

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field. (Moore 1977) The Willandra Lakes Region comprising 240,000 acres was inscribed on the World Heritage List in 1981 for both outstanding cultural and natural universal values: as an outstanding example representing the major stages in the earth's evolutionary history, as an outstanding example representing significant ongoing geological processes; and for bearing an exceptional testimony to a past civilization.

Historical Notes or Provenance: Willandra Lakes has formed over the last 2 million years. The ancient shorelines are stratified into three major layers of sediments that were deposited at different stages in the lakes' history.

The earliest sediments are more than 50,000 years old and are orange-red in colour. Above are clay, clean quartz sand and soil that were deposited along the lakes' edge when the lakes were full of deep relatively fresh water between 50,000 and 19,000 years ago. The top layer is composed largely of wind blown clay particles heaped up on the lunettes during periods of fluctuating water levels, before the lakes finally dried up.

The Willandra Lakes Region is an extensive area that contains a system of ancient lakes, most of which are fringed by a crescent shaped dune or lunette. Aborigines lived on the shores of the lakes for at least 50,000 years, and the remains of a 40,000 year old female found in the dunes of Lake Mungo are believed to be the oldest ritual cremation site in the world (WHArea, from website).

It is one of the oldest known human occupation sites in Australia. There is abundant evidence of Aboriginal occupation over the last 10,000 years.

European exploration of the area was largely left to the anonymous pastoralists who followed renowned explorers. Captain Charles Sturt is the one who had most influence in arousing interest in the area. He came upon the upper reaches of the Darling River in 1829 and named it after the Governor. He was again in the area in 1844 during his attempt to explore the interior of the continent.

Surveyor George Boyle White explored the Darling in 1833 in the region from the Peel River junction to the region of Fort Bourke and was followed two years later by Major Thomas Mitchell the Surveyor-General of New South Wales who was intent on showing whether or not the Darling entered the Murray as Sturt had surmised. Mitchell failed to befriend the Aborigines, however, and after proceeding south as far as Laidley's Ponds he thought it best to retreat after one of his party had shot and killed an Aborigine. Mitchell went into the area again in 1836, although this time he travelled down the Murrumbidgee with the intention of exploring the Darling from its junction with the Murray. However, satisfied that Sturt was correct he followed the Darling upstream only a few kilometres before turning his attention elsewhere.

Date: 24/08/2020

Heritage Division, Office of Environment and Heritage

Full Report

Page 2

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Soon after the Murrumbidgee/Murray route became well-used by stockman overlanding sheep and cattle to the colony of South Australia which had been established in 1836. Squatters who were eager for new land followed government surveyors and explorers and took up runs in the new regions. The first pastoral station in the lower Darling region was that taken up by George Hobler in 1845 on the Lachlan, a run which he called Paika.

Settlement in the region between the Murrumbidgee and the Darling was officially recognised on 4 December 1847 when the Darling Pastoral District was proclaimed.

The great boon to the pastoral occupation of the Darling and the back blocks was the navigation of the Murray and its tributaries from South Australia. Francis Cadell and William Randell pioneered river navigation during 1853 and within six months of their maiden voyages on the Darling the value of river properties had doubled.

The earliest pastoral occupation of the region was that of George Lee for the lease of Turtlee on 28 February 1850. George Mory's tender for Boomiaricod was accepted in December 1853, followed by that of James Scott for Arumpo in October 1859. because of the remoteness of these back blocks and lack of natural surface water, tenure was very tenuous.

Back blocks could not be worked profitably until expensive improvements had been made in the way of fencing and the provision of watering facilities. The sinking of tanks and successful wells were expensive and somewhat of a lottery. At Gol Gol between March 1875 and September 1881, eighty-three trial shafts had been sunk at a cost of 1,260 pounds.

Pastoralists still had an optimistic attitude towards the region and were convinced that with sufficient capital, profit would be theirs. It took them some time to appreciate the fragile nature of the environment and that the district could not accommodate the stock numbers which could be carried further to the east and that good seasons were the exception rather than the rule.

The Royal Commissions in 1900 were quick to appreciate 'that much too favourable a view was taken on the carrying capacity of the country...It is only during the late years, apparently, that pastoralists seemed to have opened their eyes to the grave risks they ran in allowing the edible shrubs to be eaten by stock in the belief that they would re-appear in abundance after every rain'.

In many instances overstocking was not planned but as a result of expected rains failing to come. Sending stock away meant loss of profit and possibly an increased overdraft. Many pastoralists were caught this way, however many other had an eye for quick profits. JH Patterson who took over Gol Gol in 1875, sold it in 1882, but was forced to repossess it again in 1886 after Everitt and White were ruined by the country.

Remoteness meant carting supplies and wool to and from stations was expensive. Often supplies were difficult to obtain as carriers would not cart supplies to the remote stations. In addition stock often had to be sent to market rather than being sold on the station.

Date: 24/08/2020

Heritage Division, Office of Environment and Heritage

Full Report

Page 3

This report was produced using State Heritage Inventory databases/software provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Rabbits compounded the problems of pastoral enterprise. They competed directly with the sheep in the fragile environment. The government recognised the problem and in 1883 it passed the Rabbit Nuisance Act which, among other things, offered bonuses to professional trappers for scalps. Until the widespread of myxomatosis in the 1950s the war on rabbits was an accepted part of station life throughout the region.

Pastoralists often complained of the lack of suitable labour for their remote stations. The Aboriginal population became an important part of the pastoral industry during the manpower shortage of the 1860s. However with the extensive use of wire fencing in the mid 1870s and the use of paddocking Aboriginal shepherds became redundant. Chinese undoubtedly worked in the district but there is hard evidence to indicate this. One of the few references is to Ah Tin who was employed to sink a well on Gol Gol Station. By 1883 there existed a camp at Narrandera with 303 Chinese that searched for casual work.

Throughout the 1890s the problems of drought, rabbits, remoteness and lack of labour were compounded because of the Australia-wide recession. Only the most astute and financially secure pastoralists survived. Drought dragged on from 1895 to 1903.

The Royal Commissioners of 1901 looked with sympathy on the pastoralists of the Western Division and recommended similar treatment from the Government. Almost immediately new legislation was drafted and within three months of the report the new legislation was approved and brought into operation on 1 January 1901. The Western Lands Board was granted control of the Western Division and to formulate more appropriate policies and conditions which pertained to the West. Leases were also extended for an additional forty-two years offering more secure tenure. The legislation of 1901 governed pastoralism in the region during the twentieth century.

Technology caused great change throughout the district. One of the first changes to make an impact was the introduction of mechanical shearing. Ten machines were introduced to Gol Gol and Mungo shearing sheds and had the immediate effect of requiring additional shearers. Other technology included the amount of work undertaken by mechanised equipment such as tractors. The telephone was introduced in 1924 to connect Arumpo, Pan Ban and Mulurulu and removed a great deal of the sense of isolation in the Region.

A significant change after World War One was the working of owner-occupiers on smaller stations rather than managers for some large absentee lessee. Life was very hard for these new lessees as they strove to establish the necessary infrastructure. The lucky ones were Ewan and Nagus Cameron who took up Mungo Station because they acquired a homestead, a shearing shed and shearer's quarters, together with other buildings. Other had to build all of this.

The increased number of families in the Region meant that there was a little more social interaction than there had been decades earlier. Albert Barnes started the Mungo Gymkhana which after three years was laid out on the southern rim of the lake on Joulri Station.

