



VIRTUSHERITAGE



Amaroo Solar Farm  
Amaroo Drive  
Moree, NSW

## DUE DILIGENCE ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

FINAL ♦ April 2021

*Prepared for SLR Consulting on behalf of Providence Asset Group*

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2	24/04/2021	Elaine Lin	Dr. Mary-Jean Sutton	Final report

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*All queries related to the content, or to any use of this report must be addressed to Dr Mary-Jean Sutton.*

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## EXECUTIVE SUMMARY

Virtus Heritage was engaged by SLR Consulting (hereafter ‘SLR’) on behalf of Providence Asset Group (hereafter ‘PAG’) to prepare an Aboriginal archaeological due diligence assessment (DD) for the Amaroo Solar Farm (project area). The project is located at Amaroo Drive (Lot 392 DP751780), Moree within the Moree Plains Shire local government area (LGA). Proposed works include the development of a grid-connected 4.95 MW solar PV farm with a 4-metre wide access road connecting the proposed solar farm to Amaroo Drive in the southeastern corner of the development. The proposed solar farm will include 13,524 panels, 161 single axis solar trackers, two 2475kVA inverters, and a medium voltage power station unit. A 2.3m high chain mesh security fence is proposed to surround the site.

### Consultation

The project area lies within the boundaries of the Moree Local Aboriginal Land Council (LALC). Steve McIntosh (CEO, Moree LALC) was consulted regarding the project, though no site officers were able to attend the site inspection. A copy of this draft report was provided to Moree LALC for review and comment. No formal written comments nor verbal comments have been received to date, and any future comments or reviews of the due diligence assessment report will be appended to the consultation log and addressed where possible by PAG.

### Environmental Context

The landscape of Moree around the project area has been largely cleared for agriculture. Prior to European settlement, the Brigalow Belt South Bioregion (BBSB) was predominantly open woodland with some large areas of open forest and tussock grassland. Since the arrival of European settlers, the BBSB has been cleared for agriculture with tussock grassland and sown pasture becoming the dominant vegetation types with only isolated patches of native vegetation remaining (Heritage Concepts Pty Ltd 2009: 26; NPWS 2000: 13). The subhumid climate would have been warm and habitable all year round. The current mean annual temperature in the region is between 10 – 19°C, with a mean annual rainfall of 449 – 1015mm.

The project area is situated within the Northern Outwash Province of the Brigalow Belt South Bioregion (BBSB) and within the Gurley landscape. The Gurley landscape is characterised by level plains and gently undulating rises of Pleistocene alluvium adjacent to bedrock hills forming extensive alluvial/colluvial fans in the eastern Moree Plains (Mitchell 2002). In relation to major waterways, the project area is situated approximately 1 km to the south of the Mehi River, a watercourse that rises from the Gwydir River before joining the Barwon River near Collarenebri. Approximately 2km to the south is the smaller Halls Creek. Extant faunal communities in the BBSB include both terrestrial and wetland species such as amphibians, reptiles, birds, and mammals.

On a regional scale, the level, easily traversed landscape, open woodland and grassland, and the presence of substantial waterways provided an excellent landscape for occupation and therefore had moderate-high potential to contain cultural materials. This potential is severely curtailed due to the impact of flooding, highly mobile soil structures, the heavy clearance of wooded areas and intensive agricultural in use since European settlement.

### Archaeological Context

The results of the background archaeological research, including heritage searches and a review of previous assessments in the region indicate that the most common site type are low density artefact scatters. The potential for scarred trees, though common in the region, is very low due to heavy deforestation and land clearance around the project area for cultivation and grazing. The archaeological context of the project area indicates that evidence of Aboriginal occupation is most likely to occur adjacent to creeks, swamps, and

chains of ponds, and on low ridge tops, gently undulating hills, river flats, and in open woodland vegetation. The preservation issues previously discussed mean that evidence of Aboriginal occupation is unlikely to have survived in the project area.

### Site Inspection Results

The site inspection was undertaken on 3 March 2021 on lands within the Moree LALC by Elaine Lin, Senior Archaeologist (Virtus Heritage). Site officers for Moree LALC were invited to participate in the inspection but were unable to attend on the day. The site inspection was completed over one field day. The project area was inspected via pedestrian survey in four transects across the proposed lease area including along the proposed access route, targeting all areas of exposure. The survey included an inspection of all mature trees within the project area. No drainage lines were identified during the inspection (refer to **Appendix D** for photographs of the site inspection).

There are no previously recorded sites within the project area based on heritage searches and background research of previous archaeological investigations to date. No Aboriginal objects or sites were observed in the project area. Visibility was generally poor, and given the disturbance and lack of any undisturbed soils or sensitive landforms identified during survey, the project area is deemed to have a low potential for archaeological deposits.

### Recommendations

The following recommendations have been made based on the information provided on project impacts, consultation to date, relevant archaeological and environmental background research, and the results of the site inspection.

1. No Aboriginal objects were identified during the site inspection. No Aboriginal places are registered within the project area. No areas of archaeological potential are identified within the project area requiring archaeological testing, salvage or mitigation. It is reasonable to conclude that there is a low probability for objects to occur in the area of the proposed development, which can now proceed with caution as per the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a).
2. All site workers and personnel involved in site impact works associated with the proposal should be inducted and briefed on the possible identification of Aboriginal sites and objects during construction and their responsibilities according to the provisions of the *NPW Act 1974*, in case any additional unknown objects or items are uncovered during proposed works.
  - a. As part of this induction, the contact phone numbers of the Heritage NSW regional archaeologist and EnviroLine 131 555, the relevant Environmental Officer responsible for this project should also be given to all site workers and personnel, in case unknown objects or items are uncovered during excavation.
  - b. Site workers should be made aware of the location of any Aboriginal sites that may at any stage occur within the proposal site and their scientific significance and their legal obligations in relation to the protection and management of these Aboriginal sites under the *NPW Act 1974*, and 2010 ancillary provisions and amendments.
  - c. As part of this induction, workers should be made aware that in the event that any unexpected human remains are uncovered on site, the area of the suspected remains must be secured and cordoned off and the NSW Police notified. No further works can be undertaken until the NSW Police provide written advice. If these remains are deemed to require archaeological investigation by the NSW Police or NSW Coroner, then Heritage NSW and the relevant Aboriginal parties must be notified. A plan of management for the

preservation of any identified Aboriginal human remains or for their salvage must be put in place or conducted under an AHIP methodology and variation developed in consultation with all relevant Aboriginal parties and Heritage NSW.

- d. Providence Asset Group or delegated authority may wish to consider the input and engagement of interested Aboriginal stakeholder groups and Moree LALC in the development of inductions and toolbox talks for this project.
3. A copy of the draft report was made available to Moree LALC for comment and review. No comments have been received to date, and any future comments by Moree LALC may be considered where possible by PAG.

# 1. INTRODUCTION

Virtus Heritage was engaged by SLR Consulting on behalf of Providence Asset Group (PAG) to prepare an Aboriginal archaeological due diligence assessment for the Pine Ridge Solar Farm Project. The project is located at Amaroo Drive, Moree, within the Moree Plains Shire local government area (LGA) (refer to **Figure 1**).

## 1.1 Project Description

This project proposes the development of a solar PV farm at Moree, including a grid-connected solar PV installation with a total PV plant capacity (DC) of 7.303 MWp. It is proposed to connect into the electrical transmission grid via the existing transmission lines which run along the southern boundary of the site. The solar PV farm will include the following components:

- 13,524 x 540W solar PV panels;
- 161 x single axis solar trackers;
- 2 x 2475kVA inverters; and
- 1 x medium voltage power station unit.

A 4m wide access road is proposed to connect the solar farm to Amaroo Drive at the south eastern corner of the lease area. A 2.3m high chain mesh security fence with 3 rows of barbed-wire is proposed to surround the site. The solar farm will be fully fenced with emergency access gates and temporary construction office. Details of the proposed construction are located on the Development Application Plan (refer to **Figure 2**).

## 1.2 Report Aims and Statutory Requirements

This report was compiled with reference to the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a) and where applicable, the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects, NSW* (hereafter referred to as the 'Code of Practice') (DECCW 2010b). The purpose of this report is to provide advice on Aboriginal archaeological (scientific) values of the project area in relation to the proposed works to guide the client in its decision-making process.

In general, the aims of a due diligence assessment are to:

- identify whether or not Aboriginal objects are, or are likely to be, present in the area;
- if objects are present or likely to be present, determine whether the proposed development activities are likely to harm Aboriginal objects; and
- determine whether further assessment or an Aboriginal Heritage Impact Permit (AHIP) is required.

The *National Parks and Wildlife Act 1974* (NPW Act), the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Heritage Act, 1977* are the relevant statutory controls protecting Aboriginal heritage within New South Wales.

### 1.2.1 National Parks and Wildlife Act 1974

Under the provisions of the NPW Act, all Aboriginal objects are protected regardless of their significance or land tenure. Aboriginal objects are defined as '*any deposit, object or material evidence (not being a handicraft made for sale) relating to Aboriginal habitation of the area that comprises NSW, being habitation*

*before or concurrent with the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains’.*

Aboriginal objects are therefore limited to physical evidence and may also be referred to as ‘Aboriginal sites’, ‘relics’ or ‘cultural material’. Aboriginal objects can include pre-contact features such as scarred trees, middens and artefact scatters, as well as physical evidence of post-contact use of the area such as Aboriginal built fencing or stockyards and missions.

The NPW Act also protects Aboriginal Places, which are defined as ‘*a place that is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects*’. Aboriginal Places can only be declared by the Minister administering the NPW Act. The NPW Act protects Aboriginal objects and Aboriginal places in NSW. Under the *National Parks and Wildlife Act 1974* (NPW Act), including the 2010 amendments, it is an offence to harm an Aboriginal object:

- Which the person knows is an Aboriginal object (a ‘knowing offence’); and
- Whether or not a person knows it is an Aboriginal object (a ‘strict liability offence’).

The maximum penalty for a knowing offence is \$550,000 for an individual or \$1.1 million for a corporation and a 2 year gaol term. The maximum penalty for a strict liability offence is \$110,000 for an individual or \$220,000 for a corporation (DECCW 2010b: 5). A person or organisation who exercises due diligence in determining that their actions would not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later unknowingly harm an object without an AHIP (DECCW 2010b, 2010:5). The due diligence defence is not available for activities which harm Aboriginal places. The Code of Practice sets out a procedure which, when followed, will satisfy the due diligence requirement. If a person or company can demonstrate that they exercised due diligence and determined that it was unlikely that Aboriginal objects would be harmed, then they have a defence to prosecution under the strict liability offence under Section 86(2) of the NPW Act (DECCW 2010b 2010: 5).

Harm includes activities that destroy, deface or damage an Aboriginal object or Aboriginal place, and in relation to an object; move the object from the land on which it has been situated. Under Section 91 of the Act, Heritage NSW must be informed upon the identification of all Aboriginal objects. Failure to do this within reasonable time is an offence under the Act. Under Section 90 of the Act, it is an offence for a person to destroy, deface, damage or desecrate an Aboriginal Object or Aboriginal Place without the prior issue of AHIP. AHIPs may only be obtained from Heritage NSW. Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them. If harm to Aboriginal objects and places is anticipated an Aboriginal Heritage Impact Permit (AHIP) is required.

The Act also provides for stop-work orders under Section 91A if an action is likely to significantly affect an Aboriginal object or Aboriginal Place. The order may require that an action is to cease or that no action is carried out in the vicinity of the Aboriginal object or Aboriginal Place for a period of up to 40 days.

### *1.2.2 Heritage Act, 1977*

The *Heritage Act, 1977* (as amended in 2009) protects and aims to conserve the environmental heritage of New South Wales. *Environmental heritage* is broadly defined under Section 4 of the *Heritage Act* as consisting of “those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance” (Heritage Branch, DoP 2009: 4). Aboriginal places or objects that are recognized

as having high cultural value (potentially of local and State significance) can be listed on the State Heritage Register and protected under the provisions of the *Heritage Act*.

Amendments to the *Heritage Act* made in 2009 have changed the definition of an archaeological ‘relic’ under the Act, so that it is no longer based on age. A relic is now an archaeological deposit, resource or feature that has *heritage significance* at a local or State level. This significance-based approach to identifying ‘relics’ is consistent with the way other heritage items such as buildings, works, precincts or landscapes are identified and managed in NSW (Heritage Branch, DoP 2009: 1). Section 4(1) of the *Heritage Act* (as amended 2009) defines ‘relic’ as follows:

***Relic*** means any deposit, artefact, object or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

(b) is of State or local heritage significance (Heritage Branch, DoP, 2009: 6).

