

Central-West Orana Renewable Energy Zone Transmission Project

Non-Aboriginal Heritage Assessment

Prepared for WSP Australia Pty Ltd

September 2023

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Executive Summary

This technical paper assesses the potential impacts to non-Aboriginal heritage (hereafter historical heritage) from the construction and operation of the Central-West Orana Renewable Energy Zone Transmission project (the project) and has been prepared to support and inform the Environmental Impact Statement (EIS) for the project.

The impacts have been assessed in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Department of Planning and Environment (DPE) and against the relevant legislation and guidelines as they apply to historical heritage.

ES1 Project overview

The NSW Government is leading the development of Renewable Energy Zones (REZ) across NSW to deliver renewable energy generation and storage, supported by high voltage transmission infrastructure. Energy Corporation of NSW (EnergyCo) is proposing the construction and operation of new high voltage electricity transmission infrastructure and new energy hubs and switching stations required to connect new energy generation and storage projects within the Central-West Orana REZ to the existing electricity network (the project). The project is located within the Warrumbungle, Mid-Western Regional, Dubbo Regional and Upper Hunter local government areas (LGAs) and extends north to south from Cassilis to Botobolar and east to west from Cassilis to Goolma.

The project would enable at least three gigawatts of new network capacity to be unlocked by the mid-2020s (noting the NSW Government's proposal to amend the Central-West Orana REZ declaration to allow for a transfer capacity of six gigawatts) and enable renewable energy generators within the Central-West Orana REZ who are successful in their bids to access the new transmission infrastructure to export electricity to the rest of the network. Importantly, the development of renewable energy generation projects in the Central-West Orana REZ is the sole responsibility of private generators and subject to separate planning and environmental approvals.

The project would consist of construction and operation of the new high voltage electricity transmission infrastructure and new energy hubs within the construction area. This would consist of new switching stations, ~234 km of 500 kV and 330 kV transmission lines, ~147 km of optic fibre cabling, and various access tracks, construction camps and other ancillary activities for the establishment of the project. These activities would require localised ground disturbance activities at each tower location, switching station and work area, and initial and ongoing vegetation clearance of the construction area.

ES2 Legislative and policy context

There are several Commonwealth and State Acts (and associated regulations) that manage and protect historical cultural heritage. These are summarised in Table ES1.

Table ES1 Commonwealth and State legislation with potential relevance to the project

Legislation	Description	Relevant for the project?	Details
Commonwealth			
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Recognises sites with universal value on the World Heritage List (WHL). Protects heritage places with outstanding heritage value to the nation on the National Heritage List (NHL), and significant heritage value on the Commonwealth Heritage List (CHL).	No	There are no heritage places within the construction area that are listed on the WHL, NHL, or the CHL. One area, Goulburn River National Park is being considered for National Heritage Listing.
State			
<i>Environmental Planning and Assessment Act 1979</i>	Requires environmental impacts, including to heritage, to be considered in land use planning. Provides for the development of environmental planning instruments, including State Environmental Planning Policies and Local Environmental Plans.	Yes	The Project is being assessed as an SSI project under Part 5, Division 5.2, of this Act, and is subject to project-specific environmental assessment and reporting requirements. These requirements (SEARs) stipulate that historic heritage must be considered as part of the EIS for the project (see Section 1.2).
<i>Heritage Act 1977</i>	Protects and manages items of environmental heritage that are listed on the State Heritage Register (SHR) and/or are assessed as 'relics'. Items listed on the SHR are given automatic protection under the Heritage Act against any activities that may damage an item or affect heritage significance.	Yes	While permits to impact historic heritage under this Act is not required for SSI projects, the SEARs require guidelines prepared under this Act to be adopted.
Local			
<i>Dubbo Regional Local Environmental Plan 2022</i> <i>Mid-Western Regional Local Environmental Plan 2012</i> <i>Warrumbungle Local Environmental Plan 2013</i> <i>Upper Hunter Local Environmental Plan 2013</i>	Clause 5.10 of the LEPs provides specific provisions for the protection of heritage items, heritage conservation areas, archaeological relics, Aboriginal objects and Aboriginal places of heritage significance within each Local Government Area (LGA). Schedule 5 of each LEP also provides a list of heritage items, conservation areas and archaeological sites within the each LGA. A review of the list indicates there are no Aboriginal objects or places of heritage significance identified on both schedules within the study area.	Yes	Subject to project approval under Division 5.2 of Part 5 of the EP&A Act, the planning controls required by each LEP will not apply to the project. Regardless items identified on the heritage schedules of each LEP must be considered. Two items are listed on the Mid-Western Regional LEP are intersected or adjacent to the proposed works (Section 5.1.1).

ES3 Assessment methods

The assessment of potential impacts related to historic heritage arising from the project included the following key steps:

- Desktop assessment – review of historical and current documents, aerials, maps to identify areas of interest (AOI) for follow-up targeted survey to determine if the locations may hold heritage values.
- Heritage survey – undertake survey of areas of interest and identify additional potential historical items which might not have been identified during the desktop assessment.
- Significance assessment – an assessment of significance against the guidelines outlined in the NSW Heritage Manual.
- Impact assessment – assessment of both construction and operational impacts.
- Management recommendations – development of recommended management mitigation for all sites identified for impact.

ES4 Existing environment

Two listed local heritage items and 21 additional areas of interest (including two site complexes CWO-22-05 and CWO-22-09) were identified in the study area during the desktop assessment phase and confirmed during the heritage survey (Table ES2); they were assessed against the NSW Heritage Manual criteria set out in *Assessing heritage significance* (2023; 2001) in Section 3.5 of this report.

Table ES2 Heritage items in proximity to the construction area

ID	Description	Lot/Plan	Within Construction Area	Assessed Significance
CWO-22-HH01	Dapper Homestead Group	16//DP754305	No	Local
CWO-22-HH02	Dapper Hut and Shed	15//DP754305	No	Local
CWO-22-HH03	Avondale House	31//DP754305	Yes	Local
CWO-22-HH04	Avondale Homestead (current)	31//DP754302	No	Local
CWO-22-HH05a	Laheys Creek Archaeological Site (House and Hut)	37//DP754305	Yes	Local
CWO-22-HH05b	Laheys Creek Archaeological Site (Stockyards)	1//DP754305 5//DP754305	Yes	Local
CWO-22-HH06	Laheys Creek Cemetery	16//DP754305	Yes	Local
CWO-22-HH07	Brampton Park Homestead Group	25//DP754334	No	Local
CWO-22-HH08	Spir Road Cottage	27//DP750764	Yes	Local
CWO-22-HH09a	Tallawang (Upper) Public School	31//DP750764	Yes	Local
CWO-22-HH09b	Tallawang Union Church	120//DP750764	Yes	Local
CWO-22-HH09c	Tallawang Catholic Churches	103//DP750764	Yes	Local

Table ES2 Heritage items in proximity to the construction area

ID	Description	Lot/Plan	Within Construction Area	Assessed Significance
CWO-22-HH10	Tallawang Creek Archaeological Site 01	74//DP750762	Yes	Local
CWO-22-HH11	Tallawang Creek Archaeological Site 02	50//DP457016	Yes	Local
CWO-22-HH12	Puggoon Rail Siding	193//DP750762	No	Destroyed
CWO-22-HH13	Merotherie Archaeological Site	16//DP754305	Yes	Local
CWO-22-HH14	Cope Road Archaeological Site	38//DP750773 39//DP750773	No	Local
CWO-22-HH15	Moolarben Archaeological Site	11//DP1246858	No	Local
CWO-22-HH16	MCP Site 10	30//DP755454	Yes	Local
CWO-22-HH17	Mittaville Archaeological Site	100//DP755454	Yes	Local
CWO-22-HH18	Road Embankment (Site 4)	26//DP755425	Yes	Local
CWO-22-HH19	Pine Park Woolshed	151//DP755425	Yes	Local
CWO-22-HH20	Tallawang Creek Archaeological Site 03	50//DP457016	Yes	Local
CWO-22-HH21	MCP Site 12	2//DP1143354	Yes	Local
CWO-22-HH22	Wandoona Homestead (Mid-Western LEP# I996)	103//DP7555455	Yes	Local – Mid-Western LEP
CWO-22-HH23	Goulburn River National Park (Mid-Western LEP# I994)	National Park	No	Local – Mid-Western LEP

ES5 Potential impacts

Prior to mitigation, the project would potentially directly impact 17 heritage items and indirectly impact three heritage items. The assessment notes that through the iterative approach the project has undertaken since 2021 along with mitigation measures, some 25% of the heritage items (n=5) have been avoided through project refinement.

ES6 Management measures

Management measures that would be implemented to mitigate impacts of the project to historical heritage values are provided in Chapter 8 of this report.

ES6.1 Historical Heritage Management Plan

A historical heritage management plan (HHMP) will be prepared and implemented as part of the CEMP. The HHMP will detail measures that will be implemented to manage potential impacts on items of heritage significance. It will also outline the requirement for heritage awareness and management training as part of the site induction process for relevant personnel involved in site works. The HHMP will include procedures and protocols for:

- avoidance and minimisation of impact
- archival recording
- non-intrusive geophysical investigation
- archaeological monitoring
- archaeological salvage
- unexpected finds procedure
- relocation of heritage assets.

Glossary

Project terms

Term	Definition
access roads	Permanent access roads to switching stations and energy hubs.
access tracks	Temporary and permanent access tracks to transmission lines.
alignment	Preferentially use the project or the transmission line. If not suitable, use only when describing the transmission line i.e. the alignment was refined at Y to avoid X.
brake/winch sites	Brake and winch sites are a temporarily cleared area where plant and equipment is located for the purposes of spooling and winching a conductor into place on erected towers along a transmission line corridor. Dependent upon the angle of line deviation, the location of the brake and winch site at that angle may or may not be within the nominated transmission line easement. Brake and winch sites are only required for the construction phase of the project. It does not need to be maintained for ongoing operation and/or maintenance of the transmission line.
Central-West Orana REZ (CWO REZ)	A geographic area of approximately 20,000 square kilometres centred by Dubbo and Dunedoo and extending west to Narromine and east beyond Mudgee and to Wellington in the south and Gilgandra in the north, that will combine renewable energy generation, storage and HV transmission infrastructure to deliver energy to electricity consumers.
construction area	The area that would be directly impacted by construction of the project including (but not limited to) transmission towers and lines, brake and winch sites, access roads to switching stations and energy hubs (not including any public roads), energy hubs, switching stations, communications infrastructure, workforce accommodation camps, construction compounds and laydown and staging areas.
construction compound	An area used as the base for construction activities, usually for the storage of plant, equipment and materials, and/or construction site offices and worker facilities. It can also comprise concrete batching plant, crushing, grinding and screening plant, testing laboratory and wastewater treatment plant.
construction routes	Roads used by construction vehicles (light and heavy).
cumulative impact	The combined impacts of the project on a matter with other relevant future projects.
enabling works	Activities that would be carried out before the start of substantial construction in order to make ready the key construction sites (including workforce accommodation camps and compounds), facilitate the commencement of substantial construction, manage specific features or issues and collect additional information required to finalise the final design and construction methodology.
EnergyCo	The Energy Corporation of New South Wales constituted by Section 7 of the <i>Energy and Utilities Administration Act 1987</i> as the NSW Government statutory authority responsible for the delivery of NSW's REZs.
energy hub/s	An energy hub is a substation where energy exported from renewable energy generators or storage is aggregated, transformed to 500 kV (where required) and exported to the transmission network. For the project, this includes Merotherie Energy Hub and Elong Elong Energy Hub.
heritage item	a building, work, place, relic, tree, object or archaeological site of historic heritage value.
renewable energy generators	A renewable energy provider to the CWO REZ.

Project terms

Term	Definition
renewable energy generation and storage projects	The various renewable energy generation and storage projects within the CWO REZ that would be delivered by others, such as wind farms and solar farms.
Essential Energy	The asset owner of multiple distribution lines below 132 kV in the region that cross the project at multiple locations.
impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
operation area	The area that would be occupied by permanent components of the project and/or maintained, including transmission line easements, transmission lines and towers, energy hubs, switching stations, communications infrastructure, access roads to the switching stations and energy hubs (excluding public roads), and permanent access tracks to the easements.
(the) proponent	EnergyCo
(the) project	The Central-West Orana REZ Transmission project as described in Chapter 3 of the Environmental Impact Statement.
Renewable Energy Zone (REZ)	A geographic area identified and declared by the NSW Government as a REZ.
study area	For the purposes of this paper, the study area was defined as a 1 km buffer around the proposed construction area.
substation	A facility used to increase or decrease voltages between incoming and outgoing lines (e.g. 330 kV to 500 kV).
switching station	A facility used to connect two or more distinct transmission lines of the same designated voltage.
transmission line easement	An area surrounding and including the transmission lines which is a legal 'right of way' and allows for ongoing access and maintenance of the transmission lines. Landowners can typically continue to use most of the land within transmission line easements, subject to some restrictions for safety and operational reasons.
twin transmission line	A pair of single or double circuit transmission lines running parallel.
workforce accommodation camps	Areas that would be constructed and operated during construction to house the construction workforce.

Abbreviations

Abbreviation	Definition
AHC	<i>Australian Heritage Council Act 2003 (Cwth)</i>
AHMP	Aboriginal Heritage Management Plan
CHL	Commonwealth Heritage List
CSSI	Critical State Significant Infrastructure
DECCW	Department of Environment, Climate Change and Water
DIN 4150	<i>German Standard DIN 4150-3: Structural vibration – Effects of vibration on structures</i>
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</i>
EPI	Environmental Planning Instruments
GSV	Ground surface visibility
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
HHMP	Historic Heritage Management Plan
ICOMOS	International Council on Monuments and Sites
kV	kilovolt
LEP	Local Environment Plan
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NCA	Noise catchment area
NHL	National Heritage List
NSW	New South Wales
NEM	National Electricity Market
REZ	Renewable Energy Zone
RNE	Register of the National Estate
SEARs	Secretary's environmental assessment requirements
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SSI	State Significant Infrastructure

Abbreviation	Definition
WHL	World Heritage List

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Plate A.127	An example of typical natural heritage values from the Goulburn River National Park

1 Introduction

1.1 Background

New South Wales (NSW) is currently undergoing an energy sector transformation that will change how we generate and use energy. The NSW Government is leading the development of Renewable Energy Zones (REZ) across NSW to deliver renewable energy generation and storage, supported by transmission infrastructure. A REZ connects renewable energy generation and energy storage systems to transmission infrastructure via energy hubs, requiring the coordination of power generation, power storage and transmission infrastructure. By doing so, REZs capitalise on economies of scale to deliver clean, affordable and reliable electricity for homes, businesses and industry in NSW.

The Central-West Orana REZ was formally declared on 5 November 2021 under the *Electricity Infrastructure Investment Act 2020*. As NSW's first REZ, the Central-West Orana REZ will play a pivotal role in underpinning NSW's transition to a clean, affordable and reliable energy sector (Figure 1.1).

The Central-West Orana REZ declaration (November 2021) provides for an initial intended network capacity of three gigawatts. The NSW Government is proposing to amend the declaration to increase the intended network capacity to six gigawatts, which would allow for more renewable energy from solar, wind and storage projects to be distributed through the NSW transmission network.

The proposed amendment is consistent with the NSW Network Infrastructure Strategy (EnergyCo, 2023) which identifies options to increase network capacity to 4.5 gigawatts initially under Stage 1 (which would be based on the infrastructure proposed in this assessment) and up to six gigawatts by 2038 under Stage 2 (which would require additional infrastructure beyond the scope of this assessment, and subject to separate approval). The proposed amendment also supports recent modelling by the Consumer Trustee in the draft 2023 Infrastructure Investment Objectives Report (AEMO, 2023) showing more network capacity will be needed to meet NSW's future energy needs as coal-fired power stations progressively retire.

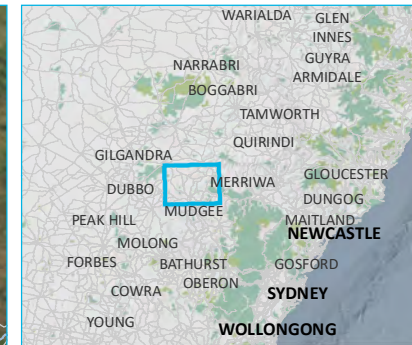
Energy Corporation of NSW (EnergyCo), a NSW Government statutory authority, has been appointed as the Infrastructure Planner responsible for delivering the Central-West Orana REZ. EnergyCo is responsible for coordinating REZ transmission, generation, firming and storage projects to deliver efficient, timely and coordinated investment.

EnergyCo is seeking approval for the construction and operation of new high voltage electricity transmission infrastructure and new energy hubs and switching stations that are required to connect energy generation and storage projects within the Central-West Orana REZ to the existing electricity network (the project).

1.2 Purpose of this paper

This technical paper (technical paper 6) assesses the potential impacts to historical heritage values from the construction and operation of the project and has been prepared to support and inform the Environmental Impact Statement (EIS).

This technical paper has been prepared to address the relevant Secretary's environmental assessment requirements (SEARs) for the project issued by the Secretary of the NSW Department of Planning and Environment (DPE) for the project on 7 October 2022 and the supplementary SEARs on 2 March 2023. The SEARs relevant to the assessment of historical heritage values are presented in Table 1.1.



- KEY**
- Construction area
 - Existing environment
 - Rail line
 - Major road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

Regional setting

Central West Orana Renewable Energy Zone transmission
Aboriginal Cultural Heritage Assessment
Figure 1.1

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Source: EMM (2023); ABS (2021); DFSI (2017, 2020); ESRI (2022); GA (2011)

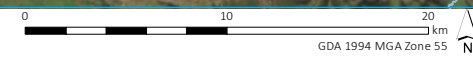


Table 1.1 SEARs relevant to this paper

Reference	Assessment requirement	Location where it is addressed
Heritage (historical/historical)	Assess the impact to historical heritage having regard to the NSW Heritage Manual	This report has been prepared using the NSW Heritage Manual, which includes the guidelines set out in Chapter 3 of this report.

1.2.1 Related Technical Papers

The historical heritage values discussed in this paper have been identified as archaeological, built and landscape in nature, with a level of significance that has the potential to be reduced by direct and indirect impacts from the project. Heritage specific to pre-contact Aboriginal heritage is discussed in technical paper 5 – Cultural heritage assessment report. Likewise specific assessment of visual significance and impacts are addressed in technical paper 3 – Landscape and visual amenity.

1.3 Project overview

The project comprises the construction and operation of new electricity transmission infrastructure, energy hubs and switching stations within the Central-West Orana REZ. The project would enable at least three gigawatts of new network capacity to be unlocked by the mid-2020s (noting the NSW Government’s proposal to amend the Central-West Orana REZ declaration to allow for a transfer capacity of six gigawatts), and enable renewable energy generators within the Central-West Orana REZ who are successful in their bids to access the new transmission infrastructure to export electricity onto the NEM. A detailed description of the project, including a description of key project components, the construction methodology and how it would be operated is provided in Chapter 3 of the EIS.

1.3.1 Features

The project would comprise the following key features:

- A new 500 kV switching station (the New Wollar Switching Station), located at Wollar to connect the project to the existing 500 kV electricity network.
- Around 90 kilometres (km) of twin double circuit 500 kV transmission lines and associated infrastructure to connect two energy hubs to the NEM via the New Wollar Switching Station.
- Energy hubs at Merotherie and Elong Elong (including potential battery storage at the Merotherie Energy Hub) to connect renewable energy generation projects within the Central-West Orana REZ to the 500 kV network infrastructure.
- Around 150 km of single circuit, double circuit and twin double circuit 330 kV transmission lines, supported on towers, to connect renewable energy generation projects within the Central-West Orana REZ to the two energy hubs at Merotherie and Elong Elong.
- 13 switching stations along the 330 kV network infrastructure at Cassilis, Coolah, Leadville, Merotherie, Tallawang, Dunedoo, Cobbora and Goolma, to transfer the energy generated from the renewable energy generation projects within the Central-West Orana REZ onto the project’s 330 kV network infrastructure.
- Underground fibre optic communication cables along the 330 kV and 500kV transmission lines between the energy hubs and switching stations.
- A maintenance facility within the Merotherie Energy Hub to support the operational requirements of the project.

- Microwave repeater sites at locations along the alignment, as well as outside of the alignment at Botobolar, to provide a communications link between the project and the existing electricity transmission and distribution network. The Botobolar site would be subject to assessment at the submissions report stage.
- Establishment of new, and upgrade of existing access tracks for transmission lines, energy hubs, switching stations and other ancillary works areas within the construction area, (such as temporary waterway crossings, laydown and staging areas, earthwork material sites with crushing, grinding and screening plants, concrete batching plants, brake/winch sites, site offices and workforce accommodation camps).
- Property adjustment works to facilitate access to the transmission lines and switching stations. These works include the relocation of existing infrastructure on properties that are impacted by the project.
- Utility adjustments required for the construction of the transmission network infrastructure, along with other adjustments to existing communications, water and wastewater utilities. This includes adjustments to Transgrid's 500kV transmission lines 5A3 (Bayswater to Mount Piper) and 5A5 (Wollar to Mount Piper) to provide a connection to the NEM, including new transmission line towers along the Transgrid network along the frontage of the New Wollar Switching Station, and other locations where there is an interface with Transgrid's network.

1.3.2 Location

The project is located in central-west NSW within the Warrumbungle, Mid-Western Regional, Dubbo and Upper Hunter Local Government Areas. It extends north to south from Cassilis to Botobolar and east to west from Cassilis to Goolma. The location is shown in Figure 1.1.

1.3.3 Timing

Construction of the project would commence in the second half of 2024, subject to NSW Government and Commonwealth planning approvals, and is estimated to take about four years. The project is expected to be commissioned/energised (i.e. become operational) in late 2027.

1.3.4 Construction

Key construction activities for the project would occur in the following stages:

- enabling works
- construction works associated with the transmission lines
- construction works associated with energy hubs and switching stations
- pre-commissioning and commissioning of the project
- demobilisation and rehabilitation of areas disturbed by construction activities.

Excavation and land forming works within the construction area would be required for transmission line tower construction, site preparation works at the energy hubs and switching station sites to provide level surfaces, to create trenches for drainage, earthing, communications infrastructure and electrical conduits, and to construct and upgrade access tracks.

Construction vehicle movements would comprise heavy and light vehicles transporting equipment and plant, construction materials, spoil and waste from construction facilities and workforce accommodation camp sites. There would also be additional vehicle movements associated with construction workers travelling to and from construction areas and accommodation camp sites. These movements would occur daily for the duration of construction.

To support the construction of the project a number of construction compounds would be required including staging and laydown facilities, concrete batching plants, workforce accommodation camps and construction support facilities. The main construction compounds would be established as enabling works and demobilised at the completion of construction. The size of the construction workforce would vary depending on the stage of construction and associated activities. During the peak construction period, an estimated workforce of up to around 1,800 people would be required

1.3.5 Operation

During operation, the project would transfer high voltage electricity from the Central West-Orana REZ to the NEM. Permanent project infrastructure would be inspected by field staff and contractors on a regular basis, with other operational activities occurring in the event of an emergency (as required). Regular inspection and maintenance activities are expected to include:

- regular inspection (ground and aerial) and maintenance of electrical equipment and easements
- fault and emergency response (unplanned maintenance)
- general building, asset protection zone and landscaping maintenance
- fire detection system inspection and maintenance
- stormwater maintenance
- remote asset condition monitoring
- network infrastructure performance monitoring.

Operation of the project would require the establishment of transmission line easements. These easements would be around 60 metres (m) for each 330 kV transmission line and 70 m for each 500 kV transmission lines. Where network infrastructure is collocated, easement widths would increase accordingly (for example, a twin double circuit 500 kV transmission line would have an easement about 140 m wide) (Figure 1.2). Vegetation clearing would be required to some extent for the full width of the transmission line easement, depending on the vegetation types present.

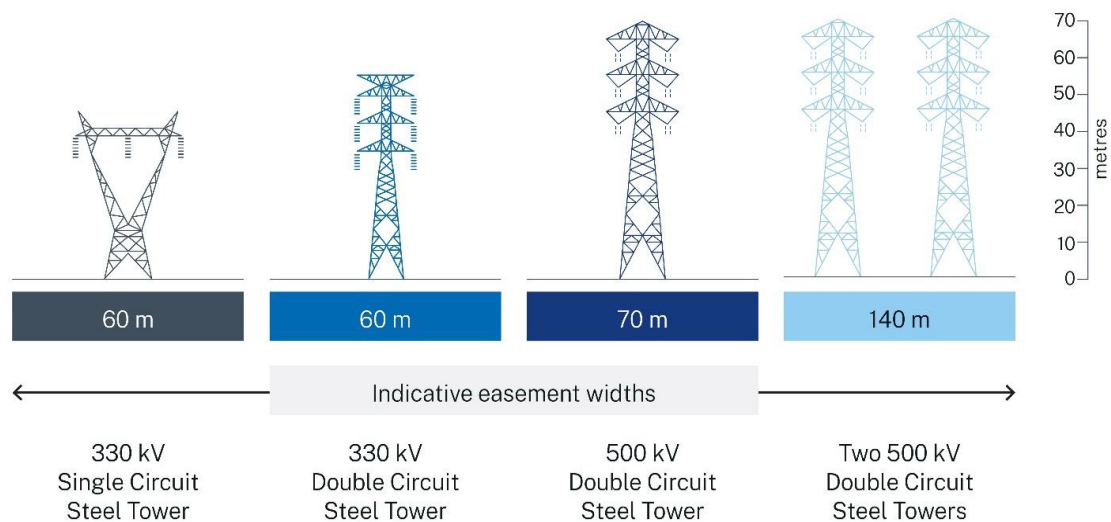


Figure 1.2 Indicative easement widths

1.4 Structure of this paper

The structure and content of this historic heritage technical paper is as follows:

- Chapter 1 – is the introduction to this technical paper (this chapter).
- Chapter 2 – provides an overview of the regulatory context for the assessment, including an overview of the legislation, policy and guidelines that apply to the project.
- Chapter 3 – outlines the assessment methods adopted for this historical heritage impact assessment.
- Chapter 4 – summarises the general history of the study area.
- Chapter 5 – describes the existing environment of the study area and key historical heritage findings associated with the project.
- Chapter 6 – assesses the significance of each against each of the NSW heritage assessment significance criteria.
- Chapter 7 – describes the potential impacts to historical heritage from construction and operation of the project.
- Chapter 8 – provides recommended mitigation and management measures to avoid, minimise and manage any potential impacts to historic heritage from construction and/or operation of the project.
- References – identifies the key reports and documents used to generate this paper.

The appendices to this paper are:

- Appendix A – Historical Site Inventory.
- Appendix B – Detailed maps.

2 Legislative and policy context

Environmental planning approval for the project is required in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act). The project is also a controlled action and therefore requires Commonwealth assessment and approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Sections 5.12 and 5.13 of the EP&A Act provide for the declaration of State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI). On 23 November 2020, the Minister for Planning made the Environmental Planning and Assessment Amendment (Central-West Orana Renewable Energy Zone Transmission Order) 2020. The Order declares the whole Central-West Orana REZ Transmission project to be CSSI.

This section describes the Commonwealth and State legislation and policies relevant to the assessment of historical heritage impacts.

2.1 Commonwealth legislation

2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage nationally and internationally important heritage places, as well as flora, fauna, ecological communities and water resources which are defined as Matters of National Environmental Significance (MNES). Under the EPBC Act, protected heritage items are listed on the World Heritage List (WHL), National Heritage List (NHL) (items of significance to the nation) or the Commonwealth Heritage List (CHL) (items belonging to the Commonwealth or its agencies). The NHL and CHL replaced the Register of the National Estate (RNE), which has been suspended and is no longer a statutory list; however, it remains as an archive.

The EPBC Act identifies nine MNES, including world heritage properties and places listed on the National Heritage Register. The EPBC Act defines 'environment' as both natural and cultural environments and therefore includes Aboriginal and historic heritage items.

Under the EPBC Act, an action that may have a significant impact on a MNES is deemed to be a 'controlled action' and can only proceed with the approval of the Commonwealth Minister for the Environment. An action that may potentially have a significant impact on a MNES is to be referred to Department of Climate Change, Energy, the Environment and Water (DCCEEW) for determination as to whether or not it is a controlled action. If deemed a controlled action the project is assessed under the EPBC Act for approval.

There would be no direct impacts to heritage items listed in the World Heritage List, NHL or CHL as a result of the project. Therefore, there would be no significant heritage impacts as defined under the EPBC Act and the project would not require referral for heritage values under the EPBC Act.

Following a referral under the EPBC Act to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding biodiversity matters, the project was determined to be a controlled action and would therefore require Commonwealth assessment and approval under the EPBC Act.

2.2 NSW legislation

2.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes the framework for formally assessing cultural heritage values as part of the development and assessment process. The EP&A Act requires that environmental impacts (including impacts on cultural heritage items and places as well as archaeological sites and deposits) are considered before development occurs and that appropriate measures are developed and implemented to avoid, mitigate and/or manage potential impacts.

Under the EP&A Act, local governments are directed to prepare planning instruments, such as Local Environment Plans (LEPs) and Development Control Plans (DCPs), which regulate land use and planning. These documents provide guidance on planning decisions and identify environmentally sensitive areas, which includes identification of heritage items. Where a project is being assessed as SSI, approval by the relevant local council is not required, however listed heritage items require assessment and management if they are affected by a proposal.

Impacts to Aboriginal and historic heritage values associated with approved SSI projects are typically managed under an Aboriginal Cultural Heritage Management Plans (ACHMP) and Historic Heritage Management Plan (HHMP) respectively. Such management plans are statutorily binding once approved by the Secretary of DPE.

The project was declared to be Critical State significant infrastructure (CSSI) under section 5.13 of the EP&A Act by the (then) Minister for Planning and Public Spaces on 23 November 2020. Under Section 5.14 of the EP&A Act, the approval of the Minister for Planning is required for SSI (including CSSI), and an EIS has been prepared under Division 5.2 of the EP&A Act.

2.2.2 Heritage Act 1977

The *Heritage Act 1977* (Heritage Act) is the piece of State legislation that protects and manages items of environmental heritage that are listed on the State Heritage Register (SHR) and/or are assessed as 'relics'. 'Environmental heritage' includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items considered to be significant to the state are listed on the State Heritage Register (SHR) and cannot be demolished, altered, moved or damaged, or their significance altered without approval from the Heritage Council of NSW.

i State Heritage Register

The State Heritage Register 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. To be listed, an item must be deemed to be of heritage significance for the whole of NSW. Items listed on the SHR are given automatic protection under the Heritage Act against any activities that may damage an item or affect heritage significance. There are no items on the State Heritage Register within the study area.

ii Section 170 registers

Section 170 (S170) of the Heritage Act requires that State government agencies maintain a Heritage and Conservation Register that includes all items of environmental heritage that have been identified by the agency, or that are listed on the SHR, an environmental planning instrument, or which may be subject to an interim heritage order that are owned, occupied or managed by that government body. These registers provide a list of known heritage items to be considered during a historic heritage assessment. There are no S170 listed items within the study area.

iii Archaeological relics and works

Part 6 of the Heritage Act provides protection for 'relics', regardless of their listing status. It applies to all land in NSW that is not included in the SHR. Section 4(1) of the Heritage Act defines a 'relic' as follows:

A '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
- b) is of State or local heritage significance.

Section 139(1) of the Heritage Act states that:

A person must not disturb or excavate any land knowingly or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

Approval under Section 139(1) of the Heritage Act by the NSW Heritage Council is not applicable for projects assessed as CSSI in accordance with Section 5.23 of the EP&A Act. However, where unanticipated relics are discovered, notification to the Heritage Council is regulated under Section 146 of the Heritage Act.

A person who is aware or believes that he or she has discovered or located a relic (in any circumstances, and whether or not the person has been issued with a permit) must:

- a) within a reasonable time after he or she first becomes aware or believes that he or she has discovered or located that relic, notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and
- b) within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require.

The Heritage Act identifies the category of 'works', which refers to historical infrastructure, and is viewed as separate to that of archaeological 'relics' under the Heritage Act. 'Works' may be buried, and are therefore archaeological in nature, but exposing a 'work' does not trigger reporting obligations under the Heritage Act unless it is of demonstrable significance.

2.2.3 Local environment plans

The study area is covered by four local environmental plans, Dubbo Regional Local Environmental Plan 2022 (DRLEP 2022), Mid-Western Regional Local Environmental Plan 2012 (MRLEP 2012), Warrumbungle Local Environmental Plan 2013 (WLEP 2013) and Upper Hunter Local Environmental Plan 2013 (UHLEP 2013).

Clause 5.10 of the LEPs provides specific provisions for the protection of heritage items, heritage conservation areas, archaeological relics, Aboriginal objects and Aboriginal places of heritage significance within each Local Government Area (LGA).