The increased use of the motor vehicle during the 1930s meant that travel throughout the

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 4

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

region was much more rapid. During this time Ministers of religion began making regular tours of the region. A major impact on the region was the development of Mildura and provided services such as hospital and medical care (Donavon & Associates 16-48).

Willandra Lakes Region was listed on the World Heritage List in 1981 (<http://whc.unesco.org/en/list/167>).

Upon listing, the World Heritage Committee requested that a management plan be 'rapidly established for the whole area.' This process was begun in 1989 with the first property management plan - Sustaining the Willandra - finalised in 1996 following extensive consultation with all stakeholders. Individual Property Plans have been developed to protect World Heritage values on the pastoral stations. Similarly, Mungo National Park, managed jointly by the NPWS and Traditional Tribal Groups under a Joint Management Agreement, is subject to a management plan which aims to maximise conservation of both natural and cultural heritage values while also conserving biodiversity and facilitating appropriate visitor access. Visitor access to sensitive areas is carefully controlled, and in some areas excluded, to mitigate adverse impacts on World Heritage values. In 2007 the Willandra Lakes Region World Heritage Area was added to the National Heritage List in recognition of its national heritage significance (WHArea, on website).

Over 2018 Western Local Land Services (LLS) and a number of stakeholders have partnered to tackle the ongoing threat that rabbits pose to the values of the Willandra Lakes Region World Heritage Area and reduce their impact on primary production in the region. Partners including the Willandra Landholders Alliance, Western Landcare NSW, and the NSW National Parks and Wildlife World Heritage team, recently met to evaluate progress and develop an adaptive rabbit management plan to coordinate management efforts within the group and share knowledge about past lessons (The Land, 1/7/2019).

Themes:	National Theme	State Theme	Local Theme
	1. Environment	Environment - naturally evolved	Other open space
	1. Environment	Environment - naturally evolved	Changing the environment
	1. Environment	Environment - naturally evolved	Cultural: Conserving and protecting natural features
	1. Environment	Environment - naturally evolved	Cultural: Lakes and wetlands supporting human activities
	1. Environment	Environment - naturally evolved	Cultural: Natural landscapes valued by humans
	1. Environment	Environment - naturally evolved	Cultural: Plains and plateaux supporting human activities
	1. Environment	Environment - naturally evolved	Cultural: Pre-invasion ecosystems illustrating changing human land uses
	1. Environment	Environment - naturally evolved	Environments important to Aboriginal traditional and spiritual life

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 5

This report was produced using State Heritage Inventory databases where provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

1. Environment	Environment - naturally evolved	Modification of terrain
1. Environment	Environment - naturally evolved	Natural - pre European settlement vegetation
1. Environment	Environment - naturally evolved	Park reserve
1. Environment	Environment - naturally evolved	Scientific: Geoperiod Quarternary Epoch Holocene from the present to 10 000 years ago
1. Environment	Environment - naturally evolved	Scientific: Geoperiod Quarternary Epoch Pleistocene 10 000 to 1.7 million years ago
1. Environment	Environment - naturally evolved	Scientific: Geoperiod Tertiary Epoch Pliocene 1.7 to 12 million years ago
1. Environment	Environment - naturally evolved	Tracing the evolution of a continent's special environments
2. Peopling	Aboriginal cultures and interactions with other cultures	(none)
2. Peopling	Aboriginal cultures and interactions with other cultures	Aboriginal Culture
2. Peopling	Aboriginal cultures and interactions with other cultures	All nations - reconciliation events
2. Peopling	Aboriginal cultures and interactions with other cultures	All nations - sites evidencing occupation
3. Economy	Agriculture	Private farming
3. Economy	Environment - cultural landscape	(none)
3. Economy	Environment - cultural landscape	Developing local, regional and national economies
3. Economy	Environment - cultural landscape	Significant Places: How are significant places marked in the landscape of Parramatta by, or for, different groups?
3. Economy	Environment - cultural landscape	Landscapes of contemplation and devotion
3. Economy	Environment - cultural landscape	Landscapes of cultural and natural interaction

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 6

This report was produced using State Heritage Inventory databases/software provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

3. Economy	Environment - cultural landscape	Landscapes of passive recreation
3. Economy	Environment - cultural landscape	Landscapes of scenic beauty
3. Economy	Environment - cultural landscape	Landscapes used for self reliant recreation
3. Economy	Environment - cultural landscape	Tourism
3. Economy	Events	Developing national landmarks
3. Economy	Pastoralism	(none)
3. Economy	Pastoralism	Agisting and fattening stock for slaughter
3. Economy	Pastoralism	Modifying landscapes to increase productivity
3. Economy	Pastoralism	Sheep farming for wool
4. Settlement	Land tenure	Administering and alienating Crown lands
4. Settlement	Land tenure	Changing land uses - from rural to tourist
4. Settlement	Land tenure	Leasing land for pastoral purposes
4. Settlement	Land tenure	Naming places (toponymy)
4. Settlement	Land tenure	Resuming private lands for public purposes
4. Settlement	Land tenure	Sub-division of large estates
4. Settlement	Towns, suburbs and villages	Subdivision of rural estates
4. Settlement	Towns, suburbs and villages	A quiet Rural District
5. Working	Labour	Working on pastoral stations
7. Governing	Government and Administration	State government
7. Governing	Government and Administration	Developing roles for government - administration of land
7. Governing	Government and Administration	Developing roles for government - conserving cultural and natural heritage
7. Governing	Government and Administration	Developing roles for government - parks and open spaces
7. Governing	Government and Administration	Developing roles for government -

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 7

This report was produced using State Heritage Inventory databases where provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

	Administration	providing museums
7. Governing	Government and Administration	Developing roles for government - public land administration
7. Governing	Government and Administration	Developing roles for government - scientific research
8. Culture	Creative endeavour	Architectural styles and periods - colonial vernacular
8. Culture	Creative endeavour	Building in response to natural landscape features.
8. Culture	Creative endeavour	Landscaping - neglected, regenerating to bushland
8. Culture	Creative endeavour	Vernacular structures and building techniques
8. Culture	Domestic life	Ways of life 1850-1900
8. Culture	Domestic life	Ways of life 1900-1950
8. Culture	Domestic life	Living in a bushland setting
8. Culture	Domestic life	Living in a rural homestead
8. Culture	Leisure	Outdoor relief
8. Culture	Leisure	Activities associated with relaxation and recreation
8. Culture	Leisure	Bird watching
8. Culture	Leisure	Enjoying public parks and gardens
8. Culture	Leisure	Going to a museum
8. Culture	Leisure	Tourism
8. Culture	Leisure	Visiting heritage places
8. Culture	Leisure	Visiting lookouts and places of natural beauty
8. Culture	Social institutions	Belonging to an historical society or heritage organisation

Designer:

Maker / Builder:

Year Started:

Year Completed:

Circa: No

Physical Description: Willandra Lakes is located in south-western New South Wales. The lakes system, a remnant of the Lachlan River drainage pattern, is approximately 150km long by 40km wide and runs generally in a north-south direction from Lake Mulurulu in the north to Lake Pringle in the south. The approximate area is 600,000 hectares. Parallel to the eastern shores,

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 8

This report was produced using State Heritage Inventory databases/ware provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

white sand and clay dunes rise 40 metres above the plain, while deep gullies have been cut through the lake shore deposits. The landscape surrounding the system is one of low, parallel ridges of fine red sand.