Other relevant State and Commonwealth legislation are discussed below.

### *1.2.3 Environmental Planning and Assessment Act 1979*

The EP&A Act requires that consideration be given to environmental impacts as part of the land use planning process. In NSW, environmental impacts include cultural heritage impacts. Part 3 of the Act relates to planning instruments including those at local and regional levels, Part 4 of the Act controls development assessment processes and Part 5 of the Act refers to approvals by determining authorities.

### *1.2.4 Native Title legislation*

The Native Title Act 1993 (NTA) provides the legislative framework to:

- recognise and protect native title;
- establish ways in which future dealings affecting native title may proceed and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title;
- establish a mechanism for determining claims to native title; and
- provide for, or permit, the validation of past acts invalidated because of the existence of native title.

The *NSW Native Title Act 1994* was introduced to make sure the laws of NSW are consistent with the Commonwealth’s NTA on future dealings. It validates past and intermediate acts that may have been invalidated because of the existence of native title.

The National Native Title Tribunal has a number of functions under the NTA, including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims.

### *1.2.5 Other Acts*

The Australian Government *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* may be relevant if any item of Aboriginal heritage significance to an Aboriginal community or historical heritage is under threat of injury or desecration and state-based processes are unable to protect it. The *Environment Protection and Biodiversity Conservation Act 1999* is relevant to projects where there are heritage values of national significance present.



### 1.3 Consultation

Aboriginal people are the primary determinants of their culture and heritage, and cultural values can only be assessed and advised by the relevant Aboriginal parties for the locality. It should be noted that Aboriginal heritage refers both to Aboriginal archaeological sites and sites/places of cultural value to Aboriginal people, protected under the *National Parks and Wildlife Act, 1974* (NPW Act, 1974) as “Aboriginal objects” and “Aboriginal places”. Sites and places of Aboriginal cultural significance can only be identified by the relevant local Aboriginal people and are likely in many cases (for example, song lines and story places) to not contain any archaeological evidence.

This assessment was conducted by an archaeologist providing advice on the archaeological (scientific) values of the project area. The cultural values of the project area are to be assessed by the Moree Local Aboriginal Land Council (LALC). No verbal nor written comments have been provided to date. Any future comments from Moree LALC after the review process may be considered where possible by PAG.

### 1.4 Limitations

This report is limited to the assessment of project impacts described in information provided by SLR on behalf of Providence Asset Group and mapped in this report. Virtus Heritage takes no responsibility for errors within the Department of Premier and Cabinet, Heritage NSW (Heritage NSW) Aboriginal Heritage Information Management Systems (AHIMS) data, and the Heritage NSW listings. Virtus Heritage has assumed information provided by Heritage NSW is accurate.

The site inspections undertaken were confined to the area of proposed works illustrated in **Figure 1**. Visibility on site was generally poor. Nevertheless, access on foot to the entire project area was unhindered. While pasture weeds and grass cover was dense, the paddock had few shrubs, undulations or large obstacles during site inspection.

### 1.5 Project Team and Qualifications

This report was compiled by Elaine Lin, Senior Archaeologist (M.Arch.Sci. (Adv) Hons., Australian National University; B.Arts (Hons.) Archaeology, University of Sydney), and Martin Wright (B.Arts (Hons.) Archaeology, University of Sydney) with quality review undertaken by Dr Emma St Pierre, Principal Archaeologist (PhD, Archaeological Science, University of Queensland; B.Arts, Hons. Archaeology and Anthropology, University of Queensland). Project information and description of works was provided by PAG.

## 1.6 Acknowledgements

We would like to acknowledge the assistance of the following individuals for the completion of this report:

- Steve McIntosh, CEO Moree LALC
- Rachel Pettitt, Town Planner, SLR Consulting
- Patrick Quinlan, Principal Consultant, SLR Consulting,
- Jeremy Every, Solar Program Director, Providence Asset Group

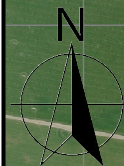
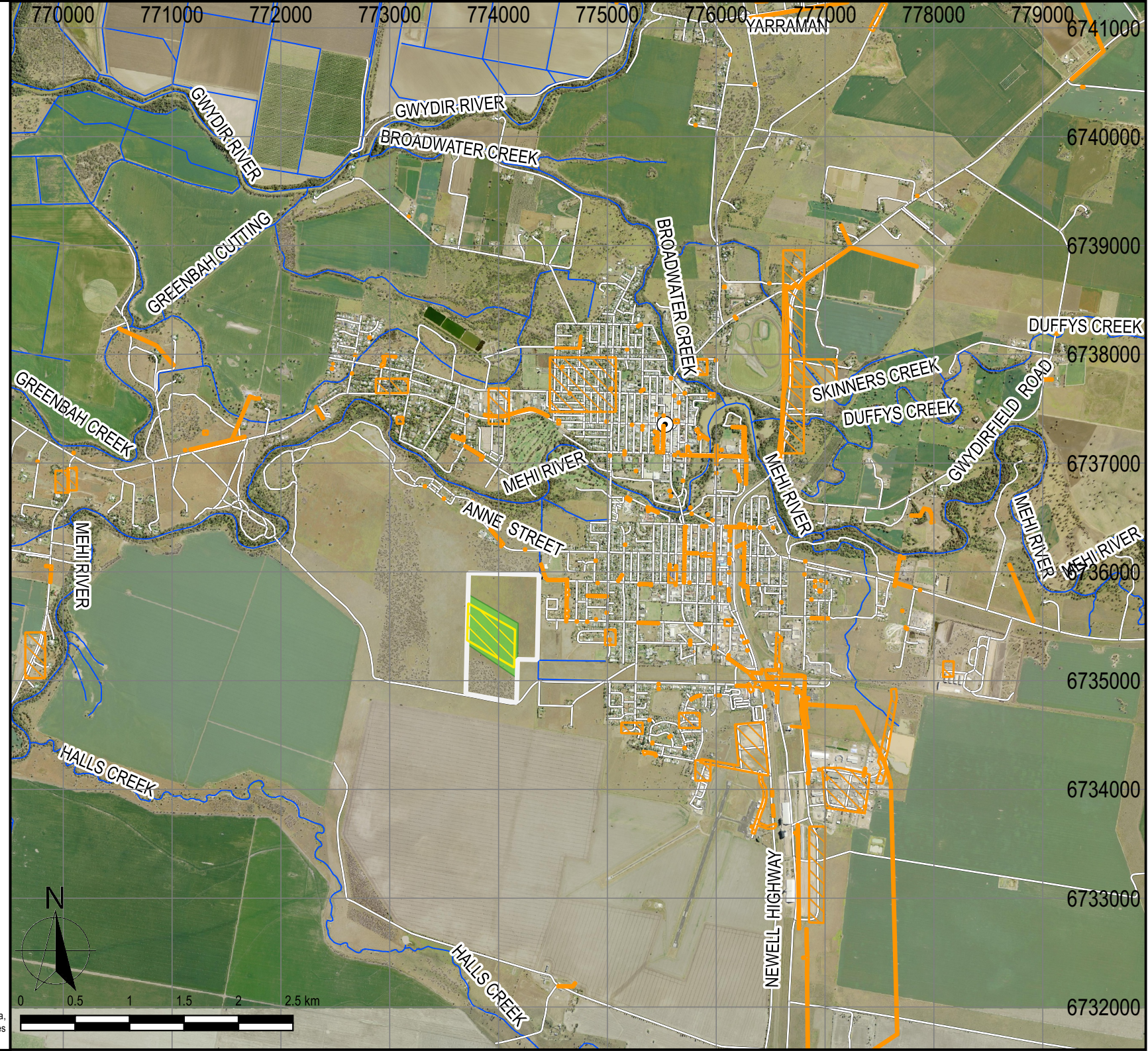




Figure 1  
Locality and Project Area

#### Legend

- Large Towns & Cities
- Water Courses
- Roads
- ▨ Preliminary DD Construction Plan
- ▨ Proposed Lease Area
- Survey Area
- Lot 392 DP 751780



0 0.5 1 1.5 2 2.5 km



LEGEND

- TREE (EXISTING)
- TREE (FOR REMOVAL)
- LOT BOUNDARY
- 400 MAJOR CONTOUR
- MINOR CONTOUR
- SECURITY FENCE
- FENCE (EXISTING)
- LEASE BOUNDARY (PROPOSED)
- PV TABLE
- O/H 22kV POWERLINE
- WATERCOURSE

SYSTEM SUMMARY

ELECTRICAL CONFIGURATION:  
TOTAL PV PLANT CAPACITY (DC): 7.303 MWp  
TOTAL INVERTER CAPACITY (AC): 4.95MVA  
PV PLANT MAXIMUM EXPORT CAPACITY (AC): 4.95MW  
DC:AC RATIO: 1.475  
STRINGS OF 28 PV MODULES.  
441/442 PV STRINGS PER INVERTER.  
483 PV STRINGS TOTAL.

PV MODULES:  
MFR: LONGI SOLAR  
MODEL: LR5-72HPH-540M  
NAMEPLATE: 540Wp  
QUANTITY: 13,524 MODULES

INVERTERS:  
MFR: SUNGROW  
MODEL: SG2475HV-MV  
NAMEPLATE: 2475kVA  
QUANTITY: 2

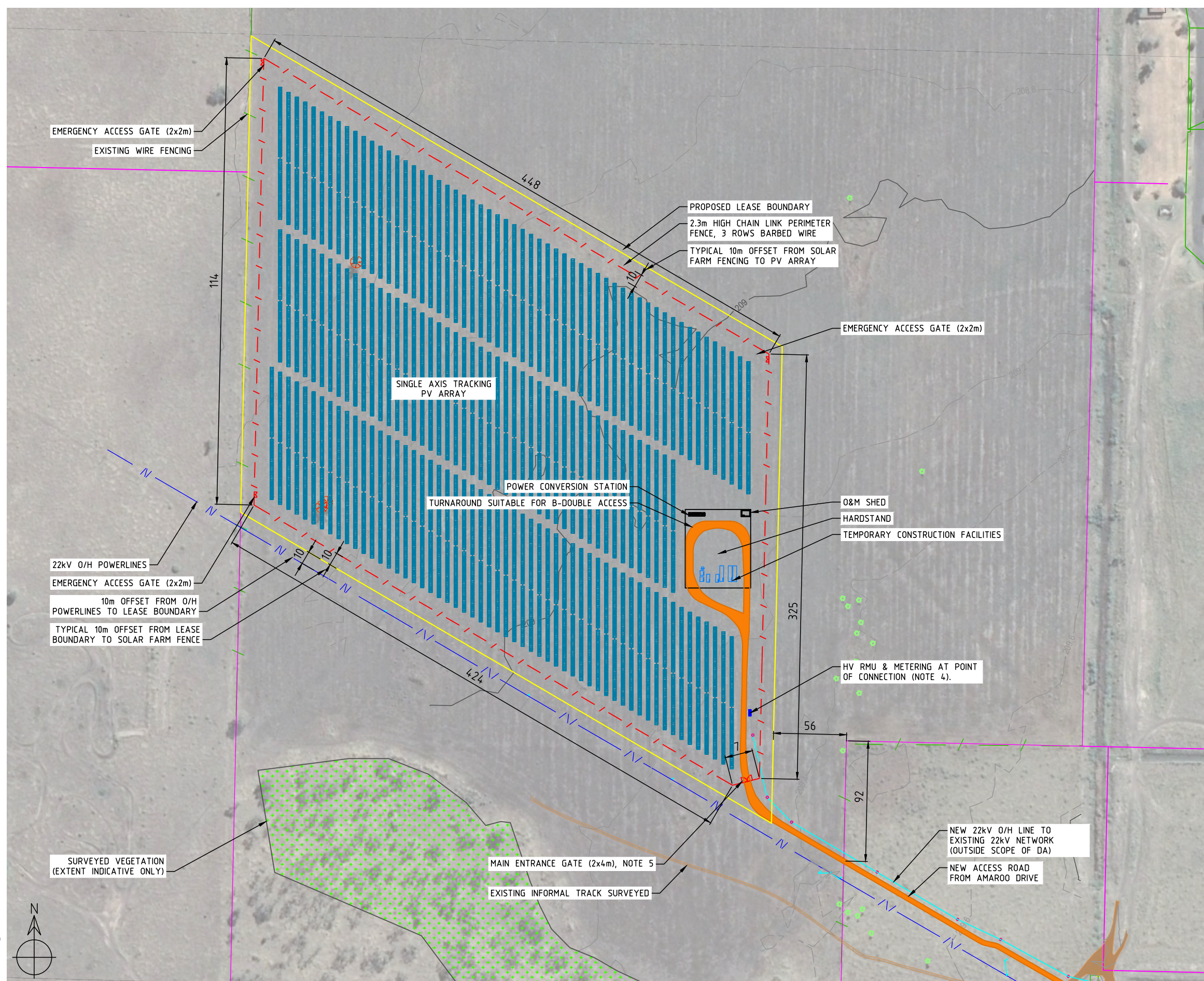
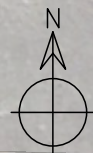
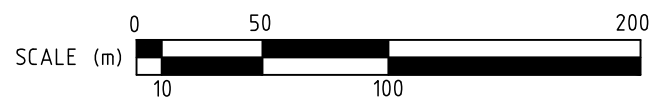
MV POWER STATION:  
MFR: SUNGROW  
MODEL: SG4950HV-MV  
QUANTITY: 1