Schedule 5 of each LEP also provides a list of heritage items, conservation areas and archaeological sites within the each LGA. A review of the list indicates there are no Aboriginal objects or places of heritage significance identified on both schedules within the study area.

As Environmental Planning Instruments (EPIs) such as LEPs do not apply to Critical SSI, the planning controls required by each LEP will not apply to the proposal but will be provided to Council to be considered as part of the assessment in the EIS.

Two local heritage listed items intersect with the historic heritage assessment study area:

- Goulburn River National Park (Mid-Western Regional LEP #1994)
- Wandoona Homestead (Mid-Western Regional LEP #1996).

2.3 Non-Statutory Registers

2.3.1 Register of the National Estate

The RNE is a list of important Aboriginal, historic, and natural heritage places throughout Australia, established under the *Australian Heritage Commission Act 1975*. In 2003, the RNE was superseded by the NHL and CHL under the EPBC Act and the *Australian Heritage Council Act 2003* (AHC Act) and, in 2007, the register was frozen. In 2012, all references to the RNE were removed from both the EPBC Act and the AHC Act, and the register now exists primarily as an archive of places with potential heritage value.

Two items on the non-statutory Register of the National Estate intersect with the historic heritage assessment study area, but are located outside of the construction area:

- Goulburn River National Park (RNE #13861)
- Dapper Nature Reserve (1984 boundary) (RNE #446).

2.4 Policy, standards and guidelines

This report and associated field survey were undertaken using the principles of *The Australian International Council on Monuments and Sites, Charter for Places of Cultural Significance* (also known as the *Burra Charter*, Australia ICOMOS 2013) and the New South Wales (NSW) *Heritage Manual* (Heritage Office 1996 with regular additions). Additional heritage guidance documents of relevance can be found on the Heritage NSW website.

Use of these documents satisfies the requirements of the SEARs.

2.4.1 The Burra Charter

The Burra Charter: The Australian ICOMOS charter for places of cultural significance (Australia ICOMOS 2013) 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.

2.4.2 NSW Heritage Manual

The *Heritage Manual* comprises the following guidance documents:

- *Statements of Heritage Impact Guidelines* (NSW Heritage Office 2002)
- *Investigating Heritage Significance* (NSW Heritage Office 2004)
- *Assessing Heritage Significance* (Department of Planning and Environment (NSW) 2023)
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (NSW Heritage Branch 2009).

These documents have been used to guide this historic heritage assessment.

3 Assessment methods

3.1 Overview

The historic heritage assessment has been prepared to address the SEARs as they relate to historic heritage, and in accordance with the following guidelines, which provides a framework for identifying and managing historical significance under the *Heritage Act 1997* (NSW); *Assessing Heritage Significance* (NSW Heritage Office 2001), *Assessing Significance for Historical Archaeological Sites and 'Relics'* (NSW Heritage Branch 2009) and *NSW Heritage Manual 1996* (NSW Heritage Office and NSW Department of Urban Affairs and Planning 1996).

The assessment methodology of this historic heritage assessment has included the following key elements:

- desktop assessment
- field survey
- assessment of significance
- impact assessment
- management measures.

3.2 Study Area

The project extends north to south from Coolah to Wollar and east to west from Cassilis to Goolma. For the purposes of this paper, the study area was defined as a 1 km buffer around the construction area. In addition to capturing potential historic heritage items that may be directly impacted by the project, the establishment of this buffer allows for the identification of similar sites that may be affected by indirect or secondary impacts such as impacts to visual amenity.

3.3 Desktop assessment

The aim of the desktop assessment was to:

- Develop an understanding of the known and potential historic heritage values (built and archaeological) of the study area through literature review and analysis of relevant heritage registers and databases.
- Identify areas of known or potential heritage value for subsequent inspection termed “areas of interest” (AOI) to be investigated further through field survey and/or archival research. Once an AOI is found to possibly be of heritage value, it is referred to as a ‘potential heritage item’ or ‘potential heritage place’.
- Provide a context against which the significance of these values was assessed.

A three-stage process was used to fulfil these aims, comprising: register searches, analysis of historical mapping, and review of previous studies.

3.3.1 Heritage register and database searches

The following heritage registers and databases were searched to identify previously recorded heritage places within the study area for this assessment:

- Commonwealth: World Heritage List; National Heritage List; Commonwealth Heritage List
- State: NSW State Heritage Register; NSW State Heritage Inventory; S170 heritage registers

- Local: *Dubbo Regional Local Environmental Plan 2022 (DRLEP 2022)*; *Mid-Western Regional Local Environmental Plan 2012 (MRLEP 2012)*; *Warrumbungle Local Environmental Plan 2013 (WLEP 2013)*; *Upper Hunter Local Environmental Plan 2013 (UHLEP 2013)*
- Non-Statutory: Register of the National Estate; National Trust Register.

3.3.2 Analysis of historical mapping

Analysis of historical maps and other images was undertaken to develop an appreciation of the creation and evolution of the historical landscape of the study area. These included:

- cadastral and parish mapping (showing property owners, reserves, roads and other infrastructure)
- topographic mapping (showing the location of structures, types of landforms, the extent of vegetation clearance and the alignment of roads and railway)
- aerial imagery (showing the location of structures, the extent of vegetation clearance and the alignment of roads and railway).

Early topographic and parish maps and crown plans for the study area were georeferenced using GIS software and analysed for early structures and other points of interest (such as named locations), enabling an accurate understanding of the location of the study area relative to elements of the historical landscape that may hint to previous land use (i.e. Sheepdip Creek) (Australian Section Imperial General Staff 1927, 1928). Where possible, these identified sites were cross referenced with early cadastral mapping (Surveyor General's Office 1888, 1890, 1925) and 1960s aerial photography. This facilitated the identification of previously unrecorded heritage items, such as early structures which are no longer standing, but which have the potential for archaeological deposits to be present.

3.3.3 Literature review of previous studies

A review was undertaken of previous heritage studies, as well as general histories of relevance to the study area. This included but not limited to:

- Cameron, Roy, Kathielyn Job, and Coolah Council (1993), *Around the Black Stump: The History of Coolah, Dunedoo, Mendooran Areas*. Coolah, NSW: Council of the Shire of Coolah
- EMM Consulting Pty Ltd (2012), *Historic Heritage Assessment: Cobbora Coal Project*. Unpublished report for Cobbora Holding Company Pty Limited
- Heritage Management Consultants Pty Ltd (2004), *Wilpinjong Coal Project: Historical Heritage Impact Assessment*. Unpublished report for Wilpinjong Coal Pty Ltd
- Maxwell, Eileen (1998), *Written in Gold: The Story of Gulgong*. Country View Graphics
- P.A. Duggan Architect and Heritage Consultant (2019a), *Warrumbungle Shire Community Based Heritage Study: Heritage Inventory Sheets - Craboon, Dapper, Denison Town, Dunedoo, Goolhi, Goorianawa, Kenebri, Laheys Creek, and Leadville. Vol. 3*. Unpublished report for Warrumbungle Shire Council
- Veritas Service Archaeology and History (2006), *Moolarben Coal Project Historical Heritage Assessment*. Unpublished report for Moolarben Coal Project
- Watts, Anne, W. A. Graham, and Debbie Robinson (1993), *Tales of Tucklan and the Stringy Bark Goldfields*. Mudgee: Mudgee Guardian
- OzArk Environmental & Heritage Pty Ltd. (2022a) *Birriwa Solar and Battery Project Aboriginal Cultural Heritage Assessment Report*. Unpublished report for ACEN Australia Pty Ltd

- New South Wales Archaeology Pty Ltd. (2014) Liverpool Range Wind Farm Stage 1 Aboriginal Cultural Heritage Assessment Report
- OzArk Environmental & Heritage Pty Ltd. (2022b) *Valley of the Winds Wind Farm Heritage Impact Statement*. Unpublished report prepared for UPC-AC Renewables Australia Pty Ltd.

The information garnered from these sources was used to identify potential heritage places of relevance to the study area and generate an overview of the history of the area, providing context against which heritage values were assessed.

3.4 Historical heritage field survey

A field survey to assess the historical heritage landscape was conducted in three mobilisations between September 2022 and April 2023. The purpose of the historical heritage field survey was to:

- validate the findings of the desktop assessment
- record and document the heritage values of items within the construction area potentially impacted by the project
- record features of interest that may have historical heritage significance and would therefore require management before construction.

The historical heritage survey was conducted on three separate occasions:

- 19–23 September 2022 (Luke Kirkwood)
- 17–21 October 2022 (Luke Kirkwood and Samuel Plummer)
- 5–6 April 2023 (Luke Kirkwood).

The field survey targeted areas of interest and potential heritage items and potential heritage places, identified through desktop assessment, with the aim of validating potential heritage values within and adjacent to the construction area. Potential heritage items, potential heritage places and listed historical heritage item locations and their details were recorded with digital tablets using site recording forms as part of ArcGIS Field Maps (Esri) software. The digital tablets had a location accuracy of up to ± 3 m which is similar to hand-held non-differential GPS units (~ 5 m). The digital forms allowed for a site's location, details and representative photographs to be linked together, which avoids potential post-fieldwork issues around data integrity.

The survey was conducted across the construction area as illustrated in Table 5.3.

Of the 26 historical heritage items (comprising a combination of listed heritage items, and potential heritage items and places) identified as occurring within the construction area, 20 were inspected as part of the field survey. The six items that were not inspected as part of field investigations was a result of inaccessibility due to land access restrictions.

The field survey involved the inspection of standing structures, surface and above-ground archaeological remains and an assessment of the potential for archaeological material. The field survey involved inspection both on foot and via vehicle, depending on property access and ground visibility constraints.

Property access and severe weather events (localised flooding) were a continuing constraint during the historic heritage assessment; therefore 100% coverage was not possible. To mitigate these constraints, information was also provided by the field team for the Aboriginal Cultural Heritage Assessment (EMM Consulting Pty Ltd 2023). The results of the field surveys are documented in Appendix A.

3.5 Non-intrusive Subsurface Investigations

Following consultation with local stakeholders at Tallawang, two potential cemetery areas were identified within the construction area, associated with the Tallawang Union Church (CWO-22-HH09b) and the Tallawang Catholic Church (CWO-22-HH09c) on the corner of Tucklan Road and Spir Road. Limited information was available to confirm the specific location of these cemeteries and as such, a program of non-intrusive subsurface investigation using Ground Penetrating Radar (GPR) and Magnetometry was initiated with the aim of identifying these potential locations.

Fieldwork was undertaken on 22 May and 8 July 2023. Where required, grass was slashed to an appropriate height to allow for accurate measurements prior to the second mobilisation. A ferrous metal detector was initially used at the both sites to help identify the presence of metals underground within the investigation areas. GPR data collection was then performed across each cemetery location using an IDS GeoRadar Stream DP multichannel GPR array unit, which allows for higher resolution output and can pick up features to a depth of approximately 2.5 m below the surface. The software program used to process the GPR field data was IQ Maps a software package designed specifically for processing and interpretation of data from IDS Stream DP Unit.

Results from the non-intrusive subsurface investigations are still pending while processing of the data occurs. This assessment will be updated following receipt of these results.

3.6 Significance assessment

In NSW, historical value is ascribed to buildings, places, archaeological sites and landscapes modified in the Australian historical period for purposes other than traditional Aboriginal use. The assessment of heritage significance is based on the *Burra Charter* (ICOMOS (Australia) 2013) and further expanded upon in the *Assessing Heritage Significance* (Department of Planning and Environment (NSW) 2023) which identifies seven criteria to identify and assess heritage values (Aboriginal, historic and natural) that apply when considering if an item is of state or local heritage significance (Table 3.1).

This guidelines also identifies the heritage gradings for which items (or features or components) that were recorded on site have been assessed against, and which provide context for each individual item's contribution to the cultural landscape. The result of the assessments of significance may determine that an individual component does not meet the threshold for local or State significance as an individual item, but that it does contribute to the significance of the cultural landscape.

While the focus of the research presented in this paper has been on the items in, or close to, the construction area, the assessment of significance is primarily concerned with items within the study area. The assessment of the potential for relics to be present is hypothetical as their existence as intact and substantial sites is predicted at this stage and not confirmed.

Table 3.1 NSW significance criteria

Criterion	Description
Criterion A – Historical	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).
Criterion B – Association	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).
Criterion C – Aesthetic	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).
Criterion D – Social	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.

Table 3.1 NSW significance criteria

Criterion	Description
Criterion E – Research	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).
Criterion F – Rarity	An item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history (or the cultural or natural history of the local area).
Criterion G – Representative	An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places, or cultural or natural environments.

These criteria may be fulfilled at different significance thresholds, ranging from World to Local, depending on the importance of the place, and the contribution it makes to our understanding of the past. Descriptions of the applicable significance thresholds are provided in Table 3.2.

Table 3.2 Levels of cultural heritage significance

Significance	Description
World	Heritage values contribute to our understanding of the pattern and evolution of world history and heritage and the place is considered to be of outstanding value to humanity.
National	Heritage values make an outstanding contribution to our understanding of the pattern and evolution of Australia’s history and heritage.
State	Heritage values contribute to our understanding of the wider pattern and evolution of New South Wales history and heritage.
Local	Heritage values contribute to our understanding of the pattern and evolution of local history and heritage.

3.7 Impact assessment

3.7.1 Impacts and magnitude of change

Impacts on heritage items can be divided into two main types: direct and indirect. Direct impacts occur if a heritage place or site would be physically impacted by development with intent. Such impacts include the demolition or substantial alteration of a building, or the disturbance of an archaeological site.

Indirect impacts are those that alter the surrounding physical environment in such a way that a heritage place or site is affected. Indirect impacts, as defined by ICOMOS (2011), are secondary consequence of construction or operation of the development, and can result in physical loss or changes to the setting of an asset beyond the development footprint. This can include vibration from construction activities or associated vehicle movements outside from a heritage item’s curtilage that are not specifically directed at a heritage item but occur incidentally to the item as a result of proximity.

The effects of direct or indirect impacts are measured in terms of the extent to which they alter the heritage values of a heritage place. This is represented as the ‘magnitude of change’ (refer Section 3.5). A discussion on management, mitigation, and use of the avoidance principle in the management of these sites is provided in Chapter 8.

It is acknowledged that a single item may be impacted both directly (mainly during construction activities) and indirectly (through multiple stages of the project beyond construction, (such as where the project would have a detrimental effect on the setting of a place resulting from visual impacts) as a result of the project..

For the purpose of this assessment, heritage items which have the potential to be both directly and indirectly impacted, were only listed as potentially directly impacted (as a worst case impact). The assessment may be updated during the response to submissions phase to identify any indirect impacts to those items already identified as potentially directly impacted.

3.7.2 Cultural Heritage Sensitivity Levels

The potential impacts on the heritage values are assessed using criteria developed from the Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS 2011), which provides a comprehensive method for assessing impacts at all types of heritage places.

Under ICOMOS guidelines, cultural heritage places can be of differing levels of importance, or significance: local, State, National and World (see Section 3.5) (Australia ICOMOS 2013). Places of local significance are important only to their immediate community, places of State significance to the wider region, and places of National significance to the country as a whole. Places of World significance are important to all of humanity, possessing one or more Outstanding Universal Values.

Places of differing heritage significance have differing sensitivity to impact. Places of World Heritage significance will be more vulnerable to change than a local heritage item and aspects of a World Heritage place that represent Outstanding Universal Values are the most sensitive of all. The differing significance of a place’s heritage values and their relative sensitivity to impact is summarised in Table 3.3.

Table 3.3 Levels of cultural heritage sensitivity (ICOMOS 2011)

Sensitivity	Justification	Status
Extreme	Attributes which convey Outstanding Universal Values of World Heritage Place.	Fulfils criteria for local, state, national and international listing.
Very High	Exceptional, rare or outstanding attributes demonstrating important themes in national or international history and heritage.	Fulfils criteria for local, state, national or potentially international listing.
High	Attributes demonstrating important themes in state history and heritage.	Fulfils criteria for local and state listing.
Moderate	Attributes demonstrating important themes in local history and heritage.	Fulfils criteria for local listing and may fulfil criteria for state listing.
Low	Attributes demonstrating minor themes in local history and heritage.	May fulfil criteria for local listing and does not fulfil criteria for state listing.
Negligible	Attributes that have no heritage significance.	Does not fulfil criteria for local or state listing.

3.7.3 Magnitude of Change

The degree of impact an activity will have on a heritage place is assessed in terms of the magnitude of change to the acknowledged heritage values of a place as summarised in Table 3.4. These impacts may be direct, such as the demolition of heritage buildings, or indirect, such as changes to the views or setting of a heritage place. In some cases, indirect impacts might also cause physical damage to a heritage place, such as excessive vibration causing structural damage, or excessive pollution causing damage to surfaces.

Table 3.4 Determining magnitude of change (ICOMOS 2011)

Magnitude	Example criteria
Major	Change to all or most significant aspects of the place, such that its heritage values are substantially reduced or destroyed.
Medium	Change to some significant aspects of the place, such that some of its heritage values are partially reduced.
Low	Minor change to significant aspects of the place, such that some of its heritage values are slightly reduced.
Negligible	Changes to insignificant aspects of the places, such that its heritage values are not reduced.
No Change	No change to heritage values.

The final assessment of the significance of impact on a heritage place is a factor of the cultural heritage sensitivity of the place, combined with the predicted magnitude of change, as outlined in the matrix provided in Table 3.5. A prediction of impact significance can be made both before and after the implementation of identified mitigation measures, allowing the efficacy of the measures to be assessed and revealing residual impacts that need to be taken into account.

Table 3.5 Estimating impact significance (ICOMOS 2011)

Significance of impact		Magnitude of change				
		Major	Medium	Low	Negligible	No change
Cultural heritage sensitivity	Extreme	Very large	Large/very large	Moderate/ large	Slight	Neutral
	Very high	Very large	Large/very large	Moderate/ large	Slight	Neutral
	High	Large/very large	Moderate/ large	Slight/ moderate	Slight	Neutral
	Moderate	Moderate/ large	Moderate	Slight	Neutral/ slight	Neutral
	Low	Slight/ moderate	Slight	Neutral/ slight	Neutral/ slight	Neutral
	Negligible	Slight	Neutral/ Slight	Neutral/ slight	Neutral	Neutral

4 History of the study area

4.1 Aboriginal ethnography

Information about the socio-cultural structure of Aboriginal society prior to European contact largely comes from historical ethnographic accounts made by colonial settlers. These accounts and observations were often made after significant social disruption due to disease and displacement. As a result, this information is often contentious, particularly in relation to language group boundaries. Therefore, it is likely that language group boundaries were far more diffuse than the arbitrary demarcations drawn by colonial observers – this is a consideration when reading the historical summary of the study area as it pertains to the contact period.

The study area is primarily associated with Wiradjuri people, however, this area sits at the boundary of the Gamilaroi (also Kamilaroi, Gomeroi and Gamilaraay; Tindale (1974) recorded over 30 spellings), and Wailwan (also Weilwan, Wayilwan) nations. Territories were marked by natural features in the landscape and Tindale (1974) records Wiradjuri Country covering an area of 127,000 km² between the Great Dividing range and Willandra Lakes region, with the northern boundary extending from beyond Mudgee and the southern boundary marked by the Murray River. The territory of the Gamilaroi to the north is estimated to cover 75,000 km² between Singleton to the Warrumbungle mountains, Quirindi and Nindigully in southern Queensland. Wailwan County to the west covers 13,000 km² from the Barwon River near Walgett to Coonamble in the south.

At the time of European settlement in the NSW Central Tablelands, Wiradjuri groups had established a regional network linking the Blue Mountains to the eastern coastal plains. Reports from European observers suggest that the pathways linking Wiradjuri groups socially and economically continued to be used throughout the first fifty years of European colonisation (Extent Heritage Advisors 2017:25). A detailed discussion of the Aboriginal history of the study area is provided in Technical Report 5: Aboriginal Cultural Heritage Assessment (EMM Consulting Pty Ltd 2023).

4.2 Colonial arrival

George Evans led the first European expedition into the Central Tablelands of New South Wales in 1813 (Former Mudgee Shire Heritage Committee 2004:70). Although the burgeoning colony was in desperate need of good agricultural land, Governor Macquarie kept strict control of the region west of the Blue Mountains, designating it Government land and only releasing grants to select individuals (Former Mudgee Shire Heritage Committee 2004:70). Governor Darling redefined the limits of the colony in 1820 and the Tablelands were open for free settlement (Kass 2003:40). Settlers had reached Mudgee by 1822 and in that year Henry Lawson led an expedition from Mudgee along the Upper reaches of the Goulbourn River (Niche Environment and Heritage Pty Ltd 2015:21). Alan Cunningham surveyed the Upper Goulbourn River the following year and noted the richness of the country (Niche Environment and Heritage Pty Ltd 2015:21).

William Lee was the first settler in the Upper Goulbourn River region occupying Bylong in the mid-1820s (Niche Environment and Heritage Pty Ltd 2015:21). Squatting runs were taken up over the study area through the late 1820s and 1830s with initial settlement focusing on reliable water sources (Kass 2003:40; Niche Environment and Heritage Pty Ltd 2015). Around the study area, squatters cleared the land for grazing with cattle. The climate, rugged landscape, and prevalence of predators in the region made cattle the most cost-effective stock in the region (Kass 2001:8). A wool boom in the late 1840s, however, led to the ascendancy of sheep farming in the Central Tablelands (Kass 2003:40). Villages were surveyed and were developed within the large squatting runs through the 1840s, and by the 1850s the majority of suitable grazing land had been claimed (Former Mudgee Shire Heritage Committee 2004:71).

The Gold Rush of the 1850s boosted the economic growth of the Central Tablelands as the increased need for beef shifted cattle routes between northern New South Wales and Victoria through Dubbo (Kass 2001:10). Roads were also officially surveyed and constructed during this period (Kass 2001:13). Settlement growth in the region, however, was slow until the 1861 introduction of the *Crown Lands Acts 1861 (NSW)*, also known as the Robertson Land Acts, which allowed for the subdivision of large squatting runs and permitted any person (free selectors) to purchase up to 320 acres (129.5 hectares (ha)) on the condition of payment of a deposit and living on the land for three years (Niche Environment and Heritage Pty Ltd 2015:21).

Pastoralism and small-scale agriculture continued as the primary industries in the Central Tableland until the coming of the railway in the 1870s and 1880s (Monitor Heritage Consultants 2019:58). A railway line was constructed from Lithgow reaching Bathurst in 1876, Wellington the following year, and arriving in Mudgee in 1884 (Former Mudgee Shire Heritage Committee 2004:71). The line was not extended to smaller townships, such as Gulgong and Dunedoo until c.1910 (Former Mudgee Shire Heritage Committee 2004:71). The coming of the railway not only offered a cheap transport route for farmers of the Central Tablelands, but also coincided with the collapse of the wheat industry east of the Great Dividing Range leaving a gap in the market that needed to be filled (Kass 2001:10). As such, wheat became a primary industry in the region over the late nineteenth century with flour mills and storage silos constructed in villages and townships (Kass 2001:24; Monitor Heritage Consultants 2019:58). Butter companies were also established through western New South Wales from 1888 and dairying was an important industry around the study area (Heritage Management Consultants Pty Ltd 2004:G-8).

In the early twentieth century families at Dripstone near Wellington, began producing fruit for the Sydney market (Kass 2001:24). Moreover, coal and shale seams had been discovered in the region at this time. The intermittent mining of coal began in Ulan, to the north, in 1930 and shale deposits were mined on Barigan Station from 1932 (Niche Environment and Heritage Pty Ltd 2015:23). Shale seams were also mined at Wollar/Wilpinjong between 1929 to 1933. Mining and pastoral pursuits continue to operate as important industries in the area today.

4.3 Contact history

The first European explorations of the Central Tablelands occurred from 1813 but the Wiradjuri had already felt the effects of colonisation (Go Green Services 2002:40). Oxley and Cunningham recorded their friendly interactions with Aboriginal groups though the Wellington Valley noting all were familiar with steel hatchets although interactions led the explorers to conclude that only some groups had previous knowledge of white men (OzArk Environmental & Heritage Management 2007:29–30).

Disease and warfare, most notably the massacres between 1824 and 1826 known as the Bathurst War, rapidly depleted Wiradjuri numbers (Former Mudgee Shire Heritage Committee 2004, 69; Gapps, 2022; Niche Environment and Heritage Pty Ltd 2015, 21). Settler/Aboriginal violence, however, was not contained to Bathurst. In early September 1824, William Cox's overseer, two stockmen and an Aboriginal guide killed sixteen Aboriginal men at Mudgee, approximately 30 km south of the study area (Ryan et al. 2022). An Aboriginal Mission Station was established within the decommissioned Wellington convict settlement by the Church Missionary Society in 1831 (Kass 2001:6). Missionaries William Watson and James Gunther, who later established a competing Mission at Nanima Reserve, attempted to convert Wellington Wiradjuri to Christianity focusing on divorcing children from the influence of their parents and elders (Kass 2001:6). Many Wiradjuri exploited the mission for food and tobacco but continued to practice traditional lifeways as long as they were able (Kass 2001:6).

Intensification of settlement throughout the study area over the 1830s and 1840s further pushed Wiradjuri from their traditional lands restricting access to traditional water and food sources leading to a reliance on European handouts for survival (Kass 2001:6, 2003:10). By the 1840s many Wiradjuri family groups and communities had attached themselves to “friendly” stations offering a reliable pool of workers in return for access to Country, which in turn allowed the continuation of traditional lifeways within the European world (Monitor Heritage Consultants 2019:20). In 1869 a correspondent noted the prevalence of Aboriginal workers near Dubbo:

On the stations to which I am alluding, there is no European—no white man—either as shepherd or stockman. The blacks are employed even at sheep washing. Their food consists only of about two ozs. of tea, a little sugar, and about six lbs of flour weekly. They find their own beef somehow (Empire 1869:2).

The subdivision of large stations and influx of free selectors (persons involved in the selection of land for agricultural purposes under the Robertson Land Acts) in the 1870s eradicated these camps (Kass 2001:6).

From 1883, Wiradjuri camps were broken up by the Aborigines Protection Board and people were forcibly removed from their country to reserves in Eugowra (AR 9386, from 1889), Forbes (AR 43462/3, 1909-1915), Wellington (AR 45426/7 and AR 87975, from 1910), or Spring Flat (AR 80144, 1957-1964) (Extent Heritage Advisors 2017:30). These reserves were segregated on the outskirts of townships (Kass 2003:11). A small community of Aboriginal people, including families of police trackers, were living at the Wollar Police Paddock in 1900 and are associated with the events of Jimmy and Joe Governor, and Jacky Underwood (Foster 2019:307).

The Governor story is relatively well known and crosses through this general region. Jimmy, an Aboriginal man, committed the murders of a family in Breelong in mid-1900, and went on the run with his brother (Joe) and Jack Underwood (Moore and Williams 2001). The last individuals to be identified as ‘outlaws’ in NSW, over a six-month period, the group gained public attention and committed several more crimes before being captured or killed in late 1900. Of relevance to the study area is both the relationship that Jimmy and Joe had to Wollar, with several of their activities occurring in the general area (along Goulbourn River), and a number of their family members living in or near the township. These family members were taken into custody by the police during the events to avoid an insurrection, initially housed at Wollar, and then moved to Mudgee, before ultimately transported to a mission in Brewarrina, which gained considerable attention at the time (Niche Environment and Heritage Pty Ltd 2015). As such, it is likely that both post-contact camp sites, and buildings or locales within or near the Wollar township have a relationship with these events (e.g. Joe Governor attended Wollar School; and the police buildings are frequently mentioned as an unofficial Aboriginal reserve, families living at the police paddock, east of the Wollar River), and which are likely of regional and potentially national importance. A detailed review of Joe and Jimmy Governor history is provided in the CWO-REZ Technical Report 5: Aboriginal Cultural Heritage Assessment (EMM Consulting Pty Ltd 2023).

By the early 1900s many reports from European observers noted the population of the Wiradjuri had been greatly reduced and traditional activities were no longer practiced (Kass 2003:10; Mudgee Guardian and North-Western Representative 1904:22; OzArk Environmental & Heritage Management 2007:32). Through the early to mid-twentieth century Wiradjuri children were removed from their families and residents of reserves were under constant government surveillance (Kass 2003:11). After the abandonment of segregationist policies in the 1970s and 1980s Wiradjuri communities have fuelled a cultural renaissance built on the legacies of the past (Kass 2003:10–11).

4.4 Regional History Summaries

4.4.1 Wollar, Wilpinjong, Moolarben and Ulan

The region was first settled in the mid-1820s when William Lee took up the Bylong Run (Niche Environment and Heritage Pty Ltd 2020:12). Soon after, prominent emancipist Robert Fitzgerald established Wollar run (Niche Environment and Heritage Pty Ltd 2020:12–13). Additional pastoral runs were taken up in the area from 1840; Woollara was taken up by George Bloodsworth in the 1840s; Wilpinjong acquired by John Terry Hughes in the 1840s; John McDonald took up land along Ulan Creek in 1850 and William Robinson purchased a small plot of land around Moolarben and Lagoon Creeks in 1855 (EMM Consulting Pty Ltd 2013:8; Niche Environment and Heritage Pty Ltd 2020:12–13). Settlement boomed after the *Robinson Land Acts* of 1861 opened the region to free selectors (Niche Environment and Heritage Pty Ltd 2020:13). The village of Wollar was established from at least 1867 and was officially declared a village in 1885 and the village of Ulan was gazetted in 1897 (EMM Consulting Pty Ltd 2013:8). Dairying became the primary industry of the region in the later decades of the nineteenth century and coal and shale mining began in Wilpinjong from 1899 (Heritage Management Consultants Pty Ltd 2004:G8). Mining and pastoralism continue to be the prominent industries in the area.

A notable event occurred in Wollar in 1900 as the town was flooded by police, bushman and newspaper journalists on the hunt for murderer Jimmy Governor and his brother Joe (Foster 2019:306–7). It was believed the brothers would come to the town as they had relatives residing in the Aboriginal camp on the Riverbank (Foster 2019:307). The local Aboriginal people were moved to the village hall and lock-up and kept under close surveillance between 23 July until 22 August (Foster 2019:308). All but four members of the Wollar Aboriginal community were transferred to Brewarrina Aboriginal mission in September (Foster 2019:319). Jimmy was captured on 27 October 1900 (Foster 2019:318).

4.4.2 Dalkeith and Cassilis

The town of Cassilis, originally known as Dalkeith, was established c.1834 as a private town to serve the Dalkeith and Cassilis pastoral runs as well as the surrounding area (Arnold Wolthers Architects 1996:2–4). Dalkeith run began as 1224 acres (495 ha) taken up by Donald Macintyre in 1834 and transferred to Robert Scott in 1835 (Christo Aitken & Associates 2005:9). Cassilis run was acquired John Turner Clarke in the early 1830s and was purchased by Alexander Busby in 1835 (Christo Aitken & Associates 2005:8). Landholdings of both stations were heavily expanded over their tenure and from the 1840s the Busby family also held a portion of Dalkeith.

Despite the presence of a courthouse, watchhouse and post office in the town from 1836, occupation was slow due to landholder reluctance to release land, indecision about where to place the Government centre in the region, and the rise of Merriwa as a commercial centre in the mid-nineteenth century (Arnold Wolthers Architects 1996:2). Nevertheless, Cassilis was a key stop on the transport route between Coonabarabran and Sydney (P.A. Duggan Architect and Heritage Consultant 2019a). It is said that bushranger Captain Thunderbolt (F. W. Ward) robbed the norther mail at Cassilis in 1869 (P.A. Duggan Architect and Heritage Consultant 2019b).

4.4.3 Uarbry, Cainbil and Turill

The Uarbry locality had been named by 1833 when Surveyor Robert Dixon stopped in the area to acquire a native guide on the way to Bathurst (P.A. Duggan Architect and Heritage Consultant 2019b). Uarbry village was surveyed in 1868 (P.A. Duggan Architect and Heritage Consultant 2019b). The village was initially constructed on the Talbragar River flood plain but was moved to its current position a few years later (Coolah NSW 2018). By the late nineteenth century Uarbry village was serviced by a pub, post office and schools and the community had established a tennis and cricket club (Coolah NSW 2018; P.A. Duggan Architect and Heritage Consultant 2019b). A school and union church were also established at Turill to the south in the late nineteenth century (Churches Australia 2020; NSW Government n.d.). The Uarbry region was heavily impacted by fire in 2017 (Zhou 2017).

4.4.4 Merotherie, Birriwa and Tucklan

For a brief period in the 1890s Tucklan was a thriving town of 3,000 people (Watts et al. 1993:78). This was due to small finds of gold in the 1890s which sparked a rush of people to the area. Tucklan was serviced by two inns, a blacksmith, a butcher and a bakery. The goldfields were abandoned around 1902 and the town declined. The Lands Department offered former miners 40 acre blocks and encouraged them to stay in the district and build houses on the land (Watts et al. 1993). It is unknown how many former miners took up this offer.