Lake Mungo, the best known of the lakes in the area is located in the centre of the Willandra Lakes system about 100km north-east of Mildura.

Vegetation and Geomorphological Features

The dry lake beds support mallee eucalypt and saltbush communities, while the sand dunes are occasionally bare of vegetation, or support mallee and spinifex communities.

The area is representative of south-east Australian lunettes or dry lake beds with wind blown dunes on their eastern margins and flat floors, formerly lake bottoms. A lunette is a crescentic dune ridge commonly found on the eastern (lee) margin of shallow lake basins in eastern Australia, developed under the influence of dominant westerly winds. The lunettes provide the area with a special scenic quality. Stabilised dunes, crescent shaped, edge the lakes and where erosion has occurred, deep gullying has created miniature grand canyons of great beauty, as at the Walls of China, where the multicoloured strata of the the lunette of Lake Mungo is exposed.

Hydrology

Willandra Lakes is a fossil waterway developed during the Pleistocene Geological Period when the climate was considerably colder and wetter than in the same area today. Thirt thousand years ago, the Murrumbidgee was a much larger river than today which broke up into four or five major channels, forming large lakes in the sand dunes west of Hillston. These large lakes were predominantly filled, covering 1,088 square kilometres, but now carry water only during peak or flood discharges.

Climate

The area is semi-arid, average rainfall being approximately 250mm per annum. (D. Moore 1977)

Fauna

Twenty species of mammals are currently recorded at Willandra, of which bats are the most diverse group. There are some 40 species of reptiles and amphibians. There are 137 recorded species of bird life including parrots, cockatoos and finches.

Physical Condition:

Modification Dates:

Recommended Management:

Management:	Recommended Management	Produce a Conservation Management Plan (CMP)
	Recommended Management	Carry out interpretation, promotion and/or education

Further Comments:

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 9

This report was produced using State Heritage Inventory databases where provided by the NSW Heritage Office.

Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

SHR criteria a): Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years. It was part of the history of inland exploration (Burke and Wills expedition) and of the development of the pastoral industry in western New South Wales. (World Heritage Australia 1996)
[Historical]

SHR criteria b):
[Association]

SHR criteria c): The area contains a relict lake system whose sediments, geomorphology and soils contain an outstanding record of low-altitude, non-glaciated Pleistocene landscape. The area contains outstanding examples of lunettes including Chibnalwood Lunette, the largest clay lunette in the world. (World Heritage Australia 1996)
[Aesthetic/Technical]

SHR criteria d): Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons. The Willandra's traditionally affiliated Aboriginal people proudly identify themselves with this land. The Willandra's primary producer landholder families have links with the European settlement of the region. The remoteness of the area creates the neighbourly support and a sense of community, in times of need whilst at the same time the isolation promotes self-sufficiency. (World Heritage Australia 1996)
[Social/Cultural]

SHR criteria e): The region has a Pleistocene archaeological record of outstanding value for world pre-history and is significant for understanding early cultural development in this region. The area is the site of discovery of the Mungo Geomagnetic Excursion, one of the most recent major changes of the earth's magnetic field. (World Heritage Australia 1996) The area is capable of yielding information relating to the evolution of climates and environments in south-eastern Australia. It has importance in understanding the reversal of the earth's magnetic field. (Moore 1977)
[Research Potential]

SHR criteria f):
[Rarity]

SHR criteria g): The area is representative of south-east Australian lunettes or dry lake beds with wind blown dunes on their eastern margins and flat floors. (Moore 1977)
[Representation]

Integrity / Intactness:

References:	Author:	Title:	Year:
	Attraction Homepage	Willandra Lakes - Mungo National Park	2007
	D Moore	National Trust Classification Card - Willandra Lakes System	1977
	Tourism NSW	Willandra National Park	2007
	unattribed	Rabbit control success at Willandra Lakes	2019

Studies:

Listings:	Name:	Title:	Number:	Date:
	Heritage Act - State Heritage Register		01010	2/04/1999
	Heritage Act - s.170 NSW State agency heritage register			

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 10

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Regional Environmental Plan	Willandra Lakes REP No 1 (World Heritage)	23/03/2001
National Trust of Australia register		
National Heritage List	Willandra Lakes Region	21/05/2007
Register of the National Estate		21/03/1978
World Heritage List	Willandra Lakes Region	1/01/1981

Data Entry: **Date First Entered:** 06/06/1997 **Date Updated:** 26/05/2020 **Status:** Partial

Images:



Caption: Aerial view of Lake Mungo lunette, including 'The Walls of China'. Willandra's archaeological record demonstrates continuous human occupation of the area for at least 40,000 years.

Copyright: National Parks and Wildlife Service

Image by: D Earle

Image Date:

Image Number:

Image Path: 504

Image File: 5045538b1.jpg

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 11

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Thumb Nail Path: 504

Thumb Nail File: 5045538t1.jpg

Date: 24/08/2020

Heritage Division, Office of Environment and Heritage
Full Report

Page 12

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Heritage Database

HOD Number
5045538

Heritage Division, Office of Environment and Heritage

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Images:



Caption: Erosion along Lake Arumpo lunette, Mungo National Park. Living in the area provides the opportunity to experience the natural harshness and beauty through all seasons.

Copyright: National Parks and Wildlife Service

Image by: D Earle

Image Date:

Image Number:

Image Path: 504

Image File: 5045533b2.jpg

Thumb Nail Path: 504

Thumb Nail File: 5045533t2.jpg

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 13

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Heritage Database

Heritage Division, Office of Environment and Heritage

HOD Number
5045538

SHR/IHO 01010

Item Name: **Willandra Lakes**

Location: **120km north, Balranald**

Image/s:



Caption: SHR Plan No 2957

Copyright: Heritage Council of NSW

Image by: Heritage Division

Image Date: 2/04/1999

Image Number:

Image Path: 504

Image File: 5045538b100.jpg

Thumb Nail Path: 504

Thumb Nail File: 5045538t100.jpg

Data Entry: Date First Entered: 06/06/1997

Date Updated: 26/05/2020

Status: Partial

Heritage Division, Office of Environment and Heritage

Date: 24/08/2020

Full Report

Page 14

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Appendix 11: Location Information

Property details for the proposed work locations (CONFIDENTIAL)

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
1	WOC-003	[REDACTED]	1	40-5-0150	7305	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
2	WOC-001	[REDACTED]	10	40-5-0001	1032	762247	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
3	MA-001	[REDACTED]	1	N/A	7304	1173617	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
4	WOC-005, WOC-145	[REDACTED]	2	40-5-0312	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
5	WOC-152	[REDACTED]	4	N/A	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
6	LW-004	[REDACTED]	2	N/A	1	1158414	Wentworth	WHL NHL	Mungo National	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
								LEP (Heritage Item and Conservation Area)	Park Estate	
7	LW-009		2	40-5-0311	1	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Mungo National Park Estate	NPWS
8	WCW-006		1	40-4-0032	2	1158414	Wentworth	WHL NHL LEP (Heritage Item and Conservation Area)	Crown Lands (Western Lands Lease)	Top Hut Station
9	LP-001		1	40-5-0158	1029	762244	Balranda	WHL NHL SHR LEP	Mungo National Park Estate	NPWS
10	GL-024		9	40-5-0313	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
11	GL-013	[REDACTED]	14	40-5-0314	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
12	GL-020	[REDACTED]	3	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
13	GL-001	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
14	GL-005	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
15	GL-002	[REDACTED]	1	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
16	GL-026	[REDACTED]	4	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
17	GL-028	[REDACTED]	1	40-5-0315	6926	1029750	Wentworth	WHL NHL SHR	Mungo National	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
									Park Estate	
18	GG-025		1	40-5-0310	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
19	GG-018		2	40-5-0079	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
20	GL-025		3	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
21	GG-001		1	40-5-0069	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
22	GG-016		29	N/A	6926	1029750	Wentworth	WHL NHL SHR	Mungo National Park Estate	NPWS
23	ML-003		1	N/A	1030	762245	Balranald	WHL NHL SHR LEP	Mungo National Park Estate	NPWS