TRACKER ARRAY:  
TYPE: GROUND MOUNT SINGLE AXIS TRACKING  
CONFIGURATION: INDEPENDENT TYPE  
RANGE OF MOTION:  $\pm 60^\circ$   
PITCH: 6.4m  
GCR: 35.25%  
QUANTITY: 161 TABLES

FENCED AREA: 133,432 m<sup>2</sup>  
LEASE AREA: 149,998 m<sup>2</sup>

GENERAL NOTES:

- SITE ACCESS VIA NEW ACCESS ROAD FROM AMAROO DRIVE.
- DETAIL SHOWN IS PRELIMINARY, MAY CHANGE IN DETAILED DESIGN.
- CLEARANCE BETWEEN SOLAR TRACKER ARRAY & SITE SECURITY FENCE TYPICALLY 10m
- HV RMU & METERING (LOCATION AND TYPE TO BE DETERMINED, IS SUBJECT TO ESSENTIAL ENERGY FEEDBACK).
- FOR SECURITY GATE DETAILS REFER TO DRAWING 10220-C-DET-02-1.
- WATERCOURSE, WATERBODY DETAIL FROM SIXMAPS, MGA ZONE 55 PROJECTION.
- REFER TO CIVIL DETAIL DRAWING 10220-C-DET-01-1.



REFERENCES

REVISIONS

REV	DATE	DESCRIPTION	DRWN.	DESIGNED	CHKD.	APPR.
B	2021.03.17	REVISED LAYOUT	JM	JM	SS	JM
A	2021.03.09	FIRST ISSUE	JM	JM	SS	JM

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TITLE  
PROVIDENCE ASSET GROUP  
AMAROO SOLAR FARM  
GENERAL ARRANGEMENT  
SYSTEM DETAIL

DWG No. 10220-G-GAD-02-2

SCALE

1:3000

REVISION

B

PAPER SIZE

A3



## 2. ENVIRONMENTAL CONTEXT

This section of the report describes the environmental context of the project area spanning previous land-use history, topography and landforms, soils and geology, and fauna and flora. These factors are integral influences of Aboriginal land use, the resultant patterning of archaeological sites, and the survival of sites in the modern landscape.

### 2.1 Previous Land Use History

The first written record of this region was by the explorer and Surveyor-General, John Oxley in 1818, who noted the presence of valuable agricultural land. By the 1830s squatters had entered the area despite the first squatting licences not being issued until 1836 (NPWS 2000). The prime grazing lands of the region were quickly taken up by European settlers establishing large pastoral stations along the Namoi and Gwydir River systems (OzArk 2018).

Initially, cattle grazing was the dominant land use, however, with the introduction of improved pastures and fencing, sheep grazing had overtaken it by the end of the 1800s (NSW HO and DUAP 1996). The development of towns in the area was expedited by an increased need to boost agricultural yields to support an influx of miners after the discovery of gold in the 1850s (NPWS 2020). Over time, agriculture, particularly wheat cropping became the economic mainstay of the region and, with improved farming equipment, by the 1860-70s large pastoral stations had been replaced by smaller agricultural holdings (NPWS 2020). Moree was gazetted as a town in 1862, incorporated on 3 December 1890, and the Moree Municipal Council was incorporated two days later (Moree Plains Shire Council Website, accessed 9 March 2021).

### 2.2 Topography, Hydrology and Climate

The Moree Plains Shire spans the Northern Outwash Province of the Brigalow Belt South Bioregion (BBSB) and the Castlereagh-Barwon province located within the northern alluvial fans of the Darling Riverine Plains Bioregion (DRPB) (Heritage Concepts 2009). The township of Moree itself and the proposed area of works is situated on the boundary of these two bioregions, just inside the BBSB portion of the Moree Plains Shire. The BBSB is situated in northern NSW and southern Qld, extending from south of Dubbo in central-western NSW to the mid-Qld coast. The bioregion consists of landscapes derived from both extensive basalt flows and quartz sandstones and consequently has very variable soils and vegetation depending on the local rock type or sediment source (NSW NPWS 2003: 131).

The Moree Plains are similar to a delta system interlaced with tributaries of the Gwydir River (Heritage Concepts 2009). Today's landscape is dominated by Quaternary sediments in the form of alluvial fans and outwash slopes with the relative distribution of sediment from basalt or sandstone having a major impact on soil quality and vegetation (NPWS 2003: 131). The BBSB is situated within the subhumid eastern zone of Australia and is characterised by hot summers and no dry season (NSW NPWS 2003: 131). The mean annual temperature is 10 – 19°C, with a mean annual rainfall of 449 – 1015mm (NSW NPWS 2003: 131).

The project area sits within the Gurley landscape which is characterised by level plains and gently undulating rises of Pleistocene alluvium adjacent to bedrock hills forming extensive alluvial/colluvial fans in the eastern Moree Plains (Mitchell 2002). The general elevation of the Gurley landscape is 180 – 320m with a local relief of 1-9m (Mitchell 2002). The Gurley landscape has been extensively cleared due to widespread wheat cropping.

The nearest waterway to the project area (1km) is the Mehi River, a watercourse that rises from the Gwydir river before joining the Barwon River near Collarenebri. Approximately 2km to the south is the smaller

Halls Creek. The flat topography of the Moree region makes the area subject to flooding (Heritage Concepts 2009: 20).

## 2.3 Geology and Soils

The BBS Bioregion's bedrock comprises horizontally bedded Jurassic and Triassic quartz sandstone and shale with limited areas of conglomerate or basalts. Some of the sandstone at the heads of streams forms a low but rugged topography of cliffs and small plateau features. Streams follow the direction of major joint planes in the narrow sandstone gorges, depositing colluvial fans of coarse sands and gravels in the wider valleys. Even further down valley the topography is more subdued, partly buried in alluvial debris and largely eroded to rolling plains. Evidence of larger stream courses of Quaternary age occur in the long, sand-filled channels and clay plains with gilgai, or shallow depressions between ridges in which rainwater collects (NPWS 2003: 132). The Northern Outwash region of the BBSB contains low red rises and a series of alluvial fans that have been formed by tributaries draining the sandstone and basalt areas to the east (NPWS 2002c).

The project area sits within some of the oldest alluvial/sheet flood fans of the north-west plains fans systems. Gravel lenses outcrop in some locations, particularly around the edge of the unit where it adjoins the Bellata (btj) soil landscape. In some locations a strongly structured bright reddish brown subplastic clay, believed to be parna, occurs as prior channel infill deposits. Geological mapping indicates the dominant geological units include an unnamed Quaternary sheet wash (Qc), consisting of often gilgaied clayey colluvium. (DPIE 2020). The project area contains grey and brown silty clay deposited from suspended sediments in floodwater, often with gilgai. Grey clays and occasionally Black Vertosols (Black Earths) can be found on crests and lower slopes while where there are elevated margins, red-brown texture-contrast soils are present (DPIE 2000; Mitchell 2002: 58). The soils of the Gurley landscape are generally all Vertosols with high shrink-swell properties and consist of very deep (>150 cm), moderately well-drained to imperfectly drained, Epipedal to self-mulching soils (DPIE 2020). **Table 1** summarises the major soil type in the project area by classification system.

**Table 1. Soil Classifications**

AUSTRALIAN SOIL CLASSIFICATION	AUSTRALIAN GREAT SOIL GROUP	PROVINCE	GEOLOGY
Vertosols	Grey Clay, Brown Clay and Red Clay (GC, BC & RC) - good surface condition	Northern Outwash (McCauley & NPWS 2002)	Tertiary and Quaternary alluvial fans and stream terraces (NSW NPWS 2003)

## 2.4 Flora and Fauna

Prior to European settlement, the BBSB was predominantly open woodland with some large areas of open forest and tussock grassland. The Moree Plains region at this time would have been open riverine woodland and grassland. Since the arrival of European settlers, the BBSB has been cleared for agriculture with tussock grassland and sown pasture becoming the dominant vegetation types with only isolated patches of native vegetation remaining (Heritage Concepts Pty Ltd 2009: 26; NPWS 2000: 13).

While the landscape around the project area has been cleared for agriculture the Gurley landscape still

supports a range of flora. Species of the following flora may be present on lower clay plains and drainage lines: myall, rosewood, coolabah, belah, wilga, bumble box, whitewood, leopardwood, gidgee, thorny saltbush, Mueller's saltbush, wild orange, buck bush, warrior bush, budda, nepine, Mitchell grasses, neverfail, goathead burr, copperburr and Warrego summer-grass. In depressions and channels, flora can include: Coolibah, black box, river cooba, eurah, and flowering lignum. On grasslands and sandy rises the following flora occurs in dense or moderate quantities: white cypress pine, bumble box, leopardwood, belah, wilga, sandplain wattle, prickly wattle, budda, quinine bush, and sandhill riceflower (DPIE Website).

Due to the substantial clearance and limited ecological studies of the project area, a reconstruction of native faunal populations is not possible. Indicative vertebrate information for the BBSB has identified the presence of 18 amphibian species, 68 reptiles, 281 birds and 82 mammal species, with a number being endangered or vulnerable, including koalas, the eastern pygmy possum, and Pilliga Mouse (DPIE Website).

## 2.5 Summary

The level plains and gently undulating rises suggest that the project area would have provided an easily traversable region. The presence of the Mehi River as well as ephemeral creeks and small drainage channels over the surrounding alluvial plains further supports this premise. The combination of easily traversed landscape, open woodland and grassland, and the presence of substantial waterways, supporting diverse ecology and therefore providing plentiful resources, means the area would have had moderate-high potential to contain cultural materials. This potential is severely curtailed by a number of factors that negatively impact the preservation of evidence for Aboriginal cultural occupation in the project area. These factors include the location of the project area on an alluvial plain that is subject to flooding, the presence of self-mulching, mobile black vertosols in the area, and the extensive European land clearance that has removed topsoils and generally disrupted traces of Aboriginal occupation. The potential for scarred trees is also very low due to heavy deforestation for cultivation and grazing beginning from the earliest European pastoral settlement of the region.

### 3. ARCHAEOLOGICAL CONTEXT AND ETHNOHISTORY

This section presents the ethnohistorical and archaeological context for the evaluation of the project area, including known archaeological sites identified by previous archaeological investigations, and the understanding of Aboriginal heritage developed by previous archaeological and heritage studies.

#### 3.1 Ethnohistorical Context

This ethno-historical context is drawn from review of accessible sources including:

- *Australian Dictionary of Biography*,
- a review of primary sources including parish maps and newspaper articles,
- sources identified on the National Library of Australia's *Trove* database,
- consultation with Aboriginal community organisations in the locality,

Moree sits within the Brigalow Belt South Bioregion (BBSB) and falls within the traditional country of the Kamilaroi (Gamilaraay) people (Tindale 1974). Tindale (1974: 194) estimated that the Kamilaroi occupied over 75,000 square kilometres ranging from Walgett in NSW, to Nindigully in Qld, and through the towns of Moree, Mungindi, Mogil Mogil, Narrabri, Pilliga, Gunnedah, Bingara, Tamworth, Quirindi, Bundella, Barraba, Gwabegar and Come-by-Chance. It should be noted that the tribal boundaries set out by Tindale and others are approximations, based upon the surviving linguistic evidence identified in the 19<sup>th</sup> century and can be treated as indicative at best (Attenbrow 2010: 35).

For thousands of years, the Kamilaroi people have maintained a strong cultural, spiritual and custodial connection to their traditional lands. They gathered plants for food and medicinal purposes and hunted animals such as kangaroos and possums for food and clothing, and produced stone and wooden tools such as spears, boomerangs, and waddies. Aboriginal communities associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge, kinship systems and strengthening social bonds (NPWS 2020).