4.4.5 Tallawang, Barneys Reef and Puggoon

The first settlers in the Tallawang region were Henry and George Cox, who established Guntawang run on the Cudgegong River in 1822 (Cremin 2002:1). The run was taken over by Edwin and George Rouse on behalf of their father Richard in 1825 and the Rouse family expanded their landholdings claiming various portions of land north of the River in the vicinity of Tallawang (Lenehan 1967; New South Wales Government Gazette 1841:903). A W. Mears is also said to have taken up land at Tallawang later selling his property to Mr M. Russell (Kennedy 1913:13). Farming families moved into the region after the passing of the 1861 *Robertson Lands Acts* and land was cleared for pastoral as well as wheat growing purposes (Kennedy 1913:13). In 1870 payable gold was discovered at Red Hill near Gulgong and then at Tallawang Creek leading to Tallawang, Barneys Reef and Puggoon to be declared part of the Gulgong goldfield (Cremin 2002:5; *The Empire* 1870:2). The rush was over by c.1881 and a number of miners decided to establish farms in the area (Kennedy 1913:13). Iron-ore mining occurred at Tallawang over the twentieth century and Puggoon became known for its kaolin clay (*Mudgee Guardian and North-Western Representative* 1939:13, 1952:16).

4.4.6 Laheys Creek, Dapper and Avondale

Laheys Creek was established by a series of pastoral selections in the late nineteenth century (Cameron et al. 1993:329). It is located along the original Guntawang to Mendooran road which was an important coach, wagon and bullock route. Laheys Creek, named after former convict Michael Lahey, has an interesting connection to the selection of land for the township of Mudgee. Michael Lahey was instrumental in suggesting the present day location of Mudgee rather than the flood prone land near the Cudgegong first selected by Surveyor Lewis (Cameron et al. 1993). Lahey also advised the Rouse brothers to take up land near Guntawang.

Dapper Homestead (CWO-22-HH02) and Dapper Hut and Shed (CWO-22-HH03) are on land, the *Woolloowoolonly Run*, that was acquired by Edwin Rouse in 1843 (Government Gazette in *The Sydney Morning Herald*, Wed 7 Nov 1849, p.3). A record in the *NSW Government Gazette* (Fri 9 Aug 1861) shows a transfer of Woolloowoolonly to James Boyle Falconer, then to Catherine Milligan Falconer (his widow) in 1875 (*NSW Government Gazette* Tue 30 Nov 1875, p. 3906). The *NSW Government Gazette* (Fri 2 Dec 1881, p.6232) notes that the lease of the run is due for the annual payment by CM Falconer. It is between 1886 and 1900 that the pastoral run of Woolloowoolonly was defaulted on and the property was forfeited by the family.

A relevant item from the research is a note of Catherin Milligan's (of *Woolloowoolonly* [sic]) death in 1869, which names her daughter, Elizabeth Mary (*NSW Government Gazette*, Fri 31 Dec 1869; Ancestry.com) and the place of burial as Lahey's Creek Cemetery. Nevertheless, the pastoral run of *Woolloowoolonly* (also *Woolloowoolonly* and *Woolloowoolonly*) in the District of Bligh existed at one point and disappeared from the records after 1900.

5 Existing environment

5.1 Desktop assessment

The desktop assessment identified two locally listed items (Section 5.1.1) and 21 potential heritage items (Section 5.1.2) from a review of historic documentation (previous heritage reports, historic mapping, historic aerals).

5.1.1 Heritage Registers

The study area is in a landscape that retains evidence of the Australian colonial period to the present day. Gazetted heritage items, that is items formally listed on a statutory instrument, occur in the Mid-Western local government area. To establish an understanding of the potential heritage values within the study area (Section 3.2), a wider review of listed heritage values was undertaken for the local region.

There are 22 previously listed historical heritage items within 5 km of the study area. These are of direct relevance to the project in developing an understanding of the nature and character of potential heritage items that may exist within the construction area. The listed heritage items within 5 km of the study area are dominated by residential and rural properties established in the region over the last 250 years, and with a focus on small urban villages such as at Cassilis, Coolah, Wollar and Gulgong. There is frequent discussion in previous studies to buildings associated with government administration (e.g. police stations, court houses) and ecclesiastical activities (e.g. cemeteries and churches), as well as residential and commercial buildings found in these locales.

There are two previously listed items of local historical heritage within the study area (defined as a 1 km buffer around the construction area); the Goulburn River National Park (LEP #1994), which is partially intersected by the study area at its southernmost extent between Ulan and Wollar, and Wandoona Homestead (LEP #1996) at Wollar (Table 5.1). There are no items within the study area previously listed on the World Heritage List, National Heritage List, Commonwealth Heritage List, State Heritage Register, State Heritage Inventory and Section 170 Registers.

It should be noted that parts of the Goulburn River National Park are being considered for inclusion on the National Heritage List (NHL: 105696 – Nominated Place) as part of an extension to the Greater Blue Mountains Area (World Heritage List – WHL: 105127 and NHL: 105999). But at the time of writing, this has yet to occur. The two gazetted heritage items within the study area are located in the Mid-Western Regional LGA as shown in Table 5.1 and Figure 5.1)

Table 5.1 Listed historical heritage items in the study area

Place of Listing	Item Name	Item Number	Suburb	Comment
Mid-Western Regional LEP	Goulburn River National Park	1994	Ulan	The project would be refined so that the proposed transmission line easement avoids direct impacts to the national park.
Mid-Western Regional LEP	Wandoona Homestead	1996	Wollar	The spatial data provided by the Department of Planning and Environment erroneously includes two heritage items in the one location. The second item “Homestead” (1367) is actually located outside of the study area to the east of the Wollar Substation.

5.1.2 Historical mapping review

Early topographic and parish maps and crown plans for the study area were georeferenced and analysed for early structures and other points of interest such as named locations that may hint to previous land use (i.e. Sheep dip Creek) (Australian Section Imperial General Staff 1927, 1928). Where possible, these identified heritage items were cross referenced with early cadastral mapping (Surveyor General's Office 1888, 1890, 1925) and 1960s aerial photography. Based on a review of historical aerial mapping, 21 potential heritage items were identified within the study area (Table 5.2) (in addition to the two local heritage listed items). Two of the 21 potential heritage items (Laheys Creek Archaeological Site and Tallawang Public School and Churches) are broken down further into sub-areas either by lot or area of activity. This was done so as to recognise that the management of these potential heritage items are not in isolation to the management measures at adjacent heritage items.

Table 5.2 Potential heritage items in the study area

ID	Heritage Item Name	Lot/Section/Plan	Reasoning	Source
CWO-22-HH01	Dapper homestead group	16//DP754305	Aerial imagery shows a farm homestead complex of standing structures. 1876 Crown Plan 519-1566 indicates hut in same location.	SixNSW Crown plan (1876)
CWO-22-HH02	Dapper hut and shed	15//DP754305	1876 Crown Plan 528-1566 shows a hut and a shed in this location. No structures in modern aerial, potential archaeological site.	Crown plan (1876)
CWO-22-HH03	Avondale house	31//DP754305	1878 Crown Plan 742-1566 shows a house near Dapper Road. No structures in modern aerial, potential archaeological site.	Crown plan (1878)
CWO-22-HH04	Avondale homestead (current)	31//DP754302	Aerial imagery and spatial data identifies the Avondale homestead.	SixNSW
CWO-22-HH05a	Laheys Creek archaeological site (House and Hut)	37//DP754305	1866 Crown Plan 65-1566 shows a house, hut and stockyards. No structures in modern aerial, potential archaeological site.	Warrumbungle Local Heritage Study (2019a) Crown plan (1866)
CWO-22-HH05b	Laheys Creek archaeological site (Stockyards)	1//DP754305 5//DP754305	1866 Crown Plan 65-1566 shows a house, hut and stockyards. No structures in modern aerial, potential archaeological site.	Crown plan (1866)
CWO-22-HH06	Laheys Creek Cemetery	16//DP754305	Cemetery of 40 people with only four standing headstones. Earliest dated headstone is a large sandstone obelisk with the date 12 December 1862.	Warrumbungle Local Heritage Study (2019a)
CWO-22-HH07	Brampton Park homestead group	25//DP754334	Early 20th century homestead complex.	Historical aerial photograph
CWO-22-HH08	Spir Road cottage	27//DP750764	Early 20th cottage located off Spir Road.	Historical aerial photograph

Table 5.2 Potential heritage items in the study area

ID	Heritage Item Name	Lot/Section/Plan	Reasoning	Source
CWO-22-HH09a	Tallawang (Upper) Public School	31//DP750764	School site from 1881 to 1926 and then 1930 to 1941. School residence relocated to Tucklan. No structures in modern aerial, potential archaeological site.	Gulgong Historical Society
CWO-22-HH09b	Tallawang Union Church	120//DP750764	Early 20th century church. No structures in modern aerial, potential archaeological site.	Gulgong Historical Society
CWO-22-HH09c	Tallawang Catholic Churches	103//DP750764	Early 20th century churches. No structures in modern aerial, potential archaeological site.	Gulgong Historical Society
CWO-22-HH10	Tallawang Creek Archaeological Site 01	74//DP750762	Early 20th century structure. No structures in modern aerial, potential archaeological site.	Historical aerial photograph
CWO-22-HH11	Tallawang Creek Archaeological Site 02	50//DP457016	Three structures on the southern bank of Tallawang Creek. No structures in modern aerial, potential archaeological site.	Historical aerial photograph
CWO-22-HH12	Puggoon Rail Siding	193//DP750762	Railway siding. No structures in modern aerial, potential archaeological site.	Parish map
CWO-22-HH13	Merotherie archaeological site	16//DP754305	Example artefacts identified from earlier heritage survey include Manganese bottle, Irish moss syrup. Champagne bottle neck. Early 1930s possibly earlier.	EMM Aboriginal heritage field survey (2023)
CWO-22-HH14	Cope Road archaeological site	38//DP750773 39//DP750773	A structure (likely a house) to the south of Cope Road. No structures in modern aerial, potential archaeological site	Historical aerial photograph
CWO-22-HH15	Moolarben Archaeological Site	11//DP1246858	A homestead group within Moolarben Coal Mine lease No structures in modern aerial, potential archaeological site	Historical aerial photograph
CWO-22-HH16	MCP Site 10	30//DP755454	Original residence described as a gunyah on 1884 Crown Plan. 2004 historic survey identified the site as now consists of a few posts and exotic trees, i.e. white cedar, plums, fig and apricot.	Crown Plan (1884) Wilpinjong Mine Historic Heritage Assessment (2004)
CWO-22-HH17	Mittaville Archaeological Site	100//DP755454	Mid 1960s historic aerial show an area of historic features (possible stockyards/house site) No structures in modern aerial, potential archaeological site.	Historical aerial photograph

Table 5.2 Potential heritage items in the study area

ID	Heritage Item Name	Lot/Section/Plan	Reasoning	Source
CWO-22-HH18	Road Embankment (Site 4)	26//DP755425	stone road embankment on Wilpinjong Road identified as demonstrating local heritage importance.	Wilpinjong Mine Historic Heritage Assessment (2004)
CWO-22-HH19	Pine Park Woolshed	151//DP755425	1930s 'depot' woolshed identified as demonstrating local heritage importance.	Wilpinjong Mine Historic Heritage Assessment (2004)
CWO-22-HH20	Tallawang Creek Archaeological Site 03	50//DP457016	1882 Crown Plan 1678-1570 shows a house in this location. No structures in modern aerial, potential archaeological site.	Crown plan (1882)
CWO-22-HH21	MCP Site 12	2//DP1143354	Rural property first selected in 1912 consists of a house, sheds, machinery and exotic trees identified as demonstrating local heritage importance.	Moolarben Coal Project – Historical Heritage Assessment (2006)

5.2 Field assessment results

A summary of the field assessment is provided in Table 5.3. The detailed survey results including photographs, locations, item-specific histories, and significance assessments are provided in Appendix A.

Table 5.3 Areas of interest inspection summary

ID	Heritage item name	Inspection summary	Within construction area
CWO-22-HH01	Dapper homestead group	Farm homestead complex of standing structures (workers cottages, shearing shed, chimneys etc.) and related historic archaeological surface scatter. Potential subsurface archaeological deposits.	No
CWO-22-HH02	Dapper hut and shed	No surface evidence of surface archaeological remains. Low potential for subsurface archaeological deposits.	No
CWO-22-HH03	Avondale house	No surface evidence of archaeological remains. Low potential for subsurface archaeological deposits.	Yes
CWO-22-HH04	Avondale homestead (current)	Inspected from the road, the structure is a single storey, multi-room brick structure of early 20 th century construction. Oral evidence from the landowner was that the structure is ~100 year old. The garden around the house is well maintained and consists of mature native vegetation and introduced species	No
CWO-22-HH05a	Laheys Creek archaeological site (House and Hut)	Two surface heaps of rubble of dressed and rough stones and metal items including machinery. Potential subsurface archaeological deposits.	Yes
CWO-22-HH05b	Laheys Creek archaeological site (Stockyards)	No surface evidence of archaeological remains. Low potential for subsurface archaeological deposits.	Yes

Table 5.3 Areas of interest inspection summary

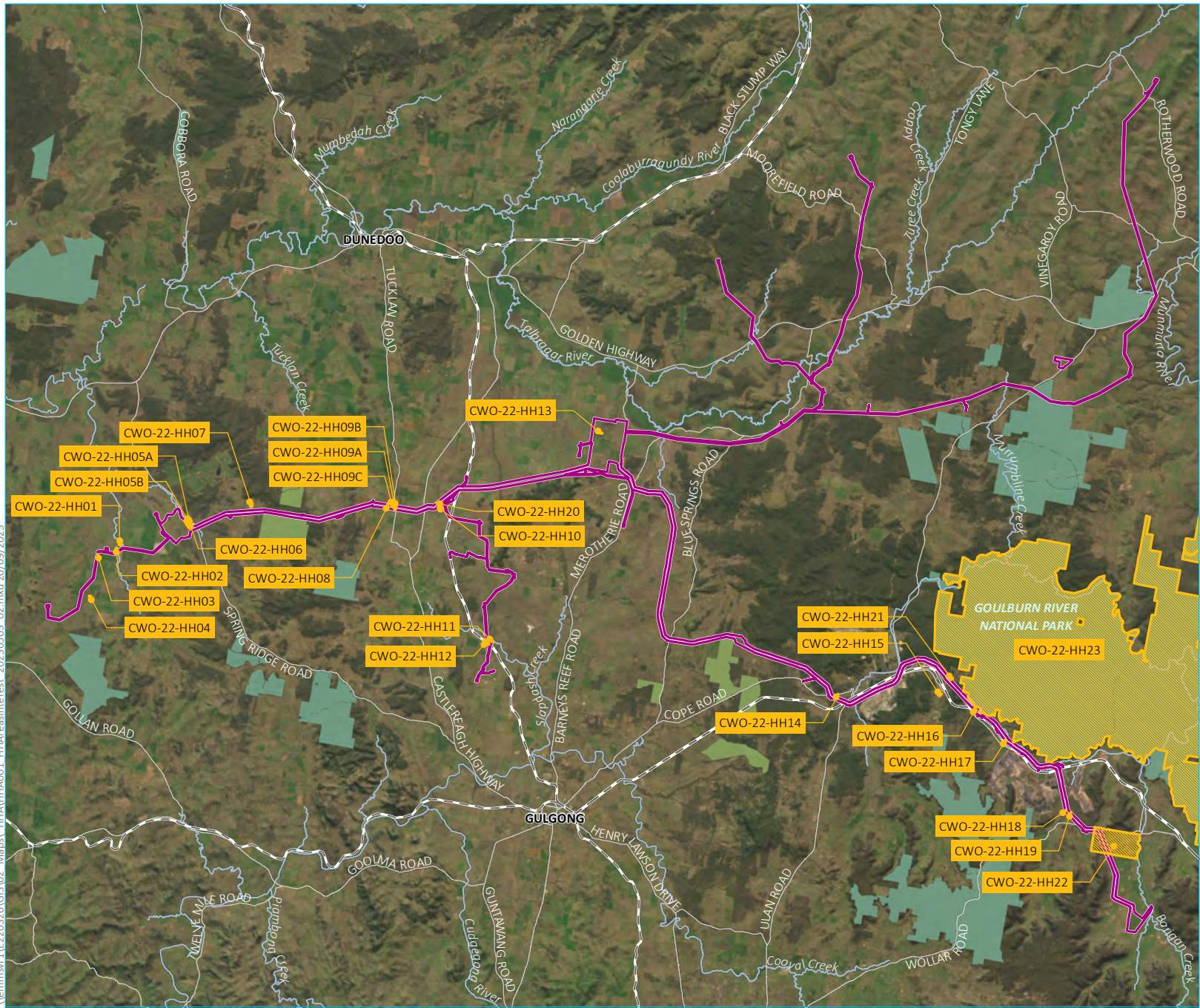
ID	Heritage item name	Inspection summary	Within construction area
CWO-22-HH06	Laheys Creek Cemetery	Confirmation of cemetery of four standing headstones. Earliest dated headstone is a large sandstone obelisk with the date 12 December 1862.	Yes
CWO-22-HH07	Brampton Park homestead group	Inspected from the road, the structure is a reclad fibro multi-room homestead of early 20 th century construction. The complex consists of a house, sheep stockyards, water tank and corrugated tin sheds. The homestead does not appear to have a garden but is surrounded by mature native and introduced vegetation species.	No
CWO-22-HH08	Spir Road cottage	Late 19 th century modified cottage located off Spir Road. Site consists of several elements: cottage, outhouse, shed/garage. The cottage is constructed in two distinct parts that create an 'L' shaped footprint. The east portion is original and consists of vertical slabs with timber 12-pane sash windows. The slabs have been painted on the exterior, but the interior demonstrates the historical newspaper commonly used to wallpaper over the gaps between the boards. A brick chimney sits on the west elevation. Appended to the south-east corner is a mid-20 th century asbestos board extension with timber framed casement windows.	Yes
CWO-22-HH09a	Tallawang (Upper) Public School	School site from 1881 to 1926 and then 1930 to 1941. School residence relocated to Tucklan. Site contains broken brick and stone foundations scattered around mature peppercorn trees. Occasional small pieces of ceramic and glass. Low potential for subsurface archaeological deposits.	Yes
CWO-22-HH09b	Tallawang Union Church	No surface evidence of archaeological remains. Moderate-high potential for subsurface archaeological deposits.	Yes
CWO-22-HH09c	Tallawang Catholic Churches	No surface evidence of archaeological remains. Moderate-high potential for subsurface archaeological deposits.	Yes
CWO-22-HH10	Tallawang Creek Archaeological Site 01	Location of early 20 th century structure (since removed). Remnant features includes foundation posts, collapsed chimney, concrete meat locker and a water tank. Site is bordered by local and exotic mature plantings. Date engraved in concrete foundation of meat locker "11/4/25" High potential for archaeological resources to survive.	Yes
CWO-22-HH11	Tallawang Creek Archaeological Site 02	Very low surface visibility. No surface archaeology noted.	No
CWO-22-HH12	Puggoon Rail Siding	Site has been significantly disturbed during demolition of railway siding. No surface archaeology noted.	No
CWO-22-HH13	Merotherie archaeological site	Example artefacts include Manganese bottle, Irish moss syrup. Champagne bottle neck. Early 1930s possibly earlier.	Yes
CWO-22-HH14	Cope Road archaeological site	No property access at time of survey.	No
CWO-22-HH15	Moolarben Archaeological Site	No property access at time of survey.	No

Table 5.3 Areas of interest inspection summary

ID	Heritage item name	Inspection summary	Within construction area
CWO-22-HH16	MCP Site 10	No property access at time of survey.	Yes
CWO-22-HH17	Mittaville Archaeological Site	No property access at time of survey.	Yes
CWO-22-HH18	Road Embankment (Site 4)	Inspection confirmed the stone road embankment on Wilpinjong Road. The embankment is in good condition although it was noted that extensive grove of young tree saplings is now present adjacent to the heritage item.	Yes
CWO-22-HH19	Pine Park Woolshed	Inspection confirmed the previous description of the heritage item as a woolshed comprised of a simple slab shed with corrugated galvanised iron roof and end-walls on a round-post frame. The heritage item is intact with only minor impacts from nearby vegetation.	Yes
CWO-22-HH20	Tallawang Creek Archaeological Site 03	No surface evidence of archaeological resources. Inspection area was noted for disturbed ground and cracking clays. Moderate potential for subsurface archaeological deposits.	Yes
CWO-22-HH21	MCP Site 12	No property access at time of survey.	Yes
CWO-22-HH22	Wandoona Homestead (LEP#1996)	The inspection confirmed the previously identified heritage values of the homestead. The proposed transmission line is located some distance from the homestead and an existing transmission line in approximately the same area at the far western end of the property was noted. The homestead faces east away from the construction area in the west of the property.	Yes
CWO-22-HH23	Goulburn River National Park (LEP#1994)	Fieldwork for the Aboriginal heritage assessment and for this report confirmed the previously identified heritage values of the Goulburn River National Park. An existing transmission line was noted running in a parallel pathway to the proposed transmission easement. The noted heritage values will not be significantly impacted.	No

5.3 Non-intrusive Subsurface Investigations Results

Results from the non-intrusive subsurface investigations are still pending while post-processing of data occurs. This section will be updated following receipt of these results.



- KEY**
- Construction area
 - Historic heritage area of interest
 - Existing environment
 - Rail line
 - Major road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest

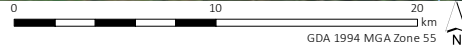
Identified historical heritage areas of interest

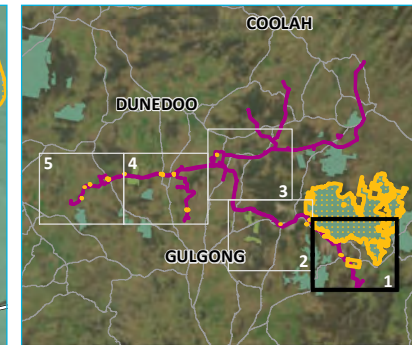
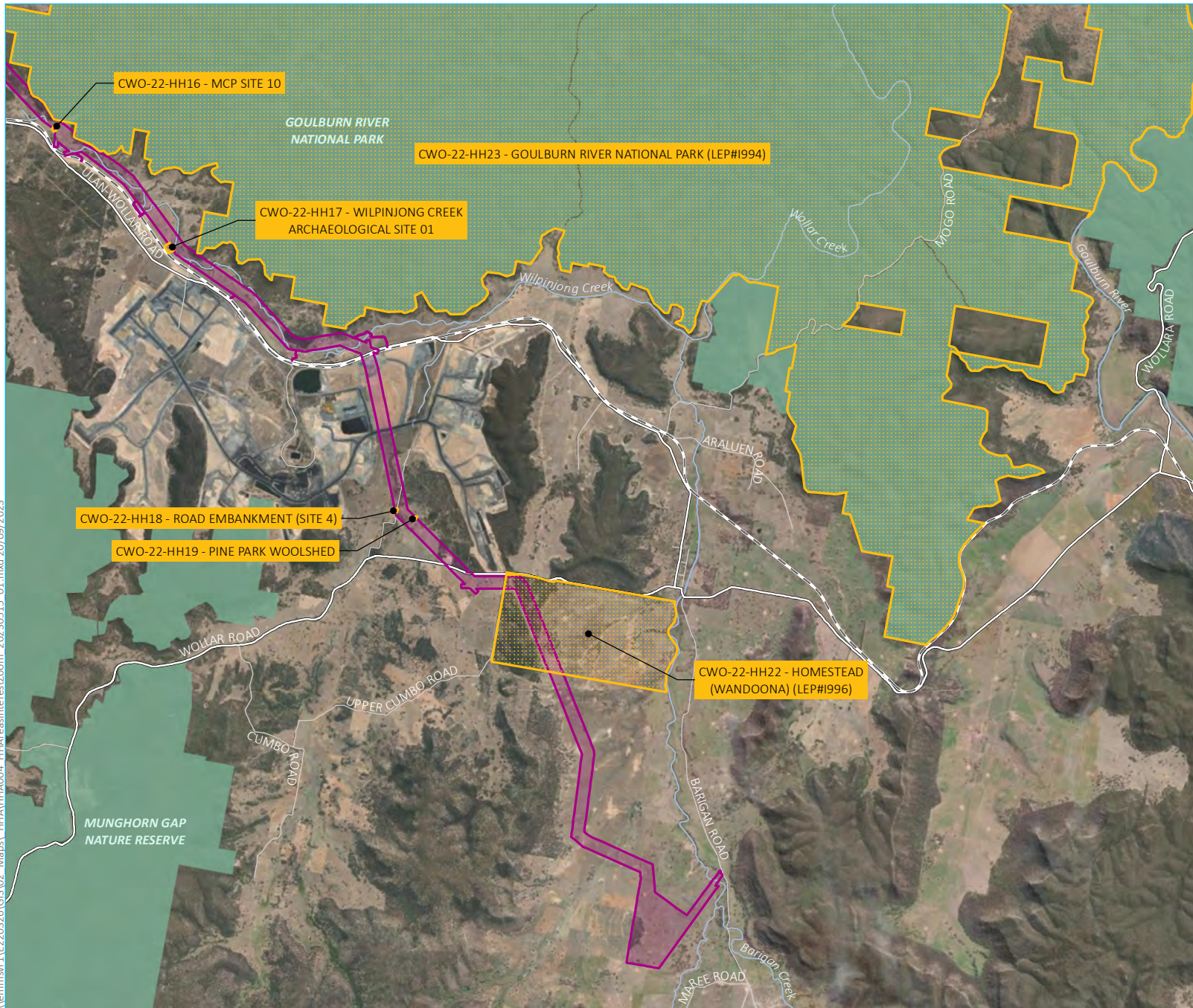
Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.1



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Source: EMM (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
- Existing environment**
- Major road
 - Minor road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

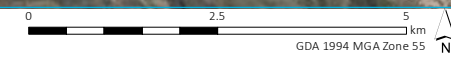
Identified historical heritage areas of interest
Map 1 of 5

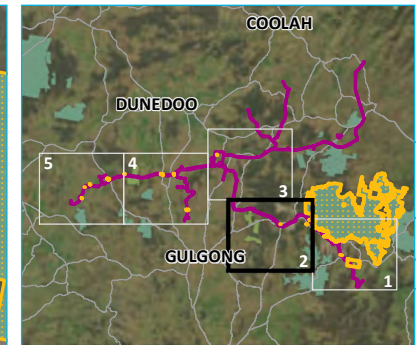
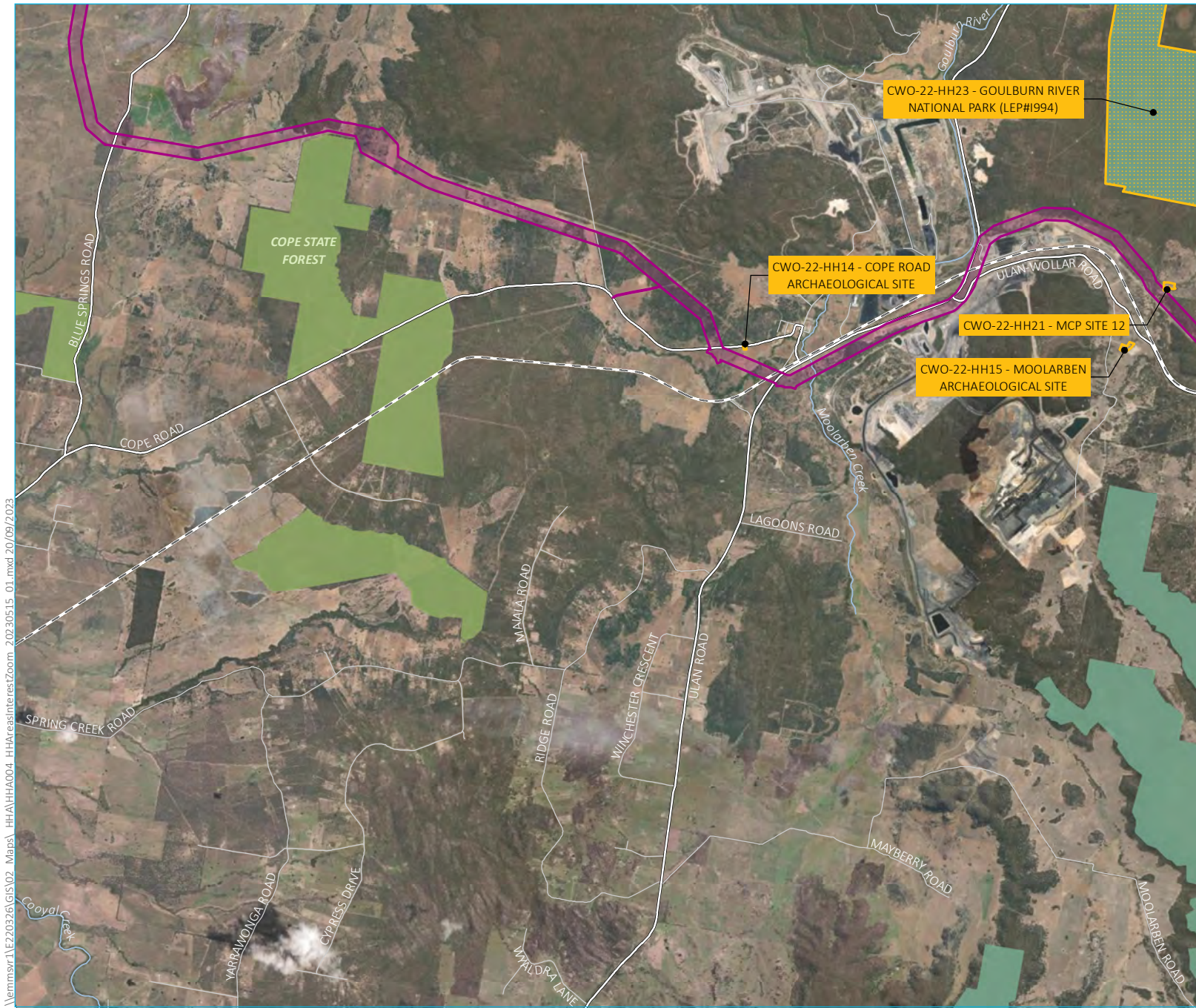
Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.2



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Source: EMM (2023); EnergyCo (2023); WSP (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
- Existing environment**
- Major road
 - Minor road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

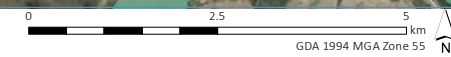
Identified historical heritage areas of interest
Map 2 of 5

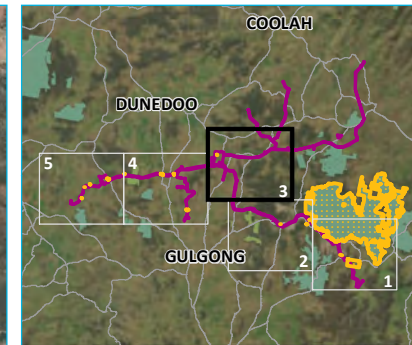
Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.2



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Source: EMM (2023); EnergyCo (2023); WSP (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
- Existing environment**
- Major road
 - Minor road
 - Named watercourse
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

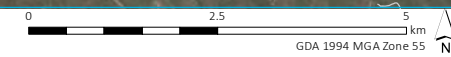
Identified historical heritage areas of interest
Map 3 of 5

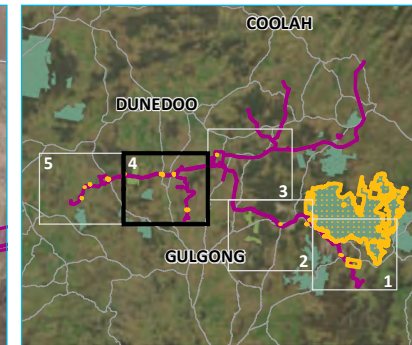
Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.2



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Source: EMM (2023); EnergyCo (2023); WSP (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
- Existing environment**
- Major road
 - Minor road
 - Named watercourse
 - NPWS reserve
 - State forest
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

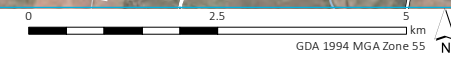
Identified historical heritage areas of interest
Map 4 of 5

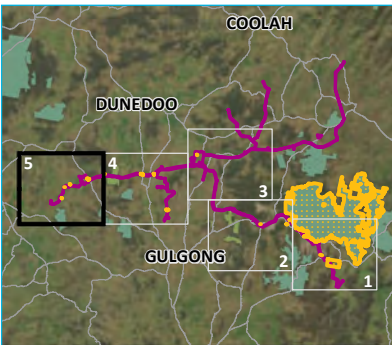
Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.2



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Source: EMM (2023); EnergyCo (2023); WSP (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
- Existing environment**
- Major road
 - Minor road
 - Named watercourse
 - NPWS reserve
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

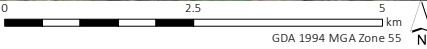
Identified historical heritage areas of interest
Map 5 of 5

Central West Orana Renewable Energy Zone transmission
Historic Heritage Assessment
Figure 5.2



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Source: EMM (2023); EnergyCo (2023); WSP (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



6 Assessment of significance

The assessment of significance of each item against each of the NSW heritage assessment significance criteria is provided in Table 6.1. Each heritage item is then assessed as to whether or not the evaluated criterion meet the threshold for Local, State and National heritage significance.