Location	Name	Grid Coordinates*	No. of Burials	AHIMS ID No.	Lot	DP	LGA	Heritage Listings	Owner	Manager
24	ME-001	[REDACTED]	1	40-2-0004	4737	44270	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Mulurulu Station
25	ME-002	[REDACTED]	1	N/A	369	761066	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Mulurulu Station
26	GS-010	[REDACTED]	1	40-5-0309	4425	767320	Balranald	WHL NHL LEP	Crown Lands (Western Lands Lease)	Gol Gol Station

*GDA 1994 MGA Zone 54

Appendix 12: Response from Local Councils

Willandra Lakes Aboriginal Ancestors Reburial Project



Matthew Carlin <Matthew.Carlin@wentworth.nsw.gov.au>
To Harvey Johnston

[↩ Reply](#) [↶ Reply All](#) [→ Forward](#) [⋮](#)

Tue 13/10/2020 9:50 AM

I would like to thank the South West Heritage Operations Team for the opportunity to provide comment on this project.

Wentworth Shire Council support this project and have no objections.

Sincerely

Matthew Carlin
Director Health and Planning
Wentworth Shire Council
26 - 28 Adelaide Street | PO Box 81 WENTWORTH NSW 2648
P 03 5027 5027 | M 0438 729 809 | F 03 5027 5000 | W www.wentworth.nsw.gov.au
E matthew.carlin@wentworth.nsw.gov.au



<p>WENTWORTH SHIRE COUNCIL WORTH <small>THE</small> DRIVE</p>	<p>Wentworth Shire Service Centres</p> <p>Main office - 26 - 28 Adelaide St Wentworth Midway Centre - Midway Drive, Buronga</p> <p>Telephone: 5027 5027</p> <p>council.wentworth.nsw.gov.au www.wentworth.nsw.gov.au</p> <p> Find us on Facebook</p>
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BALRANALD SHIRE COUNCIL

ALL COMMUNICATIONS
MUST BE ADDRESSED TO
THE GENERAL MANAGER

Contact: PK:CH:D20.43485

70 Market Street, Balranald NSW 2715
PO Box 120, Balranald NSW 2715

Tel: 03 5020 1300

Fax: 03 5020 1620

Email: council@balranald.nsw.gov.au

Web: www.visitbalranald.com.au

7 October 2020

Heritage NSW
PO Box 318
BURONGA NSW 2739

Attention: Harvey Johnston

By email: harvey.johnston@environment.nsw.gov.au

Dear Sir:

Re: The Willandra Lakes Aboriginal Ancestors Reburial Project

Thank you for your letter dated 25 September 2020 regarding the above Project. Council has considered the material supplied and responds as follows:

Your letter proposes that the Reburial Project be considered under Part 5 of the *Environmental Planning & Assessment Act 1979* owing to the operation of Clause 5.10(3)(a) of the Balranald Local Environmental Plan 2010 permitting low impact activities to occur without Development Consent.

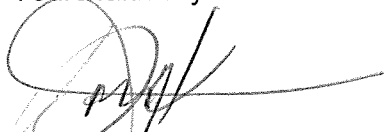
Council notes that Clause 66 of the *Public Health Regulation 2012* has implications in relation to burials, in this case specifically Clause 66(1)(c), which requires a landholding of at least 5ha and approval of the local government authority. Council's Burial on Private Land Policy speaks to the burial of family members and requires development consent for private land burials. However, the purpose of that policy is to regulate the establishment of a private cemetery to effect the burial of bodies of family members of the owner/s of private land. In this case the remains proposed to be repatriated are technically considered objects and are being repatriated to general locations of historic burial sites from which they were removed. Council is also mindful that a strict application of the policy through its identification requirements risks drawing unwanted attention to sites of cultural significance.

Council notes that protections under the *National Parks and Wildlife Act* appear to offer sufficient protection of the reburial sites, along with the private property sites being confidentially identified sites and recorded on the AHIMS database. Council does not propose any restriction on the title of the private land (such as a S.88b instrument).



In conclusion therefore, Council raises no objection to the project being considered under Part 5 of *Environmental Planning & Assessment Act 1979* and approves of the repatriation of the ancestral remains to the historical burial areas as shown in the Statement of Heritage Impact, Willandra Lakes (SHR 01010) Report by Heritage NSW and NSW National Parks and Wildlife Service, dated September 2020, as the proposal meets the requirements of Clause 66 of the *Public Health Regulation 2012*.

Yours faithfully

A handwritten signature in black ink, appearing to be 'PK', written over a circular stamp or seal.

Peter Kozlowski
ACTING GENERAL MANAGER

A long, vertical handwritten signature in black ink, extending downwards from the typed name.

From: Rhys Harris
To: [Daryl Pappin](mailto:Daryl.Pappin)
Subject: Re: Reburial of ancestral Aboriginal remains on Mulurulu
Date: Friday, 14 February 2020 6:21:53 AM

G'day Daryl

Sorry for the slow reply. Yes as we discussed on the 3rd of September 2019 Sarah and myself agree to the reburial on our property.
If theres anything else you need please let us now.

Rhys And Sarah

On 30 Jan. 2020, at 12:11 pm, Daryl Pappin
<Daryl.Pappin@environment.nsw.gov.au> wrote:

Hi Rhys and Sarah

Thanks for speaking to me about this today.

On the 3rd September 2019 myself, Harvey Johnston and Dan Rosendahl met with you and Sarah at Mulurulu homestead and discussed the reburial of two ancestral Aboriginal remains that were taken from Mulurulu Station many years ago. At that time you agreed to the reburial on your property. We have now been asked to provide further written evidence that you agree to the reburial of these remains on your property.

As discussed the aim is to return the remains to near their original burial locations, in an area that will not be eroded or disturbed. The locations will not be marked or fenced and will not be near any station tracks, fences, dams, etc.

Could you please let me know, via email, if you still support this activity on your property,

Yours sincerely

Daryl Pappin

Daryl Pappin| Heritage Operations Officer

Heritage, Community Engagement, Department of Premier and Cabinet
Melaleuca St, Buronga, NSW 2739 PO Box 318, Buronga, NSW 2739
T: 03 5021 8921 M: 0472827 951 E: daryl.pappin@environment.nsw.gov.au

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

If you are not the intended recipient, please notify the sender and then delete it immediately. Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Letter from Ian Wakefield
Top Hut Station

On the 5th September 2019, Harvey Johnston and Dan Rosendahl met with Tom and Courtney Wakefield at Top Hut homestead and discussed the reburial of ancestral Aboriginal remains that were taken from Top Hut Station many years ago. At that time, Tom and Courtney agreed to the reburial on your property. We have now been asked to provide further written evidence that you agree to the reburial of these remains on your property.