In 1828 Charles Sturt (1834) described the Kamilaroi on the Macquarie River as “clean-limbed and stout, with pleasing faces and intelligent countenances”. In November 1831, the surveyor-general Sir Thomas Livingstone Mitchell led an expedition first to Tamworth, then after following the Namoi River down to Narrabri, it crossed the plains to the Gwydir near Moree (Baker 1967). While in the area he observed a village which he described:

*In crossing one hollow we passed among the huts of a native tribe. They were tastefully distributed amongst drooping acacias and casuarinae; some resembled bowers under yellow fragrant mimosae; some were isolated under the deeper shades of casuarinae; while others were placed more socially, three or four together, fronting to one and the same hearth. Each hut was semicircular, or circular; the roof conical, and from one side a flat roof stood forward like a portico, supported by two sticks. Most of them were close to the trunk of a tree, and they were covered, not as in other parts, by sheets of bark, but with a variety of materials, such as reeds, grass, and boughs. The interior of each looked clean and to us, passing in the rain, gave some idea not only of shelter, but even of comfort and happiness (Mitchell 1839).*

The invasion of Europeans into the area subjected the Kamilaroi to violence, disease, and a reduction in the land available for them to peacefully occupy. Conflict between the Kamilaroi and settlers was fierce with seven settlers convicted and hanged for the Myall Creek Massacre and a number of Europeans killed and stock lost around the Gwydir and Namoi rivers (NSW HO and DUAP 1996). The native police were

introduced in 1849 and by the mid-1850s Aboriginal resistance was suppressed, after which many of the remaining Kamilaroi in the area were brought into service working as stockmen, shearing, and mustering, and in domestic services (NSW HO and DUAP 1996). This Aboriginal labour force became crucial to the pastoral economy of the area, especially with the shortage of European workers during the gold rush period. Despite this forced assimilation, the local Aboriginal people covertly resisted by holding on to their language, spiritual and ceremonial traditions, and continuing with the cultural and subsistence practices that linked them to the land (NPWS 2000).

### 3.2 Heritage Register and Database Searches

The following heritage registers and database searches were undertaken as part of this preliminary assessment:

- National Native Title Tribunal (NNTT);
- Aboriginal Heritage Information Management System (AHIMS);
- The Australian Heritage Database (AHD);
- State Heritage Register (SHR) and Inventory (SHI); and
- Moree Local Environmental Plan (2011).

#### 3.2.1 National Native Title Tribunal

A search was undertaken of the National Native Title Register maintained by the National Native Title Tribunal (NNTT) on 27 January 2021 of the project area to identify if Native Title exist over the project area. The searches identified that no Native Title issues exist for the site. The project area is, however, within an Active Native Title Application claim area by the Gomeroi People (refer to **Appendix B**).

#### 3.2.2 Aboriginal Heritage Information Management System (AHIMS search)

Searches were conducted of the AHIMS register on 27 January 2021 for any Aboriginal heritage sites recorded within and adjacent to the project area. The search covered the area datum: GDA, Zone: 55, Eastings: 768910 - 778910, Northings: 6730540 - 6740540 (approximate 5km radius around project area). A total of 43 Aboriginal sites and 0 Aboriginal places were listed (refer to **Appendix C, Table 2** and **Figure 3**).

**Table 2. AHIMS Search Results**

AHIMS Site ID	Site Name	Site Type	Features	Number of Sites	Sites Within Project Area
10-3-0001	Terille Island	Burial/s	Burial - five skeletons identified and recovered following their accidental exposure in the excavation of a 'soil pit' just north of the Greenbah Station homestead near Moree. Most of the bones were disturbed, but one body was recovered wrapped in a bundle in a flexed position on its side with head to the north and facing east. All of the bones were found at about three feet depth	1	0
10-3-0013	Middle Camp Moree	Open	Camp site with Modified Tree	1	0

AHIMS Site ID	Site Name	Site Type	Features	Number of Sites	Sites Within Project Area
	Moree	Camp Site			
10-3-0025	Moree scarred tree 14	Modified Tree	Open site with one modified tree	1	0
10-3-0031	Top Camp	Open Camp Site	Open camp sites with 2 small satellite camps. Artefacts removed from the site in 1960s.	3	0
10-3-0032	Steelbridge Camp	Open Camp Site	Not a site – Listed previously as an open campsite with PAD. Test excavations of PAD in 2004 revealed no artefacts.	0	0
10-3-0033	TC-IF-1	Isolated Find	Open site with isolated artefact	1	0
10-3-0034	BG-WS-1	Bora/Ceremonial	Ceremonial Ring (Stone or Earth)	1	0
10-3-0035	DC-OS-1	Open Camp Site	Artefact	1	0
10-3-0036	HC-IF-1	Isolated Find	Open site with isolated artefact	1	0
10-3-0038	Yarraman gravel pitt ST1	Modified Tree	Open site with one modified tree	1	0
10-3-0039	Moree Cohen Street Scarred Trees	Modified Tree	Open site with one modified tree	1	0
10-3-0040	SC-IF1	Isolated Find	Open site with isolated artefact	1	0
10-3-0041	SC PAD	PAD	Potential Archaeological Deposit (PAD) : - Partially destroyed	N/A	0
10-3-0052	BBS; Moree LALC; Top Camp 1	Modified Tree	Open site with one modified tree – now destroyed	1	0
10-3-0062	BBS Moree LALC Mehi River TSR 1	Modified Tree	Open site with one modified tree	1	0
10-3-0063	BBS Moree LALC Mehi River TSR 2	Modified Tree	Open site with one modified tree	1	0
10-3-0065	BBS; Moree LALC; Top camp		Habitation Structure : 1	1	0
10-3-0067	Taylor Oval burial	Burial/s	Burial removed in 1903 – potential for more in area	1	0
10-3-0068	MC-ST1	Modified Tree	Open site with one modified tree	1	0
10-3-0069	MR-IF1	Isolated Find	Open site with isolated artefact (1 pink silcrete flake)	1	0
10-3-0070	SC-OS1	Artefact Scatter	Open site with artefact scatter (2 artefacts)	1	0
10-3-0073	Halls Creek IF-1	Isolated Find	Open site with isolated artefact (1 silcrete multi-directional core)	1	0
10-6-0040	HC-OS1		Stone Quarry : 5		0
10-6-0072	MSAP PST02	Modified Tree	Open site with one modified tree	1	0
10-6-0074	MSAP IF05	Isolated Find	Open site with isolated artefact	1	0
10-6-0076	MSAP IF02	Isolated Find	Open site with isolated artefact	1	0
10-6-0077	MSAP PST08	Modified Tree	Open site with one modified tree	1	0
10-6-0078	MSAP PST07	Modified	Open site with one modified tree	1	0



AHIMS Site ID	Site Name	Site Type	Features	Number of Sites	Sites Within Project Area
		Tree			
10-6-0079	MSAP PST06	Modified Tree	Open site with one modified tree	1	0
10-6-0080	MSAP PST05	Modified Tree	Open site with one modified tree	1	0
10-6-0081	MSAP PST03	Modified Tree	Open site with one modified tree	1	0
10-6-0083	MSAP IF09	Isolated Find	Open site with isolated artefact	1	0
10-6-0084	MSAP AS04	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0086	MSAP AS05	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0087	MSAP AS06	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0088	MSAP AS03	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0089	MSAP AS02	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0090	MSAP AS01	Artefact Scatter	Open site with artefact scatter.	1	0
10-6-0091	MSAP IF11	Isolated Find	Open site with isolated artefact	1	0
10-6-0092	MSAP IF10	Isolated Find	Open site with isolated artefact	1	0
10-6-0093	MSAP IF08	Isolated Find	Open site with isolated artefact	1	0
10-6-0094	MSAP IF07	Isolated Find	Open site with isolated artefact	1	0
10-6-0095	MSAP IF06	Isolated Find	Open site with isolated artefact	1	0

Forty-three sites were identified within 5km of the project area. Of these, the most prevalent types were modified tree sites (13) and artefacts, either scatters (7) or isolated finds (12) (refer to **Table 2**). Five sites from this list (10-3-0031, 10-3-0032, 10-3-0034, 10-3-0052, and 10-3-0067) occur within the general vicinity while four sites (10-3-0013, 10-3-0068, 10-3-0069, and 10-3-0073) are situated approximately 1 - 2km from the project area. No current sites have been identified within the project area (refer to **Figure 3**).

### 3.2.3 Australian Heritage Database

The Australian Heritage Database (AHD) is a Commonwealth administered heritage database that includes entries from the former Register of the National Estate and the current Commonwealth and National Heritage Lists. This database was searched on 27 January 2021 for all Indigenous heritage items within the Moree Plains Shire Local Government Area. The AHD search listed 22 results within the Moree Plains Shire LGA for heritage places, of which nine were Indigenous Places. Of these, two were within the township of Moree. These are a duplication of the single listed item: the Moree Baths and Swimming Pool. The listed item is significant due to its association with the 1965 student protests which occurred there as part of the Aboriginal civil rights movement, and the activists and people of the movement. The Moree Baths are not within or adjacent to the project area.

### 3.2.4 NSW State Heritage Register and NSW State Heritage Inventory

The State Heritage Register is a heritage database administered by the NSW Heritage Branch of the Office of Environment and Heritage. This database includes heritage listings for State significant heritage items. This database was searched on 27 January 2021 for all heritage items within the Moree Plains Shire Local Government Area.

The results indicate a single item listed on the register, and three Aboriginal places in the LGA. None of these are in Moree nor within the project area. One of these Places, the Terry Hie Hie Corroborree Ground and Grinding Grooves, is listed as being situated in Moree. The detailed listing, however, situates the Aboriginal Place listed near Terry Hie Hie. The exact location is not made public and is unlikely to be within the project area.

The State Heritage Inventory is a heritage database administered by the NSW Heritage Branch of the Office of Environment and Heritage. This database includes heritage listings from local and regional planning instruments and heritage studies and state significant heritage items. This database was searched on 27 January 2021 for all Indigenous heritage items within the Moree Plains Shire Local Government Area.

The results of the search identified 44 historical items, of which 25 are in Moree, however, none of these items are within or adjacent to the project area. No Indigenous heritage items were listed on the SHI.

### *3.2.5 Moree Plains Local Environmental Plan (2011)*

The Moree Plains Local Environmental Plan (LEP) is a planning instrument administered by Moree Plains Shire Council, which contains provisions and listings of items of environmental heritage including heritage, conservation areas and archaeological sites within Schedule 5. The LEP was searched on 27 January 2021. There were 41 items listed within the Moree Plains LGA, of which 24 were listed in the town of Moree.

The results of the search identified no registered Indigenous heritage items within the project area.

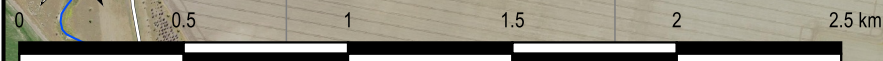
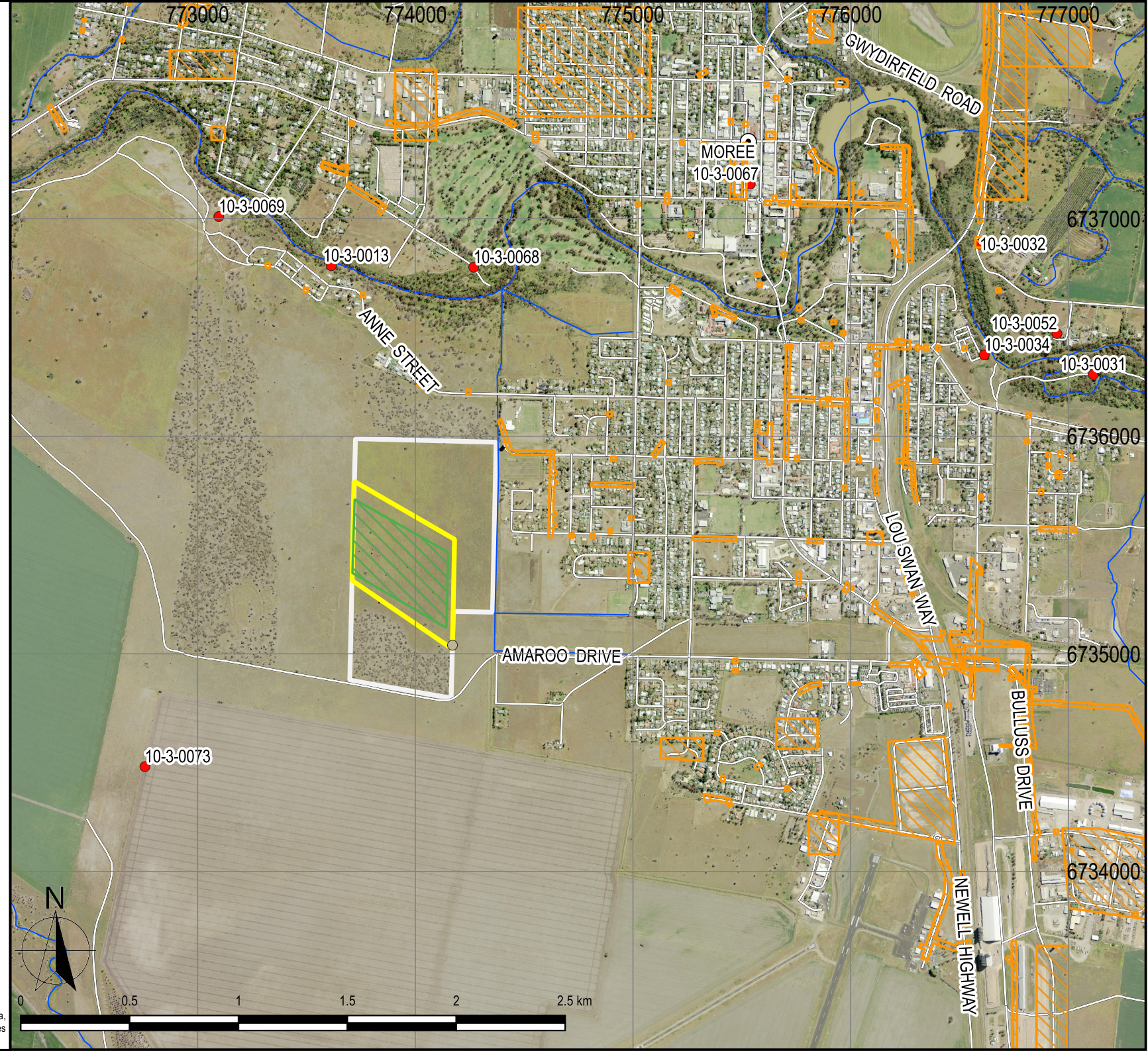