Table 6.1 Statements of significance for potential historical heritage items within the study area

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
CWO-22- HH01	Dapper homestead group	Low (if archaeological subsurface deposits present)	Local	A, E	<p>Criterion A: Originally part of the failed Woolloowoolonly Run, the Dapper Homestead Group has been continuously occupied for close to 150 years and is one of the earliest established properties of the local area.</p> <p>Criterion E: This heritage item has the potential to yield archaeological information on both early pastoral habitation structures and the evolution of the homestead over the last 150 years in the local area.</p>
CWO-22- HH02	Dapper hut and shed	Low (if archaeological subsurface deposits present)	Local	E	<p>Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures from the late 19th century in the local area.</p>
CWO-22- HH03	Avondale house (archaeological site)	Low (if archaeological subsurface deposits present)	Local	E	<p>Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures from the late 19th century in the local area.</p>
CWO-22- HH04	Avondale homestead (current)	Low	Local	A	<p>Criterion A: Avondale homestead is a single storey, multi-room brick structure thought to have been built in the early 20th century. This construction date of this structure possibly aligns with the sale of the property in 1910 by Alfred E Garling.</p>
CWO-22- HH05a	Laheys Creek archaeological site (House and Hut)	Low (if archaeological subsurface deposits present)	Local	A, B, E	<p>Criterion A: Laheys Creek Archaeological Site consists of the archaeological remains of a house (inn) and hut. It is a link to the settlement of this district as it was built by the Falconer family one of the earliest European families to settle in the area. Located at the junction of the Guntawang to Mendooran Road and the track to the Spicers Creek Gold Fields, the Falconer's converted the home to an inn called the 'Bushman's Home' which included a stable for a mail route. As a result, this area became an important nexus for travel and communication in the district in the late 19th century.</p> <p>Criterion B: The Australian novelist and bush poet Henry Lawson, was a frequent guest at the Falconer's inn, known as the 'Bushman's Home'. Two short stories have been written about the general area including: "A Double Buggy at Lahey's Creek" and "A Hero in Dingo-scrubs."</p>

Table 6.1 **Statements of significance for potential historical heritage items within the study area**

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
					Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.
CWO-22-HH05b	Laheys Creek archaeological site (Stockyards)	Low	Local	E	Criterion E: This heritage item has the potential to yield archaeological information on early pastoral practises such stock management and fencing attached to the main house and hut and Laheys Creek (CWO-22-HH05a).
CWO-22-HH06	Laheys Creek Cemetery	Low	Local	A, B, D, E, G	<p>Criterion A: Laheys Creek cemetery is a link to the original settlement of the district and the Falconer family, one of the earliest European families to settle in the area. It is directly adjacent to CWO-22-HH05a and CWO-22-HH05b.</p> <p>Criterion B: The cemetery is associated with the Falconer family and is on land selected by Catherine Falconer herself. The Falconer family contributed to the development of the area through ownership of the Bushman’s Home Inn and running a mail service for the settlers which predated the Cobb and Co service.</p> <p>Criterion D: Laheys Creek cemetery is a local landmark along Spring Ridge Road. It is an easily recognisable link to the settlement of the district. The community, including descendants of the Falconer family, who still live in the area, value the connection to these pioneer settlers.</p> <p>Criterion E: Reports in secondary sources held by the Gulgong Historical Society suggest that there are up to 40 unmarked graves at the Laheys Creek cemetery site. For researchers and archaeologists, graves have the potential to offer insights into themes of birth, health and death in rural Australia throughout the nineteenth and twentieth centuries.</p> <p>Criterion G: Laheys Creek cemetery is a good example of a private cemetery. It demonstrates the way in which people dealt with death in isolated environments.</p>
CWO-22-HH07	Brampton Park homestead group	Low	Local	A	Criterion A: Brampton Park is a single storey, multi-room timber structure thought to have been built in the early 20 th century. Little is known about this structure.
CWO-22-HH08	Spir Road cottage	Low	Local	A	Criterion A: Spir Road Cottage is a single storey, multi-room vertical slab and asbestos multi-phase building. The vertical slab section was relocated from nearby Tucklan in the mid-20 th century and is evidence of the course of historical development of the region.

Table 6.1 **Statements of significance for potential historical heritage items within the study area**

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
CWO-22- HH09a	Tallawang (Upper) Public School	Low (if archaeological subsurface deposits present based on GPR results))	Local	A, E	<p>Criterion A: Tallawang (Upper) Public School has the potential to offers insights into early education precincts in the area.</p> <p>Criterion E: This heritage item has the potential to yield archaeological information on early rural education precincts in the local area.</p>
CWO-22- HH09b	Tallawang Union Church	Low (if burials present based on GPR results)	Local	A, E	<p>Criterion A: Tallawang Union Church offers insights into the worship practices of rural communities, particularly given its role as a communal church and its relationship to the Tallawang Catholic Church and Tallawang Upper Public School.</p> <p>Criterion E: This heritage item has the potential to yield archaeological information on early rural churches in the local area. Oral evidence from local sources notes the historical presence of a number of burials within the church grounds, but their continued presence has yet to be confirmed.</p>
CWO-22- HH09c	Tallawang Catholic Churches	Low (if burials present based on GPR results))	Local	A, E	<p>Criterion A: Tallawang Catholic Church offers insights into the worship practices of rural communities, particularly its relationship to the Tallawang Union Church and Tallawang Upper Public School.</p> <p>Criterion E: This heritage item has the potential to yield archaeological information on early rural churches in the local area. Oral evidence from local sources notes the historical presence of a number of burials within the church grounds, but their continued presence has yet to be confirmed.</p>
CWO-22- HH10	Tallawang Creek Archaeological Site 01	Low	Local	E	<p>Criterion E: This heritage item has a standing meat safe half filled with complete bottles and provides research potential of local significance in understanding the evolution of early 20th century pastoral homesteads. The heritage item also has the potential to yield archaeological information on early pastoral habitation structures in the local area.</p>
CWO-22- HH11	Tallawang Creek Archaeological Site 02	Low (if archaeological subsurface deposits present)	Local	E	<p>Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.</p>
CWO-22- HH12	Puggoon Rail Siding	Negligible	None	None	<p>The Puggoon Rail Siding appears to have been destroyed. Its location is noted for demonstrating minor themes in local history and heritage.</p>
CWO-22- HH13	Merotherie archaeological site	Low	Local	E	<p>Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.</p>

Table 6.1 **Statements of significance for potential historical heritage items within the study area**

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
CWO-22- HH14	Cope Road archaeological site	Low (if archaeological subsurface deposits present)	Local	E	Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.
CWO-22- HH15	Moolarben Archaeological Site	Low (if archaeological subsurface deposits present)	Local	E	Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.
CWO-22- HH16	MCP Site 10	Low (if archaeological subsurface deposits present)	Local	A, E	Criterion A: Crown Plans and Parish Mapping indicate the presence of one structure in this location. It appears that the original structure in this location was a gunyah (a temporary structure commonly built by Aboriginal people and adapted by early historical settlers composed of a frame of sticks covered in bark or leaves). Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.
CWO-22- HH17	Mittaville Archaeological Site	Low (if archaeological subsurface deposits present)	Local	E	Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.
CWO-22- HH18	Road Embankment (Site 4)	Low	Local	A	Criterion A: <i>The Road Embankment is one of the few nineteenth century (approximate) notable civil works in the area. It demonstrates changes to the local road network as a result of patterns of European settlement of the Wilpinjong area, whereby locals required decent access through the area and to their properties.</i> (Niche Environment and Heritage Pty Ltd 2015:48)
CWO-22- HH19	Pine Park Woolshed	Low	Local	A, G	Criterion A: <i>The woolshed demonstrates settlement patterns of the Wilpinjong area. It is the best preserved older shed in the [Wilpinjong Coal Mine] Project area and is representative of shearing (as being the main industry in the [Wilpinjong Coal Mine] Project area) and the nature of small-farm shearers.</i> Criterion G: <i>The woolshed and Pine Park, in general, is typical of shearing sheds of small-holdings, and is a good example of its type. Pine Park is of local heritage significance under this criterion.</i> (Niche Environment and Heritage Pty Ltd 2015:51)
CWO-22- HH20	Tallawang Creek Archaeological Site 03	Low (if archaeological subsurface deposits present)	Local	E	Criterion E: This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.

Table 6.1 **Statements of significance for potential historical heritage items within the study area**

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
CWO-22-HH21	MCP Site 12	Low	Local	E	<p>Criterion E: This heritage item has a standing split timber structure dated to the early 20th century and provides research potential of local significance in understanding the evolution of early 20th century pastoral homesteads. The heritage item also has the potential to yield archaeological information on early pastoral habitation structures in the local area.</p>
CWO-22-HH22	Homestead (Wandoona)	Moderate	Local	A, B, C, E, F, G	<p>Criterion A: The Wandoona Homestead is on the property of the earliest settler to the area, Richard Fitzgerald, who arrived in the 1830s. It is the site where Wollar Station was established and became the centre for pastoralism in the area, directly resulting in a population growth due to employment opportunities at the Station. The Single family took over the Station and built the current homestead and continued with large scale pastoral pursuits.</p> <p>Criterion B: Wandoona has associations with the Richard Fitzgerald, the pioneering settler of Wollar and creator of the Wollar Station, and with the Single family who were influential citizens of Wollar and were actively involved in the community.</p> <p>Criterion C: The picturesque sandstone homestead does demonstrate aesthetic qualities. The kitchen, which originally stood apart from the main house, demonstrates a high degree of creative achievement whereby keeping the kitchen in a separated building to the main house reduced the risk of fire in the house. While this was a common building technique in the late nineteenth and early twentieth century, there are few demonstrative examples in the area whereby both the house and the kitchen are extant.</p> <p>Criterion E: The cellar, refuse deposits, cesspits and wells have the potential to contain relics which could yield information about the lifestyle of Fitzgerald and Single families. This could provide insight to the lifestyles of the wealthier families in the local area.</p> <p>Criterion F: There are few sandstone homesteads built in the Wollar area. Other examples of sandstone homes near Wollar are “Barrigan” and “Wollara”. Whilst such homesteads are not endangered, they are uncommon. The features of the Wandoona Homestead are also uncommon, the kitchen retains its original oven place including flume piping and the cellar is an unusual, retained feature of the homestead.</p>

Table 6.1 **Statements of significance for potential historical heritage items within the study area**

ID	Item name	Cultural heritage sensitivity	Significance level	Applicable criteria	Statement of significance
					<p>Criterion G: The Wandoona Homestead is a mix of three classes of architecture being Victoria Georgian style constructed in 1878, a later kitchen and a Queen Anne style room connecting the two earlier buildings. Although they have been joined together, each stage of construction demonstrates the principle [sic] characteristics of that class and, as a whole, is important in demonstrating a chronology of principle characteristics of architectural styles in the local area.</p> <p>(Niche Environment and Heritage Pty Ltd 2020:67–68)</p>
CWO-22-HH23	<p>Goulburn River National Park (LEP# I994)</p> <p><i>(currently being considered for inclusion in the National Heritage Curtilage of the Greater Blue Mountains Area – Additional heritage values and areas)</i></p> <p>https://www.dcc.gov.au/parks-heritage/heritage/places/world/blue-mountains/additional-values-areas</p>	Moderate	<p>Local (LEP)</p> <p>Potentially National</p>	A, B, E	<p>National Heritage Criterion A: Events and processes: in relation to the complex geological history of the place and its resultant geological features, the diversity of eucalypts and the evolution of ecological communities, and for the important historic first crossing of the Blue Mountains by Europeans in 1813.</p> <p>National Heritage Criterion B: Rarity: due to the presence of rare geological formations including pagodas, slot canyons, bottleneck valleys, perched lakes, high altitude aeolian dunes and the ancient Jenolan Caves karst system, as well as relict flora with Gondwanan origins and the Temperate Highland Peat Swamps on Sandstone Threatened Ecological Community.</p> <p>National Heritage Criterion E: Aesthetic characteristics: for the natural beauty of the place and as a powerful, spectacular and distinctive landscape highly valued by the Australian community.</p>

7 Project-specific impact assessment

This chapter presents an assessment of the potential impacts to historical heritage that are expected to occur during construction the project. Key construction activities that are likely to impact historic heritage within the study area include, but are not limited to:

- site establishment and enabling works
- general preparatory earthworks
- drainage works
- access road works
- removal of vegetation.

Following construction of the project, there are not expected to be any significant additional impacts to historical heritage during operation.

7.1 Heritage management objectives – the avoidance principle

The overriding objective in managing impacts to heritage significance is the avoidance of impacts. Avoidance minimises the need for mitigation or amelioration and is in keeping with the philosophy of the *Burra Charter 2013* (Australia ICOMOS 2013). In all cases where significant heritage values may be affected by a project, it is prudent to take a precautionary approach by minimising interactions where the construction area intersects with heritage items or with areas that have been identified as having potential to contain relics.

As the environmental assessment of the project has progressed as part of the development of this EIS, engagement with the community, landowners, and agencies has been carried out, as well as detailed site investigations and field surveys. The information collected as part of this process, combined with continued development of the projects design and construction methodology has resulted in some adjustments to the projects footprint. For example, adjustment to the design of the project has resulted in avoidance of impacts to five potential heritage items in the study area, including:

- Dapper Homestead (CWO-22-HH01)
- Dapper Hut and Shed (CWO-22-HH02)
- Avondale Homestead (CWO-22-HH04)
- Cope Road Archaeological Site (CWO-22-HH14)
- Moolarben Archaeological Site (CWO-22-HH15).

Although Lahey's Creek Cemetery (CWO-22-HH06) and Tallawang Creek Archaeological Site (CWO-22-HH11) are located (wholly or partially) within the construction area, avoidance of direct impacts to these items would be achieved through the implementation of exclusion barriers in accordance with the mitigation measures described in Section 8.2.

The Puggoon Rail Siding (CWO-22-HH12) was also assessed and did not meet any of the NSW Heritage Manual criteria.

This approach will continue to be applied, where possible, through continued development of the project design and detailed construction planning for all activities that could impact on heritage items or potential heritage items. That is, the items will either be completely excluded from the construction area, or their heritage values will be investigated and recorded prior to the works if removal is appropriate.

7.2 Direct impacts

Direct impacts to historical heritage are most likely to occur during construction. Clearing and stripping activities would require the demolition of heritage structures and the destruction of archaeological sites in the construction area. The heritage places that are in the construction area are listed in Table 7.1, along with the predicted level of impact and magnitude of change arising from that potential impact. Detailed impact assessment and discussion for each of these potential heritage items is provided in Appendix A and maps showing their location are provided in Appendix B.

Table 7.1 Potential direct impacts to items of historical heritage within the study area

ID	Heritage Item Name	Potential unmitigated impact	Likely magnitude of change (unmitigated)
CWO-22-HH03	Avondale House	Heritage item is located partially within the construction area and has the potential to be directly impacted.	Medium
CWO-22-HH05a	Laheys Creek Archaeological Site (House and Hut)	Site complex is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and has potential to be directly impacted by the proposed Project through: <ul style="list-style-type: none"> traversal of area by construction plant and vehicles potential construction activities in the south and east of the heritage complex in areas identified as being stockyards (CWO-22-HH05b). It is noted that the heritage item has been previously impacted by cropping activities by way of machinery movements.	Major
CWO-22-HH05b	Laheys Creek Archaeological Site (Stockyards)	Heritage item is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and has the potential be directly impacted by: <ul style="list-style-type: none"> traversal of area by construction plant and vehicles potential construction activities in the south and east of the heritage complex in areas identified as being stockyards. It is noted that the heritage item has been previously impacted by cropping activities by way of machinery movements.	Major
CWO-22-HH06*	Laheys Creek Cemetery	Heritage item is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and has the potential be directly impacted by construction activity prior to application of mitigation. Careful consideration of avoidance of this heritage item is discussed in Chapter 8. <p>Visual amenity impacts from transmission line easement and Elong Elong Energy Hub would also occur.</p>	Major
CWO-22-HH08	Spir Road Cottage	Heritage item is located within the construction area and may be directly impacted by construction activities such as vegetation clearance and tower placement.	Major
CWO-22-HH09a	Tallawang (Upper) Public School	Heritage item is located within the construction area and has the potential to be directly impacted through construction activities such as vegetation clearance and tower placement.	Major
CWO-22-HH09b	Tallawang Union Church	Heritage item is located within the construction area and has the potential to be directly impacted through construction activities such as vegetation clearance and tower placement.	Major
CWO-22-HH09c	Tallawang Catholic Church	Heritage item is located within the construction area and has the potential to be directly impacted through construction activities such as vegetation clearance and tower placement.	Major

Table 7.1 Potential direct impacts to items of historical heritage within the study area

ID	Heritage Item Name	Potential unmitigated impact	Likely magnitude of change (unmitigated)
CWO-22-HH10	Tallawang Creek Archaeological Site 01	Heritage item is located within the construction corridor and would be directly impacted. Surface features including water tank, meat safe, vegetation may be removed.	Major
CWO-22-HH11*	Tallawang Creek Archaeological Site 02	Direct construction impacts to CWO-22-HH11 are possible, however there are no known heritage items (including potential relics) in the immediate area of impact.	No Change
CWO-22-HH13	Merotherie Archaeological Site	Heritage item is located within the construction area and would be directly impacted by the proposed project.	Major
CWO-22-HH16	MCP Site 10	Heritage item is located within the construction area and would be directly impacted by the proposed project.	Major
CWO-22-HH17	Mittaville Archaeological Site	Potential partial disturbance of heritage item. The likely area of this heritage item is located partially within the construction area. However, this heritage item has likely been already significantly impacted through past demolition and construction of the current electrical transmission line easement.	Major
CWO-22-HH18	Road Embankment (Site 4)	Heritage item vis located within the construction area and would be directly impacted by the proposed project.	Major
CWO-22-HH19	Pine Park Woolshed	Heritage item is located within the construction area and would be directly impacted by the proposed project both physically and visually.	Major
CWO-22-HH20	Tallawang Creek Archaeological Site 03	Heritage item is located within the construction corridor and would be directly impacted by the project	Major
CWO-22-HH21	MCP Site 12	Only a very small portion of the Heritage item intersects with the construction footprint, therefore significant direct impacts to MCP Site 12 are not anticipated.	Negligible

* Although Lahey’s Creek Cemetery (CWO-22-HH06) and Tallawang Creek Archaeological Site (CWO-22-HH11) are located (wholly or partially) within the construction area, avoidance of direct impacts to these items would be achieved through the implementation of exclusion barriers in accordance with the mitigation measures described in Section 8.2.

7.3 Indirect impacts

Indirect impacts may occur during any phase of the project, when construction, site decommissioning, or operational or maintenance activities result in excessive dust, noise, or vibration which damages heritage structures, or where the project would have a detrimental effect on the setting of a place resulting from visual impacts. Heritage item with potential indirect impacts from the project are listed in Table 7.2, along with the potential nature of the impact and magnitude of change. Detailed impact assessment and discussion is provided in Appendix A and maps shown in Appendix B.

Table 7.2 Potential indirect impacts to items of historical heritage within the study area

ID	Heritage Item Name	Potential unmitigated impact	Likely magnitude of change (unmitigated)
CWO-22-HH07	Brampton Park Homestead	Heritage item is located outside the construction area and will no longer be directly impacted. Although the homestead is surrounded by mature native and introduced vegetation species, visual impacts as a result of the transmission line may be possible.	Low
CWO-22-HH22	Wandoona Homestead (LEP #1996)	Although the project would be partially located in the westernmost portion of the curtilage of this heritage item, direct impacts to the structures that form the homestead group are not anticipated. As the proposed transmission line is approximately 2.3 km from the homestead (e.g. beyond the visual impact assessment study area of 2 km), visual impacts as a result of the transmission line would be negligible.	Negligible
CWO-22-HH23	Goulburn River National Park (LEP #1994)	As there are no significant views from the Goulburn River National Park in the direction of the proposed transmission line, and already an existing transmission line running along the southern boundary of the Goulburn River National Park, visual impacts as a result of the transmission line is considered negligible.	Negligible

7.4 Significance of unmitigated impact

The significance of predicted unmitigated impacts to each of the historical heritage items in the study area are assessed in Table 7.3, using the estimated impact significance matrix outlined in Table 3.5.

Table 7.3 Heritage impact assessment

ID	Heritage item name	Nature of impact	Heritage sensitivity	Magnitude of change (unmitigated impact)	Significance of unmitigated impact
CWO-22-HH01	Dapper homestead group	No impact	Low	No change	Neutral
CWO-22-HH02	Dapper hut and shed	No impact	Low	No change	Neutral
CWO-22-HH03	Avondale house	Direct	Low	Medium	Slight
CWO-22-HH04	Avondale homestead (current)	No impact	Low	No change	Neutral
CWO-22-HH05a	Laheys Creek archaeological site (House and Hut)	Direct	Low	Major	Slight/moderate
CWO-22-HH05b	Laheys Creek archaeological site (Stockyards)	Direct	Low	Major	Slight/moderate
CWO-22-HH06	Laheys Creek Cemetery	Direct	Low	Major	Slight/moderate

Table 7.3 Heritage impact assessment

ID	Heritage item name	Nature of impact	Heritage sensitivity	Magnitude of change (unmitigated impact)	Significance of unmitigated impact
CWO-22-HH07	Brampton Park homestead group	Indirect	Low	Low	Neutral/slight
CWO-22-HH08	Spir Road cottage	Direct	Low	Major	Slight/moderate
CWO-22-HH09a	Tallawang (Upper) Public School	Direct	Low	Major	Slight/moderate
CWO-22-HH09b	Tallawang Union Church	Direct	Low	Major	Slight/moderate
CWO-22-HH09c	Tallawang Catholic Churches	Direct	Low	Major	Slight/moderate
CWO-22-HH10	Tallawang Creek Archaeological Site 01	Direct	Low	Major	Slight/moderate
CWO-22-HH11	Tallawang Creek Archaeological Site 02	No impact	Low	No change	Neutral
CWO-22-HH12	Puggoon Rail Siding	Assessed as having no potential heritage significance. No further assessment undertaken.			
CWO-22-HH13	Merotherie archaeological site	Direct	Low	Major	Slight/moderate
CWO-22-HH14	Cope Road archaeological site	No impact	Low	No change	Neutral
CWO-22-HH15	Moolarben Archaeological Site	No impact	Low	No change	Neutral
CWO-22-HH16	MCP Site 10	Direct	Low	Major	Slight/moderate
CWO-22-HH17	Mittaville Archaeological Site	Direct	Low	Low	Neutral/slight
CWO-22-HH18	Road Embankment (Site 4)	Direct	Low	Major	Slight/moderate
CWO-22-HH19	Pine Park Woolshed	Direct	Low	Major	Slight/moderate
CWO-22-HH20	Tallawang Creek Archaeological Site 03	Direct	Low	Major	Slight/moderate
CWO-22-HH21	MCP Site 12	Direct	Low	Negligible	Neutral/slight
CWO-22-HH22	Wandoona homestead	Indirect	Moderate	Negligible	Neutral/slight

Table 7.3 Heritage impact assessment

ID	Heritage item name	Nature of impact	Heritage sensitivity	Magnitude of change (unmitigated impact)	Significance of unmitigated impact
CWO-22-HH23	Goulburn River National Park	Indirect	Moderate	Negligible	Neutral/slight

7.5 Statement of heritage impact

The cultural landscape of the study area is a result of thousands of years of human interaction with the natural environment; firstly by Aboriginal people who hunted, slept, built shelters and dwellings, held ceremonies and marked the environment; then by the colonial settlers whose arrival saw significant changes to the appearance of the land through tree cutting, ploughing and cropping, damming and other water management, as well as grazing stock, mining and building settlements and cities. Each heritage item and potential heritage item within the study area, comprising built structures and archaeological sites contributes to this landscape, which will experience impacts at various levels.

None of the impacts to the landscape and its component parts are significant enough to diminish cultural significance to a degree where it is no longer recognisable, but direct impacts will occur in discrete areas, which will require management to avoid the loss of important historical data.

8 Management and mitigation measures

8.1 Construction Environmental Management Framework

This assessment indicates that there is the potential for historic heritage impacts as a result of the project. The final scope of works would be subject to confirmation as part of the detailed design process. However, a Historical Heritage Management Plan (HHMP) will be prepared which will identify the methods and protocols to be implemented to ensure that the project minimises impacts to historic heritage.

The HHMP would address the following as a minimum:

- Measures that will be implemented to manage potential impacts on items of heritage significance.
- Inclusion of heritage awareness and management training within the site induction process for relevant personnel involved in site works.
- Details regarding the conservation and curation of any historical artefacts recovered during works.

Detailed mitigation measures to be implemented as part of the delivery of the project are provided below in Table 8.1.

8.2 Mitigation measures

Management measures that would be implemented within the Historical Heritage Management Plan to address potential impacts of the project to historical heritage values are outlined Table 8.1 below:

Table 8.1 Proposed mitigation measures

ID	Impact	Identified mitigation measure	Timing	Applicable location(s)
HH1	Avoidance of direct impacts to Tallawang Creek Archaeological Site 02	Prior to construction, an exclusion barrier (e.g. fencing or suitable alternative) will be installed to prevent construction activities or access into the portion of CWO-22-HH11 which extends into the construction area. The barrier would be maintained for the duration of construction.	Pre-construction Construction	CWO-22-HH11
HH2	Minimisation of direct impacts	Construction methodologies will be refined to avoid and/or minimise direct impacts to listed and potential historic heritage items where reasonable and feasible. ¹ The final mitigation measure for the Tallawang Union and Catholic Churches (HH09b and HH09c) and cemetery depend on the outcome of the non-intrusive geophysical investigations.	Pre-construction Construction	CWO-22-HH03 CWO-22-HH05a CWO-22-HH05b CWO-22-HH08 CWO-22-HH09a CWO-22-HH09b ¹ CWO-22-HH09c ¹ CWO-22-HH10 CWO-22-HH13 CWO-22-HH16 CWO-22-HH18 CWO-22-HH19

Table 8.1 Proposed mitigation measures

ID	Impact	Identified mitigation measure	Timing	Applicable location(s)
				CWO-22-HH20 CWO-22-HH21
HH3	Minimisation and management of indirect impacts	Construction methodologies will be refined to avoid and/or minimise indirect impacts to listed and potential historic heritage items where reasonable and feasible.	Construction	CWO-22-HH06 CWO-22-HH22 CWO-22-HH23
HH4	Cultural heritage management	<p>Archival recording</p> <p>If avoidance cannot be established during the detail design stage, an archival recording will be completed in accordance with the following guidelines, and be lodged with the Heritage NSW and local councils for access to researchers:</p> <ul style="list-style-type: none"> • Photographic recording of heritage items using film or digital capture (Heritage Office 2006) • How to prepare archival records of heritage items (NSW Heritage Office 1998). 	Pre-construction	CWO-22-HH08 CWO-22-HH10 CWO-22-HH18 CWO-22-HH19
HH5	Cultural heritage management	<p>Archaeological test excavation</p> <p>If direct impacts to a heritage item cannot be reasonably and feasibly avoided during the detailed design stage, a program of archaeological test excavation will be undertaken (where the extent of the archaeological deposit is not known). This will include development of:</p> <ul style="list-style-type: none"> • a detailed archaeological research design • consultation with Heritage NSW • systematic test excavation of historical archaeological sites that meet the 'relics' threshold identified for impact • where archaeological deposits are uncovered, sampled recovery of historic heritage relics will occur prior to disturbance. Once recorded and analysed artefacts will be offered to local heritage society/museum. <p>A detailed excavation method and research design for this process will be included in the Historic Heritage Management Plan (HHMP).</p>	Pre-construction Construction	CWO-22-HH03 CWO-22-HH05a CWO-22-HH13 CWO-22-HH16
HH6	Cultural heritage management	<p>Archaeological salvage excavation</p> <p>Salvage excavation will be undertaken on archaeological sites subject to direct impacts where the extent of the archaeological deposit is known. This will include development of:</p> <ul style="list-style-type: none"> • a detailed archaeological research design • consultation with Heritage NSW • systematic salvage excavation of historical archaeological sites. Once recorded and analysed, salvaged artefacts will be offered to local heritage society/museum. <p>A detailed excavation method and research design for this process will be included in the HHMP.</p>	Pre-construction	CWO-22-HH03 CWO-22-HH05a CWO-22-HH09a CWO-22-HH09b** CWO-22-HH09c** CWO-22-HH13 CWO-22-HH16

Table 8.1 Proposed mitigation measures

ID	Impact	Identified mitigation measure	Timing	Applicable location(s)
HH7	Cultural heritage management	<p>Unexpected finds procedure</p> <p>Any items of potential heritage conservation significance or human remains discovered during construction and operation will be managed in accordance with an Unexpected Finds Procedure. Work in the vicinity of the find will stop if objects such as bonded bricks, timber or stones appearing in formation indicating a wall or floor for instance are found, or if soil with artefacts concentrations, is excavated. A description of the types of finds that will stop works within the vicinity of the finds will be determined prior to construction as part of the HHMP and staff involved in excavation work will be informed about how to apply it.</p> <p>The unexpected finds procedure will include actions such as:</p> <ul style="list-style-type: none"> • stop work procedures and exclusion buffers • utilising the advice of a technical specialist • consultation with Heritage NSW • protocols for continuing work in the area after assessment. 	<p>Pre-construction</p> <p>Construction</p>	CWO-22-HH03
				CWO-22-HH05a
				CWO-22-HH05b
				CWO-22-HH09a
				CWO-22-HH09b (if GPR finds no evidence of structural subsurface deposits)
				CWO-22-HH09c (if GPR finds no evidence of structural subsurface deposits)
				CWO-22-HH10
				CWO-22-HH11
				CWO-22-HH17
				CWO-22-HH20
CWO-22-HH21				
HH8	Laheys Creek Cemetery	<p>A structural assessment of the standing headstones will be undertaken to determine if additional conservation works may be required to mitigate nearby construction works.</p> <p>A vibration monitor will be installed within the cemetery at the closest point to construction works to confirm that vibration levels are compliant with applicable criteria.</p>	<p>Pre-construction</p> <p>Construction</p>	CWO-22-HH06

Table 8.1 Proposed mitigation measures

ID	Impact	Identified mitigation measure	Timing	Applicable location(s)
HH9	Avoidance of direct and indirect impacts to Laheys Creek Cemetery	<p>Prior to construction, an exclusion barrier (e.g. fence or suitable alternative) will be installed to provide a minimum 100 m exclusion buffer around CWO-22-HH06 (Laheys Creek Cemetery) to ensure direct and indirect impacts to the cemetery are avoided.</p> <p>The nominated exclusion buffer for CWO-22-HH06 may be reduced on the following basis:</p> <ul style="list-style-type: none"> • a report from a structural engineer assesses the stability of the headstones in the cemetery • the report can certify that a reduced buffer is unlikely to cause damage • the headstones identified as being at risk of collapse are stabilised and conserved • the report can provide and certify vibration criteria, vibration monitoring equipment is installed and vibration criteria are not exceeded • any damage sustained to the cemetery during construction or in the succeeding 12 month period is repaired and conserved by the proponent. 		CWO-22-HH06

8.3 Residual impacts

The effectiveness of the proposed mitigation measures and significance of predicted post-mitigation residual impacts are assessed using the rankings developed in previous sections and summarised below in Table 8.2. In addition to the six items whose impact has been avoided through early design changes, an additional three of the identified historical heritage items will have their residual impacts reduced through implementation of the mitigation measures detailed earlier in this section. Further reductions to the potential impacts of the project on historical heritage items may be identified during continued development of the project design, which may further minimise the residual impacts to historical heritage. The key to Table 8.2 is in the assessment methods in Chapter 3 of this report; specifically Table 3.5.

