



# Pottinger Wind Farm

Historic Heritage Assessment

PREPARED FOR



RPS on behalf of Pottinger  
Renewables Pty Ltd

DATE

March 2024

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# Pottinger Wind Farm

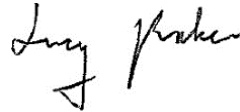
## Historic Heritage Assessment

0707548



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## ACRONYMS AND ABBREVIATIONS

Acronyms	Description
AC	Alternating Current
BESS	Battery Energy Storage System
CH	Commonwealth Heritage
CHL	Commonwealth Heritage List
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
ERM	Environmental Resources Management Australia Pty Ltd
DC	Direct Current
FTE	Full Time Equivalent
GWh	Gigawatt hours
ha	Hectares
Heritage Act	<i>Heritage Act 1977</i>
HHA	Historic Heritage Assessment
ICOMOS	International Council on Monuments and Sites
IHO	Interim Heritage Order
km	Kilometres
kV	Kilovolt
LEP	Local Environmental Plan
LGA	Local Government Area
m	Metres
MW	Megawatt
Navin Officer	Navin Officer Heritage Consultants
NHL	National Heritage List

Acronyms	Description
NSW	New South Wales
PCU	Power conversion unit
PV	Photovoltaic
RAP	Registered Aboriginal Party
REZ	Renewable Energy Zone
RNE	Register of National Estate
RPS	RPS AAP Consulting Pty Ltd
SEARs	Secretary's Environmental Assessment Requirements
SHR	State Heritage Register
SLNSW	State Library of New South Wales
SSD	State Significant Development
The Burra Charter	The Australia International Council on Monuments and Sites, Charter for Places of Cultural Significance (2013)
UNESCO	United Nations Educational, Scientific and Cultural Organisation

## TERMINOLOGY LIST

Term	Definition
Project	A wind farm as described in Section 3 in the EIS to which this Application applies
Project Area	Red boundary shown on key figures to which the Application applies (unless otherwise stipulated)
Applicant	Pottinger Renewables Pty Ltd
Pottinger Energy Park	Combination of the Solar Farm and Wind Farm projects for which separate Applications are being made
Application	Application for Development Consent under Part 4.7 of the EP&A Act; and Determination under Part 9 of the EPBC Act
Due Diligence	Environmental assessment process by which minor Project components may be located within the Project Area but external to the Survey Area as stipulated in Section 3 of the EIS during the detailed design (post-approval) phase.
Survey Area	Area surveyed within the Project Area within which detailed assessment has been consistently undertaken for all field studies. The Project components may be moved and/or microsituated within this boundary during detailed design.
Disturbance Footprint	Direct maximum Project-related disturbance in hectares. Largely within the Survey Area except where detailed in Section 3 of the EIS.

## EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd was engaged by RPS AAP Consulting Pty Ltd to conduct a Historic Heritage Assessment for the Pottinger Wind Farm (the Project) for Pottinger Renewables Pty Ltd.

The Project includes the construction, operation and decommissioning of a wind farm and associated infrastructure with a targeted electricity generation capacity of 1.3 gigawatt. The Project Area covers 26,400 hectares. It is located 60 kilometres south of Hay in the rural locality of Boooroorban in south-western New South Wales, entirely within the South West Renewable Energy Zone.

This report supports a State Significant Development application under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (SSD-59235464), as an appendix to the Environmental Impact Statement for the Project.

The historical assessment has determined that there are no known built heritage items or significant historic view lines within the Project Area. The archaeological potential of the Project Area has been assessed as Low-Moderate. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the Project Area has low archaeological research potential and as such, low archaeological heritage significance.

There are no historical built or archaeological constraints for the proposed Project. Therefore, works may proceed with no further historic heritage assessments.

The following are key recommendations that aims to mitigate the impact of the proposed works on potential and as yet unidentified heritage values of the Project Area:

### ***Recommendation 1 – Heritage Induction***

Prior to the commencement of works, all staff and contractors should be briefed on the requirements of the *Heritage Act 1977* and the project-specific Unexpected Finds Protocol.

### ***Recommendation 2 - Unexpected Finds Protocol***

In the event that relics are unexpectedly exposed, works should cease immediately. The management of relics should be in accordance with NSW Heritage guidelines and policies, as outlined in the Unexpected Finds Protocol.



# 1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by RPS AAP Consulting Pty Ltd (RPS) to conduct a Historic Heritage Assessment (HHA) for the Pottinger Wind Farm (the Project) for Pottinger Renewables Pty Ltd (the Applicant).

The Project includes the construction, operation and decommissioning of a wind farm and associated infrastructure with a targeted electricity generation capacity of 1.3 gigawatt (GW). The Project Area covers 26,400 hectares (ha) as shown on *Figure 1.1*. It is located 60 kilometres (km) south of Hay in the rural locality of Boooroorban in south-western New South Wales (NSW), entirely within the South West Renewable Energy Zone (REZ).

The impacts and proposed mitigation for heritage values from the proposed construction, operation and decommissioning phases of the Project are addressed in this report in accordance with relevant regulatory requirements and guidelines (this assessment).

This report supports a State Significant Development (SSD) application under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (SSD-59235464), as an appendix to the Environmental Impact Statement (EIS) for the Project. Each is listed in *Table 1.1* which also indicates where each is addressed.

The following guidelines have been considered in this assessment:

- *Assessing Heritage Significance* (NSW Heritage Office 2001);
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Branch, Department of Planning 2009);
- *NSW Heritage Manual* (Heritage Office 1996); and
- *The Australia International Council on Monuments and Sites, Charter for Places of Cultural Significance* (also known as the Burra Charter, Australia ICOMOS 2013) and relevant Practice Notes.

## 1.1 OBJECTIVES

This report aims to:

- Identify historic heritage resources within the Project Area, including archaeological potential and built heritage values;
- Present historical contextual data to aid in the development of an archaeological predictive model;
- Evaluate the impact of the proposed works on any identified historic heritage resources; and
- Provide recommendations for the mitigation of impacts and management of identified historic heritage resources.

## 1.2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The Applicant seeks in perpetuity approval for the construction, operation and decommissioning of a 1.3 GW wind farm, electrical infrastructure, other infrastructure and ancillary activities generally including the following components:

- Up to 247 Wind Turbine Generators (WTGs) of which each has a tip height of up to 280 m and capacity up to 8 MW;
- Electrical reticulation network:
  - Up to six substations and 13 transformers;
    - One BESS 33/330kV substation with three transformers;
    - Internal 33 kV, 66 kV, 132 kV, or 330 kV electrical reticulation network and infrastructure connecting to the 330 kV Project EnergyConnect line via a switchyard and collector station;
  - Approximately 500 MW / 2 gigawatt hours (GWh) Battery Energy Storage (BESS);
- Other temporary and permanent infrastructure including:
  - Operations and Maintenance (O&M) facility and infrastructure including site office, control room, storage facilities, car parking and fencing;
  - Accommodation facilities;
  - Construction and operational compounds;
  - Hardstands for WTGs and other infrastructure;
  - Internal access tracks and road turning head connecting Project infrastructure;
  - Meteorological masts; and
  - Concrete batching plants, crushing facilities, gravel / borrow pits, construction laydown areas;
- Ancillary activities including sourcing of materials and equipment for construction; sourcing of water for construction; subdivision and boundary adjustments, visual screening and associated ancillary works;
- Access road use via four locations and Project-required upgrades:
  - Project Area access: via the Cobb Highway from Jerilderie Road in the north east, from Wargam Road in the west, from East West Road in the south and West Burrabogie Road in the west, as well as emergency access; and
  - Wind farm major components transported via Port Adelaide;
- Operational workforce of up to 50 Full Time Equivalent (FTE) and construction up to 900 FTE;
- Construction generally within standard construction hours and operations 24 hours per day seven days per week; and
- Preliminary disturbance footprint of up to 1,066 ha.

No external transmission lines or associated easements are currently anticipated for the Project. Some of the Project-associated infrastructure will be shared with the Pottinger Solar Farm (the subject of a separate application) as generally shown within the white dashed boundary on *Figure 1.2*.

## 1.3 METHODOLOGY

This HHA examines non-Aboriginal heritage values within the Project Area. This report has been prepared in accordance with the guidelines listed in *Section 1*.

Preparation of this report includes:

- Heritage register and database searches;
- Desktop research, including publicly available libraries and archives;
- Field survey of the Project Area; and
- Assessment of the potential for impact to potential historic heritage values;
- Assessment of heritage significance; and
- Preparation of management and mitigation recommendations.

## 1.4 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

The SEARs (SSD-59235464) for the Project were issued on 10 July 2023. The requirements for historic heritage assessment and where they have been addressed are summarised in *Table 1.1*.

**TABLE 1.1 SUMMARY OF SEARS REQUIREMENTS FOR HISTORIC HERITAGE AND WHERE ADDRESSED IN THE CURRENT REPORT**

SEAR	Section addressed in this report
Assess the impact to historic heritage having regard to the NSW Heritage Manual.	Whole report, specifically Section 8.