Figure 3  
Project Area and Known  
Aboriginal Heritage Sites

### Legend

- Large Towns & Cities
- AHIMS Sites
- Water Courses
- Roads
- Lot 392 DP 751780
- ▨ Proposed Lease Area
- ▨ Survey Area





### 3.3 Previous Archaeological Research

A review of the AHIMS library and online searches were undertaken to obtain copies of previous Aboriginal heritage studies and archaeological investigations within the locality of the project area. Only one investigation has been published from the immediate surrounds of the project area (5km radius). As such, other sources for archaeological reports were consulted to gain a better understanding of the archaeological context in the Moree and the project area locality (refer to **Table 3**). This section outlines the studies in the locality that can assist in understanding of the potential archaeology of the region. This in turn can help to predict the types of sites that may be expected to be present within the project area.

**Table 3. Previous Archaeological Surveys within the Locality**

AUTHOR/ DATE	LOCALITY	INVESTIGATION AND DISTANCE TO PROJECT AREA	NO. RECORDED SITES	SITE TYPES	SITES WITHIN PROJECT AREA
OzArk Environment & Heritage 2019	Moree	Aboriginal Due Diligence Archaeological Assessment: East–West Bypass, Moree (approx. 1-2km SW&NW of project area)	3	2 scar trees, 1 isolated find	0
RMS and OzArk Environment & Heritage 2018	Newell Highway, Moree	Aboriginal archaeological survey report and historic heritage assessment of three sections of the Newell Highway (Phase 1 – approximately 5km NW of the project area)	2	2 scar trees	0
OzArk Environment & Heritage 2012	Moree	Aboriginal Heritage Assessment: Proposed water storage ponds at Evergreen precinct, Moree Plains LGA (approx. 10kms SE of project area).	3	3 scar trees	0
OzArk Environment & Heritage 2010	Moree	Aboriginal heritage assessment for a proposed solar power station (approx. 7- 11km SW of the project area).	4	2 scar trees, 1 artefact scatter, 1 PAD	0

### 3.4 Regional Character

Studies by Pearson (1981), Balme (1986), Purcell (2000), and Witter (2004) provide the regional context for the project area. Pearson's PhD thesis dealt with the Macquarie River region of NSW, however the proximity and topographic similarity to the Moree area makes their observations relevant. Pearson's site prediction model suggests that occupation sites are likely to be occur on level ground with good drainage in areas with access to water and adequate fuel that have appropriate localised weather patterns for summer or winter occupation. In Pearson's study these sites most often occurred on low ridge tops, creek banks, gently undulating hills, and river flats, and usually in open woodland vegetation (Pearson 1981: 101). He noted that

the occurrence of scar trees in the area, while often in proximity to water, did not display any other obvious patterning. Balme's study of the North-Central Rivers found that where sites still survived, their distribution was often a function of geomorphic processes that affected preservation and exposure. Balme noted extensive destruction or removal of scar trees that had been previously recorded on AHIMS from ethnographic accounts. Purcell identified that sites were more frequently found adjacent to creeks, swamps and chains of ponds surrounded by floodplains and terraces and were predominantly (91.5%) located within 200 to 300 meters of water (NPWS 2000: 31).

In the Moree area, Purcell found that sites were often on floodplain and alluvial landforms within a few hundred metres of water (NPWS 2002). Witter (2004: 139) has described the adjacent Barwon Basin Region, as "one of the major regions of archaeological disaster in NSW". Extensive laser-levelling for irrigation has destroyed much of the archaeology of the region. He also identified the presence of self-mulching, black alluvial cracking clays throughout the region as disruptive to preservation, suggesting the presence of gilgais would impact on soil mobility, obliterating evidence for occupation.

The important archaeological sites at Willandra Lakes in the Darling Basin and Cuddie Springs near the Macquarie River demonstrate that Aboriginal occupation of the region has been ongoing for at least 42,000 years (Hiscock 2008; Field and Dodson 1999). The closest dated site to the project area is the Greenbah Station site burials (identified in AHIMS as 10-03-0001 - Terille Island) that was dated to 2285+/-125 uncal BP (McBryde 1973). Approximately 100km to the east of the project area along is the Graman Rockshelter that was investigated by McBryde in 1974. This site has returned a date of 5450+/-100 uncal BP (Kigoshi 1967; McBryde 1974).

170kms SSW of the project area is the Lime Springs site, a megafauna site located in a swamp south of Gunnedah. Numerous artefacts and megafauna bones (*Diprotodon*, *Macropus titan*, *Protemnodon* sp. and *Procoptodon* sp.) were recovered and the site was dated to 19300+/-500 uncal BP (Gorecki et al. 1984). At the Crazy Man site, a rockshelter 200km to the south, a basal date of 17140+/-140 uncal BP was recorded, with evidence of low-level occupation peaking between 4900-5450 BP and 1730-4450 BP (Williams *et al.* 2014).

### 3.5 Summary

The results of the background archaeological research, including heritage searches and a review of previous assessments in the region indicate that the most prevalent site types were modified tree sites and artefacts, either scatters or isolated finds. The potential for scarred trees, though common in the region, is very low due to heavy deforestation and land clearance in the project area for cultivation and grazing. The archaeological context of the project area indicates that evidence of Aboriginal occupation is most likely to occur adjacent to creeks, swamps, and chains of ponds and on low ridge tops, gently undulating hills, river flats, and in open woodland vegetation. The preservation issues discussed in **Section 2** (flooding, self-mulching mobile black vertosols, extensive European land clearance) suggest that evidence of Aboriginal occupation is unlikely to have survived in the project area.

## 4. PREDICTIVE MODEL AND ARCHAEOLOGICAL POTENTIAL

Based on the known archaeological, environmental and landscape context of the locality, a predictive model for evidence of Aboriginal occupation for the project area is presented below:

**Scarred trees** and **carved trees** contain evidence of scars and carved patterns which can be attributed as having Aboriginal cultural origin. Scarred trees are typically created by the removal of bark from the trunk of the tree (usually with a stone axe) to make shields, canoes, implements and other types of items which leave a wound on the tree trunk. Carved trees contain carved patterns on the tree trunk and are often found in association with ceremonial grounds, burials, or cultural sites. Carved trees are a frequent site type in the Moree region as indicated by the AHIMS search results and previous archaeological results identified in **Table 3**. Due to the clearance of trees, the potential is low in the project area.

**Isolated artefacts** and **open campsites (artefact scatters)** are the locations of discarded stone artefacts, often material that has been discarded as part of making stone tools or over frequent episodes of occupation/visitation in an area. The objects are most likely to be found within 100 metres of a major water course, well drained alluvial flats, lower slope adjacent water courses, crests, and areas near the lake foreshore where the landscape has not been heavily modified. Flaked stone in region includes silcrete, quartz, and granite porphyry while the occasional ground stone such as milling slabs can occasionally be found (Witter 2004). The potential for artefact scatters and isolated artefacts is low to moderate. They are the most common site type in the broader region, though potential has been limited due to heavy impacts to the landscape associated with intensive agriculture.

**Middens** are the accumulation of debris from fish, crustaceans, and shellfish (shells, fish bones) consumed as part of Aboriginal people's diet. Middens also often contain charcoal, stone artefacts, bone and other types of material used by Aboriginal people. Middens often occur within close proximity to freshwater and saltwater sources which have potential to contain mussels, oysters, and other types of edible shellfish. The potential for the presence midden is very low due the absence of freshwater habitats within the general vicinity of the project area.

While two **burial sites** and a **bora ground** (AHIMS site card 10-3-0001, 10-3-0067 & 10-3-0034) have been identified in the general vicinity, they are very rare site types and are unlikely to be found in areas of high modification. As burials are commonly within shell middens, the potential for a site of this type is particularly low due to a lack of known middens recorded in the vicinity of the project area.

**Petroglyphs** (also referred to as Rock Engravings) are art sites where marks have been made in stone by Aboriginal people (for example, spirit figures, animals, implements and footprints). **Rock shelter sites with art** consist of rock overhangs used for shelter by Aboriginal people and where smooth surfaces on the walls of the shelter (sandstone surfaces) are painted with ochres and pigments). **Rock shelter sites with occupation deposits** include sediment deposits that potentially retain archaeological material. No known landforms supportive of rock shelters have been recorded in the vicinity of the project area.

**Aboriginal axe grinding grooves** are grooves most often found in sandstone where Aboriginal people have sharpened or manufactured stone axes and other implements, and in some cases, ground seed and grains in the sandstone forming 'bowls'. This site type may occur if suitable geology is present such as outcropping sandstone or suitable sandstone shelves in creek beds. The potential for this site type within the project area is low due to a lack of suitable geology. No outcroppings of stone nor grinding groove sites were identified during site survey.

**Potential Archaeological Deposits** refer to soil profiles within landforms which are predicted to contain buried evidence of Aboriginal occupation. This buried evidence is most often stone artefact scatters which survive frequently in the archaeological record and may occur in both primary and secondary depositional environments. Nearly all soil landscapes and landform types in Australia are connected to Aboriginal occupation and have potential to contain evidence of such.

Artefacts are most commonly recorded in A unit soils (topsoils) and at great depth in B unit alluvial deposits. They occur also in other types of B unit subsoils and deposited between the cracks of C unit cracking clays, where artefacts have moved down the soil profile. Evidence of Aboriginal occupation occurs commonly in both natural secondary deposits as well as in many types of disturbed contexts. Due to the large number of environments and soils where artefacts can occur, deposits are considered to have archaeological potential unless the absence of artefacts is anticipated as a result of post-depositional factors. How archaeological potential is defined and to be assessed in this report is provided in **Table 4**.

**Table 4. Definitions of Archaeological Potential**

ARCHAEOLOGICAL POTENTIAL	DEFINITION
Low to Zero	Landforms that have been totally modified and have low to zero potential for any remaining original soil profile or intact archaeological deposits. This is infrequent as usually disturbed sites remain redeposited or partially redistributed in the landscape. In order to designate areas as having low to zero potential, complete stripping of original soil profiles down to or through bedrock must be evident. Sites of that description are rare and are usually deep quarries or open cut mines.
Low	Landforms that may have been utilised by Aboriginal people in the past, but at a lower intensity relative to all surrounding landforms, resulting in a lower artefact density than all surrounding landforms. This category also includes landscape areas of low terrain integrity, where geomorphic processes or human action may have redistributed artefacts from their deposited locations, such as stripping of soil or excavation to create culverts or dams, resulting in site disturbance or destruction.
Moderate	Landforms that are predicted to have been utilised by Aboriginal people in the past, but not intensively or repeatedly. There is therefore potential for artefactual deposition, but at a lower frequency and density than in areas of high archaeological potential. This category may also refer to landforms known to be sensitive for higher levels of Aboriginal occupation but where prior ground surface disturbances has decreased the archaeological integrity and potential of finding evidence of Aboriginal occupation (for example, creek confluences, alluvial terraces and riverbanks, where stratigraphic integrity may have decreased due to previous land use).
High	Landscape areas predicted to have been intensively or repeatedly utilised by Aboriginal people in the past, such as creek confluences, Pleistocene terraces, floodplains or elevated landforms above major watercourses (high stream order tributaries) or floodplains. In these areas, site and artefact density are expected

	to be higher than the surrounding landscape, and sites in these areas may possibly be more complex. Though terrain integrity in these areas may be variable, the high archaeological potential of these areas give the associated deposits research potential, or the capacity to provide valuable information on past Aboriginal land use.
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No Potential Archaeological Deposits were recorded during the survey. The area has been identified as having low potential for intact archaeological deposits and low sensitivity in terms of landform. Intensive clearing and farming practices appear to have stripped the majority of topsoil from the property, which in conjunction with the lack of mature trees, revealed no archaeological materials during the site inspection to indicate potential for preserved cultural materials.