Table 8.2 Effectiveness of mitigation measures

ID	Heritage Item Name	Pre-mitigation impact			Residual impact	
		Heritage sensitivity	Magnitude of change before mitigation	Significance of impact before mitigation	Magnitude of change after mitigation	Significance of impact after mitigation (residual impact)
CWO-22-HH01	Dapper homestead group	Low	No change	Neutral	No change	Neutral
CWO-22-HH02	Dapper hut and shed	Low	No change	Neutral	No change	Neutral
CWO-22-HH03	Avondale house	Low	Medium	Slight	Medium	Slight
CWO-22-HH04	Avondale homestead (current)	Low	No change	Neutral	No change	Neutral
CWO-22-HH05a	Laheys Creek archaeological site (House and Hut)	Low	Major	Slight/moderate	Low	Neutral/slight
CWO-22-HH05b	Laheys Creek archaeological site (Stockyards)	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH06	Laheys Creek Cemetery	Low	Major	Slight/moderate	Negligible	Neutral/slight
CWO-22-HH07	Brampton Park homestead group	Low	Low	Neutral/slight	Low	Neutral/slight
CWO-22-HH08	Spir Road cottage	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH09a	Tallawang (Upper) Public School	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH09b	Tallawang Union Church	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH09c	Tallawang Catholic Churches	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH10	Tallawang Creek Archaeological Site 01	Low	Major	Slight/moderate	Major	Slight/moderate

Table 8.2 Effectiveness of mitigation measures

		Pre-mitigation impact			Residual impact	
CWO-22-HH11	Tallawang Creek Archaeological Site 02	Low	No change	Neutral	No change	Neutral
CWO-22-HH12	Puggoon Rail Siding	Assessed as having no potential heritage significance. No further assessment undertaken.				
CWO-22-HH13	Merotherie archaeological site	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH14	Cope Road archaeological site	Low	No change	Neutral	No change	Neutral
CWO-22-HH15	Moolarben Archaeological Site	Low	No change	Neutral	No change	Neutral
CWO-22-HH16	MCP Site 10	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH17	Mittaville Archaeological Site	Low	Low	Neutral/slight	Low	Neutral/slight
CWO-22-HH18	Road Embankment (Site 4)	Low	Major	Slight/moderate	Negligible	Neutral/slight
CWO-22-HH19	Pine Park Woolshed	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH20	Tallawang Creek Archaeological Site 03	Low	Major	Slight/moderate	Major	Slight/moderate
CWO-22-HH21	MCP Site 12	Low	Negligible	Neutral/slight	Negligible	Neutral/slight
CWO-22-HH22	Wandoona Homestead	Moderate	Negligible	Neutral/slight	Negligible	Neutral/slight
CWO-22-HH23	Goulburn River National Park	Moderate	Negligible	Neutral/slight	Negligible	Neutral/slight

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Appendix A

Historical Heritage Item Inventory

A.1 CWO-22-HH01 – Dapper Homestead Group

Table A.1 CWO-22-HH01 – Dapper Homestead Group

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
16//DP754305	Dapper	Lincoln	10%	80%	-32.202965	149.220163
24//DP754305						

Description

Multi-structure farm homestead group demonstrating multiple periods of occupation with extended archaeological complex. The structures are currently uninhabited. The group consists of four main areas:

1. The original homestead area in the south-east, comprised of at least seven standing structures including:
 - Structure #1: a mid-20th century two-roomed timber weatherboard cottage with recent renovations to the verandah, windows and doors. This is the largest standing structure of this complex.
 - Structure #2: an adjoining corrugated tin sheet with green ceramic bath, sink and toilet fixtures.
 - Structure #3: a small fibro structure with two rooms on a concrete floor. The larger room is used for storage, and the smaller used as a shower. Structure was possibly a worker's/shearer's cottage.
 - Structure #4: a small single room timber weatherboard cottage with verandah.
 - Structure #5: a small single room timber weatherboard cottage with adjoining corrugated tin shed for animals (dogs).
 - Structure #6 and 7: a grey brick concreted chimney with iron fireplace screen and a red brick mortared chimney on raised concrete platform with in-situ wood oven. These features likely represent a single demolished structure with two chimneys (kitchen and living room).
 - Exotic plantings (wisterias) fringe the boundary of the heritage item.
2. A modern to late 20th century brick structure (#8) and associated sheds located in the centre of the potential heritage area and are not of historical interest.
3. An agro-industrial area comprised of a timber shearing shed (#9), large timber storage shed (#9) and corrugated tin feed silo (#9) in the north.
4. A single fibro worker's cottage (Structure #10) with brick chimney located in the south-west on a slightly rise. It appears to be contemporaneous with the cottage and other structures to the east in Area #1.



Plate A.1 **Location map**

Historical documentation including Crown Plans and Parish Maps indicate the presence of a hut in this area dating back to the late 19th century (~1876). This mapped hut appears to be contemporaneous with historic heritage item CWO-22-HH02 to the south.

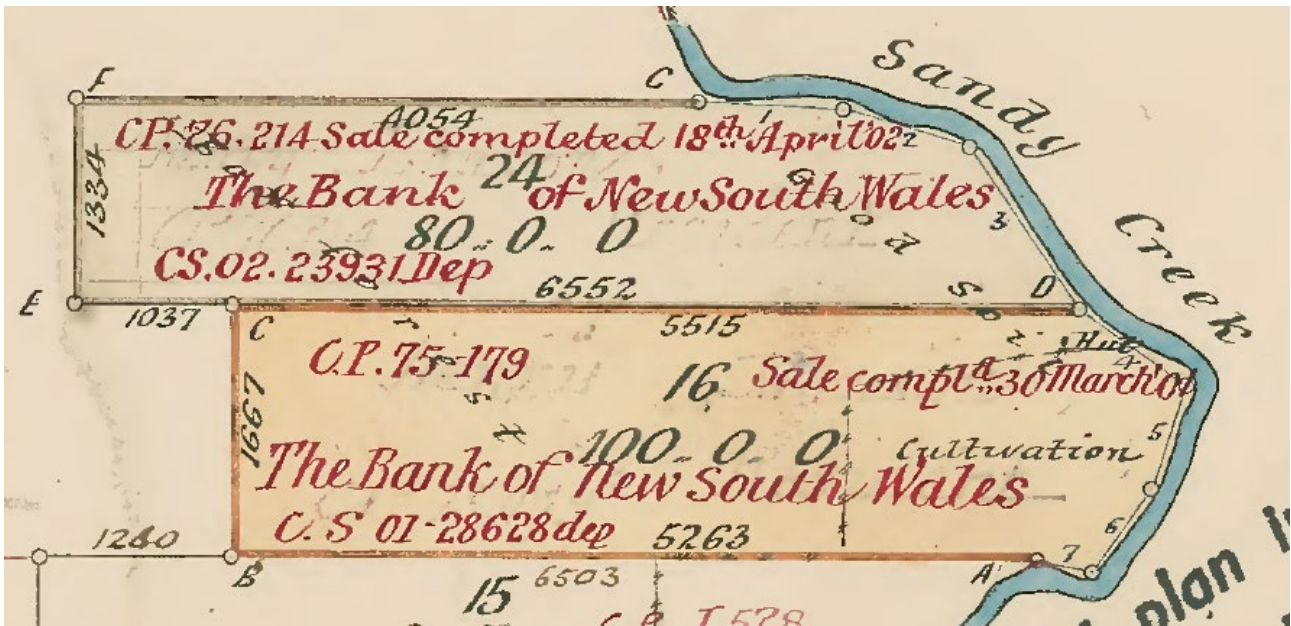


Plate A.2 Crown Plan 519-1566 from 1876 showing location of hut in northeast corner of lot

Table A.2 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Originally part of the Woolooloolonly Run, the Dapper Homestead Group has been continuously occupied for close to 150 years and is one of the earliest established properties of the region. Therefore, the heritage item is of local historical significance in understanding the historical development of the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item has the potential to yield archaeological information on both early pastoral habitation structures and the evolution of the homestead over the last 150 years in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.3 Statement of significance

Statement of Significance

CWO-22-HH01 is considered to be of local heritage significance in that it contains heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Originally part of the Woollooolooly Run, the Dapper Homestead Group has been continuously occupied for close to 150 years and is one of the earliest established properties of the region. This heritage item has the potential to yield archaeological information on both early pastoral habitation structures and the evolution of the homestead group since establishment.

Impact

- Heritage item is now located outside the construction area and will no longer be directly impacted.
- The general view from this heritage item towards the project is also obscured by extant vegetation on the creek bank and fringing vegetation around Area #1 and unlikely to result in visual impacts.
- Air quality monitoring has identified that the project has a low chance of impact from dust during construction (WSP 2023).

Recommendation

- Avoidance protocols will be maintained during construction.



Plate A.3 Structure #1 looking west



Plate A.4 Structure #1 looking east



Plate A.5 Structure #2 looking east



Plate A.6 Structure #2 looking west



Plate A.7 Structure #3 looking north



Plate A.8 Structure #4 looking south-east



Plate A.9 Structure #4 looking south



Plate A.10 Structure #5 looking south



Plate A.11 Structure #6 looking south



Plate A.12 Structure #7 looking south



Plate A.13 **Panorama of Structures #1-7**



Plate A.14 **Structure #8 looking south**



Plate A.15 **Grain silo with timber shed**



Plate A.16 **Shearing shed**



Plate A.17 **Shearing shed detail**



Plate A.18 **Structure #10 looking east**



Plate A.19 **Structure #10 looking west**

A.2 CWO-22-HH02 – Dapper Hut and Shed

Table A.4 CWO-22-HH02 – Dapper Hut and Shed

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
15//DP754305	Dapper	Lincoln	10%	80%	-32.205971	149.217542
Description						

Hut identified on Crown Plan predates the current Dapper Homestead Group. Potential archaeological site. Not located during survey due to limited ground surface visibility (GSV) and access issues associated with wet ground.



Plate A.20 Location map

Historical documentation including Crown Plans and Parish Maps indicate the presence of a hut and a shed in this area recorded in the late 19th century (~1876). This mapped hut appears to be contemporaneous with historic heritage item CWO-22-HH01 to the north.



Plate A.21 Crown Plan 519-1566 from 1876 showing location of hut in northeast corner of lot

Table A.5 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Although this item was mapped on a Crown Plan from 1876, there is no evidence that this item played an important role in the local area’s cultural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

Originally part of the original larger Wooloowoolonly Run, the location of the hut and shed is now part of what is known locally as the Dapper property. The hut and shed were originally marked on an 1876 crown plan and listed as being owned by one Christopher Myers. There is limited information available on either the Wooloowoolonly Run or Christopher Myers, which is why the heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area. If CWO-22-HH02 is present as an archaeological site, it can be assessed as local heritage significance in that it would demonstrate research potential that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

- Heritage item is now located outside the construction area and will no longer be directly impacted.

Recommendation

- Avoidance protocols will be maintained during construction.



Plate A.22 Mapped location of hut showing low GSV looking west

A.3 CWO-22-HH03 – Avondale House

Table A.6 CWO-22-HH03 – Avondale House

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
31//DP754305	Dapper	Lincoln	10%	80%	-32.209814	149.204701
Description						

The property is cropped paddock with several large volcanic rocky outcrops present on the western and southern boundaries of the lot. A house was identified from Crown Plans from 1878 which would predate the current Avondale homestead.

This area is considered a potential archaeological site; however, archaeological evidence was not located during survey due to limited ground surface visibility (GSV) and access issues associated with boggy ground. A suspected area for this item was noted on raised ground that had been cleared on small cobbles and arranged in a linear dry stone wall feature.



Plate A.23 Location map

Historical documentation including Crown Plans and Parish Maps indicate the presence of a house in this area dating back to the late 19th century (~1878). This mapped house appears to be contemporaneous with historic heritage items: CWO-22-HH01 and CWO-22-HH02 to the north.

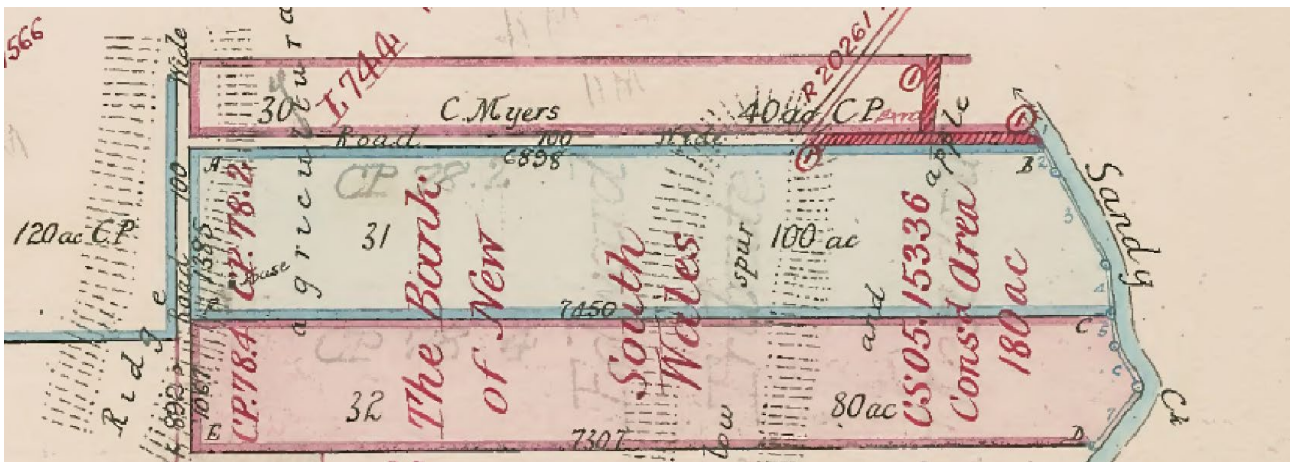


Plate A.24 Crown Plan 742-1566 from 1878 showing location of hut in northeast corner of lot

Table A.7 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Although this item was mapped on a Crown Plan from 1878, there is no evidence that this item played an important role in the local area's cultural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.7 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The si heritage item te does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

Originally part of the larger Woollooolooly Run, the location of the house is now part of what is known locally as the Avondale property (a 20th century name for the property), was originally marked on an 1878 Crown Plan as being owned by one Edward Tribute, married to Annie Margaret Tribute (née Hauber). Edward Tribute died shortly after the sale of the property in 1879. This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area and additional research required prior to archaeological excavation is likely to shed light on the inhabitants and their use of the place. If CWO-22-HH03 is present as an archaeological site, it can be assessed as local heritage significance in that it would demonstrate research potential that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

Heritage item is located partially within the construction area and has the potential to be directly impacted.

Recommendation

- The heritage item is to be avoided during detailed design and construction planning where feasible and reasonable.
- If subsurface disturbance cannot be avoided, then archaeological test excavation informed by an archaeological research plan will be undertaken to investigate potential for late 19th century archaeological deposits.
- If archaeological test excavation identifies archaeological deposits, sampled recovery of historical heritage relics will occur prior to disturbance through salvage excavation.
- Salvaged artefacts will be offered to local heritage society/museum.



Plate A.25 Cleared mound



Plate A.26 Rocky pile from cleared land

A.4 CWO-22-HH04 – Avondale Homestead (current)

Table A.8 CWO-22-HH04 – Avondale Homestead (current)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
181//DP580825	Dapper	Lincoln	50%	80%	-32.234956	149.199755
Description						

Avondale Homestead is an existing ~100-year-old, multi-room, brick homestead on the lot and is currently inhabited. The homestead looks out east down slope towards Sandy Creek. The garden is well maintained and consists of mature native vegetation and introduced species. The homestead was not inspected as land access was not provided.



Plate A.27 Location map

Table A.9 NSW Heritage Significant Criteria

Criterion	Assessment	Threshold
A: Historical	Avondale is a single storey, multi-room brick structure thought to have been built in the early 20 th century. This construction date of this structure aligns with the sale of the property in 1910 by Alfred E Garling. Therefore, the heritage item is of local historical significance in understanding the historical development of the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

Avondale is a single storey, multi-room brick structure thought to have been built in the early 20th century. This construction date of this structure possibly aligns with the sale of the property in 1910 by Alfred E Garling.

CWO-22-HH04 is assessed as local heritage significance in that it demonstrates historical heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

- Heritage item is located outside the construction area.
- Whilst the general view from this heritage item towards the project is currently obscured by extant vegetation fringing the road easement there is potential for visual impacts should the vegetation be removed.

Recommendation

- Avoidance protocols will be maintained during construction.



Plate A.28 Avondale Homestead

A.5 CWO-22-HH05a – Laheys Creek Archaeological Site (House and Hut)

Table A.10 CWO-22-HH05a – Laheys Creek Archaeological Site (House and Hut)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
1//DP754305, 37//DP754305.	Dapper	Lincoln	10%	80%	-32.190034	149.269586

Description

The heritage item covers the house and hut noted in historic crown plans and is located within a mechanically ploughed field south of Laheys Creek (originally known as Woolloowoolonly Creek) and immediately west of the junction of Dapper and Spring Ridge roads. A surface archaeological site of glass, ceramic and metal items such as pieces of machinery in addition to two mounds of dressed and rough stones, representing several, since-demolished, structures.

For the purposes of this assessment, the historical archaeological scatter has been mapped as CWO-22-HH05a, while the less sensitive stockyard structures are mapped as CWO-22-HH05b. A small private cemetery (CWO-22-HH06) is located between CWO-22-HH05a and CWO-22-HH05b and was used by a number of local families in the area.

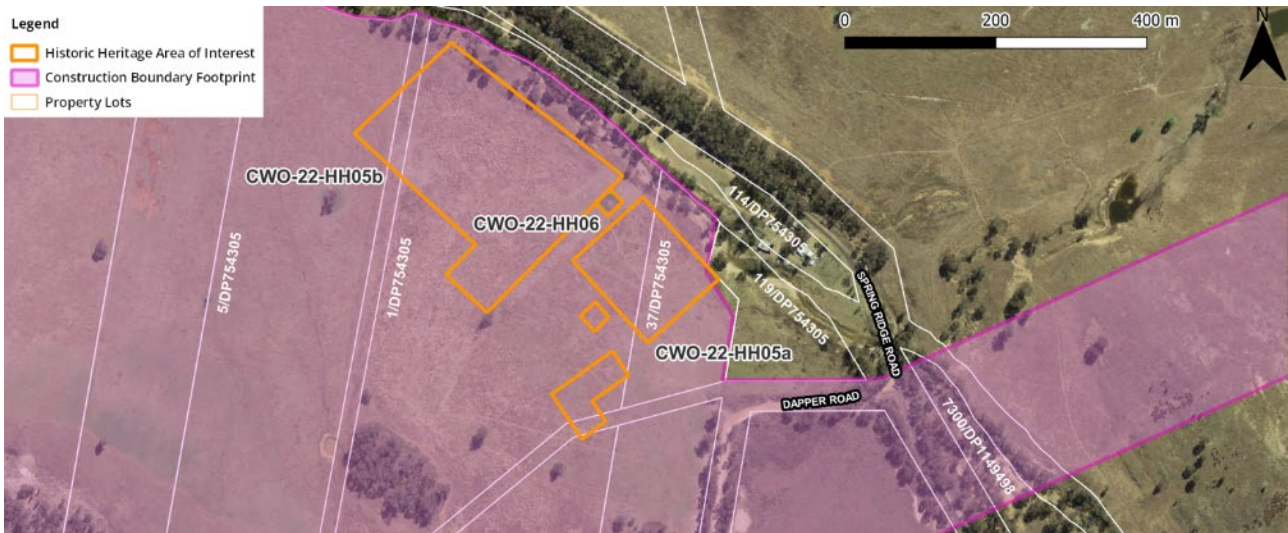


Plate A.29 **Location map**

In 1849, James Boyle Falconer and his family came to Laheys Creek where they grazed sheep and cattle. Historical documentation including Crown Plans and Parish Maps showed that James B Falconer was the owner of two lots south of Woolloowoolanley Creek (now Laheys Creek). The plans mapped the location of a house/inn, a hut, two stockyards, a cultivated area and a garden dating back to the mid-19th century (~1866). A parish plan (1884) shows an inn in this area, likely to be the *Bushman's Home*, the name of the establishment listed on the publican license of John Robert Falconer, son of James B Falconer (Anon 1871).

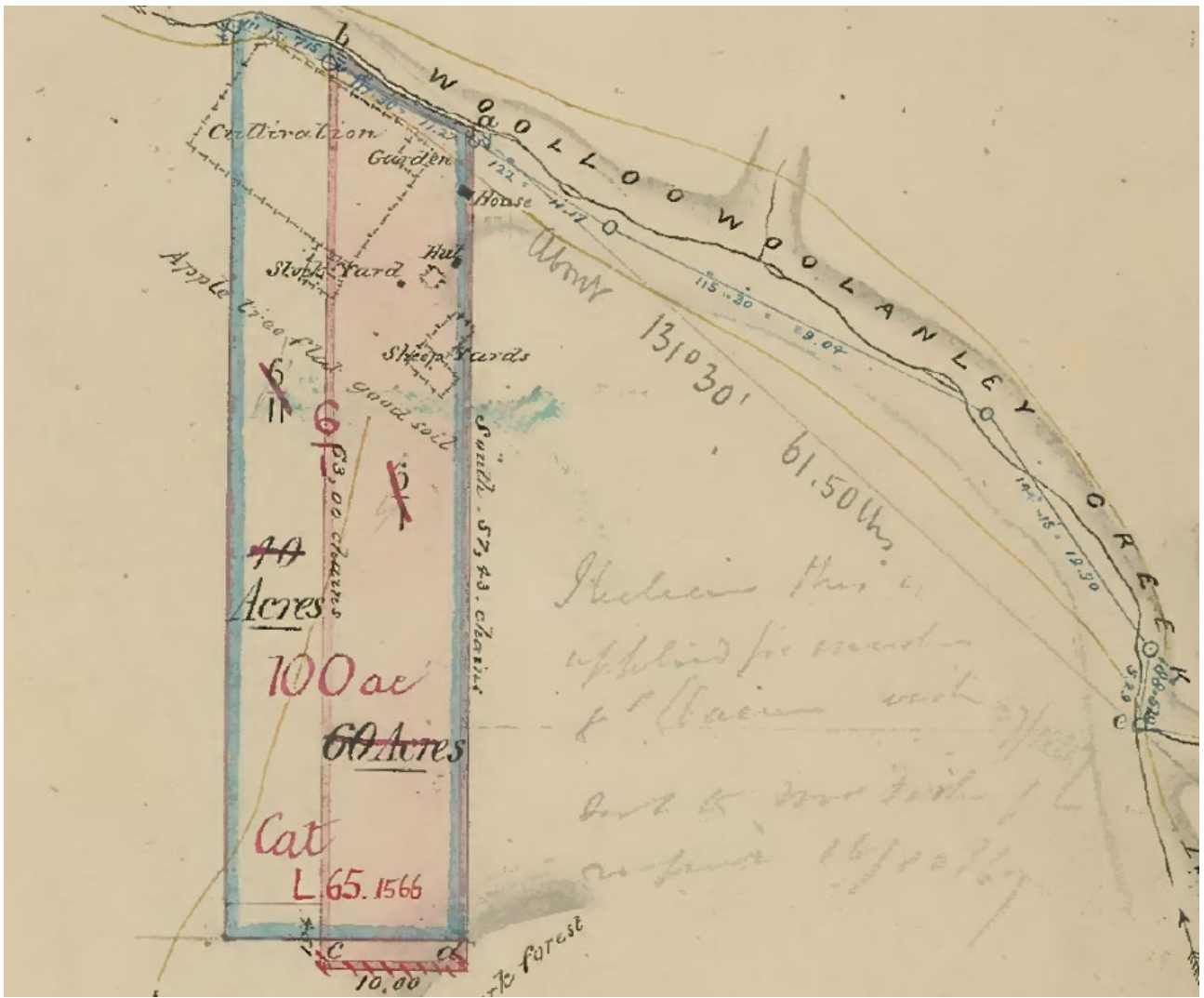


Plate A.30 Crown Plan 65A-1566 from 1869 showing location of the house and hut in northeast corner of lot



Plate A.31 Dapper Parish plan (1900); “Inn” is marked on the plan

Table A.11 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	CWO-22-HH05a consists of the archaeological site of a house (inn) and hut. It is a link to the settlement of this district as it was built by the Falconer family one of the earliest European families to settle in the area. Located at the junction of the Guntawang to Mendooran Road and the track to the Spicers Creek Gold Fields, the Falconer’s converted the home to an inn called the ‘Bushman’s Home’ which included a stable for a mail route. As a result, this area became an important nexus for travel and communication in the district in the late 19 th century. Therefore, the heritage item is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	<p>The heritage item is the property of the Falconer family who are recognised as early settlers of the area. Many members of the Falconer family are buried in the private cemetery (CWO-22-HH06) next to this heritage item.</p> <p>In addition to the Falconers, the Australian novelist and bush poet Henry Lawson, was a frequent guest at the Falconer’s Inn, known as the ‘Bushman’s Home’. Two short stories have been written about the general area including: “A Double Buggy at Lahey’s Creek” and “A Hero in Dingo-scrubs”. Due to the association with an historical figure, the heritage item has cultural significance for the local area.</p>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural, or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures and practices such as stock management and fencing in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare, or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.11 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
State of Significance		
	<p>Laheys Creek Archaeological Site consists of the archaeological resources of a house (inn) and hut. It is a link to the settlement of this district as it was built by the Falconer family one of the earliest European families to settle in the area. Located at the junction of the Guntawang to Mendooran road and the track to the Spicers Creek Gold Fields, the Falconers converted the home to an inn called the ‘Bushman’s Home’ which included a stable for a mail route. As a result, this area became an important nexus for travel and communication in the district in the late 19th century.</p> <p>The Australian novelist and bush poet Henry Lawson, was a frequent guest at the Falconer’s inn, known as the ‘Bushman’s Home’. Two short stories have been written about the general area including: “A Double Buggy at Lahey’s Creek” and “A Hero in Dingo-Scrubs”.</p> <p>CWO-22-HH05 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage. This heritage item also has the potential to yield archaeological information on early pastoral habitation structures in the local area.</p>	
Impact		
	<ul style="list-style-type: none"> • Site complex is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and has potential to be directly impacted by the proposed Project through: <ul style="list-style-type: none"> – traversal of area by construction plant and vehicles – potential construction activities in the south and east of the heritage complex in areas identified as being stockyards (CWO-22-HH05b). <p>It is noted that the site has been previously impacted by cropping activities by way of machinery.</p>	
Recommendation		
	<ul style="list-style-type: none"> • Avoidance protocols will be maintained during construction for CWO-22-HH05a. • Should impact be proposed during construction, a program of test/salvage excavation informed by an archaeological research plan should be undertaken to investigate potential for late 19th century archaeological deposits. • Where archaeological deposits are uncovered, sampled recovery of historic heritage relics should occur prior to disturbance. Once recorded and analysed, salvaged artefacts to be offered to local heritage society/museum. • An unexpected finds procedure should be implemented for works in this area. 	



Plate A.32 Paddock showing ploughed furrows (north-west)



Plate A.33 Mounded historic debris including construction material



Plate A.34 Paddock showing ploughed furrows (south)



Plate A.35 Example historic archaeological find – green wine bottle

A.6 CWO-22-HH05b – Laheys Creek Archaeological Site (Stockyards)

Table A.12 CWO-22-HH05b – Laheys Creek Archaeological Site (Stockyards)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
1//DP754305, 5//DP754305.	Dapper	Lincoln	10%	80%	-32.190034	149.269586
Description						
<p>The heritage item covers the stockyards noted in historic crown plans and is located within a mechanically ploughed field south of Laheys Creek (originally known as Woollooolanley Creek) and immediately west of the junction of Dapper and Spring Ridge Road. No surface archaeology was noted in the areas mapped as stockyards.</p>						

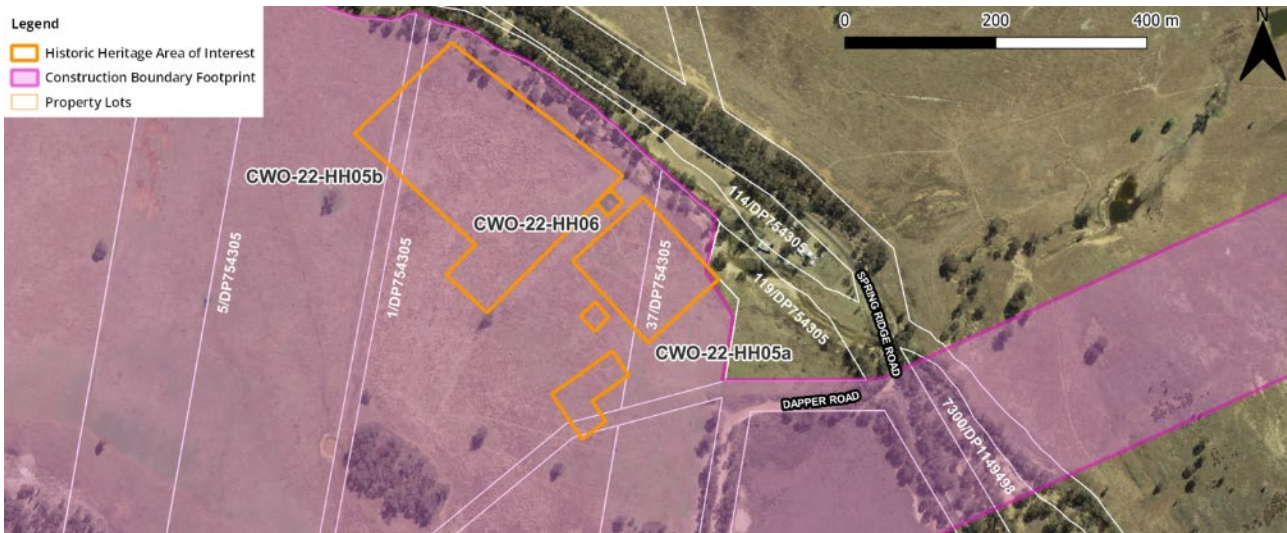


Plate A.36 Location map

In 1849, James Boyle Falconer and his family came to Laheys Creek where they grazed sheep and cattle. Historical documentation including Crown Plans and Parish Maps showed that James B Falconer was the owner of two lots south of Woollooolanley Creek (now Laheys Creek). The plans mapped the location of a house/inn, a hut, two stockyards, a cultivated area and a garden dating back to the mid-19th century (~1866). A parish plan (1884) shows an inn in this area, likely the Bushman’s Home, the name of the establishment listed on the publican license of John Robert Falconer, son of James B Falconer (Anon 1871).

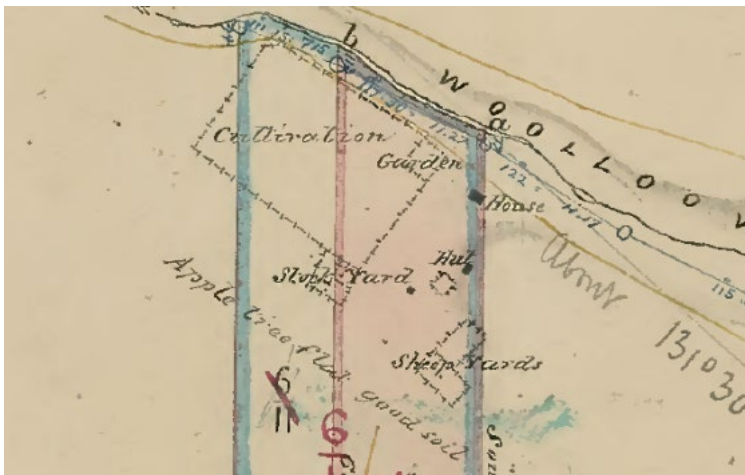


Plate A.37 Crown Plan 65A-1566 from 1869 showing location of hut in northeast corner of lot

Table A.13 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	CWO-22-HH05b is the mapped boundaries of historic stockyards noted on the 1866 Crown Plan. While of interest, this aspect of the heritage item is not of local historical interest.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The stockyards were established by the early members of the Falconer family. However, this association is considered to be more incidental rather than contributory to local heritage values.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.13 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures and practices such as stock management and fencing in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

State of Significance

CWO-22-HH05b consists of the potential archaeological resources of a series of stockyards. Archaeological evidence is likely to be in the form of postholes, noting that the wider area has been historically ploughed. CWO-22-HH05b is considered to be of local heritage significance in having the potential to yield archaeological information on early pastoral stock management and fencing of the local area.

Impact

- Heritage item is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and will be directly impacted by the proposed Project through:
 - traversal of area by construction plant and vehicles
 - potential construction activities in the south and east of the heritage complex in areas identified as being stockyards.
- It is noted that the heritage item has been previously impacted by cropping activities by way of machinery.

Recommendation

- An unexpected finds procedure will be implemented for works in this area.