## 1.5 AUTHORSHIP

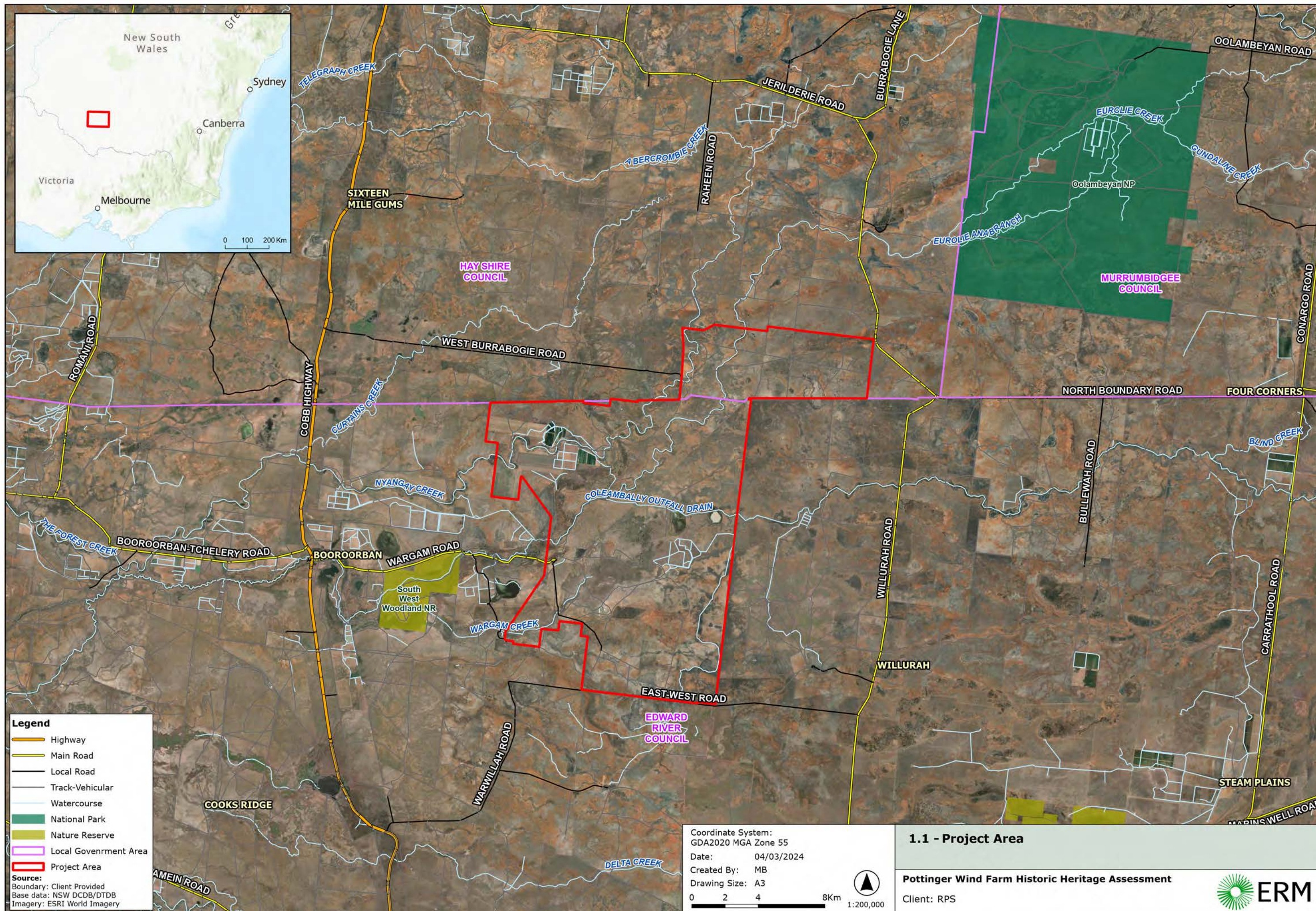
ERM Senior Heritage Consultant Victoria Gleeson prepared this report. ERM Technical Consulting Director – Heritage, Erin Finnegan completed technical review. ERM Partner Lucy Baker completed a quality assurance review.

## 1.6 LIMITATIONS

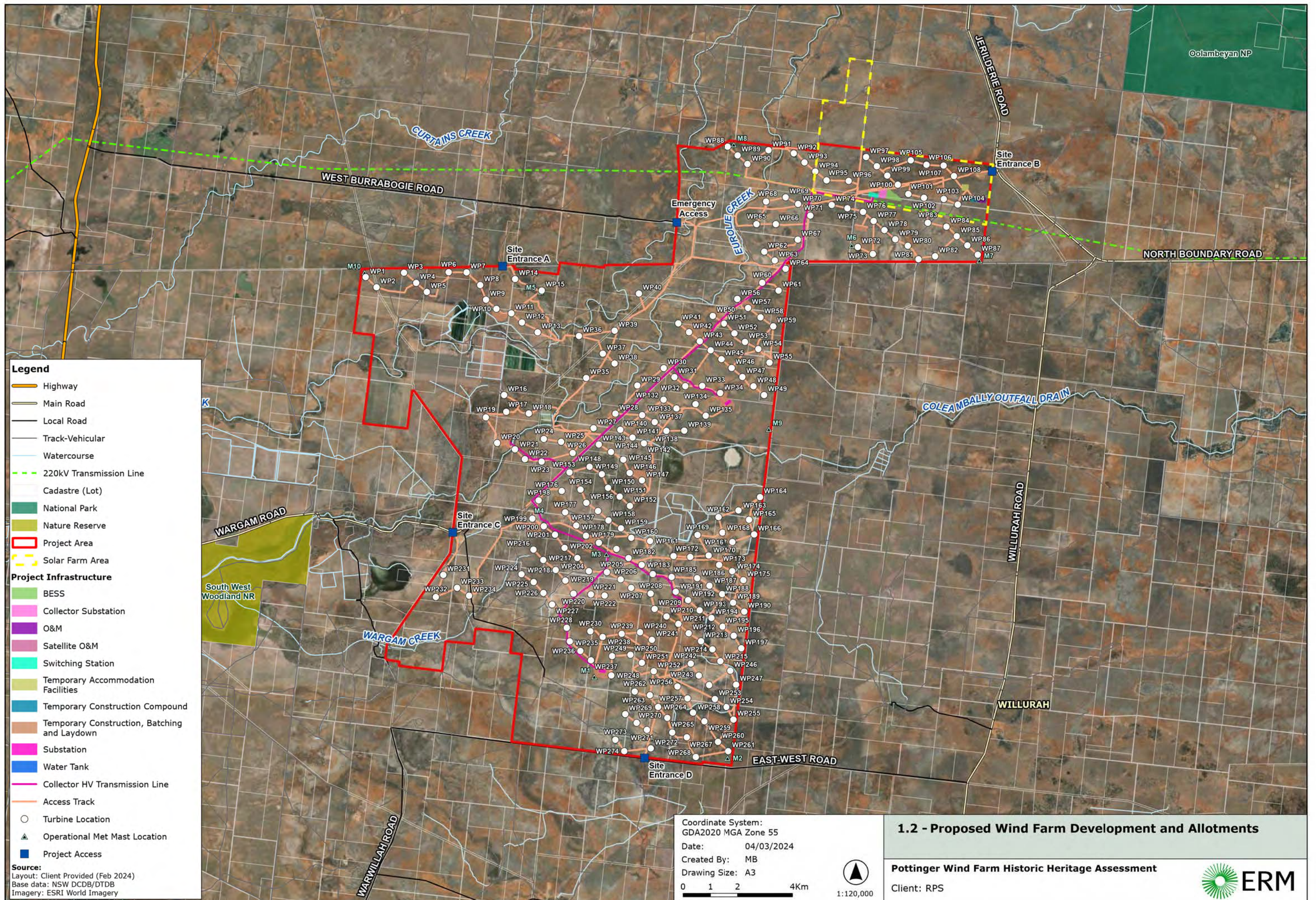
This HHA has been prepared with respect to potential heritage impacts arising from the Pottinger Wind Farm within the areas specified by Someva and includes information provided by RPS and Someva.

The internal spaces of the buildings within the Project Area were not investigated, due to them either being occupied residences or operational agricultural structures.











## 2. LEGISLATION AND GUIDELINES

Several pieces of Commonwealth and State legislation guide the assessment and management of historic heritage in NSW. This legislation also provides the framework for the establishment of heritage registers under their respective legislative purview. A summary of relevant legislation is provided below. A search of the heritage registers associated with the below legislation is provided in *Section 4.1.1* and *Table 4.1*.

### 2.1 COMMONWEALTH LEGISLATION

#### 2.1.1 ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act; as amended 2022) provides the framework for the Commonwealth Government's environmental legislation. The EPBC Act outlines a legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities, and heritage places. Several heritage listings were established under the EPBC Act including the Commonwealth Heritage List (CHL), National Heritage List (NHL), and Register of National Estate (RNE) (now repealed).

The CHL includes natural, Indigenous, and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the Minister as having one or more Commonwealth Heritage values.

The Australian NHL contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.