#### 4.1. Summary

The project area is in a heavily disturbed landscape, whereby remnant A1 topsoils may have been re-distributed or almost entirely removed, limiting the potential for intact Aboriginal objects and sites to occur. During the site inspection no outcroppings of stone and no evidence of grinding grooves were identified. Mature trees were also uncommon in the landscape due to land clearance and deforestation for agriculture. As such, the potential for axe grinding grooves and scarred or modified trees is low.

The landforms in the area may be suitable for artefact scatters or isolated artefacts to occur dependent on the level of disturbance and modification, though the potential is low due to previous land use history and the lack of vegetation required for topsoil retention. While the potential is low, these site types have been demonstrated to occasionally occur within cracks in clayey subsoil horizons such as those within the project area, or in remnant pockets of topsoil within undulating parts of otherwise disturbed landscapes. Other site types such as stone arrangements, art sites, burials, and ceremonial sites such as bora rings are unlikely to occur in the project area.



## 5. SITE INSPECTION AND RESULTS

The site inspection was undertaken on 3 March 2021 on lands within the Moree LALC area. The site inspection was undertaken by Elaine Lin, Senior Archaeologist (Virtus Heritage). A representative from the Moree LALC was unable to attend the site inspection. The field survey was completed over one field day. The project area was inspected via pedestrian survey in four transects across the proposed lease area, including along the proposed access route, targeting all areas of exposure. The survey included an inspection of all mature trees within the project area. No drainage lines were identified during the inspection (refer to **Appendix D** for photographs of the site inspection).

### 5.1 Site Inspection Results

General visibility was low to moderate over the project area as the entire paddock was overgrown with tussock grass and numerous exotic pasture grass, shrub and weed species. The general visibility ranged between 5 – 25%, with occasional areas of exposure with visibility ranging between 50 – 95%. The project area has been heavily disturbed by European farming activities for plant cultivation and animal grazing, such as ploughing and tree clearing. The soil, where visible, was a greyish brown loamy clay with large cracks forming polyhedral peds, consistent with the imperfectly drained Grey Vertosols of the Gurley Soil Landscape described by Mitchell (2002). No outcroppings of bedrock, stone nor drainage lines were identified during the site inspection.

Trees located on the property were scarce, and no scarring was identified on any potential mature or native tree species within the project area. No Aboriginal cultural material was observed during the survey of the project area. The study area has been identified as having low potential for intact archaeological deposits to occur. Intensive clearing and farming appear to have stripped the majority of topsoil from the area, which in conjunction with the lack of mature trees and the lack of evidence for cultural material in the occasional large areas of exposure, indicates low potential for preserved archaeological remains.

#### 5.1.1 Cultural Comments and Potential for Archaeological Deposits

No comments from Moree LALC have been received to date.

### 5.2 Summary of Site Inspection

There are no previously recorded sites within the project area based on heritage searches and background research of previous archaeological investigations to date. No Aboriginal objects or sites were observed in the project area and given the high level of disturbance and lack of any undisturbed soils or sensitive landforms identified during survey, the project area is deemed to have a low potential for archaeological deposits.

No cultural comments have been received from Moree LALC to date.

## 6. RECOMMENDATIONS

The following recommendations have been made based on the information provided on project impacts, consultation to date, relevant archaeological and environmental background research, and the results of the site inspection.

1. No Aboriginal objects were identified during the site inspection. No Aboriginal places are registered within the project area. No areas of archaeological potential are identified within the project area requiring archaeological testing, salvage or mitigation. It is reasonable to conclude that there is a low probability for objects to occur in the area of the proposed development, which can now proceed with caution as per the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a).
2. All site workers and personnel involved in site impact works associated with the proposal should be inducted and briefed on the possible identification of Aboriginal sites and objects during construction and their responsibilities according to the provisions of the *NPW Act 1974*, in case any additional unknown objects or items are uncovered during proposed works.
  - a. As part of this induction, the contact phone numbers of the Heritage NSW regional archaeologist and EnviroLine 131 555, the relevant Environmental Officer responsible for this project should also be given to all site workers and personnel, in case unknown objects or items are uncovered during excavation.
  - b. Site workers should be made aware of the location of any Aboriginal sites that may at any stage occur within the proposal site and their scientific significance and their legal obligations in relation to the protection and management of these Aboriginal sites under the *NPW Act 1974*, and 2010 ancillary provisions and amendments.
  - c. As part of this induction, workers should be made aware that in the event that any unexpected human remains are uncovered on site, the area of the suspected remains must be secured and cordoned off and the NSW Police notified. No further works can be undertaken until the NSW Police provide written advice. If these remains are deemed to require archaeological investigation by the NSW Police or NSW Coroner, then Heritage NSW and the relevant Aboriginal parties must be notified. A plan of management for the preservation of any identified Aboriginal human remains or for their salvage must be put in place or conducted under an AHIP methodology and variation developed in consultation with all relevant Aboriginal parties and Heritage NSW.
  - d. Providence Asset Group or delegated authority may wish to consider the input and engagement of interested Aboriginal stakeholder groups and Moree LALC in the development of inductions and toolbox talks for this project.
3. A copy of the draft report was made available to Moree LALC for comment and review. No comments have been received to date, and any future comments by Moree LALC may be considered where possible by PAG.

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# **APPENDIX A**

## **CONSULTATION LOG**

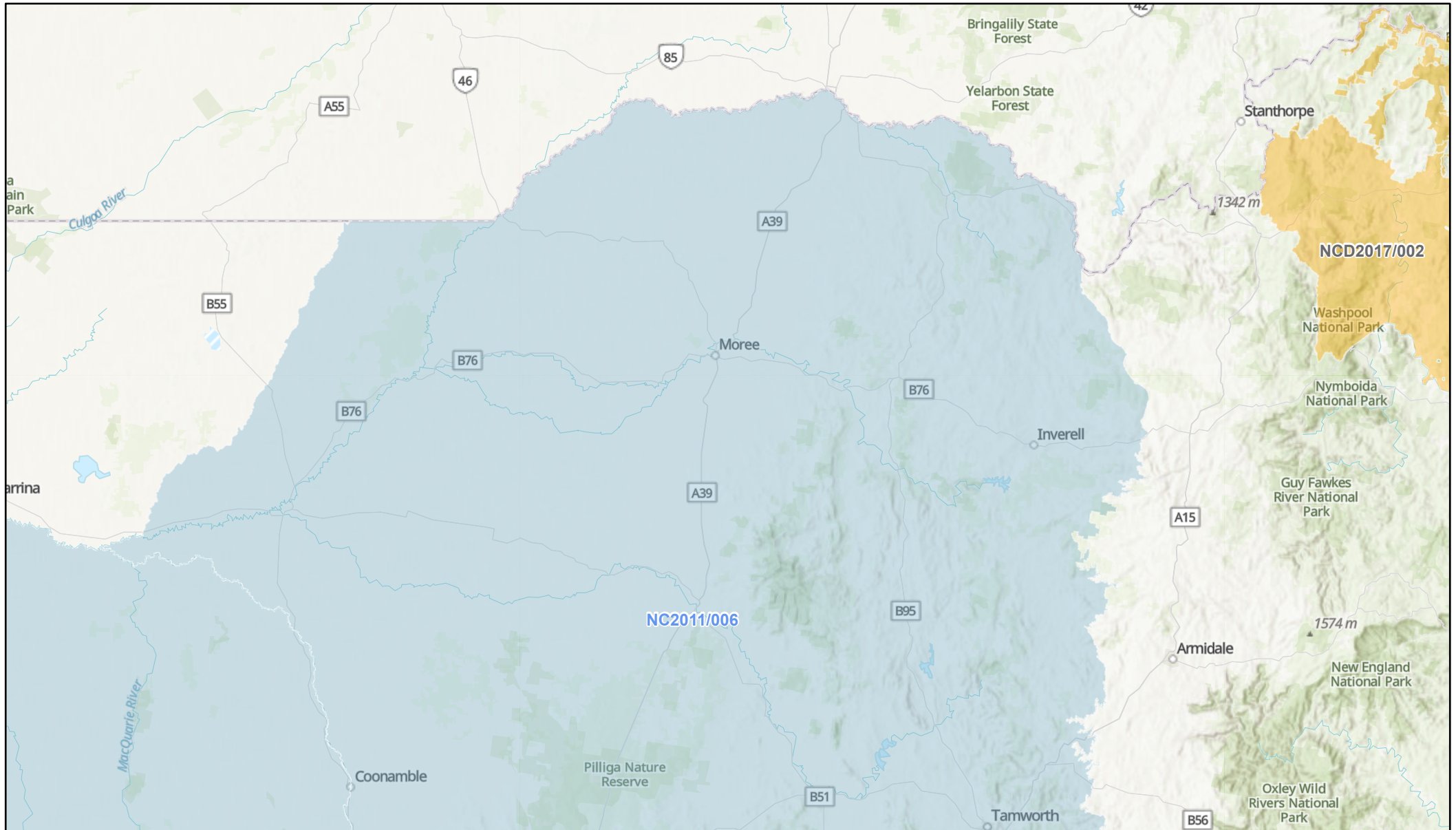
*No comments have been received to date from Moree LALC*

# **APPENDIX B**

## NATIONAL NATIVE TITLE TRIBUNAL SEARCH



# NT - Moree Search - Gomeroi Application



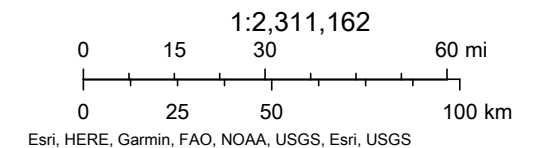
1/27/2021, 1:39:20 PM

Determinations

In effect - Finalised

Conditional - Part

Applications (Schedule)





Gomeroid People


Gomeroid People

NOTE: To determine areas subject to claim within the external boundary, reference to the application description is necessary.  
Application boundary data compiled by the NNTT from data sourced from DOL (NSW).

Topographic image data is © Commonwealth of Australia and is used under licence from Geoscience Australia 2008  
NOTE: Topographic images should be used as a guide only.

Map created by: Geospatial Services, National Native Title Tribunal (09/12/2011)

Register Attachment:  
NSD37/2019 (NC2011/006)  
Map of the area covered by the application  
Attachment C of the Application  
Page 1 of 1, A4, 20/01/2012




**NORTH**

0 25

**KILOMETRES**

Latitude and Longitude based on Geocentric Datum of Australia 1994  
Non Projection



National  
Native Title  
Tribunal

© Commonwealth of Australia 2011

The Registrar, the National Native Title Tribunal and its staff, members and agents and the Commonwealth (collectively the Commonwealth) accept no liability and give no undertakings guarantees or warranties concerning the accuracy, completeness or fitness for purpose of the information provided. In return for you receiving this information you agree to release and indemnify the Commonwealth and third party data suppliers in respect of all claims, expenses, losses, damages and costs arising directly or indirectly from your use of the information and the use of the information you obtained by any third party.