A.7 CWO-22-HH06 – Laheys Creek Cemetery

Table A.14 CWO-22-HH06 – Laheys Creek Cemetery

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
1//DP754305	Dapper	Lincoln	10%	80%	-32.189236	149.269053
Description						
<p>A small private fenced cemetery at Laheys Creek marks the final resting place of about 40 persons from the area, most being members and relations of the Falconer family. The cemetery is easily identified from the Spring Ridge Road by an imposing sandstone obelisk dedicated to the Falconer family in addition to three other standing headstones.</p>						

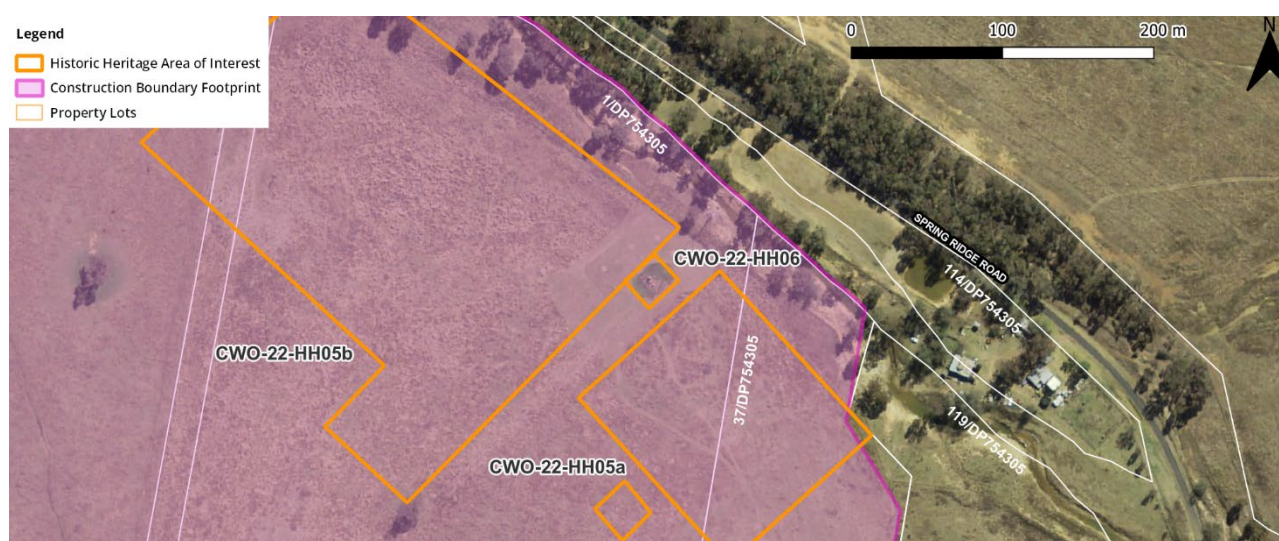


Plate A.38 Location map

Table A.15 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Laheys Creek cemetery is a link to the settlement of this district as it was created by the Falconer family, one of the earliest European families to settle in the area. Therefore, the heritage item is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The cemetery is associated with the Falconer family and is on land selected by Catherine Falconer herself. The Falconer family contributed to the development of the area, running a mail service for the settlers which predated the Cobb and Co service. Due to the association with an historical figure, the heritage item has cultural significance for the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.15 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
D: Social	Laheys Creek cemetery is a local landmark along Spring Ridge Road. It is an easily recognisable link to the settlement of the district. The community, including descendants of the Falconer family, who still live in the area, value the connection to these pioneer settlers.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
E: Research	Reports in secondary sources held by the Gulgong Historical Society suggest that there are up to 40 unmarked graves at the Laheys Creek cemetery site. For researchers and archaeologists, graves have the potential to offer insights into themes of birth, health and death in rural Australia throughout the nineteenth and twentieth centuries.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	Laheys Creek cemetery is a good example of a private cemetery. It demonstrates the way in which people dealt with death in isolated environments.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

CWO-22-HH06 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Laheys Creek Cemetery is associated with the Falconer family, one of the earliest families in the district. Four generations of the Falconer family are buried in the cemetery. The cemetery has local social significance, and the tall sandstone pillar grave marker of Catherine Falconer (nee Milligan) is a landmark for residents. Descendants of the Falconer family are still connected to the site with the most recent burial conducted in 1965. The heritage item is also significant as part of the original grant of land to Catherine Falconer. Laheys Creek cemetery has the potential to contribute to an understanding of life and death in nineteenth century society. The graves themselves are in good condition and are able to offer insight into the mourning practices of the community throughout the nineteenth and twentieth centuries.

Laheys Creek cemetery is a local landmark along Spring Ridge Road. It is an easily recognisable link to the settlement of the district. The community, including descendants of the Falconer family, who still live in the area, value the connection to these pioneer settlers.

Reports in secondary sources held by the Gulgong Historical Society suggest that there are up to 40 unmarked graves at the Laheys Creek cemetery site. For researchers and archaeologists, graves have the potential to offer insights into themes of birth, health, and death in rural Australia throughout the nineteenth and twentieth centuries.

Impact

- Heritage item is located on the eastern edge of the proposed Elong Elong energy hub, adjacent to Laheys Creek and has the potential to be directly impacted by the proposed project. Subject to proposed mitigation measures, direct impacts to the heritage item can be avoided.
- Indirect impacts that may occur relate to vibration impact. The main obelisk has a significant lean owing to the presence of cracking clays. Additional vibration pressures may stress this structure.

Table A.15 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
Recommendation		
<ul style="list-style-type: none"> • Avoidance protocols will be maintained during construction. • A minimum 100 metre exclusion buffer will be provided around this location to ensure impacts to the cemetery are avoided. • A structural baseline assessment of the standing headstones is to be undertaken to determine if additional conservation works may be required to mitigate nearby construction works. • A vibration monitor will be installed within the cemetery at the closest point to construction works to confirm that vibration levels are compliant with applicable criteria. 		



Plate A.39 General shot looking south-west



Plate A.40 General shot looking north-east



Plate A.41 Detail shot of obelisk plaque, note the angle of lean



Plate A.42 Detail shot of grave showing recent maintenance

A.8 CWO-22-HH07 – Brampton Park Homestead Group

Table A.16 CWO-22-HH07 – Brampton Park Homestead Group

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
25//DP754334	Yarrow	Lincoln	10%	80%	-32.177872	149.312787
Description						

“Brampton Park” Homestead is an existing ~100-year-old reclad fibro multi-room homestead for the Brampton Park property. The complex consists of a house, sheep stockyards, water tank and corrugated tin sheds. The homestead does not appear to have a garden but is surrounded by mature native and introduced vegetation species.

The property was not inspected due to lack of land access permission.



Plate A.43 Location map

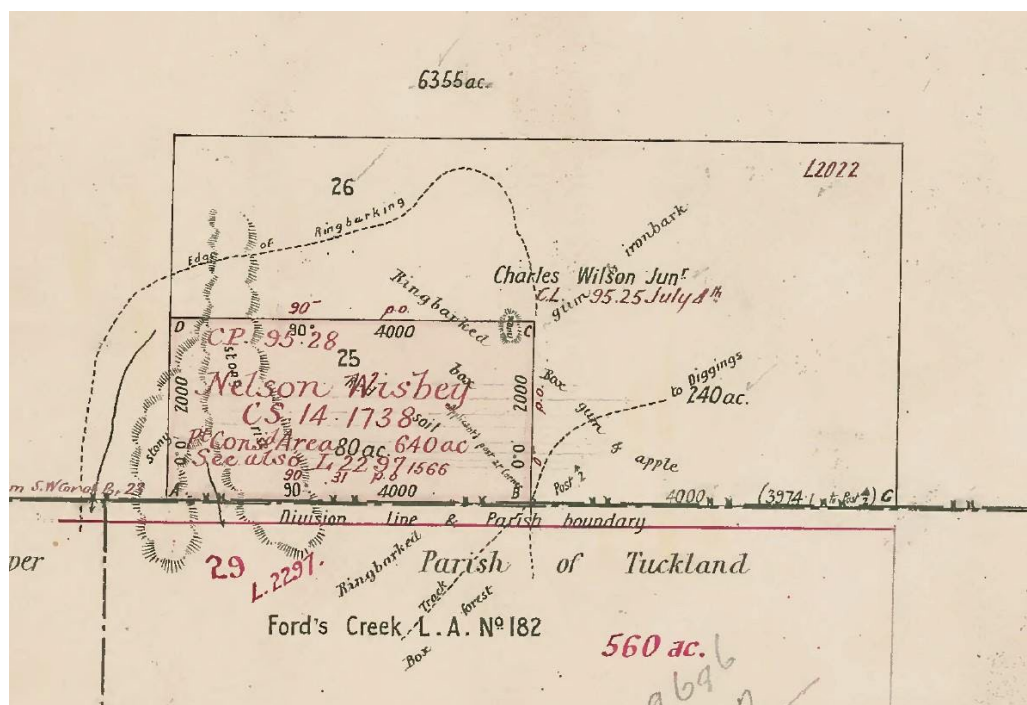


Plate A.44 Crown Plan 2023-1566 (lot 25)



Plate A.45 Location map

Table A.17 NSW Heritage Significant Criteria

Criterion	Assessment	Threshold
A: Historical	<p>Brampton Park is a single storey, multi-room timber structure thought to have been built in the early 20th century. Little is known about this structure. Due to its age, the heritage item is of local historical significance.</p> <p>The land was acquired by Nelson Wisbey in 1914 from Chalres Wilson Jnr. No structures were surveyed with the property (Crown plan 2023-1566).</p>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

Little is known about this structure other than its general age and thus a detailed Statement of Significance has not been developed. That said, CWO-22-HH07 is likely to be of local heritage significance in that it demonstrates heritage values as an early 20th century structure that can contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

- Heritage item is located outside the construction area and will no longer be directly impacted.
- Homestead is located outside of construction area but may have unavoidable visual impacts.

Recommendation

- Avoidance protocols will be maintained during construction.



Plate A.46 Brampton Park Homestead complex

A.9 CWO-22-HH08 – Spir Road Cottage

Table A.18 CWO-22-HH08 – Spir Road Cottage

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
27//DP750764	Rouse	Bligh	10%	80%	-32.175972	149.409677

Description

Heritage item consists of several elements: cottage, outhouse, shed/garage. The cottage is constructed in two distinct parts that create an 'L' shaped footprint. The east portion is of vertical slabs with timber 12-pane sash windows. The slabs have been painted on the exterior, but the interior demonstrates the historical newspaper commonly used to wallpaper over the gaps between the boards. A brick chimney sits on the west elevation. Appended to the south-east corner is an asbestos board extension with timber framed casement windows.

The cottage has a corrugated iron roof with a hipped form that is consistent across the two phases of construction. A modern steel verandah has been added to the north, west and south elevations.

The cottage faces south, with Spir Road to the back (north). The house is closely planted with native and exotic species on the north and west sides, with more open prospects across the paddocks to the south. There appears to have been a small ornamental garden to the south of the cottage. There is a stand of trees approximately 35 m south-west of the house, in which sits the timber framed corrugated iron outhouse. This stand of trees also contains further structures that have dilapidated to the extent that their original function could not be ascertained, but may have been a shower room, meat safe or tank stand. The shed/garage sits to the south-west of the cottage and is a simple timber framed building with corrugated iron cladding.

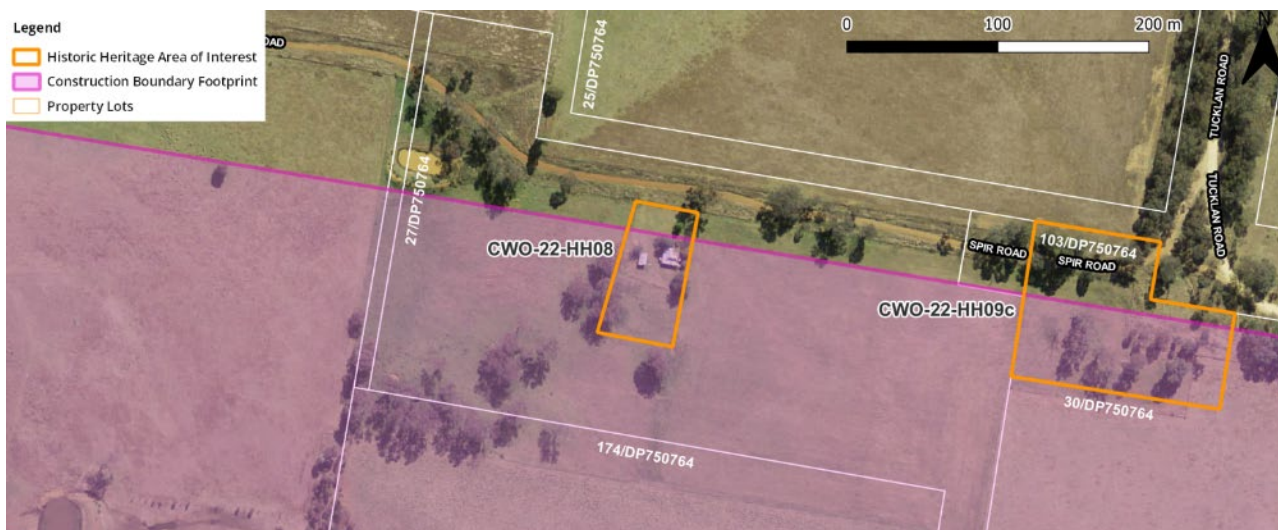


Plate A.47 Location map

Table A.19 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Spir Road Cottage is a single storey, multi-room vertical slab and asbestos multi-phase building. The vertical slab section was relocated from nearby Tucklan in the mid-20th century and is evidence of the course of historical development of the region. Therefore, it is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural, or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.19 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
Statement of Significance		
<p>Spir Road Cottage is a single storey, multi-room vertical slab and asbestos multi-phase building. Oral evidence identified that the vertical slab section was relocated from nearby Spines Cop/Borderville, Tucklan in the mid-20th century and is evidence of the course of historical development of the region.</p>		
Impact		
<p>Heritage item is located within the construction area and may be directly impacted by the proposed Project following finalisation of the required easement width.</p>		
Recommendation		
<ul style="list-style-type: none"> • Avoidance protocols should be considered prior to construction. • If direct impacts cannot be avoided, an Archival Recording should be undertaken prior to impact. 		



Plate A.48 Cottage and gardens looking south



Plate A.49 Cottage looking south



Plate A.50 Cottage and shed looking north



Plate A.51 Cottage looking north into extension, note newspapers on timber walls



Plate A.52 Cottage looking north into extension, note church coloured glass window



Plate A.53 20th century extension to cottage



Plate A.54 Outhouse looking north-east

A.10 CWO-22-HH09a – Tallawang (Upper) Public School

Table A.20 CWO-22-HH09a – Tallawang (Upper) Public School

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
31//DP750764	Rouse	Bligh	10%	80%	-32.178330	149.414846
Description						

Location of a public school, teacher’s residence (31//DP750764) dating from the late 19th century. A school was initially proposed for the Tallawang region in 1881 and the following year a Public School was approved for Upper Tallawang, as well as Lower Tallawang, under the Public Instruction Act of 1880 (The Sydney Mail and New South Wales Advertiser, 1 January 1881, p.27; New South Wales Government Gazette, 21 November 1882, p. 6167). Parish maps show Lot 30 was the Tallawang (later Upper Tallawang) Public School paddock and Lot 31 was the location of the school itself further, both properties were dedicated for school purposes in 1884. The school closed for a short time between 1926 and 1930 and closed permanently in 1941 (*The Online History of Gulgong and Surrounding Districts 2021*). The annotated 1956 Parish of Rouse plan indicates both properties were taken up by RW and NJ Nott between c.1956 and 1982.

No structures currently remain in this location. The teacher’s residence was relocated to nearby Tucklan, it is unknown what happened to the school. A number of roughly dressed stone, wire-drawn bricks and bottle glass are present across the site around a number of mature peppercorn trees (*Schinus areira*), a common introduced tree planted in late 19th century school yards.

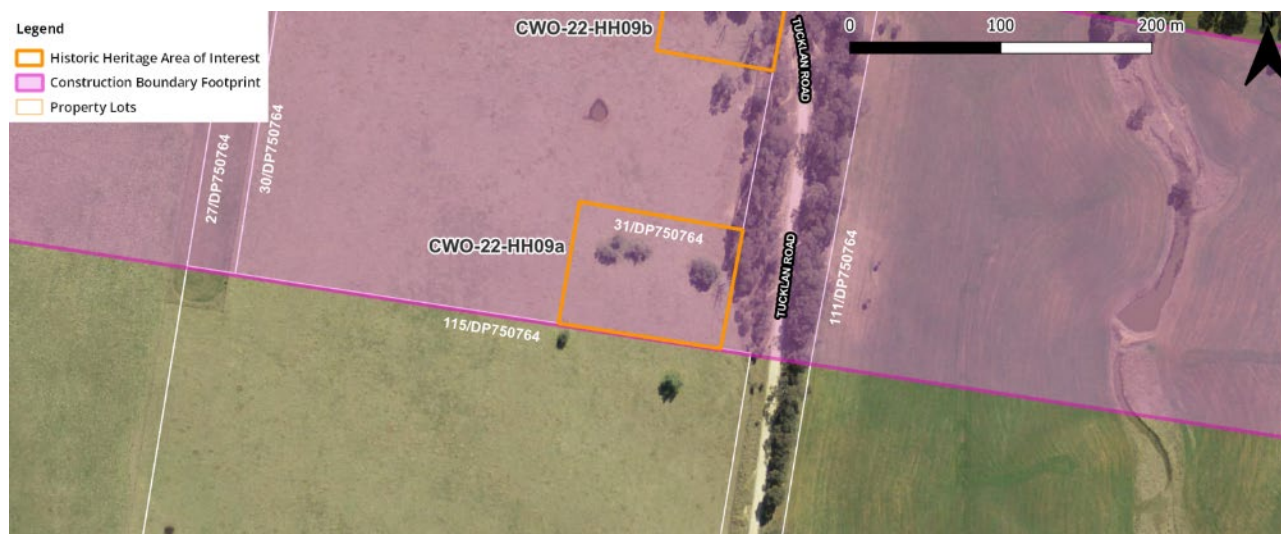


Plate A.55 Location map

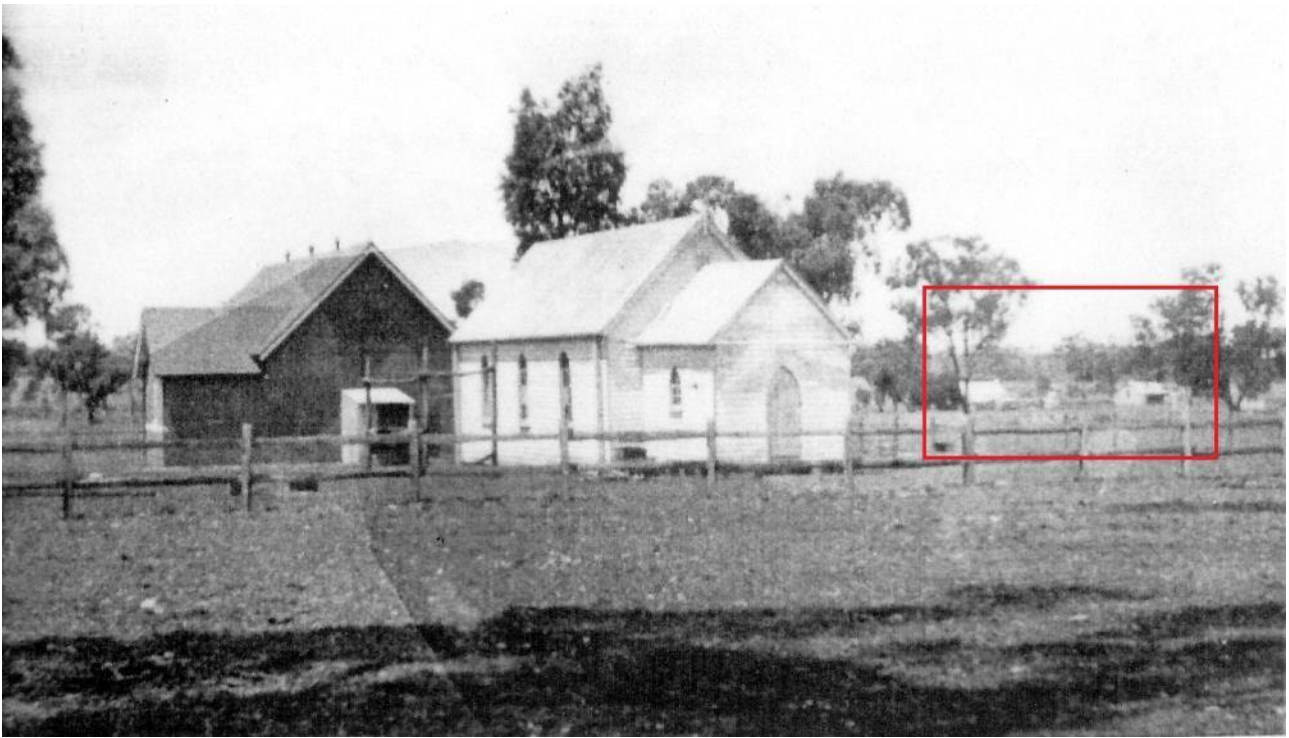


Plate A.56 View from the Catholic Churches (CWO-22-HH09c) with Upper Tallawang Public School (CWO-22-HH09a) highlighted in red in the background (Source: Gulgong Pioneer's Museum)



Plate A.57 The school residence from Upper Tallawang was relocated to Tucklan (Source: Joanne Trengove)

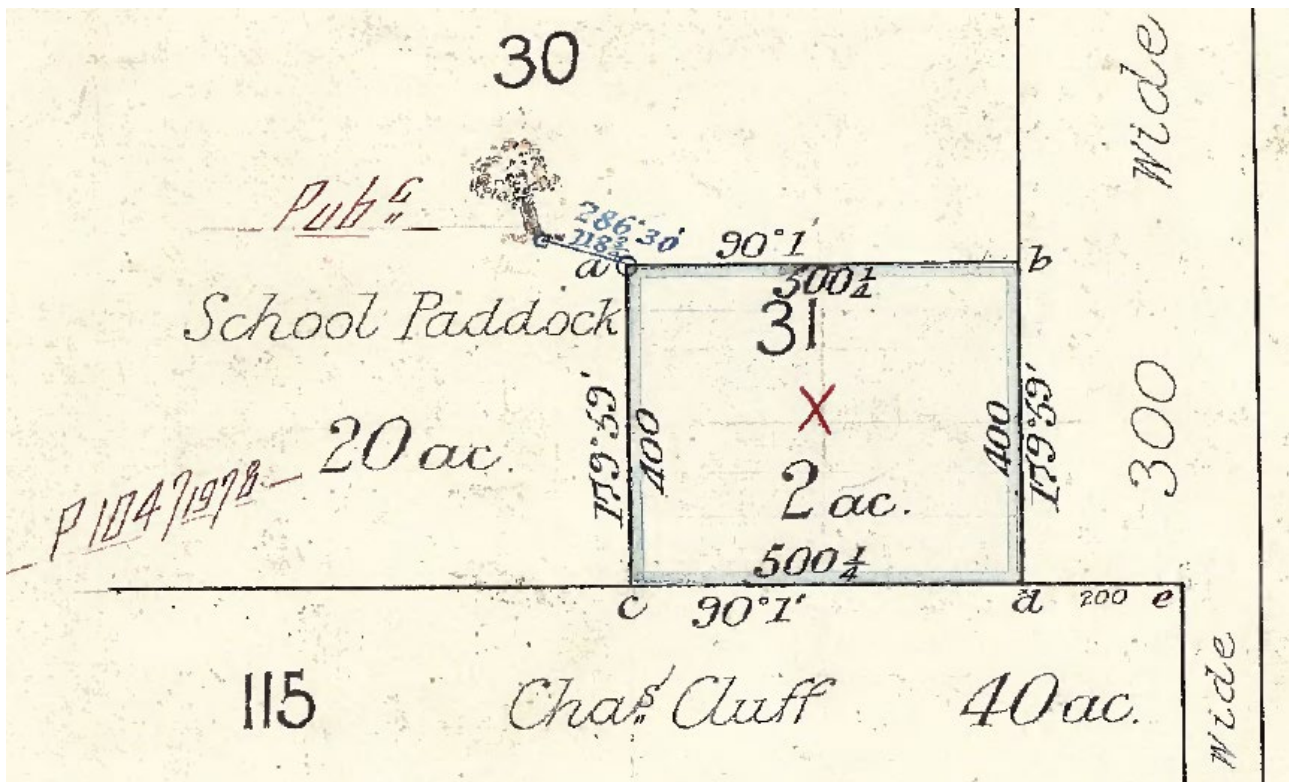


Plate A.58 Crown Plan 1048-1978 from 1883 showing Lot 31 identified for a Public School and adjacent school paddock (Lot 30)

Table A.21 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Tallowang (Upper) Public School has the potential to offers insights into early education precincts in the area. Therefore, it is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural, or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early rural education precincts in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.21 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
Statement of Significance		
<p>If CWO-22-HH09a is present as an archaeological site, it can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of local history and heritage. The heritage item also has the potential to yield archaeological information on early rural education precincts in the local area.</p>		
Impact		
<ul style="list-style-type: none"> Heritage item is located within the construction area and has the potential to be directly impacted through vegetation clearance and tower placement. 		
Recommendation		
<ul style="list-style-type: none"> The heritage item is to be avoided during detailed design and construction planning where feasible and reasonable. If subsurface disturbance cannot be avoided during detailed design and construction planning, then archaeological test excavation informed by an archaeological research plan will be undertaken to investigate potential for late 19th century archaeological deposits. If identified, sampled recovery of historical heritage relics will occur prior to disturbance. Artefacts will be offered to local heritage society/museum. An unexpected finds procedure should be implemented for works in this area. 		



Plate A.59 General location of Upper Tallawang Public School showing fringing peppercorn trees



Plate A.60 Peppercorn trees with scattered building rubble



Plate A.61 Detail of building rubble present amongst the peppercorn trees



Plate A.62 A corner of a brick wall or foundation



Plate A.63 Split timber piled underneath a peppercorn tree



Plate A.64 Examples of bottle glass and ceramics

A.11 CWO-22-HH09b – Tallawang Union Church

Table A.22 CWO-22-HH09b – Tallawang Union Church

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
120//DP750764	Rouse	Bligh	10%	80%	-32.176672	149.415333

Description

Located on the corner of Tucklan Road and Spir Road, was the Dapper Union Church (120//DP750764). No structures currently remain in this location. Little has been documented about this church; however it is known that the lot was purchased by local farmers Charles Lincoln, John Edwards Hansell, and William John Copelin acting as trustees of the Union Church, a church that serves multiple denominations, with a structure established on the property. Oral evidence from local residents also suggests that as many as 36 burials are located within the grounds of the church. To date additional research has not confirmed nor denied the location of these burials and the site inspection found no surface evidence of archaeology or burials within the property.

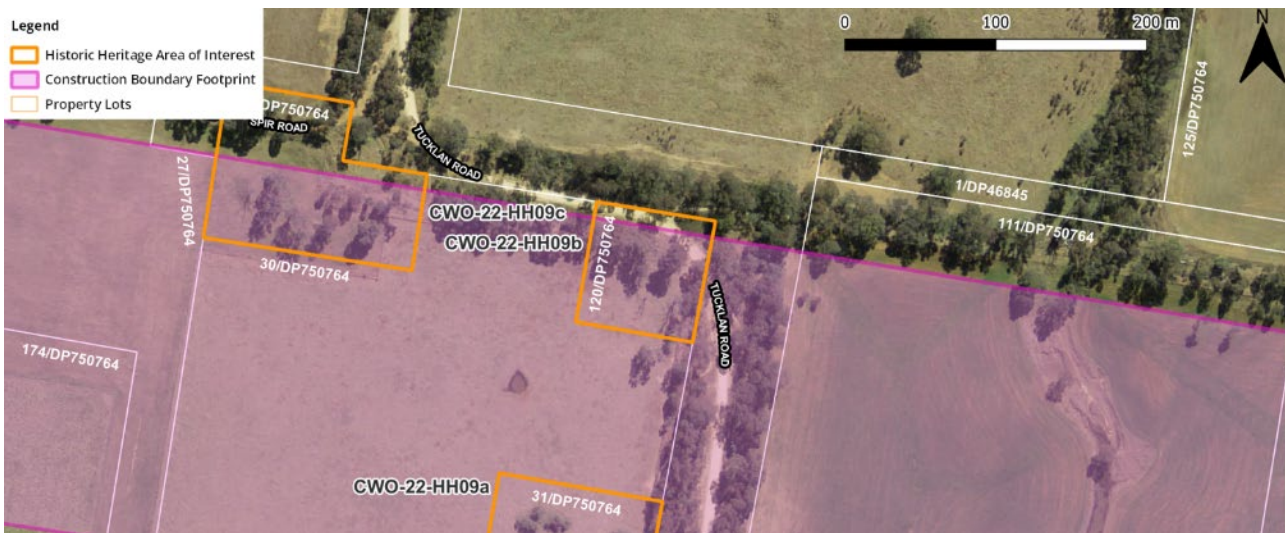


Plate A.65 Location map

Table A.23 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Tallawang Union Church offers insights into the worship practices of rural communities, particularly given its role as a communal church and also its relationship to the Tallawang Catholic Church and Tallawang Upper Public School. Therefore, it is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early rural churches in the local area. Oral evidence notes the presence of a number of potential burials within the church grounds.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

If archaeological evidence of the church is identified, then it can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of religious culture in rural NSW outside of the major town centres.

Table A.23 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
	If the cemetery is identified the graves would be of local social importance representing early pioneers of the area. The cemetery would also have the potential to offer insights for researchers and archaeologists into themes of birth, health and death in rural Australia throughout the nineteenth and twentieth centuries.	
Impact	<ul style="list-style-type: none"> Heritage item is located within the construction area and has the potential to be directly impacted through vegetation clearance and tower placement. 	
Recommendation	<ul style="list-style-type: none"> A program of non-intrusive geophysical investigations (ground penetrating radar etc) should be undertaken to determine if sub-surface deposits associated with the suspected cemetery and/or church exist within the area of potential heritage. Based on the results of this investigation, the following actions should be considered if impacts are proposed in this area: <p>Cemetery:</p> <ul style="list-style-type: none"> If the location of the potential cemetery is identified with confidence, proposed tower design should consider avoidance. NSW Health and Heritage NSW should be contacted on appropriate management measures regardless of proposed impact. If the investigations are not conclusive, a program of investigative archaeological monitoring of the mechanical stripping of topsoil informed by a research design should be undertaken in consultation with NSW Health and Heritage NSW. If the investigation finds no evidence of a cemetery, an unexpected finds procedure should be implemented. <p>Church:</p> <ul style="list-style-type: none"> If the investigation confirms the previous location of the church, proposed tower design should consider avoidance. If subsurface disturbance cannot be avoided during construction, then archaeological salvage excavation informed by an archaeological research plan should be undertaken to investigate potential for late 19th century archaeological deposits. If identified, sampled recovery of historical heritage relics should occur prior to disturbance. If the investigation finds no evidence of a church or the results are not conclusive, an unexpected finds procedure should be implemented. <ul style="list-style-type: none"> Salvaged historic artefacts not associated with burials are to be offered to local heritage society/museum. 	



Plate A.66 Looking south from corner of Tucklan Road



Plate A.67 Looking west towards Spir Road



Plate A.68 Looking east towards corner of Tucklan Road



Plate A.69 Looking east towards corner of Tucklan Road

A.12 CWO-22-HH09c – Tallawang Catholic Churches

Table A.24 CWO-22-HH09c – Tallawang Catholic Churches

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
103//DP750764	Rouse	Bligh	10%	80%	-32.176190	149.412945
Description						

Located off Spir Road were St Paul’s and St Joseph’s Catholic Church (103//DP750764). Lot 103 in the northwest of the heritage complex was purchased by The Right Reverend Joseph Patrick Byrne in 1896 and a timber Catholic Church, St Joseph’s, was established on the lot (Old Form Torrens Register Vol. 1200 Fol. 186). In 1913, a brick church, St Paul’s was built, and the timber church was converted to a hall.

In 1970 the property was sold to farmers Rita May Jones and Lawrence Darcy Jones (Old Form Torrens Register Vol. 1200 Fol. 186). Both churches were subsequently disposed of in the late 20th century. No structures currently remain in this location. Like the Union Church, little has been documented about these churches, but oral evidence from local residents suggests that two burials are located within or immediately outside the grounds of the church. To date additional research has not confirmed nor denied the location of these burials and the site inspection found no surface evidence of archaeology or burials within the property.