As discussed, the aim is to return the remains to near their original burial locations, in an area that will not be eroded or disturbed. The locations will not be marked or fenced and will not be near any station tracks, fences, dams, etc.

Signed 

Date 27/2/2020

Letter from Russell Clothier
Gol Gol Station

2-3-2020
Russell Clothier
Gol Gol Station
RMB 9085
Mildura 3500
Victoria

Dear Daryl

I'm writing regarding the reburial of
ancestral Aboriginal remains on Gol Gol.

As the owner of Gol Gol station I give
permission for this to happen.

On the condition this doesn't have any
impact to my grazing & business operation
that I carry out on Gol Gol.

RUSSELL ERNEST CLOTHIER





Appendix 14: NSW National Parks Wildlife Service Approval

NPWS Ref: DOC20//852545
NSW Heritage-DPC Ref: DOC20/757684

Mr Harvey Johnston
Heritage NSW
PO Box 318
BURONGA NSW 2739

By email: harvey.johnston@environment.nsw.gov.au

The Willandra Lakes Aboriginal Ancestors Reburial Project

Dear Harvey,

Thank you for your notification dated 7 October 2020 issued in line with clause 16 of the *State Environmental Planning Policy (Infrastructure) 2007* for the above project. The National Parks and Wildlife Service (NPWS) acknowledges the intent to carry out the proposed re-burial of the Willandra Ancestral Remains on and adjoining land reserved as Mungo National Park under the *National Parks and Wildlife Act 1974* (NPW Act).

The return of the Willandra Lakes Aboriginal Ancestors to Mungo National Park is a significant step in reuniting and restoring the cultural values of the landscape and fulfilling the long-term wishes of the Aboriginal people. As the re-burial represents the final step in the repatriation process for the Aboriginal Ancestors, NPWS continues to remain supportive of the intent, as a partner in the proposal.

NPWS recognises that the proposal is permissible under NPW Act, as it remains consistent with the objects of the Act, management principles of national parks and the adopted Mungo National Park Plan of Management. As a permissible activity under the NPW Act, it can therefore be authorised subject to determination of a Review of Environmental Factors (REF) under Division 5.1 of the *Environmental Planning and Assessment Act 1979*.

In addition, NPWS agrees that the re-burial of the Willandra Aboriginal Ancestors:

- will be undertaken with great care and respect as to not result in any additional harm or desecration to the significant cultural values of Mungo National Park.
- is defined as both a conservation work, as it will be overseen by authorised officers from Heritage NSW under Section 87A, and a traditional cultural burial activity undertaken by Aboriginal people, under Section 87B of the NPW Act – and therefore, is exempt from requiring an Aboriginal Heritage Impact Permit under Section 90 of the NPW Act
- involves Ancestral Remains that are substantially older than 100 years therefore no authorisation from the Coroner under Section 19 of the Coroners Act 2009 will be required

- will require, under the Public Health Regulation 2012, an approval from NPWS as the land manager in the form of a consent (as an approval) issued under the National Parks and Wildlife Regulation 2019, the conditions of which will be identified through the REF determination process and which will need to be issued before works associated with the proposal may commence on park.

The final justification of the matters presented above are to be clearly documented in the revised and final version of the Aboriginal Ancestors Reburial Project REF, prior to submission to NPWS for determination.

Yours sincerely

A handwritten signature in black ink, appearing to read 'EMMA BLEECHMORE', with a horizontal line extending to the right from the end of the signature.

EMMA BLEECHMORE
Acting Director, West
National Parks and Wildlife Service

19 October 2020

Appendix 15: Review of Submissions

Project name: Willandra Lakes Aboriginal Ancestors Reburial Project

Proponent: Heritage NSW & NSW National Parks & Wildlife Service

Park name: Mungo National Park

Introduction

In August 2019, a Draft REF was made available to more than 200 individual Willandra stakeholders. Four weeks was allowed for comment. These stakeholders included a wide range of interest groups such as former Community Management Council (CMC) and Technical and Scientific Advisory (TSAC) members and former Executive Officers, universities, museums, academics, AAG members, Dareton and Balranald Local Aboriginal Land Councils, Aboriginal organisations, native title holders (Barkandji Native Title Prescribed Body Corporate), Elders, community members and NPWS Regional Advisory Committee members. Researchers from universities and institutions in Australia, New Zealand and the United States were also included.

Four of the proposed activity areas are on private lands (Top Hut, Mulurulu and Gol Gol Stations). In September 2019, meetings were held with these private landholders and their written approval has been provided and is included in Appendix 13.

The Draft REF was also made available to the WLRWHA Advisory Committee. This Committee held its first meeting in April 2019 and all members have been kept informed of the draft REF and have been provided opportunity to comment. A detailed briefing on the project was provided to the WLRWHA Advisory Committee in November 2019 and in September 2020.

Details of individuals and organisations that have made written submission(s)

Table 1 below summarises the names and contact details of individuals and organisations that made written submission(s) in relation to the first draft of the Willandra Lakes Aboriginal Ancestors Reburial proposal, circulated in August 2019.

Note: These individuals and/or organisations have not specified if they want their personal details to be made public. For this reason, all their submission(s) are considered as 'confidential', as recorded in the table below.

Table 1: Record of personal details of individuals and organisations who have made written submission(s)

Name of individual or organisation	Address	Phone and/or email	Date received	Confidentiality required (yes/no)
Michael Ockwell			27/8/2019	Yes
Michael Young on behalf of the Part 4a applicants			30/8/2019	Yes
Colin McGregor			2/9/2019	Yes
Jim Bowler			12/8/2019	Yes
West Regional Advisory Committee (NPWS)			29/8/2019	Yes
Doug Williams			2/9/2019	Yes
David Gee, Crown Lands - Far West Area Department of Planning, Industry and Environment			14/8/2019	Yes
Western Heritage Group Inc. Suzanne Hall, Karin Donaldson, Peter Thompson			8/9/2019	Yes
Michael Westaway			2/9/2019	Yes
Michael Westaway and Art Durban			6/9/2019	Yes