### 2.2 NSW LEGISLATION

#### 2.2.1 NSW HERITAGE ACT 1977

*The Heritage Act 1977* (Heritage Act) protects the cultural and natural history of NSW with emphasis on historic (non-Aboriginal) heritage items, including places, buildings, works, relics, moveable objects, precincts, historic shipwrecks, and archaeological sites of State or local significance. Protection is provided through protection provisions and the establishment of a Heritage Council and State Heritage Register (SHR). Nominated items are considered by the NSW Heritage Council, which then makes a recommendation to the Minister for Environment and Heritage. The Heritage Council is empowered to place Interim Heritage Orders (IHO) on an item of potential state significance. Section 136 of the Heritage Act allows for the Minister or Chair of the Heritage Council to place a 'Stop Work' Order on a building, work, relic, or place, that is not subject to an IHO or listed on the SHR and that is being or about to be harmed. Work can be stopped for 40 days, whilst the imposition of an IHO is considered.

Sections 139 to 146, Divisions 8 and 9 of Part 6 of the Act refer to the requirement that excavation or disturbance of land that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council (or in accordance with a gazetted exception under Section 139(4) of the Act).

An archaeological relic is defined as meaning *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.*

In particular Section 139 refers to the need for a permit in certain circumstances:

- (1) A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- (2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*

The potential for archaeological 'relics' to be present within the Project Area is considered in Section 6.

### STATE HERITAGE REGISTER

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is maintained by Heritage NSW and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

Listing on the SHR controls activities such as alteration, damage, demolition, and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required for any major work.

### SECTION 170 HERITAGE AND CONSERVATION REGISTER (S170 REGISTER)

Under Section 170 of the Heritage Act, NSW government agencies are required to maintain a register of the heritage assets it owns or controls. Under S170A of the Heritage Act, government agencies are required to notify the Heritage Council about decisions affecting assets on the S170 Register including removing the item from the register, transferring ownership of a listed item, or vacating and/or demolishing part or all of the item.

Government agencies are also required to maintain properties on the S170 and SHR with due diligence in accordance with State Owned Heritage Management Principles approved by the Minister on the advice of the Heritage Council.

### 2.2.2 NSW ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the main law regulating land use planning and development in NSW and requires that environmental impacts are considered in land use planning, including impacts on Aboriginal and non-Aboriginal heritage. The EP&A Act controls the making of environmental planning instruments (EPIs) that identify permissible land use and development constraints. Two types of EPIs can be made: Local Environmental Plans (LEPs) and State Environmental Planning Policies.

## LOCAL ENVIRONMENTAL PLANS

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

## 2.3 NON-STATUTORY CONSIDERATIONS

### 2.3.1 NATIONAL TRUST OF AUSTRALIA (NSW)

The National Trust is a community-based, non-government organisation. The National Trust has a database of important heritage sites across the State. There are no listed places within the Project Area or its immediate surrounds.

### 2.3.2 REGISTER OF THE NATIONAL ESTATE

The RNE is now an archive of information about more than 13,000 places throughout Australia including many places of local or state significance. The RNE was closed in 2007 and is no longer a statutory list. The closure of the RNE does not diminish protection of Commonwealth Heritage places.

The RNE is maintained on a non-statutory basis as a publicly available archive and educational resource. RNE places can be protected under the EPBC Act if they are also included in another Commonwealth statutory heritage list or are owned or leased by the Commonwealth.

In addition, places in the RNE may be protected under appropriate state, territory, or local government heritage legislation.

There are no RNE listed places within the Project Area, adjacent to or its immediate surrounds.

### 2.3.3 THE BURRA CHARTER

*The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Adopted 31 October 2013) (the Burra Charter) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers, and custodians. The Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the 2013 charter can also be accessed at: <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>.

This HHA has been prepared in accordance with this document and to the standards it describes.



### 3. HISTORICAL OVERVIEW

#### 3.1 EARLY EXPLORATION AND DEVELOPMENT OF THE REGION

Early European exploration of the Murrumbidgee Region occurred from the 1820s with expeditions originally focused along the Murrumbidgee River. Charles Sturt's accounts, from his explorations of the Murrumbidgee and lower Murray Rivers between 1828-31, described treeless plains and good water sources that lured graziers to the region. Pastoral stations focused on cattle grazing were established in the lower Murrumbidgee region from the 1820s. By 1841, the Murrumbidgee District contained 147 stations, and by 1845 an average cattle-stocked pastoral property around the Murray-Murrumbidgee junction comprised eighty thousand hectares (Eardley 1999).

Development of towns within the region soon followed. The locality of the Hay township was originally known as Lang's Crossing; named after three Lang brothers (Thomas, William and Gideon Lang) who were leaseholders of the Mungadingadal, Eli Elwah, Nyangay, and Wirkenbirgal Runs (encompassing the Project Area). The Lang Brothers pioneered a stock route to their pastoral run from the early 1850s when they began to transport cattle across the Murrumbidgee from Queensland, to their property in the south; the route was known as 'Lang's Wool Road'. The location of the stock route at Lang's Crossing was regularly used and the 'Great North Road' also crossed the Murrumbidgee at this location, for supply to the Victorian market in the wake of the gold rushes (Beissel 2008). In 1858-59 a store, inn and punt service were built at Lang's Crossing; the place became an important port for steam-boat navigation of the Murrumbidgee (Hay Shire Council 2023).

The town was gazetted in 1858 and surveyed the following year; it was named after Sir John Hay, a local pastoralist and Member of parliament. In 1859 the first Post office was opened and in 1860 the original courthouse was built (now present location of the Post Office). Cobb & Co Coaches made Hay the headquarters of their Victoria and Riverine operations from 1862 to 1896, setting up a coach factory on the corner of Lachlan and Randall Streets; this became the largest coach factory in Australia outside of Sydney (Hay Shire Council 2023). As it developed, Hay became a service hub for the large pastoral district. The Municipal Council of Hay was proclaimed in 1872 and the town was connected by rail to Narrandera in 1882 (Historical Encounters 2023).

#### 3.2 NINETEENTH CENTURY DEVELOPMENT OF BURRABOGIE AND THE PROJECT AREA

The Project Area is located within the pastoral runs of Burrabogie Block A and Burrabogie Block B, and Wirkenbengal Block and Wirkenbengal Block A (*Figure 3.1*). Large blocks of land in this region between the Murrumbidgee and Billabong Rivers were released by the Government c.1850s (Empire 1865:5).

The Pottinger Energy Park, including the Project Area, spans the historic parishes of Bedarbidgal, Wirkenberjal, Euroley, Werkenbergal, Palmer and Wargam within the counties of Waradgery and Townsend.

The Project Area lies within the historical parishes of Bedarbidgal and Wirkenberjal of Waradgery County, and Palmer, Euroley, Wargam and Werkenbergal of Townsend County (*Figure 3.2*).

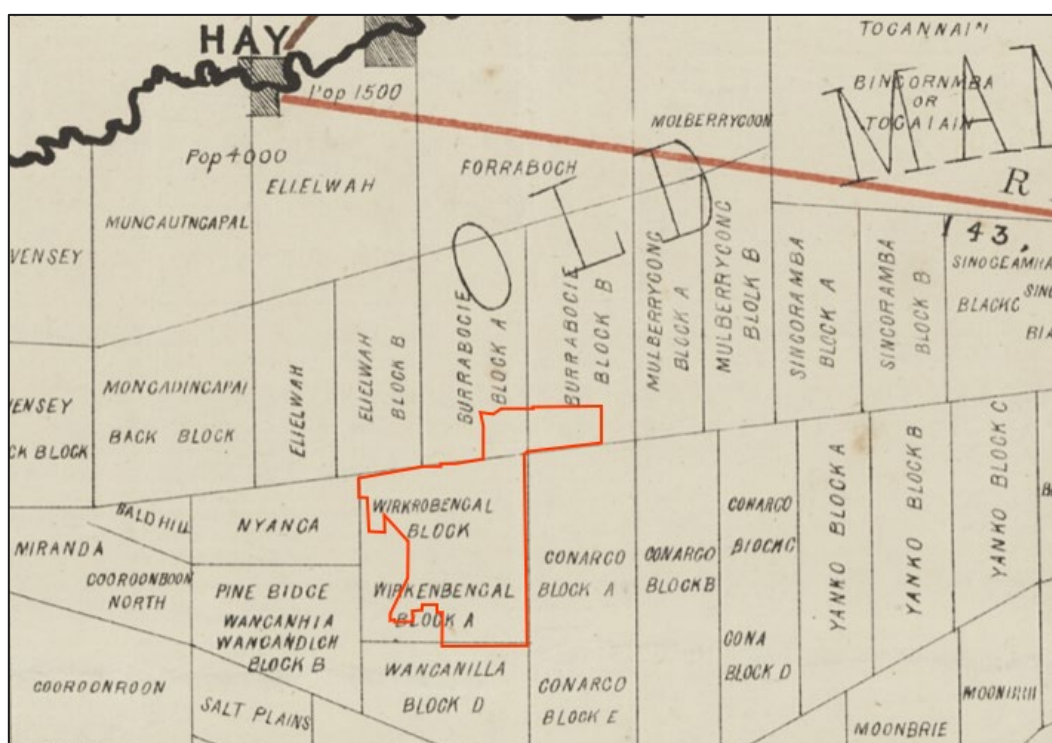


FIGURE 3.1 DETAIL OF 'DIRECT ROUTE TO HAY FROM WAGGA WAGGA', C.1881, SHOWING PROJECT AREA WITHIN THE PASTORAL RUNS OF BURRABOGIE BLOCK B AND CONARGO BLOCK A (SLNSW, M2 814.2/1881/1)



FIGURE 3.2 DETAIL PLAN 'PLAN SHOWING MURRUMBIDGEE RIVER DISTRICT', 1901, SHOWING PROJECT AREA (OUTLINE RED) (STATE LIBRARY NSW, Z/M3814/1901/1).