## Gomeroi

### External boundary description

The application area covers all the land and waters within the external boundary described as:

Commencing at the intersection of the centreline of an unnamed creek and the Queensland - New South Wales border at Longitude 148.384192° East and extending easterly, generally north easterly, generally south easterly and generally southerly along that State border to the eastern bank of Crooked Creek; then generally southerly along the bank of that creek to the western boundary of Bruxner Highway road reserve; then generally southerly and generally south easterly along the western boundaries of that highway, Rocky Creek Road, Innes Glen, an unnamed road, Strathbogie Road, Maids Valley Road and Waterloo Road reserves to the northern boundary of the Gwydir Highway road reserve; then generally south westerly along the boundary of that Highway road reserve to the prolongation northerly of the eastern boundary of Lot 7001 on DP93978; then southerly along that prolongation and the eastern boundaries of that lot to its south east corner; then south east to a point 1000 metres above the Australian Height Datum (A.H.D.) at Latitude 29.762966° South; then generally southerly along that 1000 metre contour to the eastern boundary of Lot 100 on DP753260; then southerly, generally easterly, again southerly and generally westerly along the eastern boundaries of that lot and northern, eastern and southern boundaries of Lot 91 on DP753292 to again the 1000 metre contour; then generally westerly and generally south easterly along that contour line to the eastern boundary of Lot 132 on DP753300; then southerly, generally westerly and generally southerly along the eastern and southern boundaries of that lot and Lot 199 on DP46377 to again the 1000 metre contour at a point approximately 200 metres north of the Macintyre River; then generally easterly and generally south westerly along that contour line to the northern boundary of the Single National Park; then generally easterly, southerly, generally westerly, generally southerly and again generally westerly along the northern, eastern and southern boundaries of that National Park to its westernmost corner; then westerly, southerly and again westerly along the northern and western boundaries of Lots 110 and 4 on DP753667 to Lot 101 on DP753667; then southerly, generally easterly and again southerly along the eastern and northern boundaries of that lot, Lot 96 on DP753667 and the prolongation southerly of that boundary across Moredun Creek to the northern boundary of Lot 900 on DP1137399; then

generally easterly and generally southerly along the northern and eastern boundaries of the western severance of that Lot and the prolongation southerly of that boundary to the southern bank of Limestone Creek; then generally westerly, southerly, westerly, again southerly, again generally westerly along that bank, eastern and southern boundaries of Lot 82 on DP753667, northern and western boundaries of Lots 57 and 64 on DP753667 and southern boundaries of lots 65 and 63 on DP753667 to the eastern boundary of Lot 2 on DP712834; then northerly, westerly, again northerly, again westerly, again northerly, again westerly and southerly along the eastern and northern boundaries of that lot and Lot 110 on DP753645, eastern and northern boundaries of Lot 33 on DP753667 and eastern, northern and western boundaries of Lot 10 on DP753667 to that lots south west corner; then westerly along the southern boundary of Lot 11 on DP753667 to the eastern boundary of Indwarra National Park; then generally southerly along the boundaries of that National Park to the northern boundary of Lot 66 on DP753645; then easterly, southerly, again easterly and generally south easterly along the northern and eastern boundaries of Lots 66, 67, 83 on DP753645, The Basin Nature Reserve and Lot 85 on DP753645 to the northern bank of Georges Creek; then generally north easterly along the southern and eastern boundaries of Lots 20, 122 and 11 on DP753645 to the western boundary of Lot 30 on DP753645; then northerly, generally easterly, generally southerly and westerly along the western, northern and eastern boundaries of Lot 30 on DP753645 and eastern and southern boundaries of Lots 58 and 62 on DP753676 to its southwest corner; then southerly and westerly along the boundaries of Lot 51 on DP753635 to the 1000 metre contour at approx Longitude 151.282626° East; then generally south easterly and generally westerly along that 1000 meter contour to the eastern boundary of Lot 89 on DP1008694; then southerly, generally south easterly, easterly and generally southerly along the eastern boundary of that lot, north eastern boundary of Lot 49 on DP753672, northern and eastern boundaries of Lots 45, 34 and 41 on DP753672 and onwards to the southern bank of Abington Creek; then generally south easterly along that bank to the south eastern corner of Lot 69 on DP721174; then westerly, southerly and generally westerly along the boundaries of that lot and Lot 68 on DP721174 to the eastern boundary of Lot 55 on DP753671; then southerly, westerly and again southerly along the boundaries of that lot, southern boundary of Lot 79 on DP721148 and eastern boundary of Lot 54 on DP753683 to the northern boundary of Lot 46 on DP753683; then easterly, generally southerly and generally south westerly along the boundaries of that lot and Lot 2 on DP236759 to the north eastern boundary of Lot 58 on DP753683; then generally

south easterly along the boundary of that lot and onwards to the southern bank of Haylocks Creek; then generally westerly along that bank and the southern bank of Cachs Creek to the northern boundary of Thunderbolts Way road reserve; then generally south easterly along that road reserve, and the eastern boundaries of Yarrowyck-Torryburn Road and Yarrowyck Crossing Road reserve boundaries to the centreline of the Gwydir River; then generally easterly and generally southerly along that centreline to Morses Creek; then generally southerly along the centreline of that creek and Long Swamp Creek to the northern boundary of Lot 5 on DP591627; then generally south westerly along that boundary to the 1000 metre contour; then generally southerly along that contour to the western boundary of Lot 117 on DP753849; then northerly, generally easterly and southerly along the western, northern and eastern boundaries of that lot and Lot 45 on DP753849 to again the 1000 metre contour; then generally southerly along that contour to Latitude 30.937829° South; then south westerly to the northern bank of the MacDonald River at 30.953337° South; then generally southerly to the northern boundary of McNamara Street, Woolbrook; then easterly and generally southerly along the boundary of that street and the centrelines of Borthwick Street, Reid Street (Limbri-Woolbrook Road) and Campfire Road to again the 1000 metre contour at approximately Latitude 30.984652° South; then generally southerly along that contour to the northern boundary of Lot 76 on DP753847 at approximately Longitude 151.331784° East; then generally easterly along that boundary and the northern boundaries of Lot 19 on DP753847 and Lots 76, 85, 54 and 4 on DP755345 to that lots eastern boundary; then southerly along that boundary, the eastern boundary of Lot 60 on DP755345 and onwards to again the 1000 metre contour; then generally south westerly along that contour to the northern boundary of Lot 67 on DP755345; then easterly, southerly, generally easterly, generally southerly, westerly, again southerly and again westerly along the boundaries of that lot and Lot 62 on DP755345 to again the 1000 metre contour; then generally southerly along that contour to the northern boundary of Lot 71 on DP755317; then generally easterly and generally southerly along the boundaries of that lot to again the 1000 metre contour; then generally southerly along that contour to the western boundary of Lot 104 on DP755317; then northerly, generally easterly and southerly along the boundaries of that lot to again the 1000 metre contour; then generally south westerly along that contour to the northern boundary of an unnamed road reserve which bisects Lot 2 on DP731952; then generally south westerly along the boundary of that unnamed road reserve (along the Port Stephens Cutting) to the south eastern corner of the northern severance of Lot 11 on

DP755338; then generally southerly and generally easterly along the western and southern boundaries of Lots 39 and 40 on DP881258, Lot 3 on DP815453 and Lot 32 on DP755351 to its south east corner; then northerly along the eastern boundary of that lot to the prolongation westerly of the northern boundary of Lot 22 on DP755351; then generally easterly along that prolongation and that boundary to the western bank of Dungowan Creek; then generally southerly along that bank to the prolongation westerly of the northern boundary of Lot 63 on DP618784; then easterly, southerly, again easterly and generally southerly along the northern and eastern boundaries of that lot and Lots 21, 28 and 23 on DP755339 to the northern boundary of the Nundle State Forest; then generally easterly and generally southerly along the eastern boundaries of that State Forest and Tomalla State Forest to the northern bank of the Barnard River; then generally westerly along that bank to the south eastern corner of Lot 28 on DP753709; then northerly, westerly, generally northerly, again westerly, again northerly and generally westerly along the eastern and northern boundaries of that lot, Lot 26 on DP753717, Lot 28 on DP45607, Lot 7301 on DP1130347 and again Lot 28 on DP45607 to the south western corner of Lot 27 on DP45607; then northerly, generally westerly and southerly along the western boundary of that lot, southern boundaries of Nundle and Hanging Rock State Forests and eastern boundary of Back River Nature Reserve to the northern bank of the Back River; then generally westerly along that bank to the 1000 metre contour; then generally southerly, generally westerly and again generally southerly along that contour to the northern boundary of Lot 49 on DP753722, being Ben Halls Gap National Park; then generally easterly, generally southerly, generally westerly and again generally southerly along the boundaries of that National Park and onwards to the centreline of Pages Creek; then generally south easterly and generally south westerly along that centreline and the centreline of the Hunter River to the Goulburn River; then generally westerly along that centreline to approximately Longitude 149.817504° East, Latitude 32.209916° South; then north westerly to the intersection of the centrelines of two unnamed creeks at approximately Longitude 149.713070° East, Latitude 32.161341° South; then generally north westerly along that centreline and the centreline of Mona Creek to the Talbragar River; then generally north westerly along that centreline to the eastern boundary of the Castlereagh Highway road reserve; then generally north westerly along that road reserve boundary to the southern bank of the Castleragh River and onwards to the centreline of that river; then generally westerly, generally north westerly and again generally westerly along that centreline and the centreline of the Macquarie River to the



Barwon River; then generally easterly and generally north easterly along the centreline of that river and the Big Warrambool to an unnamed creek at approximately Latitude 29.030555° South; then generally north easterly along the centreline of that unnamed creek back to the commencement point.

## **Note**

### **Data Reference and source**

- Application boundary data compiled by National Native Title Tribunal based on data sourced from NTSCORP.
- Cadastre data sourced from the LPM Authority, NSW (September 2010) and Public Sector Mapping Agency (November 2011).
- Rivers / Creeks based on cadastre where available, otherwise, Topographic vector data which is © Commonwealth of Australia (Geoscience Australia) 2003.
- Road names sourced from cadastre and Google map data © 2011 - Whereis (R) Sensis Pty Ltd.
- Contour data supplied by NTSCORP.

### **Reference datum**

Geographical coordinates have been provided by the NNTT Geospatial Services and are referenced to the Geocentric Datum of Australia 1994 (GDA94), in decimal degrees and are based on the spatial reference data acquired from the various custodians at the time

### **Use of Coordinates**

Where coordinates are used within the description to represent cadastral or topographical boundaries or the intersection with such, they are intended as a guide only. As an outcome to the custodians of cadastral and topographic data continuously recalculating the geographic position of their data based on improved survey and data maintenance procedures, it is not possible to accurately define such a position other than by detailed ground survey.

Prepared by Geospatial Services, National Native Title Tribunal (09 December 2011)

# **APPENDIX C**

## AHIMS SEARCH



Elaine Lin

Date: 27 January 2021

17/469-475 Parramatta Road  
Leichhardt New South Wales 2040

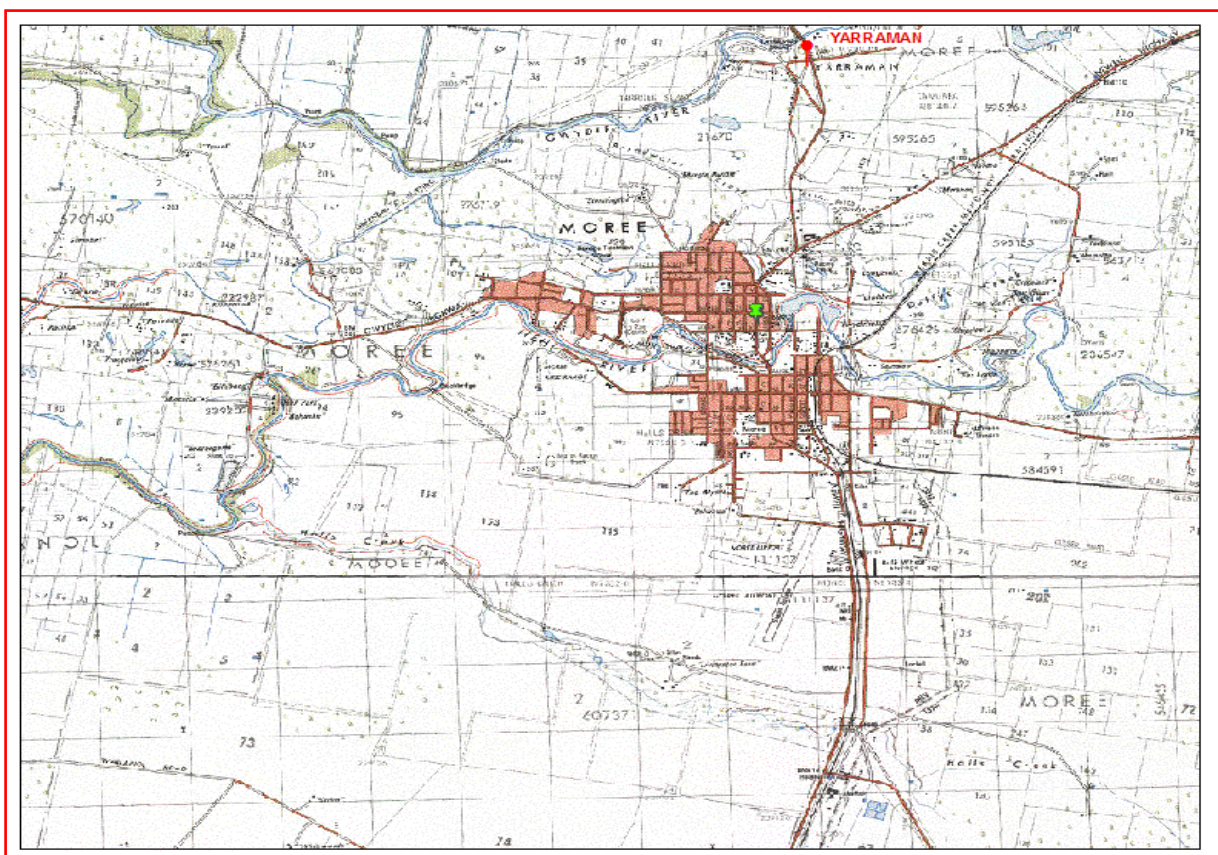
Attention: Elaine Lin

Email: e.lin@virtusheritage.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 768910 - 778910, Northings : 6730540 - 6740540 with a Buffer of 1000 meters. Additional Info : Site inspection and due diligence assessment, conducted by Elaine Lin on 27 January 2021.**