Author	Page	Section	Comment	DPC reply
Doug Williams		6.1 NSW NPW Act, Justification	The proposed activity is INCONSISTENT with the conservation of objects of cultural value (the remains). The remains were fossilised under environmental conditions no longer present and being reburied in small shallow excavations in an environment widely understood to be becoming more arid. There is no data whatsoever to indicate that placing remains in the locations selected is consistent with conservation of these 'objects'	Addressed in 16.5.2, additional context added of Repatriation Policy added to 6.1
Doug Williams		6.1 Justification	As there will be no markers at reburial locations the proposed activity is largely irrelevant to fostering a public appreciation of the conservation of cultural heritage. On the other hand, a keeping place that houses such remains (even if they are not on display) would achieve such an aim.	Addressed in Section 14 under 'Justification for preferred option', additional contextual information provided on previous investigations of alternative options.
Doug Williams		6.1 Reserve Management	The proposed activity is INCONSISTENT with (b) the conservation of... objects of cultural value (the remains). The remains were fossilised under environmental conditions no longer present and being reburied in small shallow excavations in an environment widely	Addressed in 16.5.2. The activity has been assessed to have negligible impact on Aboriginal heritage sites on the ground. Comment noted, No change to REF.
Doug Williams		6.1. Management plan/intent	Mungo NP Plan of Management 2006: The proposed action is INCONSISTENT with Desired Outcome 15. It does not protect Aboriginal cultural material from damage, quite the contrary it exposes it to a range of environmental risks.	Addressed in 16.5.2. Comment noted, No change to REF.
Doug Williams		6.1. Management plan/intent	WLRWHA POM 1996 Strategy 25.1. It is significant over reach to suggest this project bears relationship to allowing access to archaeological sites. This has occurred with increasing regularity over the last decade.	Agreed. Removed strategy 25.1 from REF
Doug Williams		6.1. Management plan/intent	WLRWHA POM 2014: Repatriation is different to reburial. Repatriation has occurred. Further, this proposal is INCONSISTENT with the 'rehabilitation of heritage values'. If they are to be rehabilitated there is a clear implication they have been eroded or diminished. They have not. In fact the heritage values of this particular set of remains were unknown until they were found and collected.	This comment references a POM that has not been adopted. As per the National Repatriation Policy , repatriation can only be deemed complete by descendants. Comment noted, No change to REF.

Author	Page	Section	Comment	DPC reply
Doug Williams		7 Consultation	The details of consultation for this particular process have been over stated, making it more extensive than it really has been. The first seven paragraphs refer to the process leading up to the return of the remains to Mungo, which has occurred, it is over. This REF refers specifically to the reburial, in which case 'providing details of consultation', if the assessment was honest, should start at paragraph 8. So the consultation for this part of the process is that 1, the AAG has made a descision, and 2, other interested parties are really just being asked to comment on a foregone conclusion.	Details of the consultation that has been undertaken are presented in Section 7. Comment noted, No change to REF.

Doug Williams		13.3 Objectives	It is arguable whether the proposal is consistent with either of these documents, neither of which include the word or concept of 'reburial'.	<p>13.3 has been amended as follows:</p> <p><i>The proposal is the reburial of ancestral Aboriginal remains from the Keeping Place at Mungo to 22 selected sites in Mungo National Park and four other sites on nearby stations. The proposed activity will fulfil the long-term aspirations of the Aboriginal community. It is also in line with the Willandra Lakes World Heritage Area Plan of Management (1996) and Mungo National Park Plan of Management (2006). While neither plan states 'reburial' both plans clearly articulate that the aspirations of the three Traditional tribal Groups will be facilitated.</i></p> <ul style="list-style-type: none"> • <i>locate and manage all human remains and other archaeological material to the satisfaction of the three Traditional Tribal Groups (Strategy 33.1). (Department of Environment, 1996); and</i> • <i>Ceremonial and hunting and gathering rights for members of the three traditionally affiliated tribal groups will be recognised and facilitated." (NSW National Parks and Wildlife Service, 2006, p. 37)</i>
Doug Williams		Assessment of alternatives	An alternative option is briefly described, but there is simply a statement that it was not adopted as preferred. The section presents no justification as to WHY a keeping place is non-preferred for this internationally significant group of human remains. It is in this manner, deficient.	Further information provided has been provided in Section 14 on the previous investigations of Keeping Places between 2004 and 2015.

Doug Williams		Justification for preferred option	The response in this box again avoids the issue by failing to provide any form of justification for rejecting alternatives. A statement is not a justification. It is stated that reburial is now a preferred option, but there is no description as to WHY it is preferred. The corollary is that perhaps in a couple of years time the preferred option might be a keeping place, but then it will be too late.	Added a short sentence stating the role of the AAG, however a statement is not needed as it is the preferred option of the descendants. More information also provided on the NSW Repatriation of Aboriginal Ancestors and cultural material Policy (2018), UNDRIP, and Aust. Govt Policy on Repatriation. Further information on alternate views (e.g. Mulvaney 2010) also included in this section.
Doug Williams		Interests of External stakeholders	The scientific/archaeological community has long been recognised as a stakeholder in the WLRWHA, and yet they are omitted from the document at this point.	Already addressed in section 7 in identifying who has commented on the draft REF. Text added to point this out.
Doug Williams		Matter of National Environmental Significance	It is patently incorrect to state that the action will not have significant impacts on matters of national environmental significance. It results in the loss of the largest collection of Pleistocene pre-LGM human remains from one geographic location on the planet. There would not be a WLRWHA had those remains not been discovered by scientists. It is patently incredible (in the true sense of the word) that any assessment could conclude that dispersing and burying this collection will NOT result in World Heritage Values being LOST, DEGRADED, DAMAGED, OBSCURED , or DIMINISHED. All of those remains are objects that are of World Heritage Value, and those impacts WILL come to pass on them if they are reburied.	This is an opinion and is based on the view that the Willandra ancestral remains are part of the World Heritage area listing. The study by Smith (2019) has concluded that the ancestral remains, as removed from the Willandra, do not form part of the World Heritage Area. This point is fully explained in Appendix 8, and no further response is proposed.
Doug Williams		16.5 Aboriginal Cultural Heritage Impacts: 2	Does the action affect known Aboriginal Objects? Likely impact should be HIGH. The process may not affect any objects out in the field as yet undiscovered, but the impact on the human remains being reburied will be high. Own it.	This section has been expanded to include information, as available, on the chemistry of the collected bone, and the processes of mineralisation. It has also been expanded to include the exemptions afforded under the <i>Repatriation of Aboriginal Ancestors and cultural material Policy (2018)</i> .
Doug Williams		16.7 Matters of National environmental Significance	World Heritage Values: The assessment is in error. It is spurious to argue that world heritage values will not be damaged, degraded, obscured or diminished during this process.	This is already well addressed in the REF – as above, see Appendix 8, no amendment required

Doug Williams		16.7 Matters of National environmental Significance	National Heritage Values: The assessment is in error. It is spurious to argue that world heritage values will not be damaged, degraded, obscured or diminished during this process.	This is already well addressed in the REF – as above, see Appendix 8, no amendment required
Doug Williams		19 Summary of Impacts - Community	The absolute language used in this summary is misleading. The activity MAY have a positive impact on SOME of the Aboriginal community. It will also have a negative impact on SOME of the Aboriginal community, particularly those who might want to bring an Aboriginal perspective on the examination of human remains, or those agitating for a keeping	This is already well addressed in the REF – as above, see Appendix 8. Comment noted, No change to REF.
Doug Williams		19 Summary of Impacts - Cultural Heritage	Every excavation will have an impact on cultural heritage, because human remains will go into it and be buried and this is an impact, whether its regarded as positive or negative.	Already addressed in the REF – cultural activities are exempt and encouraged in the POM. Additional text outlining the relevant acts, policies and declarations included in summary under Cultural Heritage

APPENDIX 16

HISTORY OF CONSULTATION

Project name: Willandra Lakes Aboriginal Ancestors Reburial Project

Proponent: Heritage NSW & NSW National Parks & Wildlife Service

Park name (where applicable): Mungo National Park

Introduction

Aboriginal community consultation and engagement about the Willandra Lakes Aboriginal Ancestors has a long history leading up to this project. The topic of repatriation has been discussed extensively between 1984 and 2016. Some 70 Willandra World Heritage meetings have discussed repatriation, a research centre and reburial (Williams 2016). A general background to community consultation and engagement is presented below.