### 3.2.1 BURRABOGIE

Burrabogie is believed to have been derived from the Indigenous words “Burra” meaning quick, and “bogie” swim (Australian Town and Country 1875:21). Burrabogie Blocks A and B, each spanned 32,000 acres in 1851 and by 1855 they totalled 41,000 and 43,000 acres, respectively (New South Wales Government Gazette 1851:434; New South Wales Government Gazette 1855:1012).

Burrabogie Blocks A and B later became encompassed by the larger Burrabogie Station, comprising six individual leaseholds totaling approximately 320,000 acres (*Figure 3.3*) (Australian Town and Country Journal 1875:21).

By 1875, Burrabogie Station was run by Messrs. McGaw and Co and was completely fenced into 49 paddocks to contain the run’s 140,000 pure merino sheep and around 200 head of short horn cattle. Burrabogie House and associated outbuildings including kitchen stores, black smiths’ and carpenters’ shops, stables and coach houses were erected outside of the Project Area. Besides the head station there were eight out-stations and twenty accommodation huts for the people employed. The station required about fifty constant farm hands, and at the time of shearing, about 200 extra men were employed. Twenty-four dams and fourteen wells were developed across the run during this time to increase irrigation in the dry south of NSW. It is also noted that a “boiling down establishment” capable of melting 2000-3000 sheep per week was erected, as well as two steam engines, used for sawing timber (Australian Town and County Journal 1875:21; Kapunda Herald and Northern Intelligencer 1875:4).

The management of pastoral runs was changed by the *Crown Lands Act 1884*, which introduced new types of land tenure including grazing licences, conditional leaseholds and pastoral leases. Pastoral runs were divided into two areas; leasehold areas, for which a pastoral lease could be granted to a squatter, and resumed areas, that could be leased under an annual occupation licence (Navin Officer 2021: 22). The Burrabogie Station was gazetted as the ‘Burrabogie Resumed Area No.347’ in 1885 (New South Wales Government Gazette 1890: 2378). In c.1886, the leasehold area of Burrabogie (labelled A in *Figure 3.3*) totaled 145,000 acres and the resumed area (labelled B in *Figure 3.3*) totaled 232,000 acres (NSW HLRV 2023).



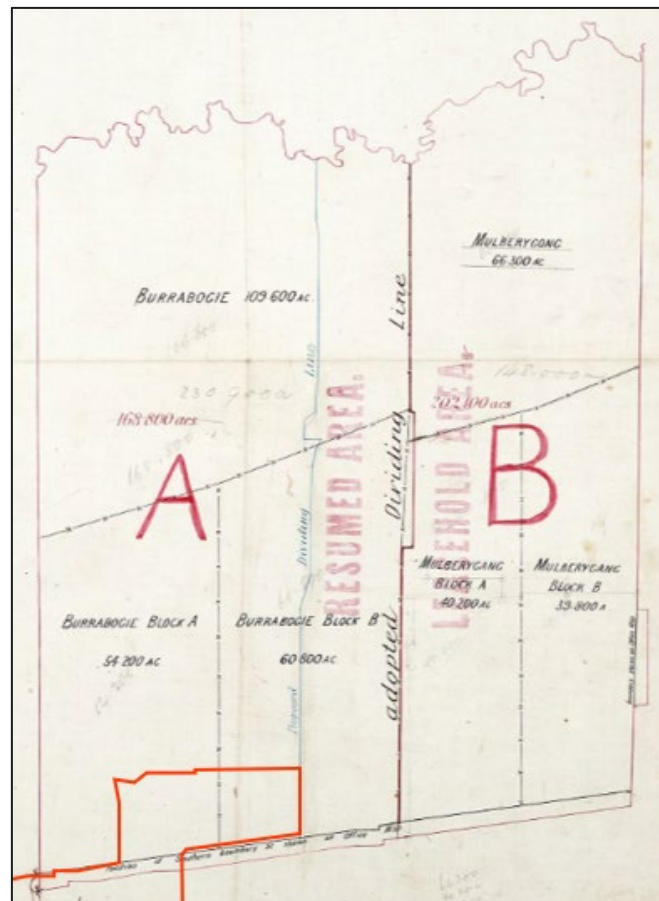


FIGURE 3.3 PASTORAL MAP OF 'BURRABOGIE', C.1885, SHOWING DIVISION OF LEASEHOLD (A) AND RESUMED AREAS (B). THE PROJECT AREA IS BOXED (NSW HISTORICAL LAND RECORDS VIEWER, [HTTPS://HLRV.NSWLRS.COM.AU/](https://HLRV.NSWLRS.COM.AU/))

### 3.2.2 WIRKROBENGAL RUNS AND WARGAM HOLDING

Wirkenbengal Blocks A and B were held by the three Lang brothers (William, Thomas and Gideon from the mid-nineteenth century (c.1853). In 1862, the pastoral runs were held by William Lang alone; he maintained ownership of the property until his death in 1876 when it was sold to W and J Robertson (The Riverine Grazier 1940: 1).

Following the introduction of the *Crown Lands Act 1884*, 'Wargam Holding No.90' was gazetted in 1885 (New South Wales Government Gazette 1887:3615). In c.1886, the leasehold area of Wargam totalled 27,000 acres and the resumed area totalled 44,000 acres (*Figure 3.4*) (NSW HLRV 2023). By this time, a 'Home Station' along with a well and tank had been constructed in the south-western portion of the Project Area, and a hut, yards and tank had been erected in the central portion of the Project Area. A series of fenced yards, wells and tanks were also dispersed across the property.

In c.1884, Robert Henry Woodward acquired Wargam Station; the Woodward family maintained ownership of the Station into the twentieth century (The Riverine Grazier 1937:2; Weekly Times 1884:14).

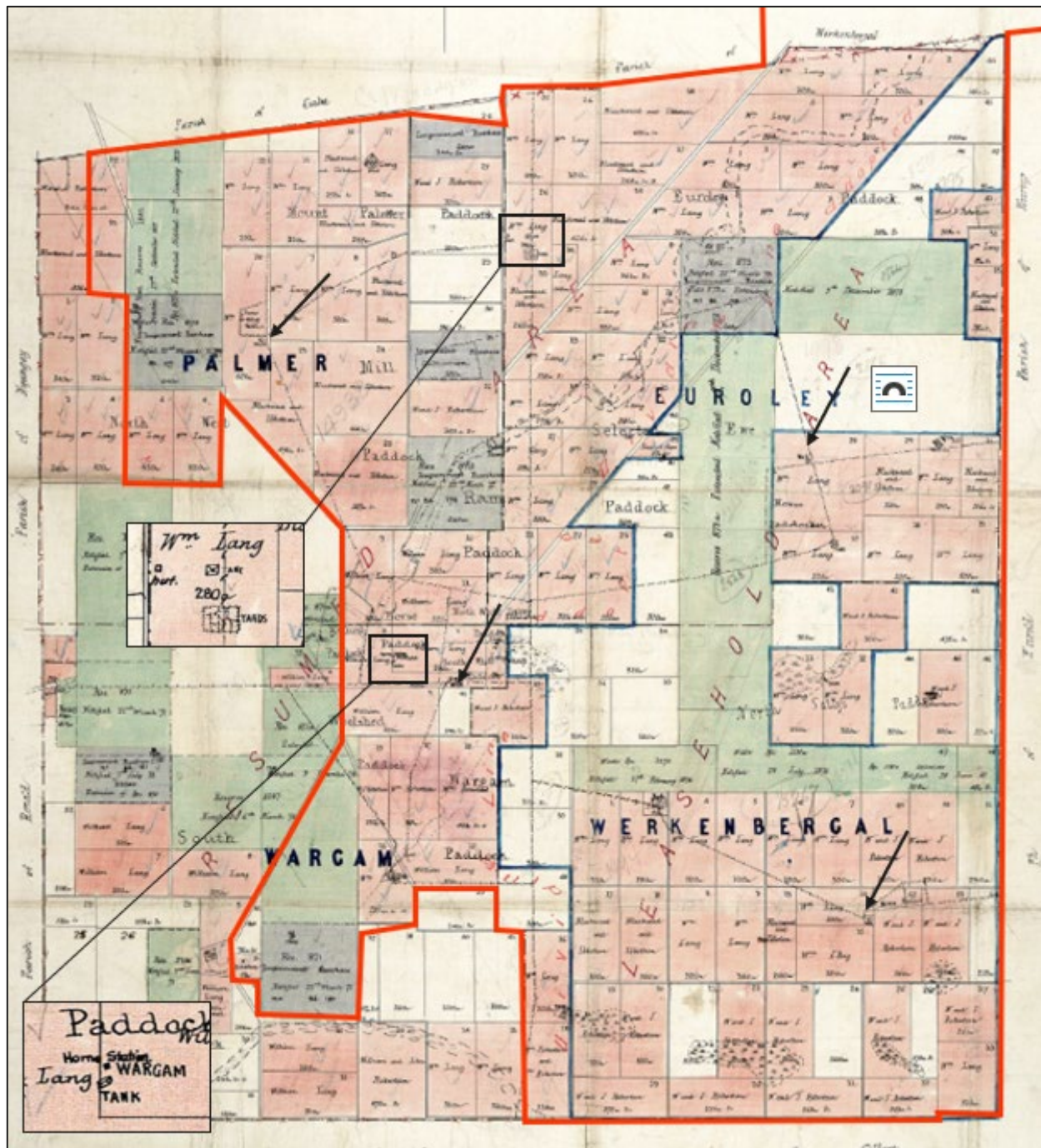


FIGURE 3.4 PASTORAL MAP OF 'WARGAM', C.1886, SHOWING DIVISION OF LEASEHOLD (EAST) AND RESUMED AREAS (WEST). THE PROJECT AREA IS BOXED. HUT (NORTH) AND HOME STATION (SOUTH) ARE INDICATED. LOCATIONS OF WELLS ARE ARROWED (NSW HISTORICAL LAND RECORDS VIEWER, [HTTPS://HLRV.NSWLRS.COM.AU/](https://HLRV.NSWLRS.COM.AU/))