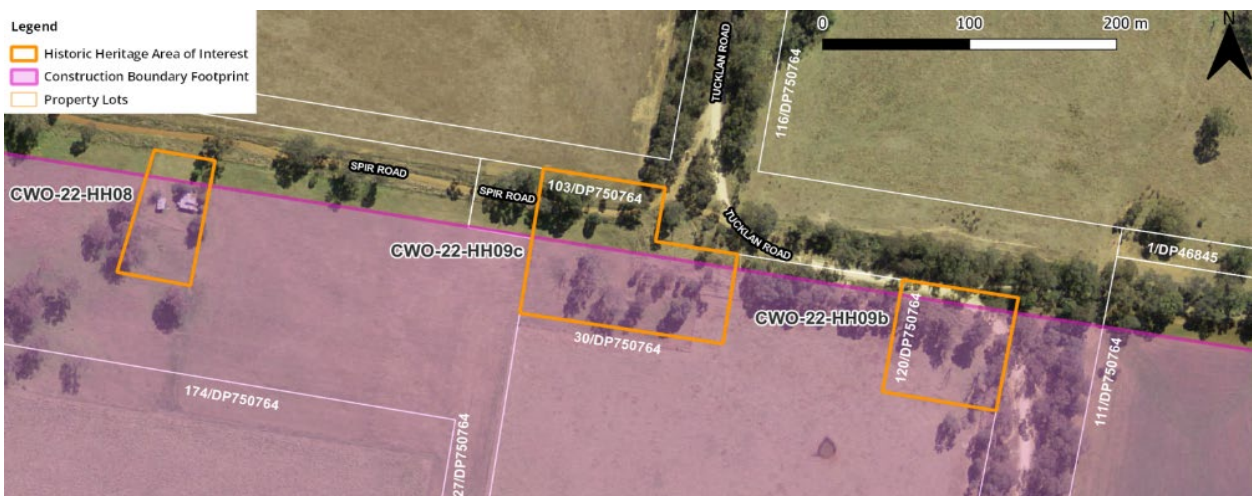


Plate A.70 Location map

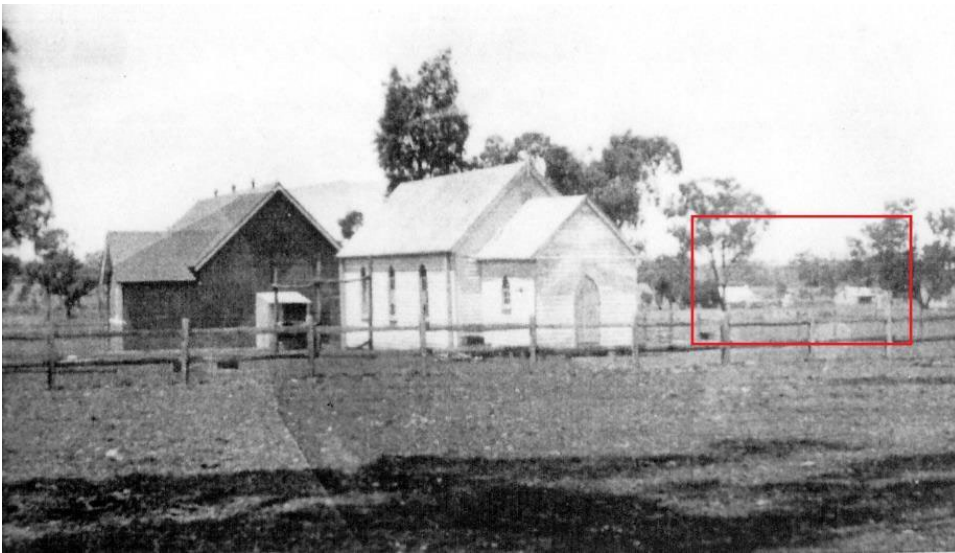


Plate A.71 Historic photo of the original timber church (St. Joseph's) and the new brick church (St Paul's)
(Source: Gulgong Pioneer's Museum)



Plate A.72 St Paul's Catholic Church erected in 1913



Plate A.73 Opening of St Paul’s Catholic Church erected in 1913 (Source: Gulgong Pioneer’s Museum)

Table A.25 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Tallawang Catholic Church offers insights into the worship practices of rural communities, particularly its relationship to the Tallawang Union Church and Tallawang Upper Public School. Therefore, it is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early rural churches in the local area. Oral evidence notes the presence of a number of potential burials within the church grounds.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare, or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.25 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
Statement of Significance		
<p>If archaeological evidence of the church is identified, then it can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of religious culture in rural NSW outside of the major town centres.</p> <p>If the cemetery is identified the graves would be of local social importance representing early pioneers of the area. The cemetery would also have the potential to offer insights for researchers and archaeologists into themes of birth, health and death in rural Australia throughout the nineteenth and twentieth centuries.</p>		
Impact		
<ul style="list-style-type: none"> Heritage item is located within the construction area and has the potential to be directly impacted through vegetation clearance and tower placement. 		
Recommendation		
<ul style="list-style-type: none"> A program of non-intrusive geophysical investigations (ground penetrating radar etc) should be undertaken to determine if sub-surface deposits associated with the suspected cemetery and/or churches exist within the area of potential heritage. Based on the results of this investigation, the following actions should be considered if impacts are proposed in this area: 		
Cemetery:		
<ul style="list-style-type: none"> If the location of the potential cemetery is identified with confidence, proposed tower design should consider avoidance. NSW Health and Heritage NSW should be contacted on appropriate management measures regardless of proposed impact. If the investigations are not conclusive, a program of investigative archaeological monitoring of the mechanical stripping of topsoil informed by a research design should be undertaken in consultation with NSW Health and Heritage NSW. If the investigation finds no evidence of a cemetery, an unexpected finds procedure should be implemented. 		
Churches:		
<ul style="list-style-type: none"> If the investigation confirms the previous location of the churches, proposed tower design should consider avoidance. If subsurface disturbance cannot be avoided during construction, then archaeological salvage excavation informed by an archaeological research plan should be undertaken to investigate potential for late 19th century archaeological deposits. If identified, sampled recovery of historical heritage relics should occur prior to disturbance. If the investigation finds no evidence of a church or the results are not conclusive, an unexpected finds procedure should be implemented. 		
<ul style="list-style-type: none"> Salvaged historic artefacts not associated with burials are to be offered to local heritage society/museum. 		



Plate A.74 Looking east across original location of both churches



Plate A.75 Looking south across original location of both churches



Plate A.76 Looking south showing limited ground surface visibility



Plate A.77 Possible location of burials as identified by landowner

A.13 CWO-22-HH10 – Tallawang Creek Archaeological Site 01

Table A.26 CWO-22-HH10 – Tallawang Creek Archaeological Site 01

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
50//DP457016	Rouse	Bligh	0%	80%	-32.176682	149.445221
Description						

The Tallawang Creek Site 01 was identified on the basis of historical aerials that show a structure in this area.

Subsequent inspection of the location identified the following elements:

- Cultural plantings of peppercorn trees (*Schinus sp.*), cypress trees (*Cupressus sp.*) and *Eucalyptus sp.* around the boundary and adjacent to the remnant remains of structures.
- A collapsed red brick chimney with an arrangement of timber stumps, indicated the structure was a weatherboard or similar structure.
- A group of timber stumps arranged in a tight square, indicating a tank stand.
- A small, corrugated iron tank on a short timber stand.
- A concrete meat safe with punched metal ventilation grilles. The threshold of the meat safe has been etched with "11/4/25". The meat safe has been partially filled with complete or near complete bottles, including brown glass beer-style bottles, clear glass syrup bottles and sauce bottles.
- Concrete landscaping elements, including concrete pavers and garden edging.
- The bricks and bottles, together with the date provided on the meat safe, indicate the heritage item dates from the early 1900s and was probably abandoned in the early 1950s.



Plate A.78 Location map

Table A.27 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The heritage item demonstrates the course and pattern of historical development of the region whereby the beginning of the 19 th century saw the establishment of numerous smaller scale pastoral operations. Therefore, it is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

CWO-22-HH10 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Table A.27 **NSW Heritage Significance Criteria**

Criterion	Assessment	Threshold
Impact	<ul style="list-style-type: none">• Heritage item is located within the construction corridor and will be directly impacted by the proposed Project.• Surface features including water tank, meat safe, vegetation may be removed.	
Recommendation	<ul style="list-style-type: none">• Archival recording of heritage item will be undertaken prior to the commencement of any construction works which would affect the item.• If surface features (such as vegetation or structures) are to be removed, surface sampled recovery of important historical artefacts (such as complete bottles) will occur prior to disturbance. Once recorded and analysed, salvaged artefacts will be offered to local heritage society/museum.• Unexpected finds procedure will be maintained during construction.	



Plate A.79 **View north-east showing house stumps**



Plate A.80 **View south showing water tank and concrete meat safe**



Plate A.81 House stump arrangement



Plate A.82 Collapsed chimney



Plate A.83 Concrete meat safe with timber door and ornate metal grill dated to 11/4/1925



Plate A.84 Collection of intact bottles within meat safe

A.14 CWO-22-HH11 – Tallawang Creek Archaeological Site 02

Table A.28 CWO-22-HH11 – Tallawang Creek Archaeological Site 02

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
179//DP44925 74//DP750762	Rouse	Bligh	0%	80%	-32.256698	149.485902
Description						
Location of structures on Tallawang Creek noted from historic aerial (1964) and since removed (historic aerial 1994). Possible archaeological site located at the edge of the construction area. Limited access due to weather conditions during fieldwork. Paddock had significantly low ground surface visibility to other areas surveyed.						

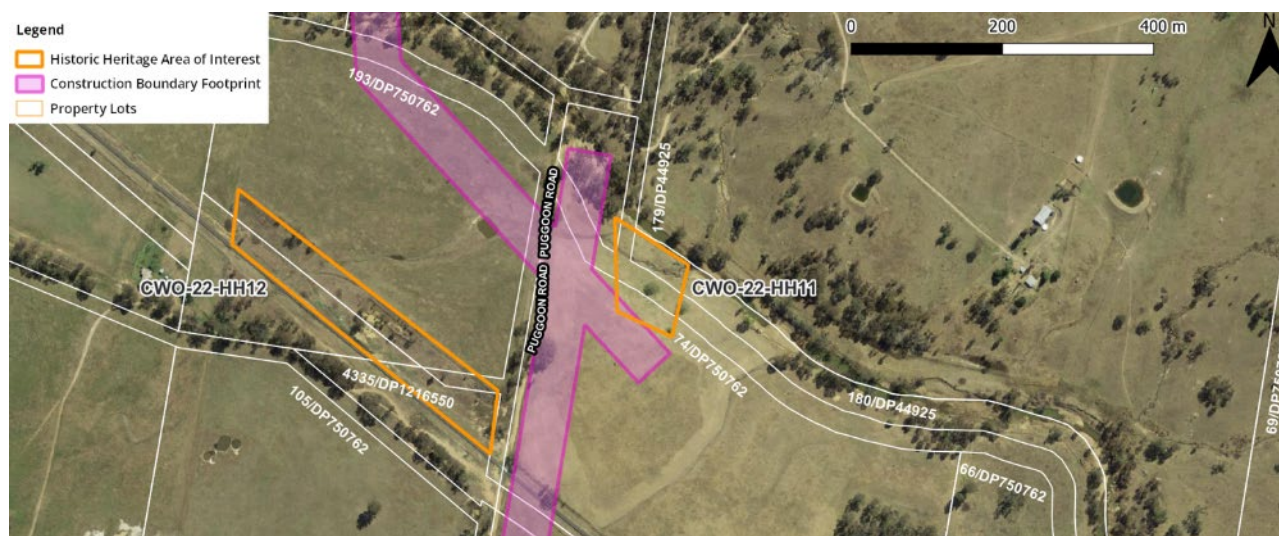


Plate A.85 Location map

Table A.29 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Historical aerials indicate the presence of three structures in this location. But the heritage item only demonstrates minor themes in local history and heritage and does not meet the significance criterion.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.29 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

CWO-22-HH11 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

Direct construction impacts to CWO-22-HH11 are possible, however there are no known heritage items (including potential relics) in the immediate area of impact.

Recommendation

- Unexpected finds procedure will be maintained during construction.



Plate A.86 View south-west



Plate A.87 View north-east

A.15 CWO-22-HH12 – Puggoon Rail Siding

Table A.30 CWO-22-HH12 – Puggoon Rail Siding

Lot//DP	Parish	County	GSV	GSI	Latitude	Longitude
193//DP750762 1//DP1208704	Puggoon	Bligh	70%	40%	-32.257273	149.481989

Description

Demolished railway siding identified from parish maps (1916) and historical aerials (1964). Originally named Stubbo Railway Station, it was renamed to Puggoon Railway Station by the mid-20th century. No physical evidence observed despite good GSV.



Plate A.88 Location map

Table A.31 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The Puggoon Rail Siding appears to have been destroyed. Its location is noted for demonstrating minor themes in local history and heritage.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.31 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
Statement of Significance		
Heritage item has been destroyed. No obvious heritage values remain.		
Impact		
Heritage item is now located outside the construction area (20 m to the west) and not expected to be impacted.		
Recommendation		
Heritage item has been destroyed, no management measures required.		



Plate A.89 Puggoon Siding showing cleared area with wattles



Plate A.90 View south from Puggoon Siding

A.16 CWO-22-HH13 – Merotherie Archaeological Site

Table A.32 CWO-22-HH13 – Merotherie Archaeological Site

Lot//DP	Parish	County	GSV	GSI	Latitude	Longitude
1//DP854876	Merotherie	Bligh	10%	80%	-32.129665	149.559318

Description

Archaeological site identified north of the Birriwa bus route during Aboriginal heritage survey. Heritage item consists of finds such as a manganese bottle, Irish Moss syrup and a champagne bottle neck. Estimated to be from the 1930s at the earliest.



Plate A.91 Location map

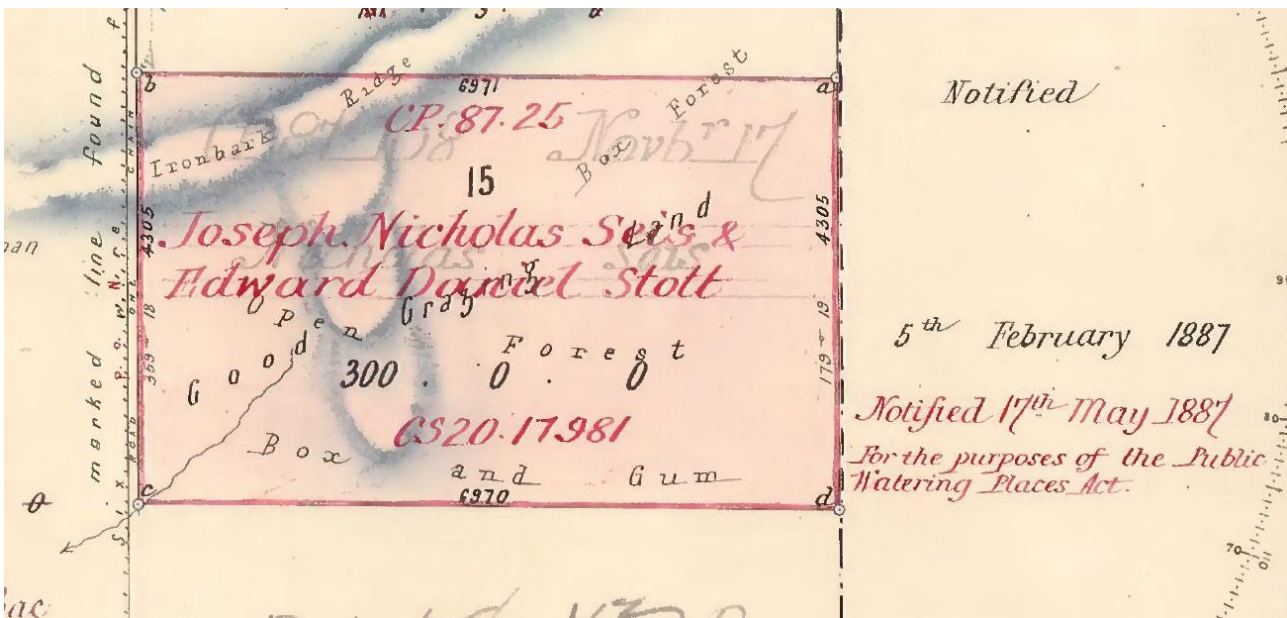


Plate A.92 Detail of Crown Plan 2128-1570 illustrating the natural resources of the historical lot 15

Table A.33 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The Merotherie archaeological site demonstrates minor themes in local history and heritage and does not meet the significance criterion.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
Statement of Significance		
CWO-22-HH13 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.		
Impact		
Heritage item is located within the construction area and will be directly impacted by the proposed project.		
Recommendation		
Archaeological test and salvage excavation informed by an archaeological research plan will be undertaken to recover identified artefacts. Salvaged artefacts will be offered to local heritage society/museum.		



Plate A.93 Detail of identified glass bottles



Plate A.94 Context shot showing historic debris on the surface

A.17 CWO-22-HH14 – Cope Road Archaeological Site

Table A.34 CWO-22-HH14 – Cope Road Archaeological Site

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
39//DP750773, 38//DP750773	Ulan	Bligh	-	-	-32.284003	149.732322

Description

Possible archaeological site located north of the construction area. Historical aerials from 1964 show a large house fringed by mature vegetation. No structure is shown on early Crown Plans. No access at time of survey. Heritage item is close to road, but no safe place to pull over.



Plate A.95 Location map

Table A.35 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The heritage item demonstrates minor themes in local history and heritage and does not meet the significance criterion.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

If CWO-22-HH14 is present as an archaeological site, it can be assessed as local heritage significance in that it would demonstrate research potential that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

Heritage item is now located outside the construction area and will no longer be directly impacted.

Recommendation

Avoidance protocols will be maintained during construction.

A.18 CWO-22-HH15 – Moolarben Archaeological Site

Table A.36 CWO-22-HH15 – Moolarben Archaeological Site

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
11//DP1246858	Ulan	Bligh	-	-	-32.282317	149.804592

Description

Homestead archaeological site identified from historical aerials of structures and adjacent orchard on eastern side of old Murragamba Road. Historical aerials from 1964 show a large house fringed by mature vegetation with orchard to the north-east and sheds to the south-west. No structure is shown on early Crown Plans. No access at time of survey.



Plate A.96 Location map

Table A.37 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The Moolarben archaeological site demonstrates minor themes in local history and heritage and does not meet the significance criteria.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.37 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare, or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

If CWO-22-HH15 is present as an archaeological site, it can be assessed as local heritage significance in that it would demonstrate research potential that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

- Heritage item is now located outside the construction area and will no longer be directly impacted.

Recommendation

- Avoidance protocols will be maintained during construction.

A.19 CWO-22-HH16 – MCP Site 10

Table A.38 CWO-22-HH16 – MCP Site 10

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
30//DP755454	Ulan	Bligh	-	-	-32.290608	149.829616

Description

Possible archaeological site located in centre of construction area identified by extensive wisteria plantings. Described in past assessment as consisting of a few posts and exotic trees (Veritas Service Archaeology and History 2006). No access at time of survey.



Plate A.97 Location map

Crown Plan (1884) indicate the presence of one structure in this location. It appears that the original structure in this location was a gunyah, a temporary structure commonly built by Aboriginal people composed of a frame of sticks covered in bark or leaves and adopted by early European settlers.

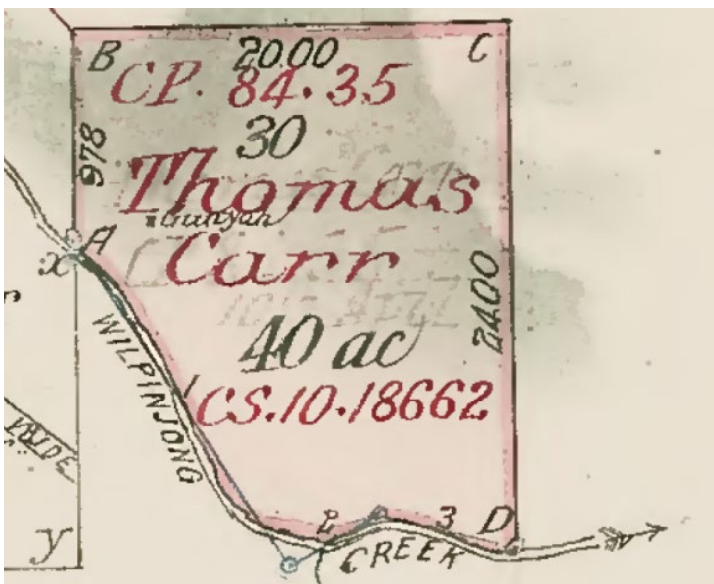


Plate A.98 Crown Plan 1315-2125 from 1884 showing location of gunyah in west of lot

Table A.39 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Crown Plans and Parish Mapping indicate the presence of one structure in this location. It appears that the original structure in this location was a gunyah (a temporary structure commonly built by Aboriginal people composed of a frame of sticks covered in bark or leaves. Therefore, the heritage item is of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State

Table A.39 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

CWO-22-HH16 can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

The following Statement of Significance comes from the Moolarben Coal Project – Historical Heritage Assessment (Veritas Service Archaeology and History 2006):

This site has the potential to yield archaeological information on early pastoral habitation structures in the local area.

Impact

- Heritage item is located within the construction area and will be directly impacted by the proposed project.

Recommendation

- Archaeological test and salvage excavation informed by an archaeological research plan should be undertaken to investigate potential for late 19th century archaeological deposits. If identified, sampled recovery of historic heritage relics should occur prior to construction activities.
- Once recorded and analysed, salvaged artefacts to be offered to local heritage society/museum.



Plate A.99 Detail shot of homestead showing thick growth of wisteria



Plate A.100 Context shot from public land (view north)

A.20 CWO-22-HH17 – Mittaville Archaeological site

Table A.40 CWO-22-HH17 – Mittaville Archaeological site

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
100//DP755454	Ulan	Bligh	-	-	-32.309205	149.851814

Description

The Mittaville Archaeological Site is thought to have been built in the early 20th century but is known to have been historically heavily modified by later work. A more modern house was built in 1981. Demolished prior to construction of current electrical transmission line easement. No access at time of survey.



Plate A.101 Location map

Table A.41 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	Crown Plans and Parish Mapping indicate the presence of one structure in this location. Therefore, the heritage item has the potential to be of local historical significance.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

If CWO-22-HH17 is present as an archaeological site, it can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of local history and heritage.

Impact

- The likely area of this heritage item is located partially within the construction area. However, this item has likely been already significantly impacted through past demolition and construction of the current electrical transmission line easement.

Recommendation

- An unexpected finds procedure should be implemented for works in this area.

A.21 CWO-22-HH18 – Road Embankment (Site 4)

Table A.42 CWO-22-HH18 – Road Embankment (Site 4)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
26//DP755425	Cumbo	Phillip	10%	80%	-32.350242	149.896074

Description

Described as ‘Road Embankment (Site 4)’ in the Peabody Coal *Wilpinjong Coal Historic Heritage Management Plan*, (Peabody Wilpinjong Coal Mine 2017), which is informed by *Wilpinjong Coal Project historical Heritage Impact Assessment* (Heritage Management Consultants Pty Ltd 2004). From the Wilpinjong Coal Historic Heritage Assessment Report: *The stone road embankment on Wilpinjong Road in portion 26, Parish of Cumbo (Plate GA-16), has not been dated. The roadway existed by the time of the first parish map in 1884 and had become a gazetted public road by the parish map of 1908. It was built before the memory of anybody interviewed for this report, so was in place by at least the 1930s, and probably much earlier, perhaps being late 19th century in date. The stone road embankment on Wilpinjong Road is of moderate local importance in the pattern of European settlement of the Wilpinjong area. There are few engineering works of note in the local area, other than the earth works for the Sandy Hollow railway. The stone road embankment is one of the few probably 19th century notable works of a civil rather than rural landholder origin in the valley* (HMP 2004, p.GA-36).

This retaining wall supports the unsealed Wilpinjong Road above it. It was built in the drystone technique using sandstone blocks that have the appearance of being formed through natural fractures and rough quarrying as the blocks are not uniform in size and do not show signs of dressing. Construction is random rubble, and the smaller components used to fill interstices commonly used in the drystone technique are absent.

The variable height of the wall follows the topography, with the tapered ends being composed of approximately four courses, making the wall roughly 300 mm in height at the southern end, with a maximum height of approximately 2010 mm, and 14 courses, at the mid-length point. The wall leans into the landform it supports at approximately 5°.

Lichen growth on the face of the blocks supports the assumption that the retaining wall has been in this location for an extended period, but without targeted research, a construction date cannot be confirmed. Further, with respect to construction, without clearing the topsoil, it is impossible to tell if the base stones are trenched, or if the weight of the blocks has pushed the lowest course into the ground.

It is plausible that the road and retaining wall date from the late 1920s when a shale seam was discovered at Wollar and a syndicate was put together to mine the product, although ultimately, this enterprise ended in failure within three years (Niche 2020:5). The original shale mine site was approximately 2 km north-east of the subject retaining wall, but the Wilpinjong Road does not appear to be the most direct route from the shale mine to Wollar Road. Alternatively, it is noted that the road is built directly adjacent to Cumbo Creek to the west, and the drystone retaining wall may simply be a reinforcing on a dynamic landform.

A homestead group, Pine Park, is situated on the lot east of the road, and the driveway from Wilpinjong Road to the residence and farm buildings is clear in aerial photography (refer to CWO-22-H19 – Pine Park Woolshed). The entrance to the Pine Park is marked with a dry stone wall with another smaller dry stone wall located near the shearing shed (see site card for CWO-22-HH19). It is noted that there are external similarity of the retaining wall and the drystone walls on the Pine Park property, raising the possibility that this is not a civil work, but built by the owners of Pine Park.



Plate A.102 Location map

Table A.43 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	<i>The Road Embankment is one of the few nineteenth century (approximate) notable civil works in the area. It demonstrates changes to the local road network as a result of patterns of European settlement of the Wilpinjong area, whereby locals required decent access through the area and to their properties (Niche Environment and Heritage Pty Ltd 2020:48).</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

CWO-22-HH18 is considered to be of local heritage significance in that it demonstrates heritage values that contribute to our understanding of the pattern and evolution of local history and heritage. The Statement of Significance from the Wollar Buildings Archival Recording for Wilpinjong Coal (Niche Environment and Heritage Pty Ltd 2020:48) is reproduced here:

The Road Embankment is one of the few nineteenth century (approximate) notable civil works in the area. It demonstrates changes to the local road network as a result of patterns of European settlement of the Wilpinjong area, whereby locals required decent access through the area and to their properties.

A similar stone retention wall, Carrs Gap Road Stone Wall, is noted on the Moolarben Coal Project lease (MCP Site #18) located to the west (Heritas Architecture 2008:18–19).

Impact

- Heritage item is located within the construction corridor but can be avoided through considered placement of the proposed tower.

Recommendation

- Noting that the original archival recording was undertaken in 2006, consultation will be undertaken with Heritage NSW to confirm the adequacy of the existing archival record to determine if additional archival recording/mapping prior to works being undertaken is warranted.
- Avoidance protocols will be considered during construction if applicable.
- If surface features such as vegetation are to be removed, monitoring of the structure will be undertaken



Plate A.103 Detail shot of stone fabric



Plate A.104 Context shot showing embankment and stone wall

A.22 CWO-22-HH19 – Pine Park Woolshed

Table A.44 A.22 CWO-22-HH19 – Pine Park Woolshed

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
151//DP755425	Cumbo	Phillip	10%	80%	-32.351311	149.8997

Description

From the Wilpinjong Coal Historic Heritage Assessment Report (Niche Environment and Heritage Pty Ltd 2015):

William Lennox purchased Portion 151, parish Cumbo, in 1889, the block being forfeited to the Bank of NSW by 1932. A cottage was built on the block at some stage, being nothing but a ruined site by the 1980s. The two-stand woolshed (Plate GA-12), believed to date to the 1930s, is said to have been used as ‘depot’ shed by a number of local small-holders who did not have their own shearing sheds.

The woolshed is a simple slab shed with corrugated galvanised iron roof and end-walls on a round-post frame (Plate GA-12 and Plan GA-7). The slabs are said to have come from the old house on the site. The re-use of the slabs from a more domestic building is confirmed by fragments of newspaper and wallpaper adhering to the inside faces of the slabs. The slabs are nailed into the frame, again showing their re-use. The floor and walls are raised about 600 mm above the ground on timber stumps (Heritage Management Consultants Pty Ltd 2004:27).

The Crown Plan (1881) and the Torrens Title form (1889) do not record built features on the property.



Plate A.105 Location map

Table A.45 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	<i>The woolshed demonstrates settlement patterns of the Wilpinjong area. It is the best preserved older shed in the [Wilpinjong Coal Mine] Project area and is representative of shearing (as being the main industry in the [Wilpinjong Coal Mine] Project area) and the nature of small-farm shearers (Niche Environment and Heritage Pty Ltd 2020:51).</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	The heritage item does not have the potential to contribute to understanding NSW's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area's cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

The following Statement of Significance comes from the Wilpinjong Coal Project: Historical Heritage Impact Assessment: The Pine Park woolshed is of local importance in the pattern of European settlement of the Wilpinjong area. It is the best-preserved older woolshed in the [Wilpinjong Coal Mine] Project area and illustrates the nature of shearing in a small-holder community. The woolshed is typical of shearing sheds of small-holdings, and is a good example of its type (Heritage Management Consultants Pty Ltd 2004:31).

Impact

- Heritage item is located within the construction area and will be directly impacted by the proposed project both physically and visually.

Recommendation

The Peabody HHMP (prepared by Niche and which incorporates HMC's assessment) recommends that no further assessment or recording of this feature is required as it has already been completed (Peabody Wilpinjong Coal Mine 2017:13). Likewise an archival recording of this item has been made as part of the approvals for the Wilpinjong Coal Mine (Peabody Wilpinjong Coal Mine 2006).

- Noting that the original archival recording was undertaken in 2006, consult with Heritage NSW on the adequacy of the existing archival record to determine if additional archival recording/mapping prior to works being undertaken is warranted.



Plate A.106 **Dry stone wall at entrance**



Plate A.107 **Pine Park late-20th century house**



Plate A.108 **Shearing shed southern wall**



Plate A.109 **Shearing shed western wall**



Plate A.110 **Shearing shed northern wall**



Plate A.111 **Smaller stone wall**



Plate A.112 Internal intact shearing equipment



Plate A.113 Intact shearing stations

A.23 CWO-22-HH20 – Tallawang Creek Archaeological Site 03

Table A.46 CWO-22-HH20 – Tallawang Creek Archaeological Site 03

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
50//DP457016	Rouse	Bligh	10%	80%	-32.174218	149.444433

Description

The property lot is a cleared paddock and is characterised by black soil and cracking clays (vertosols) and an abundance of thistles. No surface archaeological evidence was noted during the site inspection.

A house was noted in this area on the Crown Plan from 1884. Property owner and one of the original pioneers of the Birriwa area, Edward Milton, is recorded as committing suicide by hanging near his dwelling in 1908 (Anon 1908). It is likely that this house was the same dwelling. The dwelling was likely abandoned after this and possibly demolished. It would be replaced with the later structure, CWO-22-HH10, to the south which is dated to the 1920s.



Plate A.114 Location map

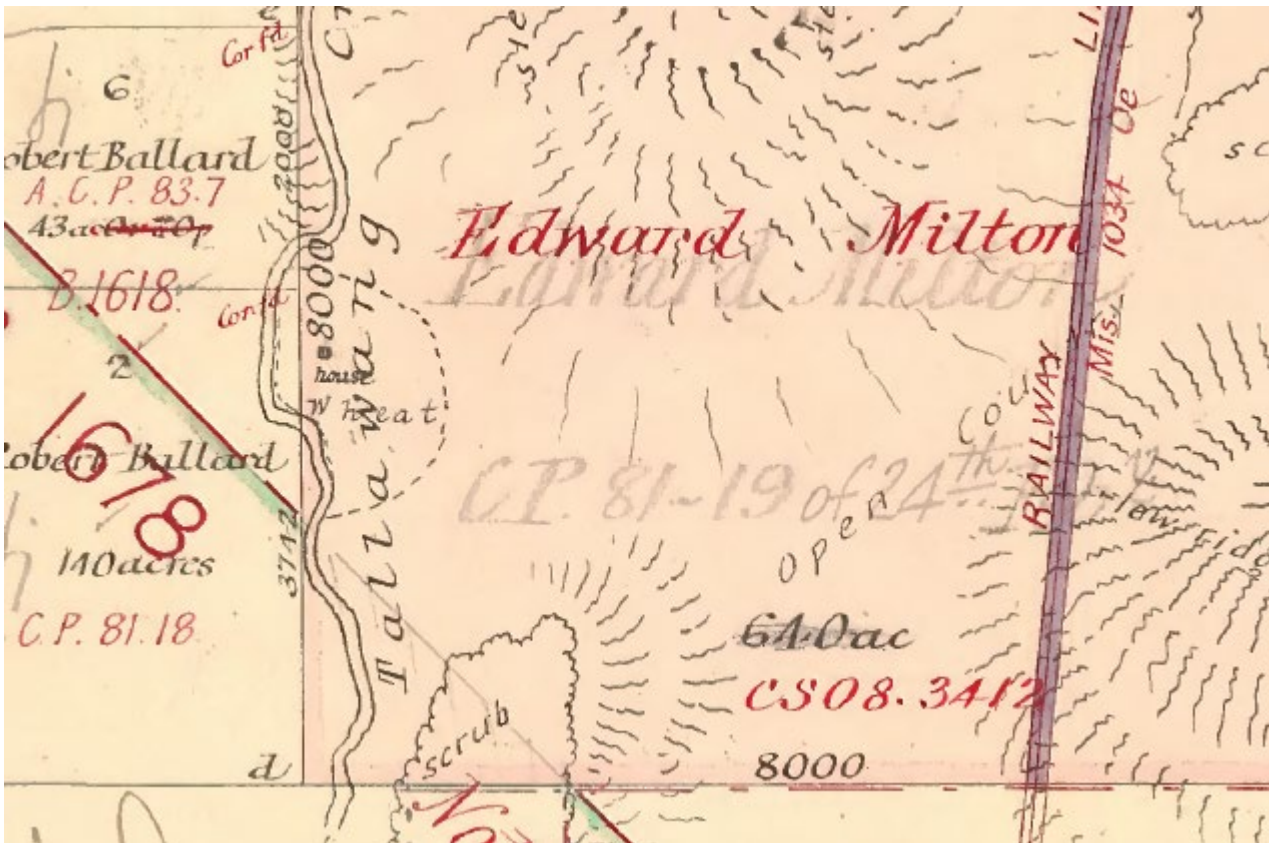


Plate A.115 Crown Plan 1678-1570 from 1884 showing location of a house in the eastern part of the lot in an area of wheat cultivation

Table A.47 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	The Tallawang Creek Archaeological Site 03 demonstrates minor themes in local history and heritage and does not meet the significance criteria.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area's cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.47 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
Statement of Significance		
If CWO-22-HH20 is present as an archaeological site, it can be considered to be of local heritage significance in that it would demonstrate heritage values that contribute to our understanding of the pattern and evolution of local history and heritage. This heritage item has low potential to yield archaeological information on early pastoral habitation structures in the local area.		
Impact		
<ul style="list-style-type: none"> Heritage item is located within the construction corridor and will be directly impacted by the project 		
Recommendation		
<ul style="list-style-type: none"> An unexpected finds procedure should be implemented for works in this area. Salvaged artefacts should be offered to local heritage society/museum. 		