1980s

Aboriginal community awareness and concern over the unauthorised removal and study of Ancestral Remains from the Willandra increased in the 1980s (Cribb, 1990, Stannard, 1988). At the first meeting of the Willandra Lakes World Heritage Area Consultative Committee in 1984, a request from Aboriginal Elders for the repatriation of removed Aboriginal Ancestors was tabled. Between 1985 and 1991 the Western Heritage Group undertook extensive and detailed consultation on the management of the Willandra Lakes and specifically the interaction of researchers and Aboriginal people, and the management of the ancestral remains (Western Heritage Group, 2017).

Concurrently with this local approach, the Australian Archaeological Association, without any consultation with Aboriginal people from the region, wrote to the Minister for Planning and Environment in 1984 to propose an underground keeping place at Mungo for the Mungo skeletal remains. Some Aboriginal people were prepared to consider this vault idea because they thought special protection from theft and vandalism would be needed when the famous skeletal remains were brought back to Mungo (Western Heritage Group, 2017).

Aboriginal community consultation on the specific topic of reburial vs. Keeping Place was undertaken and documented in detail in between 1985 and 1991 (Western Heritage Group, 2017). Providing a safe, secure and long-term reburial location is an issue that was repeatedly by numerous community members who were concerned about safety, theft and the idea that reburied remains could fall into 'restless hands' (cf. Alice Kelly 1987). A 1980s study, The Mungo Report (Western Heritage Group, 2017) undertook extensive consultation on these matters, and a range of quotes from the report are presented below.

I reckon they should bury them back in the sand and have people to keep an eye on them.

Irene Mitchell (Dareton, 1986)

About the vault and the skeletons down in Canberra: if we get them and bring them back and bury them in the ground, somebody might come out, dig them up and take them away, and we'll never see them again.

Badger Bates (Broken Hill, 1986)

I think they should be put in a fibreglass or plastic sarcophagus in the exact place they found them. Then if others want to study them, they can be dug up. But put it inside concrete to make it too heavy to steal.

Max Harris (Griffith, 1990)

I'd like to build a centre out there, a nice Keeping Place for the Mungo Lady. A Keeping Place would be better than burying them because it could fall into restless hands, or development could damage it - they're talking about building roads out there. I want those remains safe in one place where they can't be disturbed. It's like a treasure, because it's a very, very vital link.

Alice Kelly (Balranald, 1987)

They should be put back where they belong. Not necessarily in the same spot, because you've got to think of security. We don't want them turning up in a museum in Europe in ten years. No monument. Because we don't know the name of the person.

Eric Ferguson (Dareton, 1987)

They should be brought back and re-buried and protected for all time so that they'll never be interfered with again. By respecting our dead the government will show that they'll respect our living.

Stewart Murray (Melbourne, 1986)

In the end they should bring them back and put it under security. If you put it in the earth, somebody's going to mess with it. You never know, some more clever person might take it overseas, and no Aboriginal person would want that to happen.

Isobel Bennett (Menindee, 1987)

I think there should be some way that the burials could be guarded from erosion - because they could be guarded with something around them, protected so the wind wouldn't blow them away. And, you know, if it's done properly, it could be something that's put around deep down in the soil, so that the sand wouldn't blow. Somebody else could have another idea, but that's my idea.

Elsie Jones (Wilcannia, 1986)

Mrs. Alice Bugmy (Aboriginal interests) says Mr. Clarke should go to Aboriginal communities first and ascertain what their requirements were in respect of the intended use of the bones and their return to Mungo. Dr. Hope says consideration was being given to the construction of a vault at Mungo for the interment of the bones. This would be underground but in a situation in which they could be brought up again for further study should this be needed. Mr. Bates was adamant that there should be no display of Aboriginal remains but that they should go back into the vault to be constructed at Mungo. However, there was currently some disagreement amongst the Aboriginal community as to whether they should go back in the ground to their original sites. There could be a problem of later exposure by deflation by wind and water erosion.

Minutes of the WLR Consultative Committee 14th June 1984

At a meeting called the 'Mungo Workshop' in 1989 the Aboriginal and scientific participants reached an agreement that the Willandra Ancestral Remains collection should be returned to Mungo, and that, as first step in reconciliation, keys to the safe that holds the remains should be held by both the Aboriginal community and researchers.

The topic of repatriation was discussed before and following this agreement, and between 1984 and 2016 ca. 70 Willandra World Heritage meetings discussed repatriation, a research centre and reburial (Williams, 2016).

1990s

In 1996, the Plan of Management for the Willandra Lakes called for the development of a series of strategies for the return of all human remains '...to the satisfaction of the three Traditional Tribal Groups' (Strategy 33.1). The Three Traditional Tribal Elders Council (3TTGs) were the main advisory and consultation group forum for the WLRWHA from the mid 1990's – 2013.

2010s

In 2014 the Willandra Repatriation Traditional Custodians group (WRTC) was formed by the Heritage Division, then apart of OEH, to focus specifically on, and direct, the repatriation of the Willandra Ancestral Remains.

A Repatriation Forum was held in February 2015 and brought together a wide range of scientists and traditional custodians (Williams and Associates, 2015). In November 2015 Ancestral Remains collection was repackaged and moved from the Australian National University to the Museum of Australia. At this time the WRTC set a two-year time frame to complete the transfer from Canberra to Mungo, which set November 2017 as the deadline.

In November 2016, a Second Forum was held and options for repatriation and reburial outlined by attendees at this forum (Williams and Associates, 2016).

This was followed by a Third Forum in April 2017 that presented options for repatriation. Most of the participants at this meeting said reburial was the most appropriate for all of the Willandra ancestral remains apart from Mungo Man and Mungo Woman, and a consensus was made to return all Ancestral Remains to Mungo National Park (Williams and Associates, 2017).

On 17 November 2017, the Willandra Ancestral Remains collection was returned to Mungo. The role and purpose of the WRTC was completed with the return of the Willandra Lakes Aboriginal Ancestors to Mungo in 2017 and this committee has ceased to meet.

The Willandra Lakes Region Aboriginal Advisory Group (AAG) is a community elected Group and the peak Aboriginal body for the Willandra Lakes Region. The purpose of the AAG is to provide advice on Aboriginal Cultural Heritage matters within the World Heritage boundaries. It can also be consulted on matters within Mungo NP.

In November 2018, the AAG decided to rebury the Willandra Ancestral Remains collection when the following motion was passed:

In exercising our inalienable rights and as Traditional Owners the Willandra Lakes Region World Heritage Area Aboriginal Advisory Group as duly elected representatives of the 3TTGs unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past sentiments and views expressed by Elders and members of the various 3 Traditional Tribal Group representative bodies of the Willandra Lakes Region World Heritage Area over the last 40 years.

The proposed reburial was made public via a formal press release on the 18th December 2018. The AAG press release stated:

MUNGO MAN AND LADY TO BE REBURIED

Aboriginal remains known as the Willandra ancestral remains, including those of Mungo Man and Mungo Lady, will be reburied following a unanimous decision of the Willandra World Heritage Region Aboriginal Advisory Group.

The group made the decision at its November meeting with this motion: In exercising our inalienable rights and as Traditional Owners, the Willandra Lakes Region World Heritage Area Aboriginal Advisory Group as duly elected representatives of the 3 Traditional Tribal Groups unanimously resolves to rebury the Willandra Ancestral Remains collection. This resolution is consistent with past

sentiments and views expressed by Elders and members of the various 3TTG representative bodies of the WLRWHA over the last 40 years.