### 3.3 TWENTIETH CENTURY DEVELOPMENT TO PRESENT

Burrabogie Station, along with neighbouring Eli Elwah Station (to the west), were acquired in 1911 by Mr Thomas C. Ellis together with Messrs. W. N. C and J. C. Ellis (The Narracoorte Herald 1938:3). The stations were later subdivided and sold, and Thomas Ellis retained the southern portion of the property that became known as Burrabogie South Estate, comprising 59,088 acres. In 1924 Burrabogie South Estate was subdivided into seven farms ranging in size from approximately 5,000 to 15,000 acres. The Project Area is encompassed within Blocks 4 & 5. The subdivision plan indicates that the Project Area comprised rich red loamy soil and black soil, and was fenced (Figure 3.5). A cottage (that remains extant) was present in the north-western area, as well as a woolshed, tanks and yards. Two additional tanks were located in the northern portion of the Project Area, as well as one bore and two wells with attached mills. The wells on the property were reported to contain an abundant supply of fresh water (The Riverine Grazier 1924:2).

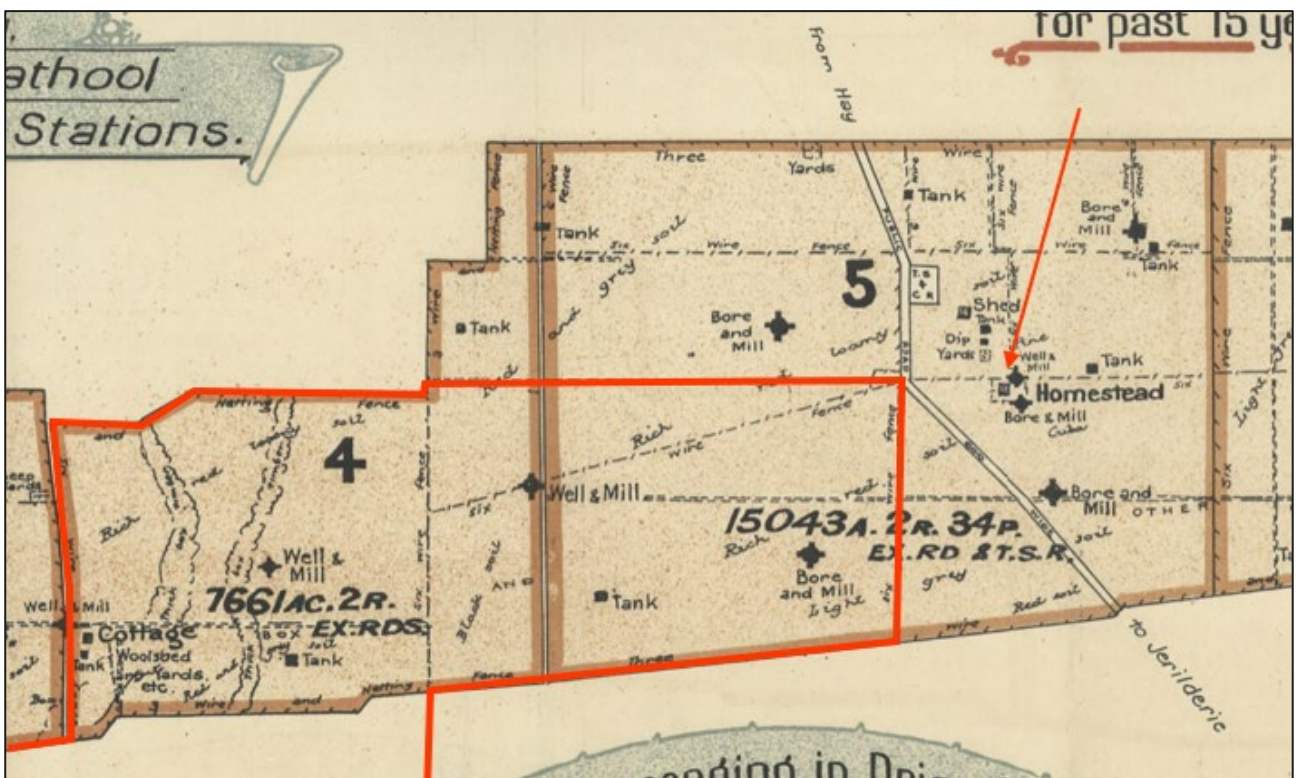


FIGURE 3.5 DETAIL OF BURRABOGIE SOUTH ESTATE SUBDIVISION PLAN, C.1924, SHOWING COTTAGE, WOOLSHED, TANKS, BORE, WELLS AND MILLS WITHIN THE PROJECT AREA (BOXED RED). THE HOMESTEAD IS ARROWED (SLNSW, CP/T4,Z/CP/T4)

The Wargam Estate was purchased in c.1920-1923 by Messrs. Matthews and Ross (The Riverine Grazier 1937:2). By this time, the improvements on the property comprised a *homestead, woolshed, manager's house, stabling and numerous outbuildings* (The Australasian 1923:33).

Little has changed in the use of the properties encompassing the Project Area, as pastoral grazing of sheep and cattle remains the principal industry.

## 4. HISTORIC HERITAGE CONTEXT

### 4.1 HISTORIC ENVIRONMENT

#### 4.1.1 HERITAGE REGISTER AND DATABASE SEARCH RESULTS

A search of the relevant statutory heritage register searches was conducted on 1 November 2023 as part of the desktop assessment.

- Australian Heritage Database, which includes World Heritage List (WHL), NHL, CHL, RNE;
- SHR;
- Hay LEP 2010; and
- Conargo LEP 2013.

The search area encompassed the Project Area with a 2 km buffer surrounding. A summary of the search results is provided in *Table 4.1* below.

**TABLE 4.1 STATUTORY HERITAGE REGISTER SEARCH SUMMARY**

Register Name	Description	Findings
WHL	The United Nations Educational, Scientific and Cultural Organisation (UNESCO) WHL includes properties in Australia that are matters of national environmental significance and are protected and managed under the EPBC Act.	There are no WHL places within, or in close proximity to, the Project Area.
CHL	The CHL includes natural, Indigenous and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the minister as having one or more Commonwealth Heritage (CH) values.	There are no CHL places within or in close proximity to the Project Area.
NHL	The NHL contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.	There are no NHL places within or in close proximity to the Project Area.
SHR	The SHR is a list of places and objects of particular importance to the people of NSW. The register lists a diverse range of over 1,650 items, in both private and public ownership. To be listed, an item must be significant for the whole of NSW.	There are no SHR listed items within the Project Area.
S170 Heritage Registers	S170 of the Heritage Act requires all NSW state agencies to identify, conserve and manage the heritage assets owned, managed and occupied by that agency. In order to facilitate this, S170 heritage registers were established for all NSW government agencies. These registers are held and maintained by each state agency and updated as assets are acquired, altered, or decommissioned.	As the Project Area does not coincide with any NSW government property, S170 register searches were not required for this assessment.
Hay LEP 2010	LEPs contain a register of environmental heritage items important to the locality. These registers are included as Schedule 5 of all NSW LEPs, and include built items, archaeological sites and conservation areas.	There are no locally listed heritage sites within the Project Area.

Register Name	Description	Findings
Conargo LEP 2013	LEPs contain a register of environmental heritage items important to the locality. These registers are included as Schedule 5 of all NSW LEPs, and include built items, archaeological sites and conservation areas.	There are no locally listed heritage sites within the Project Area.

## 4.2 PREVIOUS REPORTING

The Project Area has been previously assessed for historic heritage values by Navin Officer Heritage Consultants (Navin Officer) in 2021. A summary of this report is provided below.

### 4.2.1 PROJECT ENERGYCONNECT (NSW EASTERN SECTION), BURONGA TO WAGGA WAGGA NSW (NAVIN OFFICER HERITAGE CONSULTANTS, 2021)

Navin Officer prepared a Historic Heritage Impact Assessment to support the EIS and Submissions Report for Project EnergyConnect, a new High Voltage interconnector between NSW and South Australia. Project EnergyConnect comprises several sections, the NSW Eastern Section would involve the installation of transmission lines between Buronga and Wagga Wagga. The historic heritage study area was generally a 100 m wide corridor (50 m either side of the proposed alignment) between the Buronga substation and the Wagga Wagga substation, totalling approximately 540 kms and traversing nine Local Government Areas (LGA) being Wentworth Shire, Balranald Shire, Murray River, Edward River, Hay Shire, Murrumbidgee, Federation, Lockhart Shire, and Wagga Wagga LGAs. The proposed 330 kV transmission line traverses the northern portion of the Project Area, as shown in *Figure 4.1*.