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



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

**If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

**Important information about your AHIMS search**

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 228 - Moree Solar Farm DD

Client Service ID : 563682

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
10-3-0038	Yarraman gravel pitt ST1	AGD	55	777371	6740378	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Archaeological Surveys & Salvage					<u>Permits</u>		
10-3-0040	SC-IF1	GDA	55	776684	6738212	Open site	Destroyed	Artefact : 1		98851,99149
	<u>Contact</u>	<u>Recorders</u>	Doctor.Jodie Benton,OzArk Environmental and Heritage Management,Miss.Stephar					<u>Permits</u>	1974	
10-3-0052	BBS; Moree LALC; Top Camp 1	AGD	55	776834	6736288	Open site	Valid	Modified Tree (Carved or Scarred) : 1		98907
	<u>Contact</u>	<u>Recorders</u>	Mr.Lyle (Terry Hie Hie Elder) §					<u>Permits</u>		
10-3-0062	BBS Moree LALC Mehi River TSR 1	GDA	55	771648	6736604	Open site	Valid	Modified Tree (Carved or Scarred) : 1		98907
	<u>Contact</u>	<u>Recorders</u>	Mr.Lyle (Terry Hie Hie Elder) §					<u>Permits</u>		
10-3-0063	BBS Moree LALC Mehi River TSR 2	GDA	55	771610	6736621	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Lyle (Terry Hie Hie Elder) §					<u>Permits</u>		
10-3-0065	BBS; Moree LALC; Top camp	AGD	55	777243	6736206	Open site	Valid	Habitation Structure : 1		98907
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0041	SC PAD	GDA	55	776693	6738283	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) :-		98854,99149
	<u>Contact</u>	<u>Recorders</u>	Christine Tester,OzArk Environmental and Heritage Management,Miss.Stephanie R					<u>Permits</u>	1974	
10-3-0067	Taylor Oval burial	AGD	55	775425	6736975	Open site	Valid	Burial : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Craig Trindall					<u>Permits</u>		
10-3-0025	Moree scarred tree 14	AGD	55	778900	6735400	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1355,97835
	<u>Contact</u>	<u>Recorders</u>	Bonhomme Craib & Associates					<u>Permits</u>		
10-3-0013	Middle Camp Moree Moree	AGD	55	773500	6736600	Open site	Valid	Artefact : -	Open Camp Site	204,1068
	<u>Contact</u>	<u>Recorders</u>	Jane Balme					<u>Permits</u>		
10-6-0040	HC-OS1	AGD	55	776646	6730892	Open site	Valid	Stone Quarry : 5		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phillip Cameron					<u>Permits</u>		
10-3-0068	MC-ST1	AGD	55	774154	6736593	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phillip Cameron					<u>Permits</u>		

Report generated by AHIMS Web Service on 27/01/2021 for Elaine Lin for the following area at Datum :GDA, Zone : 55, Eastings : 768910 - 778910, Northings : 6730540 - 6740540 with a Buffer of 1000 meters. Additional Info : Site inspection and due diligence assessment. Number of Aboriginal sites and Aboriginal objects found is 43

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : 228 - Moree Solar Farm DD

Client Service ID : 563682

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
10-3-0069	MR-IF1	AGD	55	772983	6736826	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phillip Cameron <u>Permits</u>							
10-3-0070	SC-OS1	AGD	55	776666	6737934	Open site	Valid	Artefact : 2		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phillip Cameron <u>Permits</u>							
10-3-0001	Terille Island	AGD	55	768257	6739840	Open site	Valid	Burial : -	Burial/s	778,788,973,1166
	<u>Contact</u>	<u>Recorders</u>	Isabel McBryde <u>Permits</u>							
10-3-0073	Halls Creek IF-1	GDA	55	772757	6734481	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	OzArk Environmental and Heritage Management,Doctor.Alyce Cameron <u>Permits</u>							
10-6-0072	MSAP PST02	GDA	55	775695	6731251	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0074	MSAP IF05	GDA	55	776786	6731480	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0076	MSAP IF02	GDA	55	777103	6732706	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0077	MSAP PST08	GDA	55	775954	6731103	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0078	MSAP PST07	GDA	55	774984	6731363	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0079	MSAP PST06	GDA	55	776139	6731036	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0080	MSAP PST05	GDA	55	775818	6731126	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0081	MSAP PST03	GDA	55	775977	6731194	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>	Mr.Matthew Barber,NGH Heritage - Fyshwick <u>Permits</u>							
10-6-0083	MSAP IF09	GDA	55	776211	6731311	Open site	Valid	Artefact : -		

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## Extensive search - Site list report

Your Ref/PO Number : 228 - Moree Solar Farm DD

Client Service ID : 563682

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0084	MSAP AS04	GDA	55	776709	6730592	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0086	MSAP AS05	GDA	55	776797	6730722	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0087	MSAP AS06	GDA	55	776773	6730939	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0088	MSAP AS03	GDA	55	775659	6731285	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0089	MSAP AS02	GDA	55	775123	6731264	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0090	MSAP AS01	GDA	55	774911	6731264	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0091	MSAP IF11	GDA	55	776944	6730438	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0092	MSAP IF10	GDA	55	774981	6731364	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0093	MSAP IF08	GDA	55	776691	6731375	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0094	MSAP IF07	GDA	55	776810	6731174	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-6-0095	MSAP IF06	GDA	55	776964	6731334	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0035	DC-OS-1	AGD	55	777400	6737720	Open site	Valid	Artefact : -	Open Camp Site	97835
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0036	HC-IF-1	AGD	55	776650	6731010	Open site	Valid	Artefact : -	Isolated Find	97835
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0031	Top Camp	AGD	55	777000	6736100	Open site	Valid	Artefact : -	Open Camp Site	97714,97835
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0032	Steelbridge Camp	GDA	55	776593	6736883	Open site	Not a Site	Artefact : -, Potential Archaeological Deposit (PAD) : -	Open Camp Site	97714,99149
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
10-3-0033	TC-IF-1	AGD	55	777260	6735930	Open site	Valid	Artefact : -	Isolated Find	97835
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		

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## Extensive search - Site list report

Your Ref/PO Number : 228 - Moree Solar Farm DD

Client Service ID : 563682

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
10-3-0034	BG-WS-1	AGD	55	776500	6736190	Open site	Valid	Ceremonial Ring (Stone or Earth) :-	Bora/Ceremonial	97714
	<u>Contact</u>	<u>Recorders</u>	Central West Archaeological and Heritage Services Pty Ltd					<u>Permits</u>		
10-3-0039	Moree Cohen Street Scarred Trees	AGD	55	774684	6738172	Open site	Valid	Modified Tree (Carved or Scarred) : 2		
	<u>Contact</u>	<u>Recorders</u>	Ms.Suzanne Hudson					<u>Permits</u>		

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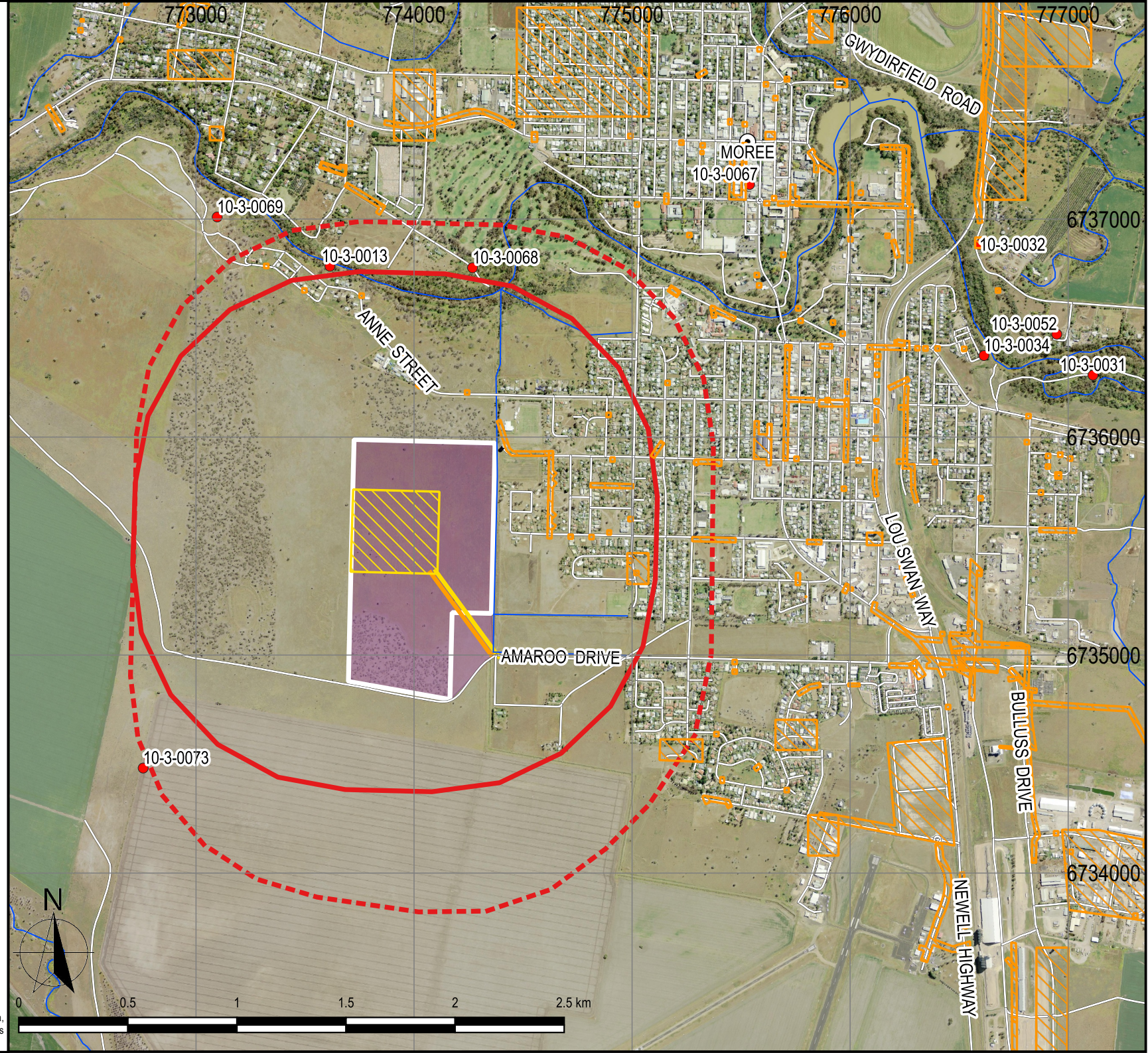




Figure 3  
Project Area and Known  
Aboriginal Heritage Sites

### Legend

- Large Towns & Cities
- AHIMS Sites
- Water Courses
- Roads
- 1km Buffer - Desktop DD
- 1km Buffer - Proposed Lease
- Proposed Lease Area
- Desktop DD Area
- Preliminary DD Construction Plan





# APPENDIX D

## PLATES





**Plate 1.** Access to proposed solar farm lease area from Amaroo Drive, Moree, NSW, start of transect one; facing east.





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**Plate 2.** Proposed solar development lease area and start of transect two; facing south-east.





**Plate 3.** Start of transect three showing overgrown grass in paddock and poor visibility; facing west.





**Plate 4.** Start of transect four; facing south-east.





**Plate 5.** Example of general visibility in proposed lease area.





**Plate 6.** Example of occasional large area of exposure with approximately 90% visibility.