The resolution comes 12 months after the remains of Mungo Man were returned to Country.

Mungo Man and Mungo Lady were discovered in the dunes of dry Lake Mungo in the 1960s and 70s and led the way in showing the world that Aboriginal people had been in Australia for some 42,000 years.

The Aboriginal Advisory Group (AAG) has asked the Office of Environment and Heritage to now begin the administrative process to enable the 105 sets of remains to be reburied.

The AAG further resolved to rebury the majority of the remains as close as possible to the original locations from which they were taken.

The remains of Mungo Man, Mungo Lady and a further set of remains known as WLH 4 will be reburied separately but also as close as possible to their original grave sites.

AAG Chair and Barkandji man Ivan Johnston said the decision sent an important message.

“Mungo Man and Mungo Lady are among the most important human remains ever discovered in Australia, but they need to be laid to rest,” he said.

Mick Kelly, Ngilyampaa representative and AAG In-Coming Chair said “It is only fair that we respect and uphold the wishes of the Elders who went before us. They always maintained that we should lay our old people to rest - back in the ground where they belong, not on a shelf in a university or museum. Once these wishes have been carried out we can start the healing process for Aboriginal people within the Willandra Lakes World Heritage Area.”

Patsy Winch, Mutthi Mutthi representative said: “Mungo Man and his kin needed to be reburied so they can be reunited with their country and their resting place in the sands of Mungo. This will allow the community to move on.”

Ivan Johnston (Barkandji)

Mick Kelly (Ngilyampaa)

Patsy Winch (Mutthi Mutthi)

The AAG discussed the process of reburial in more detail at their March 2019 meeting, and from 1-5 April 2019, representatives of the AAG/3TTGs were part of the site assessment team which fine-tuned the location of assessment sites selected for reburials and informed the results of this Heritage Assessment and a Review of Environmental Factors (REF) (Sunraysia Environmental & Heritage NSW, 2020).

In August 2019, the results of this assessment and a draft REF was made available to a wide range of more than 200 individual Willandra stakeholders. Four weeks was allowed for comment. These stakeholders included a wide range of interest groups such as the previous Community Management Council (CMC) and Technical and Scientific Advisory Committee (TSAC) members, former World Heritage Executive Officers, universities, museums, academics, AAG members, Local Aboriginal Land Councils, Aboriginal organisations, native title holders, Elders, community members and NPWS Advisory committee members. Researchers from universities and institutions in Australia, New Zealand and the United States were also included.

The assessment results and draft REF (including the proposed mitigation measures) were

also made available to the new Willandra Lakes Region World Heritage Advisory Committee. This Committee held its first meeting in April 2019 and the committee received a briefing on this project at this first meeting and all members have been kept informed of the draft REF and were provided opportunity to comment. The proposed mitigation measures for this activity have been edited in light of the comments received during this phase of consultation (see Appendix 16).

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- Williams, D. (2016). *Repatriation of Cultural materials and Human Remains to Willandra: A brief review. A document to support community workshops on repatriation*. Unpublished report to the Office of Environment & Heritage.

Appendix 17: Table of Proposed Works

Location	Name	No. of Burials	Method	Works Area per grave	Total Impact Area m ²
1	WOC-003	1	Mechanical Excavation	50cm by 1m	0.5 m ²
2	WOC-001	11	Manual & Mechanical Excavation	50cm by 50cm (10) 75cm by 2m (1)	2.5 m ² 1.5 m ²
3	MA-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
4	WOC-005, WOC-145	2	Manual Excavation	50cm by 50cm	0.5 m ²
5	WOC-152	4	Manual Excavation	50cm by 50cm	1 m ²
6	LW-004	2	Manual Excavation	50cm by 50cm	0.5 m ²
7	LW-009	2	Manual Excavation	50cm by 50cm	0.5 m ²
8	WCW-006	1	Manual Excavation	50cm by 50cm	0.25 m ²
9	LP-001	5	Manual Excavation	50cm by 50cm	1.25 m ²
10	GL-024	9	Manual Excavation	50cm by 50cm	2.25 m ²
11	GL-013	14	Manual Excavation	50cm by 50cm	3.5 m ²
12	GL-020	3	Manual Excavation	50cm by 50cm	0.75 m ²
13	GL-001	2	Manual Excavation	50cm by 50cm	0.5 m ²
14	GL-005	1	Manual Excavation	50cm by 50cm	0.25 m ²
15	GL-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
16	GL-026	4	Manual Excavation	50cm by 50cm	1 m ²

Location	Name	No. of Burials	Method	Works Area per grave	Total Impact Area m²
17	GL-028	1	Manual Excavation	50cm by 50cm	0.25 m ²
18	GG-025	1	Manual Excavation	50cm by 50cm	0.25 m ²
19	GG-018	2	Manual Excavation	50cm by 50cm	0.5 m ²
20	GL-025	3	Manual Excavation	50cm by 50cm	0.75 m ²
21	GG-001	1	Manual Excavation	50cm by 50cm	0.25 m ²
22	GG-016	29	Manual Excavation	50cm by 50cm	7.25 m ²
23	ML-003	5	Manual Excavation	50cm by 50cm	0.25 m ²
24	ME-001	1	Manual Excavation	50cm by 50cm	1.25 m ²
25	ME-002	1	Manual Excavation	50cm by 50cm	0.25 m ²
26	GS-010	1	Manual Excavation	50cm by 50cm	0.25 m ²
Total		108	Total Impact Area		28.5 m²



Appendix 18: NPW Act 1974 Exemption

Our ref: DOC20/869234-3

Harvey Johnston
Senior Team Leader – South West
Heritage NSW, Community Engagement
Department of Premier and Cabinet
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RE: Willandra Lakes Ancestors repatriation

Dear Harvey

Thank you for your letter dated 12 October 2020 seeking support for Heritage NSW Officers to undertake activities associated with the Willandra Lakes Aboriginal ancestor's reburial project under Sections 87A and 87B of the *National Parks and Wildlife Act 1974* (NPW Act).

I note the project intends to return 108 Aboriginal Ancestors back to country within the Willandra Lakes Region World Heritage Area. The reburial will include 22 locations on Mungo National Park and 4 locations within Crown Lands (Western Lands Leases) on Mulurulu, Gol Gol and Top Hut Stations. The repatriation will fulfil long-term aspirations of the Aboriginal community.

Based on a review of the activity and recommendations outlined in the Heritage Assessment Report (dated September 2020), I support the use of section 87A(a) of the NPW Act for this project noting the overall intent is to conserve and protect Aboriginal objects where possible. To minimise impacts to Aboriginal objects and the cultural landscape, the proposed works must follow the management measures set out in sections 11.1 and 11.2 of the Heritage Assessment Report. The project activities must also always be supervised by a Heritage Officer(s) from Heritage NSW in the company of Aboriginal Elders.

If you require any assistance with this matter please contact Jackie Taylor, Senior Team Leader, Aboriginal Cultural Heritage Regulation – South via email at jackie.taylor@environment.nsw.gov.au or on (02) 6229 7089.

Yours sincerely

Juanita McCarthy
Manager, Aboriginal Cultural Heritage Regulation
Heritage NSW

26 October 2020