There were no listed heritage items within the Project Area or within its vicinity, and no potential heritage items were identified within the Project Area as part of the study. The closest potential historic heritage features identified were the PEC-E-H4 Hut Site Nyangai Pastoral Holding, and PEC-E-H1 survey marker tree, located approximately 38 km west and 40 km east of the Project Area, respectively (*Figure 4.2*).



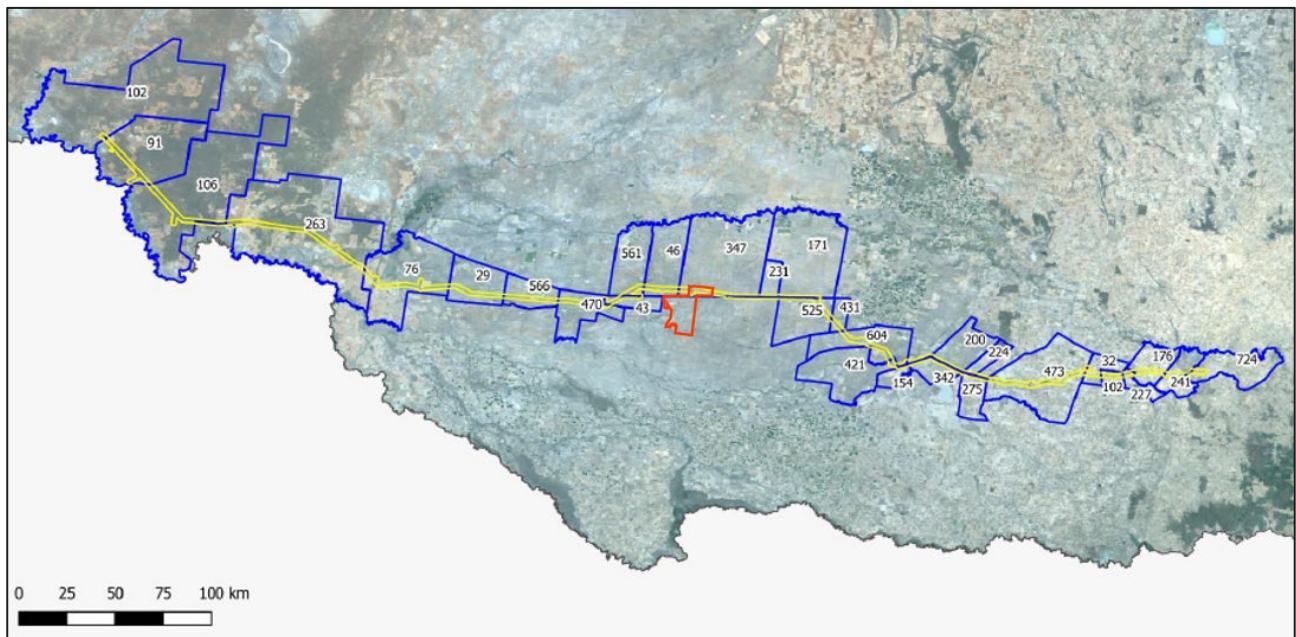


FIGURE 4.1 HISTORIC HERITAGE STUDY AREA (YELLOW) AND HISTORIC PASTORAL HOLDINGS (BLUE) WITH THE APPROXIMATE LOCATION OF THE PROJECT AREA BOXED RED, WITHIN THE BURRABOGIE HOLDING (NAVIN OFFICER 2021:24)

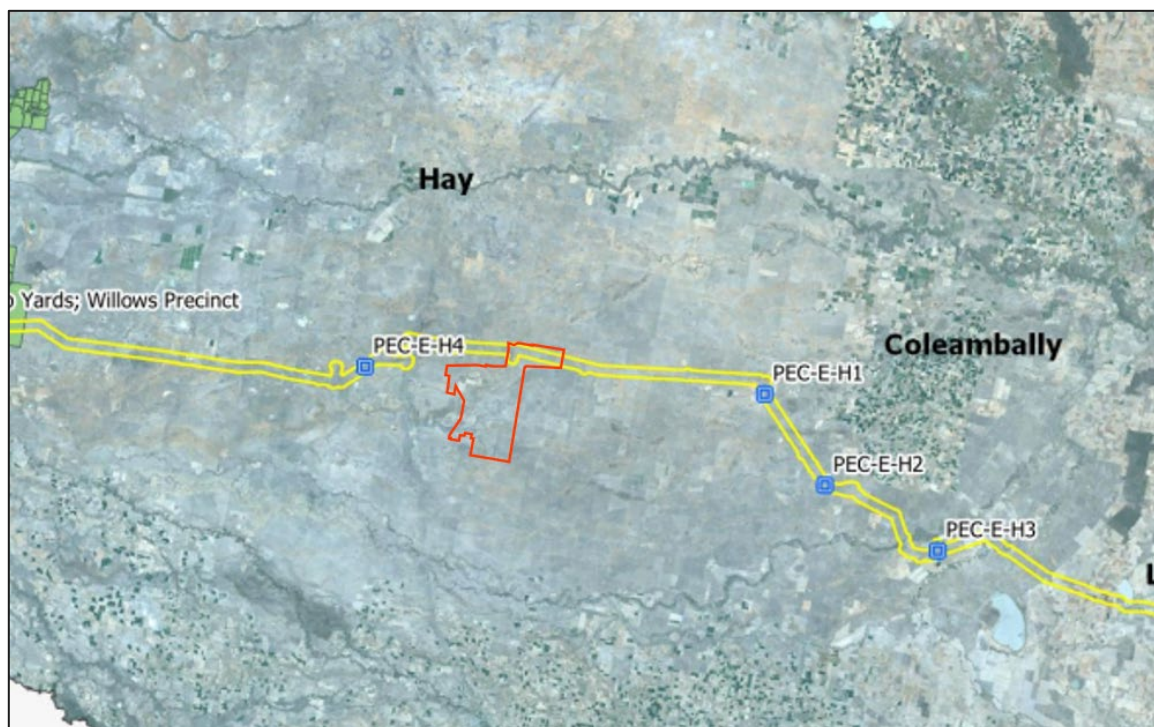


FIGURE 4.2 DETAIL OF MAP SHOWING POTENTIAL HISTORIC HERITAGE ITEMS (PEC-E-H4 AND PEC-E-H1) WITH THE PROJECT AREA LOCATION BOXED RED (NAVIN OFFICER 2021:43)

## 5. PHYSICAL ANALYSIS

### 5.1 SURVEY AIMS AND PERSONNEL

Three rounds of field survey were undertaken for the Project Area by ERM accompanied by Registered Aboriginal Party (RAP) representatives<sup>1</sup>. The first was completed on 6 to 10 November 2023, by ERM Managing Consultant Lorien Perchard, ERM Senior Consultant Victoria Gleeson. The second was undertaken on 4 to 8 December 2023 by ERM Consultant Brent Koppel and ERM Consulting Senior Associate Mia Linton-Smith. The third was undertaken on 29 January to 9 February 2024 by ERM Senior Consultant Victoria Gleeson, ERM Consulting Senior Associate Mia Linton-Smith as well as Damian Wall and Maggie Cronin of Red-Gum Environmental Consulting.

The methodology of the site visits included pedestrian survey of the Project Area and visual inspection of potential view lines to potential surrounding heritage items. The aims of the historical heritage survey were to:

- Cover a representative sample of the Project Area that will potentially be impacted by the proposed works. Areas identified through desktop research as having historic development were targeted during survey;
- Identify any previously unidentified built heritage items or areas of historic archaeological potential that may be impacted by the Project; and
- Gather sufficient information to provide an assessment of the historic heritage significance of the Project Area.

### 5.2 SURVEY RESULTS AND DESCRIPTION OF PROJECT AREA

The landscape encompassing the Project Area is largely densely vegetated with grasses, saltbush, weeds, and native flowers. The Project Area is generally flat, with little discernible topography aside from gentle undulations and small rises. Nyangay and Eurolie Creeks run north-south through the northern portions of the Project Area, and Wargam Creek runs north-south through the southern portion of the Project Area (*Photograph 5.1* and *Photograph 5.2*).

The Project Area is moderately disturbed from agricultural activities and several dams and irrigation channels are present throughout, including the Coleambally Outfall Drain, traversing the central portion of the Project Area (*Photograph 5.3*). Water tanks and access roads were also present throughout the Project Area. Additionally, the TransGrid electrical transmission line and associated access track run east-west across the northern portion of the Project Area (*Photograph 5.4*).

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<sup>1</sup> RAPs were in attendance as the survey for Aboriginal Cultural Heritage Assessment Report (ACHAR) was undertaken in concurrence with historic heritage survey.





PHOTOGRAPH 5.1 VIEW WEST ACROSS THE NORTHERN PORTION OF THE PROJECT AREA TOWARD EUROLIE CREEK (ERM 2023)



PHOTOGRAPH 5.2 VIEW NORTH-EAST ACROSS THE SOUTHERN PORTION OF THE PROJECT AREA (ERM 2024)



PHOTOGRAPH 5.3 VIEW EAST OF COLEAMBALLY OUTFALL DRAIN (ERM 2024)



PHOTOGRAPH 5.4 VIEW WEST ACROSS EUROLIE CREEK SHOWING TRANSGRID TRANSMISSION LINE (ERM 2023)

The Project Area encompasses two large operational properties; West Burrabogie (in the north) and Wargam Estate (in the south). Each property contains clusters of occupied residences and numerous agricultural structures. The proposed development footprint will not impact the residences and main structures of the properties.

The north-western portion of the Project Area, the West Burrabogie property, contains four residences at the termination of West Burrabogie Road, that were likely constructed in the early-mid-twentieth century. The main residence is weatherboard-clad, with a corrugated iron-clad combination roof. An enclosed verandah runs around the northern, eastern and western sides of the house (*Photograph 5.5* and *Photograph 5.6*). An overgrown, fenced, tennis court is also located to the north of the residence. Other agricultural structures are located in close proximity to the residences, including a corrugated iron-clad shearing shed with gable roof and associated fenced yards, as well as several corrugated iron-clad worker's accommodation sheds, machinery sheds, tanks and silos (*Photograph 5.7* to *Photograph 5.9*). A corrugated iron-clad shearing shed with gable roof (constructed post-1961) and associated fenced yards is present within the far north-eastern portion of the Project Area (*Photograph 5.10*).



PHOTOGRAPH 5.5 VIEW WEST OF THREE RESIDENCES AT WEST BURRABOGIE (ERM 2024)



PHOTOGRAPH 5.6 VIEW SOUTH-WEST OF MAIN RESIDENCE AT WEST BURRABOGIE (ERM 2024)



PHOTOGRAPH 5.7 VIEW NORTH-EAST OF THE SHEARING SHED TO EAST OF RESIDENCES (ERM 2024)



PHOTOGRAPH 5.8 VIEW SOUTH OF WORKER'S ACCOMMODATION IN CLOSE PROXIMITY TO RESIDENCES (ERM 2024)



PHOTOGRAPH 5.9 VIEW EAST OF MACHINERY SHED, TANKS AND SILOS IN CLOSE PROXIMITY TO RESIDENCES (ERM 2024)



PHOTOGRAPH 5.10 VIEW NORTH-EAST OF THE SHEARING SHED IN THE FAR NORTH-EASTERN PORTION OF THE PROJECT AREA (ERM 2023)



The south-western portion of the Project Area, the Wargam Estate property, contains three residences off Wargam Road, that were likely constructed in the early-mid twentieth century. The main residence is weatherboard-clad, with a corrugated iron-clad combination roof (*Photograph 5.11 to Photograph 5.13*). Other agricultural structures are located in close proximity to the residences, including a timber stables, corrugated iron-clad machinery shed, silos and tanks (*Photograph 5.14 and Photograph 5.15*). Additionally, a large corrugated iron-clad shearing shed with gable roof and associated fenced yards, as well as three corrugated iron-clad worker's accommodation sheds, stand in a cluster to the south of the residences (*Photograph 5.16 and Photograph 5.17*).



PHOTOGRAPH 5.11 VIEW NORTH OF MAIN RESIDENCE AT WARGAM ESTATE (ERM 2024)



PHOTOGRAPH 5.12 VIEW WEST OF ADDITIONAL RESIDENCE AT WARGAM ESTATE (ERM 2024)



PHOTOGRAPH 5.13 VIEW NORTH OF ADDITIONAL RESIDENCE AT WARGAM ESTATE (ERM 2024)



PHOTOGRAPH 5.14 VIEW SOUTH OF TIMBER STABLES (ERM 2024)



PHOTOGRAPH 5.15 VIEW SOUTH OF  
MACHINERY SHED IN CLOSE PROXIMITY TO  
RESIDENCES (ERM 2024)



PHOTOGRAPH 5.16 VIEW SOUTH OF  
SHEARING SHED TO SOUTH OF  
RESIDENCES (ERM 2024)



PHOTOGRAPH 5.17 VIEW NORTH OF WORKER'S ACCOMMODATION ADJACENT TO  
SHEARING SHED (ERM 2024)

## 6. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

Review of the potential for historical archaeological resources to be present within the Project Area is based on a consideration of current ground conditions and analysis of historic development within the Project Area.

Grading of archaeological potential used for this assessment is detailed in *Table 6.1*.

**TABLE 6.1 GRADING OF ARCHAEOLOGICAL POTENTIAL**

Grading	Justification
Nil	No evidence of historical development or use, or where previous impacts would have removed all archaeological potential.
Low	Research indicates little or low intensity historical development, or substantial previous impacts. Expected that deep subsurface archaeological features may survive.
Moderate	Known historical development with some evidence of previous impact. Likely that archaeological remains survive with some localised truncation and disturbance.
High	Evidence of multiple phases of historical development and structures with minimal or localised twentieth century development impacts. Archaeological remains likely to be largely intact.

*Table 6.2* summarises the archaeological potential of each land use phase across the Project Area.

**TABLE 6.2 SUMMARY OF ARCHAEOLOGICAL POTENTIAL ASSOCIATED WITH LAND USE PHASES**

Phase	Land use and potential remains	Archaeological potential
Phase 1 c.1850s to c.1920	<p>The Project Area is within the pastoral runs of Burrabogie Block A and Burrabogie Block B, as well as Werkenbengal Block A and Werkenbengal Block B. Burrabogie Blocks A and B later became encompassed within the larger Burrabogie Station by c.1875. The main Burrabogie Homestead was located to the east of the Project Area. However, a cottage as well as a woolshed and other agricultural improvements including wells, mills, tanks, yards and fences were present within the Project Area by 1924 (likely constructed in the late nineteenth or early twentieth century).</p> <p>Werkenbengal Blocks A and B later became encompassed within the larger Wargam Estate in c.1885. By this time, the Homestead had been erected in the south-western portion of the Project Area, and a hut had been constructed in the central portion of the Project Area. Agricultural improvements including yards, wells and tanks were also dispersed across the Project Area.</p> <p>These areas were targeted during the site survey, namely the location of the former Wargam Estate residence and hut; however, no ground surface expression of the former structure(s) was noted.</p>	Low-Moderate

Phase	Land use and potential remains	Archaeological potential
	<p>It is also possible that other discrete or ephemeral features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines.</p> <p>There have not been substantial impacts to the area in the twentieth and twenty-first centuries. As such, it is possible that the foundations of the former homestead and hut, as well as associated improvements including wells, are present with good integrity. These areas were not within the current survey area, and as such were not subject to detailed inspection.</p> <p>Evidence of the evolving agricultural landscape (insubstantial remains such as postholes) are unlikely to be present with good integrity.</p>	
Phase 2 c.1920 to Present	<p>By the mid-1920s, additional residences, sheds and outbuildings had been constructed within the Project Area. However, the majority of the Project Area remained largely undeveloped into the mid-twentieth century, and continued to be used for agricultural pursuits.</p> <p>In recent years, the TransGrid electrical transmission line was constructed through the northern portion of the Project Area. This would have impacted or removed any remaining archaeological resource in this area.</p>	Low

### 6.1.1 SUMMARY OF HISTORIC ARCHAEOLOGICAL POTENTIAL

The historic research undertaken for this assessment has identified that the Project Area has been characterised by agricultural pursuits since the early nineteenth century. Between the late nineteenth century to early twentieth century, various residences had been established within the Project Area associated with Burrabogie and Wargam Estates, as well as outbuildings, sheds, and other agricultural improvements including wells, mills, tanks, yards and fences. These areas were targeted during the site survey, namely the location of the former Wargam Estate residence and hut; however, no ground surface expression of the former structure(s) was noted.

It is also possible that other discrete or ephemeral features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines.

The Project Area remained largely undeveloped into the mid-twentieth century, and the majority of the Project Area has remained largely undisturbed from substantial impacts. However, it is unlikely that evidence of the evolving agricultural landscape (insubstantial remains such as post holes) would be present with good integrity.

In recent years, the TransGrid electrical transmission line was constructed through the Project Area, which would have impacted or removed any archaeological resource in this area.

As such, there is Low-Moderate potential for historical archaeological resources to be present within the Project Area.



## 7. SIGNIFICANCE ASSESSMENT

### 7.1 HISTORIC HERITAGE SIGNIFICANCE ASSESSMENT FRAMEWORK

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

An item will be considered to be of state or local heritage significance if, in the opinion of the Heritage Council, it meets one or more of the following criteria outlined in *Table 7.1*.

**TABLE 7.1 NSW HERITAGE ASSESSMENT CRITERIA**

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

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

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

### 7.1.1 ASSESSMENT OF HISTORIC HERITAGE SIGNIFICANCE

#### 7.1.1.1 BUILT HERITAGE ENVIRONMENT

The following *Table 7.2* provides an assessment of significance of the built heritage identified within the Project Area against the NSW Heritage Assessment Criteria.

**TABLE 7.2 SUMMARY SIGNIFICANCE ASSESSMENT AGAINST NSW HERITAGE CRITERIA**

Criterion	Assessment
Criterion A - Historic	<p>The Riverina region was largely focused on agricultural pursuits throughout the nineteenth and early twentieth century. The early to mid-twentieth century structures within the Project Area are not unique to the area and are unlikely to provide information that is not already available from other sources.</p> <p><b>This criterion is not met.</b></p>
Criterion B - Associative	<p><b>This criterion is not met.</b></p>
Criterion C - Aesthetic	<p>The early to mid-twentieth century structures within the Project Area range in condition from good to fair. None of these structures possess aesthetic value. The structures are not uncommon examples of their type, and do not demonstrate creative or technical achievement.</p> <p><b>This criterion is not met.</b></p>
Criterion D - Social	<p>Whilst a social impact assessment has not been undertaken, it can be said that the Project Area is unlikely to satisfy this criterion.</p> <p><b>This criterion is not met.</b></p>

Criterion	Assessment
Criterion E – Research Potential	<p>The Riverina region was largely focused on agricultural pursuits throughout the nineteenth and early twentieth century. As such, the early to mid-twentieth century structures within the Project Area are not unique to the area and are unlikely to provide information that is not already available from other sources.</p> <p><b>This criterion is not met.</b></p>
Criterion F - Rarity	<p>The nature of the early to mid-twentieth century structures within the Project Area are not rare or uncommon.</p> <p><b>This criterion is not met.</b></p>
Criterion G - Representative	<p>The early to mid-twentieth century structures within the Project Area range in condition from good to fair. They are not good representative examples of their type.</p> <p><b>This criterion is not met.</b></p>

#### 7.1.1.2 HISTORICAL ARCHAEOLOGICAL RESOURCE

The potential for historic archaeological remains to be present within the Project Area has been assessed as Low. An assessment of the significance of a potential archaeological resource in accordance with the guiding document *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Council of NSW 2009) has been completed below.

##### ***Can the site contribute knowledge that no other resource can?***

The potential archaeological resource within the Project Area would most likely comprise remains of the former late nineteenth century structures (namely the former residence and hut of Wargam Estate) (as illustrated in *Figure 3.4*). It is also possible that other discrete or insubstantial agricultural features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines.

The nature of the potential archaeological resource within the Project Area is not rare or unique. As such, the archaeological resource has limited potential to provide a new understanding of the history of the local area that is not available from other sources.

##### ***Can the site contribute knowledge that no other site can?***

The nature of the potential archaeological resource within the Project Area is not rare or unique; the surrounding area was also largely focused on agricultural pursuits throughout the nineteenth and early twentieth century. As such, the archaeological resource within the Project Area is unlikely to provide information that is not already available from other sites.

##### ***Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?***

As detailed above, the potential archaeological resource within the Project Area is unlikely to contribute knowledge that is not already available from other sites. As such, this criterion is not applicable.

### 7.1.2 SUMMARY STATEMENT OF SIGNIFICANCE

No built heritage items are located within the Project Area or its immediate vicinity. Several early to mid-twentieth century structures are present within the Project Area. The Riverina region was largely focused on agricultural pursuits throughout the nineteenth and twentieth centuries. As such, the structures within the Project Area are not uncommon to the area and are unlikely to provide information that is not already available from other sources.

If archaeological resources are present within the Project Area, they would most likely comprise remains of the former late nineteenth – early twentieth century structures (namely the residence and hut of Wargam Estate) (as illustrated in *Figure 3.4*). It is also possible that other discrete or insubstantial agricultural features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines. These resources are unlikely to provide a new understanding of the history of the local area that is not available from other sources.

Therefore, any extant archaeological resources in the Project Area would have low archaeological research potential and as such, have low archaeological heritage significance.

## 8. IMPACT ASSESSMENT

### 8.1 PROPOSED WORKS

*Section 1.2* provides a detailed description of the proposed Project. Activities with the potential to impact archaeological resources would include earthworks, electrical service excavation and foundation construction. A summary of potential impacts to historic heritage values is provided below.

### 8.2 IMPACT ASSESSMENT

The current assessment has identified that there are no known or potential historic heritage sites within the Project Area or within its immediate vicinity. Additionally, no direct or indirect impacts to built heritage items (including significant view lines) associated with the proposed works have been identified.

The Project Area has remained largely undisturbed from substantial impacts and has been characterised by agricultural pursuits since the early nineteenth century. However, the construction of the TransGrid electrical transmission line in c.2021-2022 would have impacted or removed any remaining archaeological resource in this area. The archaeological potential of the Project Area has been assessed as Low-Moderate. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the proposed works will result in little to no archaeological impact.

#### 8.2.1 CUMULATIVE IMPACTS

Continued development within the Riverina Murray Region has the potential to result in a cumulative impact on the cultural values of the local area when impacts overlap with impacts from other projects, which can result in a greater overall effect. This effect is dependent on the scale and timing of the impacts and generally occurs when projects are constructed concurrently or consecutively and are based on their location. *Section 4.2* discusses a number of existing and/ or proposed projects adjacent to or in the vicinity of the Project Area.

*Table 8-1* identifies and describes five projects that are within or adjacent to the current Project. The Project Area borders Bullawah Wind Farm immediately to the east, and The Plains Wind and Solar Farm to the north and west. The Project EnergyConnect (NSW eastern section) traverses the northern portion of the Wind Farm Project Area. The Pottinger Solar Farm encompasses the far north-eastern portion of the Wind Farm Project Area.

The EnergyConnect Project comprises the complete construction of a high voltage interconnector. As described in *Section 4.2*, there were no listed heritage items within the Project Area or within its vicinity, and no potential heritage items were identified within the Project Area.

TABLE 8-1 NEARBY RENEWABLE ENERGY PROJECTS

Project	Distance to Project Area	Description	Current Status
Bullawah Wind Farm	<1 km (adjacent)	<ul style="list-style-type: none"> <li>• 170 wind WTGs</li> <li>• ~1,000 MW capacity</li> </ul>	EIS to be prepared
The Plains Solar Farm	<1 km (adjacent)	<ul style="list-style-type: none"> <li>• 900,900 PV panels</li> <li>• 500 MW capacity</li> <li>• BESS</li> </ul>	EIS to be prepared
The Plains Wind Farm	<1 km (adjacent)	<ul style="list-style-type: none"> <li>• 226 WTGs</li> <li>• 1,800 MW capacity</li> </ul>	EIS to be prepared
Project EnergyConnect (NSW – Eastern Section)	<1 km (within Project Area)	<ul style="list-style-type: none"> <li>• 330 kV transmission line</li> </ul>	Determination
Pottinger Solar Farm	<1 km (within Project Area)	<ul style="list-style-type: none"> <li>• 600,000 PV panels</li> <li>• 300 MW capacity</li> <li>• BESS</li> </ul>	EIS to be prepared

The current Project has been identified as having low historic heritage value. As such, it has been assessed that cumulative impacts as a result of this Project are low.

## 9. CONCLUSIONS

The historical assessment has determined that there are no known or potential built heritage items (or significant view lines) within the Project Area.

It has been determined that there is Low-Moderate potential for archaeological resources to be present within the Project Area. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the Project Area has low archaeological research potential and as such, low archaeological heritage significance.

There are no historical built or archaeological constraints for the proposed Project. Therefore, works may proceed with no further historic heritage assessments.

### 9.1 RECOMMENDATIONS

The following are key recommendations that aims to mitigate the impact of the proposed works on potential and as yet unidentified heritage values of the Project Area:

#### 9.1.1 RECOMMENDATION 1 – HERITAGE INDUCTION

Prior to the commencement of works, all staff and contractors should be briefed on the requirements of the Heritage Act and the Unexpected Finds Protocol (outlined in *Section 9.1.2.1*).

#### 9.1.2 RECOMMENDATION 2 - UNEXPECTED FINDS PROTOCOL

In the event that relics are unexpectedly exposed, works should cease immediately. The management of relics should be in accordance with NSW Heritage guidelines and policies, as outlined in the Unexpected Finds Protocol (*Section 9.1.2.1*).

##### 9.1.2.1 UNEXPECTED FINDS PROTOCOL

This HHA has identified that the archaeological potential of the Project Area is Low-Moderate. However, in the event that relics are unexpectedly recovered during the proposed works, all works should cease immediately, and the Unexpected Finds Protocol should be followed. The following steps are provided below in the event that unexpected heritage items are identified during the proposed works:

- Where a potential historic heritage item is found during works, all works within the vicinity of the item, or with the potential to impact the item should cease and a temporary exclusion zone established;
- An appropriately qualified heritage consultant should examine the item to assess its significance and further archaeological potential; and
- Where a relic is found, the NSW Heritage Council should be notified (in accordance with Section 146 of the Heritage Act) and approval will likely be required prior to the continuation of works. Other archaeological deposits should be recorded and assessed for significance and potential salvage by an appropriately qualified heritage consultant.

Depending on the nature of the discovery, additional assessment and approval under the Heritage Act may be required prior to the recommencement of works in the affected area.

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This report is based solely on the scope of work described in *Section 1* (Scope of Work) and performed by Environmental Resources Management Australia Pty Ltd (ERM) as commissioned by RPS AAP Consulting Pty Ltd (RPS) (the Client). The Scope of Work was governed by a contract between ERM and the Client (Contract).

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- Use of the site for any purpose may require planning and other approvals and, in some cases, environmental regulator and accredited site auditor approvals. ERM offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environment works.

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