Plate A.116 Looking North



Plate A.117 Looking south noting the presence of thistles

A.24 CWO-22-HH21 – MCP Site 12

Table A.48 CWO-22-HH21 – MCP Site 12

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
2//DP1143354	Wilpinjong	Phillip	N/A	N/A	-32.272353	149.812233

Description

Land access was not permitted during the assessment, the following description comes from the Moolarben Coal Project – Historical Heritage Assessment (Veritas Service Archaeology and History 2006):

The original section of the house has walls of pit sawn vertical slabs. The interior has metal strips to cover the gaps which were then lined with newspapers. One of the papers was dated to 1912. The veranda at the front is supported by round bush timber. The house has verandas on the east and north which have been enclosed to form extra rooms. Modern sawn timber has been used but has been set as vertical boards to match the rest of the house. Some of the older outbuildings have been converted into living areas. The shearing shed is a BBQ area and the machinery shed has been made an accommodation area. The buildings retain their original appearance from the outside. There is a considerable amount of early farm machinery on the site. Exotic trees are plum, pear and grape vines.

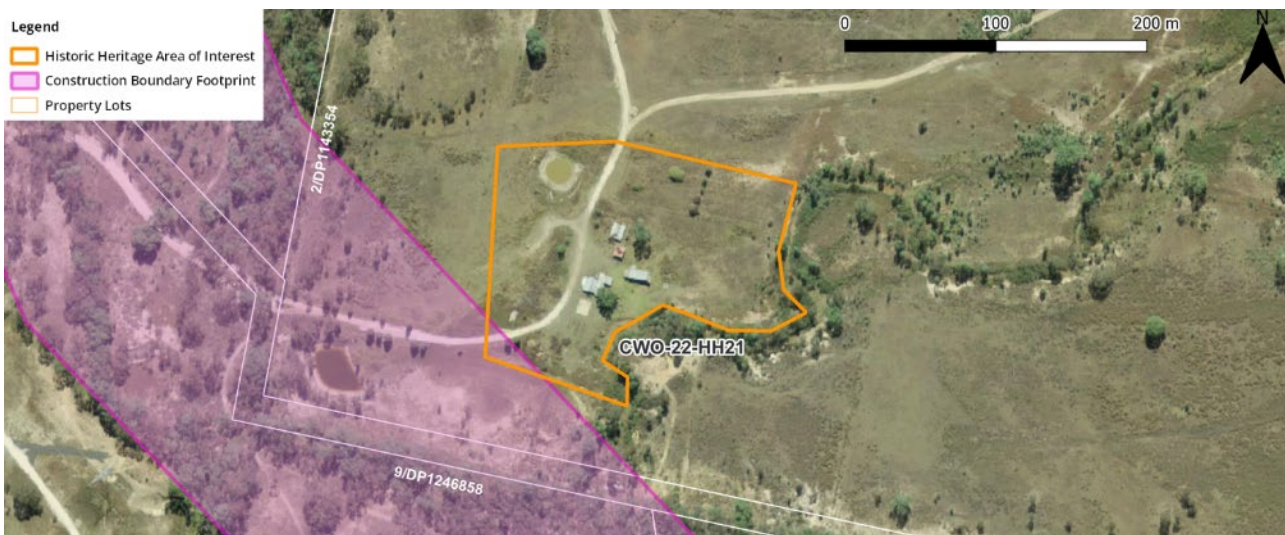


Plate A.118 Location map

Table A.49 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	MCP Site 12 demonstrates minor themes in local history and heritage and does not meet the significance criteria.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
B: Association	The heritage item is not strongly associated with the life or works of a person or group of persons of importance in the cultural or natural history in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	The heritage item is not important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Table A.49 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
D: Social	The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	This heritage item has the potential to yield archaeological information on early pastoral habitation structures in the local area.	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	The heritage item does not possess uncommon, rare or endangered aspects of the area’s cultural or natural history.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
G: Representative	The heritage item is not important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments.	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

The following Statement of Significance comes from the Moolarben Coal Project – Historical Heritage Assessment (Veritas Service Archaeology and History 2006):

This site has the potential to yield archaeological information on early pastoral habitation structures in the local area.

Impact

- Only a very small portion of the area of potential heritage of this heritage item intersects with the construction footprint, therefore significant direct impacts to MCP Site 12 are not anticipated.
- Homestead is located outside of construction area but may have unavoidable visual impacts.

Recommendation

- Avoidance protocols will be maintained during construction.
- An unexpected finds procedure should be implemented for works in this area.



Plate A.119 Farm House at MCP Site 12

A.25 CWO-22-HH22 – Wandoona Homestead (Mid-Western LEP#1996)

Table A.50 CWO-22-HH22 – Wandoona Homestead (Mid-Western LEP#1996)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
1//DP755455	Wollar	Phillip	N/A	N/A	-32.368946	149.932299

Description

Wandoona Homestead is listed on the Mid-Western LEP as Item 996 (1996). The homestead group of buildings is situated at the eastern end of the property and faces Wollar Creek. The majority of the lot is cleared farmland except for the western end, which is heavily vegetated, includes steep topography and has an existing power line and easement oriented to the north-west.

From the Wilpinjong Extension Project Historical Heritage Assessment (Niche Environment and Heritage Pty Ltd 2015):

Situated on the top of a rise with commanding views, the sandstone Wandoona homestead was constructed in three stages. The first stage of the house is a Victorian Georgian style, with a door at the centre of the facade and two double French doors with timber shutters symmetrically placed on either side of the entrance. The roof is hipped corrugated iron with a broken backed veranda roof supported with simple timber posts. The veranda has a timber balustrade and timber steps for access. There are two sandstone chimneys on either side of the original house. The rear entrance to the homestead is similar to the front in appearance, but is at ground level with no wooden window shutters. A sandstone plaque inscribed on the building reads “1878”.

The second stage of construction is of a separate sandstone kitchen building with a corrugated iron hip roof. The external chimney has a window for inserting wood. Looking through the window it can be seen that the fireplace has been bricked in internally but a stove pipe is still in situ.

The third stage of construction is a Queen Anne style gabled roof room, built between the two earlier buildings linking them together. This building is constructed of sandstone with a bay window at the front and a simple window at the rear. Outside and at the rear of the building is a sandstone lined cellar with a wooden sill.

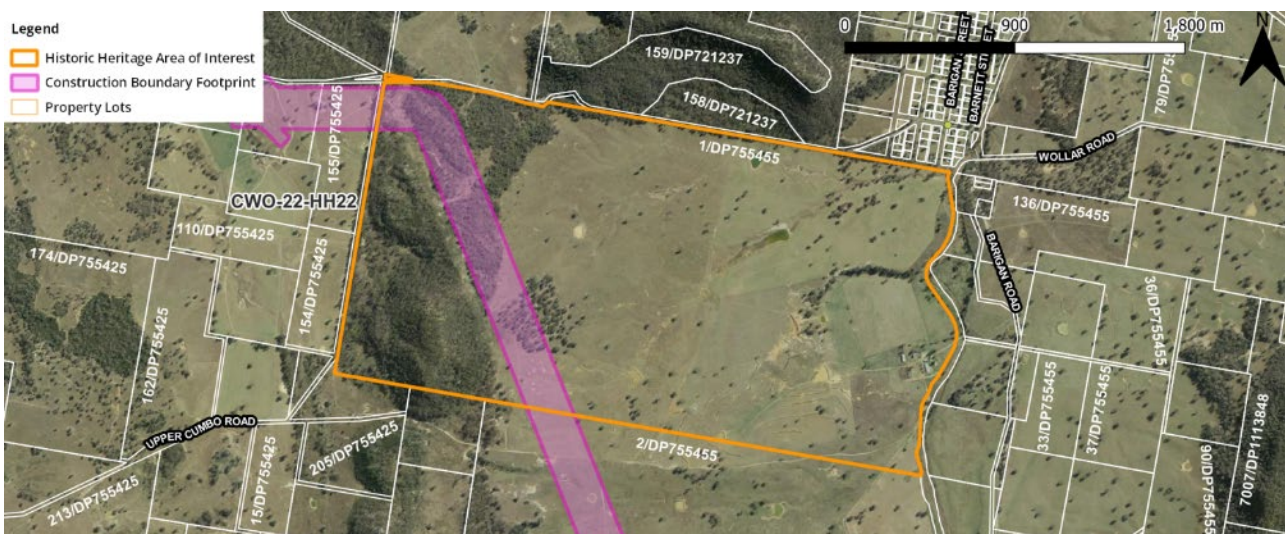


Plate A.120 Location map

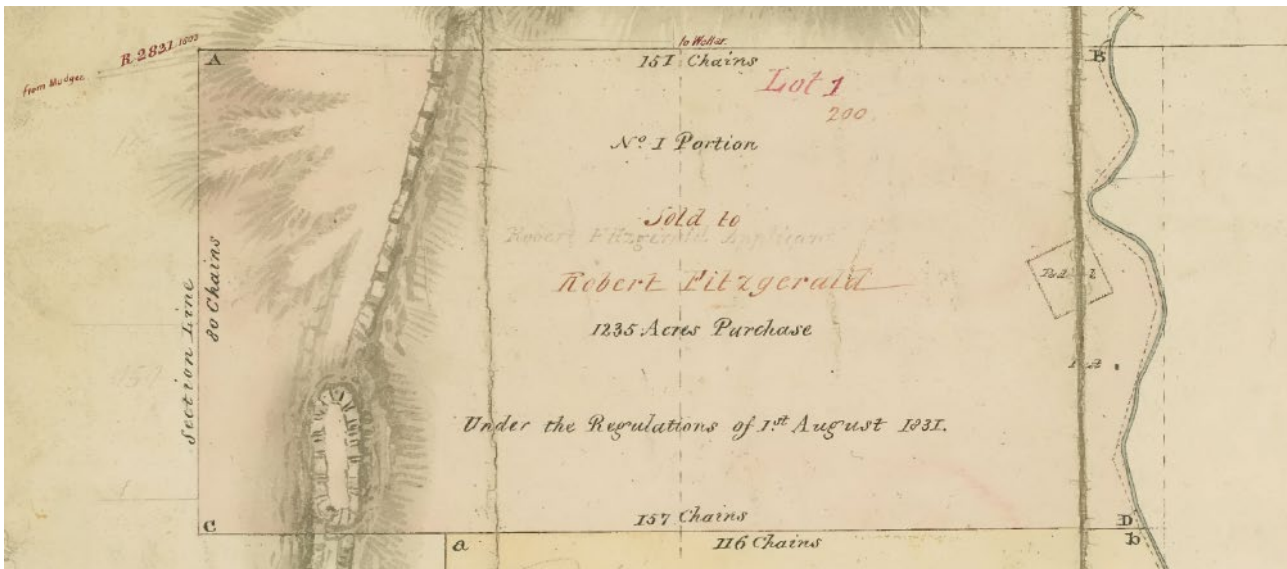


Plate A.121 Crown Plan 104-671 from 1837 showing location of a hut in the east of the lot

Table A.51 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
A: Historical	<i>The Wandoona Homestead is on the property of the earliest settler to the area, Richard Fitzgerald, who arrived in the 1830s. It is the site where Wollar Station was established and became the centre for pastoralism in the area, directly resulting in a population growth due to employment opportunities at the Station. The Single family took over the Station and built the current homestead and continued with large scale pastoral pursuits.</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
B: Association	<i>Wandoona has associations with the Richard Fitzgerald, the pioneering settler of Wollar and creator of the Wollar Station, and with the Single family who were influential citizens of Wollar and were actively involved in the community.</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
C: Aesthetic	<i>The picturesque sandstone homestead does demonstrate aesthetic qualities. The kitchen, which originally stood apart from the main house, demonstrates a high degree of creative achievement whereby keeping the kitchen in a separated building to the main house reduced the risk of fire in the house. While this was a common building technique in the late nineteenth and early twentieth century, there are few demonstrative examples in the area whereby both the house and the kitchen are extant.</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
D: Social	<i>The heritage item does not have strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons.</i>	<input checked="" type="checkbox"/> Not Met <input type="checkbox"/> Local <input type="checkbox"/> State
E: Research	<i>The cellar, refuse deposits, cesspits and wells have the potential to contain relics which could yield information about the lifestyle of Fitzgerald and Single families. This could provide insight to the lifestyles of the wealthier families in the local area.</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State
F: Rarity	<i>There are few sandstone homesteads built in the Wollar area. Other examples of sandstone homes near Wollar are "Barrigan" and "Wollara". Whilst such homesteads are not endangered, they are uncommon. The features of the Wandoona Homestead are also uncommon, the kitchen retains its original oven place including flume piping and the cellar is an unusual retained feature of the homestead.</i>	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State

Table A.51 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
G: Representative	<i>The Wandoona Homestead is a mix of three classes of architecture being Victoria Georgian style constructed in 1878, a later kitchen and a Queen Anne style room connecting the two earlier buildings. Although they have been joined together, each stage of construction demonstrates the principle [sic] characteristics of that class and, as a whole, is important in demonstrating a chronology of principle characteristics of architectural styles in the local area</i> (Niche Environment and Heritage Pty Ltd 2020:67–68).	<input type="checkbox"/> Not Met <input checked="" type="checkbox"/> Local <input type="checkbox"/> State

Statement of Significance

The Statement of Significance from the Wollar Buildings Archival Recording for Wilpinjong Coal (Niche Environment and Heritage Pty Ltd 2020:67–68) is reproduced here:

The Wandoona Homestead is on the property of the earliest settler to the area, Richard Fitzgerald, who arrived in the 1830s. It is the site where Wollar Station was established and became the centre for pastoralism in the area, directly resulting in a population growth due to employment opportunities at the Station. The Single family took over the Station and built the current homestead and continued with large scale pastoral pursuits.

Wandoona has associations with the Richard Fitzgerald, the pioneering settler of Wollar and creator of the Wollar Station, and with the Single family who were influential citizens of Wollar and were actively involved in the community.

The picturesque sandstone homestead does demonstrate aesthetic qualities. The kitchen, which originally stood apart from the main house, demonstrates a high degree of creative achievement whereby keeping the kitchen in a separated building to the main house reduced the risk of fire in the house. While this was a common building technique in the late nineteenth and early twentieth century, there are few demonstrative examples in the area whereby both the house and the kitchen are extant.

The cellar, refuse deposits, cesspits and wells have the potential to contain relics which could yield information about the lifestyle of Fitzgerald and Single families. This could provide insight to the lifestyles of the wealthier families in the local area.

There are few sandstone homesteads built in the Wollar area. Other examples of sandstone homes near Wollar are “Barrigan” and “Wollara”. Whilst such homesteads are not endangered, they are uncommon. The features of the Wandoona Homestead are also uncommon, the kitchen retains its original oven place including flume piping and the cellar is an unusual retained feature of the homestead.

The Wandoona Homestead is a mix of three classes of architecture being Victoria Georgian style constructed in 1878, a later kitchen and a Queen Anne style room connecting the two earlier buildings. Although they have been joined together, each stage of construction demonstrates the principle [sic] characteristics of that class and, as a whole, is important in demonstrating a chronology of principle characteristics of architectural styles in the local area.

Impact

- Although the project would be partially located in the westernmost portion of the curtilage of this heritage item, direct impacts to the structures that form the homestead group are not anticipated. There are no known heritage items (including potential relics) in the area of impact.
- Visual impacts to the homestead arising from the proposed transmission line and supporting towers are considered negligible for the following reasons:
 - Proposed transmission line is approximately 2.3 km from the homestead (e.g. beyond the visual impact assessment study area of 2 km).
 - An existing transmission line crosses the approximate area of the new proposed transmission line. The existing transmission line is barely visible from the homestead.
 - The key view lines for the homestead faces towards the east away from the proposed transmission line.
 - The western side of the homestead has a windbreak of trees significantly reducing the potential visual impact.

Recommendation

- Avoidance protocols will be maintained during construction.



Plate A.122 The front of Wandoona Homestead looking south-west



Plate A.123 The rear of Wandoona Homestead looking east



Plate A.124 View to the ridgeline at the western end of the property

A.26 CWO-22-HH23– Goulburn River National Park (Mid-Western LEP# 1994)

Table A.52 CWO-22-HH23– Goulburn River National Park (Mid-Western LEP# 1994)

Lot/DP	Parish	County	GSV	GSI	Latitude	Longitude
-	Wollar	Phillip	N/A	N/A	-	-

Description

The Goulburn River National Park was established in 1983 following proposals to construct the Kerrabee Dam. The area is characterised by Triassic Narrabeen Sandstones and is viewed as a vegetative transitional zone encompassing floral communities typical of the south-east, north-west and western ecotones of the State. Extensive environmental assessments undertaken for the Kerrabee Dam have identified the area’s significant natural and cultural values.

Table A.53 NSW Heritage Significance Criteria

Criterion	Assessment	Threshold
Statement of Significance		
<p>CWO-22-HH23 is currently listed as local heritage significance in the Mid-Western Regional LEP. The Goulburn River National Park has primarily natural, historic and Indigenous heritage values including in relation to the complex geological history of the place and its resultant geological features, the diversity of eucalypts and the evolution of ecological communities, the important historic first crossing of the Blue Mountains by Europeans in 1813 and its roles in the national conversation regarding the development of dams in community values environments.</p> <p>The Goulburn River National Park is noted due to the presence of rare geological formations including pagodas, slot canyons, bottleneck valleys, perched lakes, high altitude aeolian dunes and the ancient Jenolan Caves karst system, as well as relict flora with Gondwanan origins and the Temperate Highland Peat Swamps on Sandstone Threatened Ecological Community. It is the cumulative nature of this aspect that makes the distinctive landscape of the Goulburn River National Park valued by the wider community.</p>		
Impact		
<p>Significant impacts to the Goulburn River National Park are not anticipated. Visual impacts arising from the proposed power line and supporting towers are anticipated to be negligible for two reasons:</p> <ul style="list-style-type: none"> • There are no significant views from the Goulburn River National Park in the direction of the proposed transmission line. • There is already an existing transmission line running along the southern boundary of the Goulburn River National Park. 		
Recommendation		
<ul style="list-style-type: none"> • This heritage item is adjacent to, but outside of the construction area for the project and won't be directly impacted. • Avoidance protocols will be maintained during construction. 		



Plate A.126 Goulburn River National Park showing existing electrical transmission line in foreground

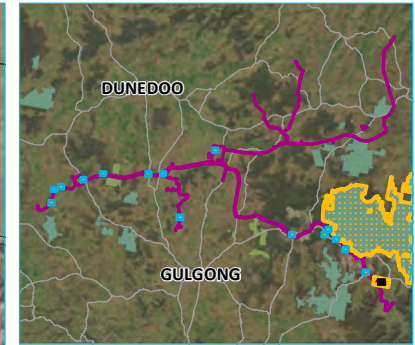
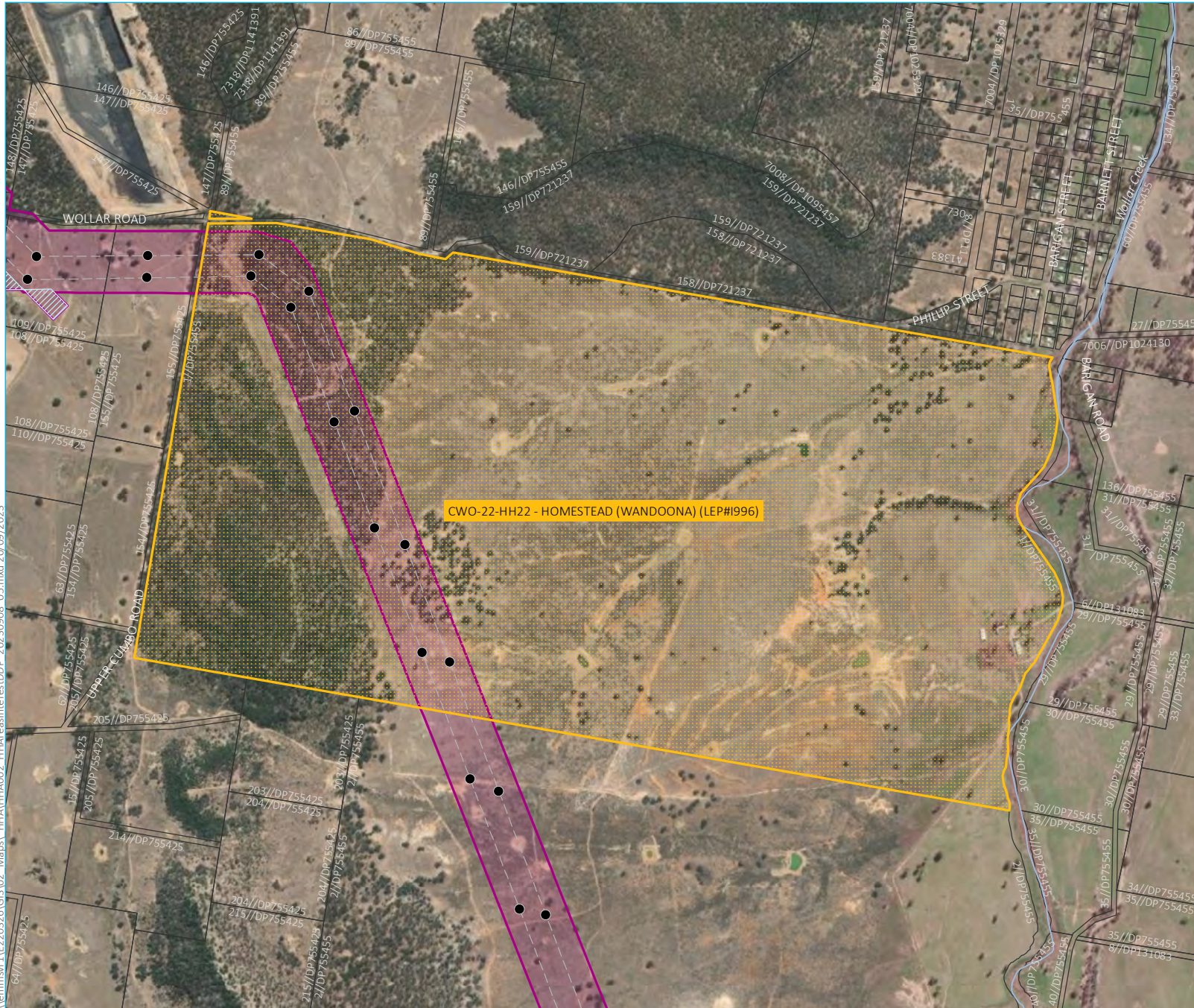


Plate A.127 An example of typical natural heritage values from the Goulburn River National Park

Appendix B

Figures

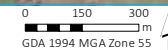
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- KEY**
- Construction area
 - Historic heritage area of interest
 - Named watercourse
 - Named waterbody
 - Cadastral boundary
 - Construction and operational element
 - Proposed tower location
 - Overhead powerline
 - Break and winch site
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

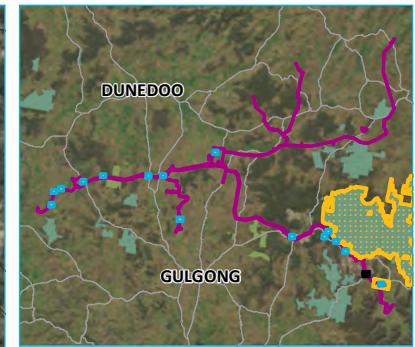
CWO-22-HH22
(LEP#1996)

Central West Orana Renewable
Energy Zone transmission
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Appendix B



Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)

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- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH18 - ROAD EMBANKMENT (SITE 4)

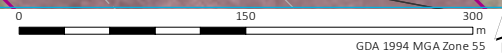
CWO-22-HH19 - PINE PARK WOOLSHED

CWO-22-HH18,
CWO-22-HH19

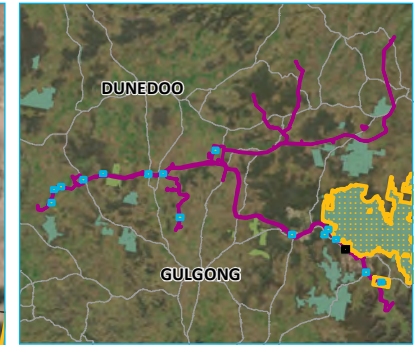
Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



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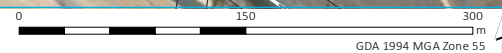
- KEY**
- Construction area
 - Historic heritage area of interest
 - Rail line
 - Named watercourse
 - Cadastral boundary
 - NPWS reserve
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

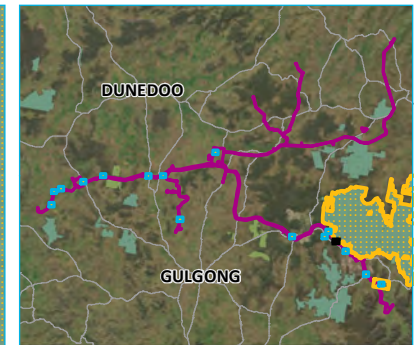
CWO-22-HH17

Central West Orana Renewable Energy Zone transmission Historic Heritage Assessment Appendix B



Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
 - Rail line
 - Named watercourse
 - Cadastral boundary
 - NPWS reserve
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
 - Break and winch site
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

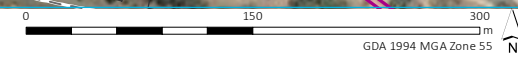
CWO-22-HH16

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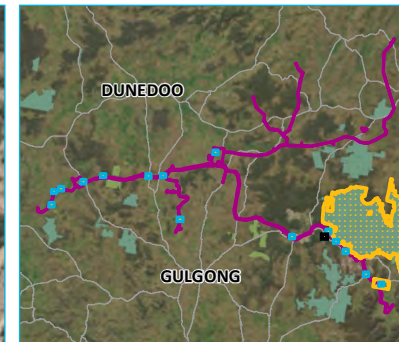
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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





CWO-22-HH15 - MOOLARBEN
ARCHAEOLOGICAL SITE



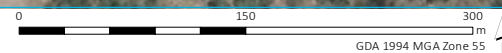
- KEY**
- Construction area
 - Historic heritage area of interest
 - Rail line
 - Cadastral boundary
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH15

Central West Orana Renewable
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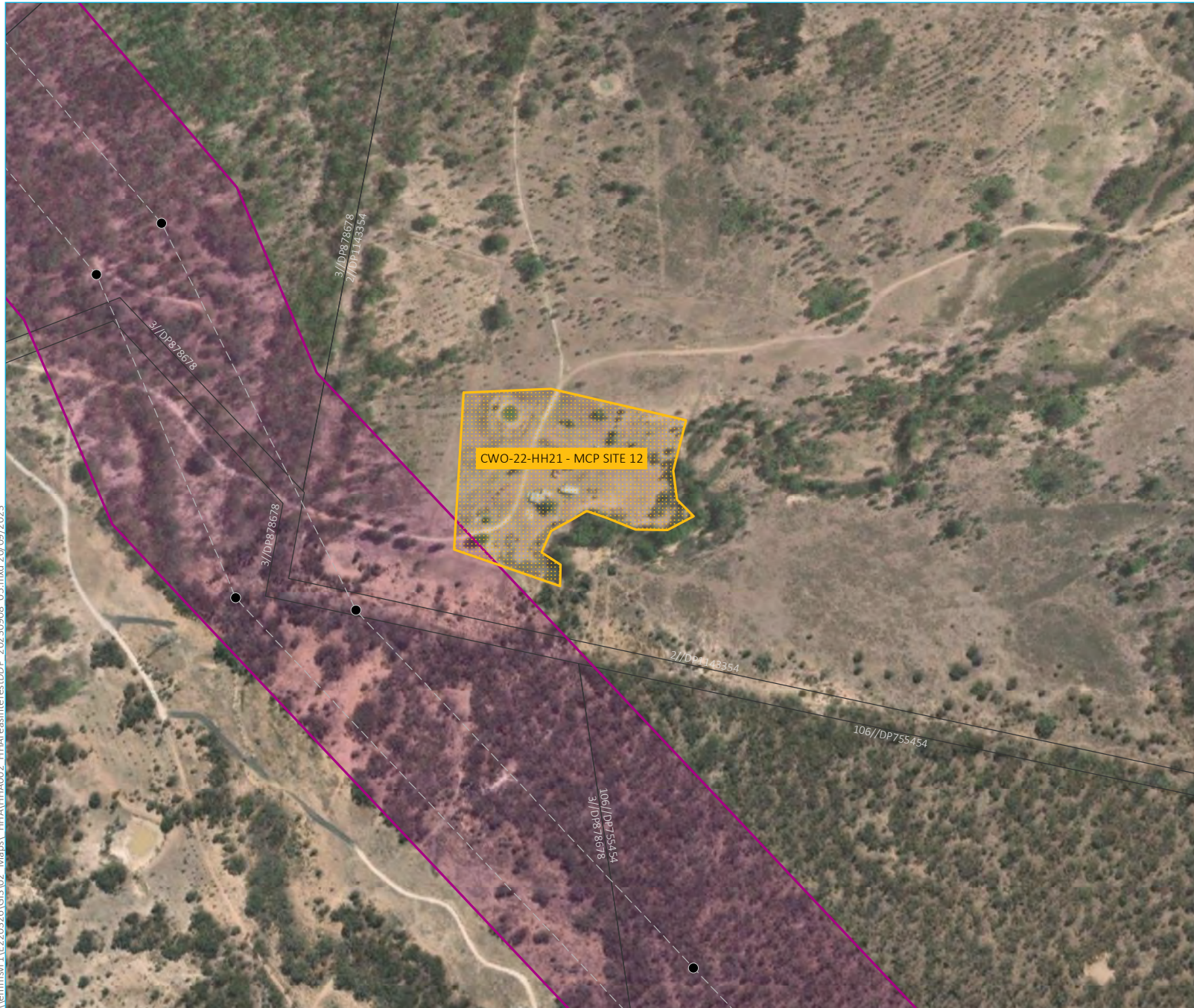
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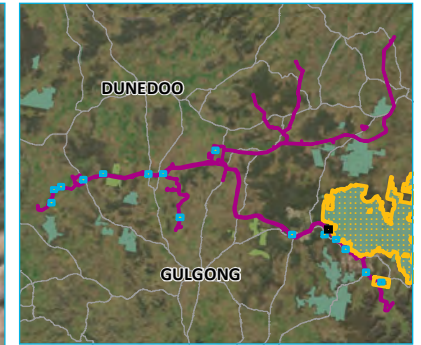
GDA 1994 MGA Zone 55

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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



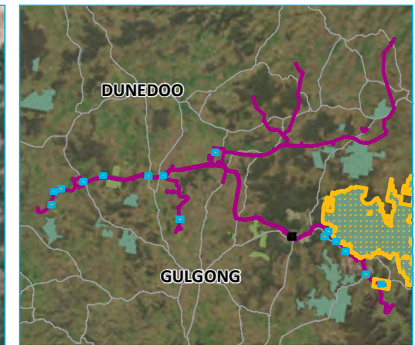
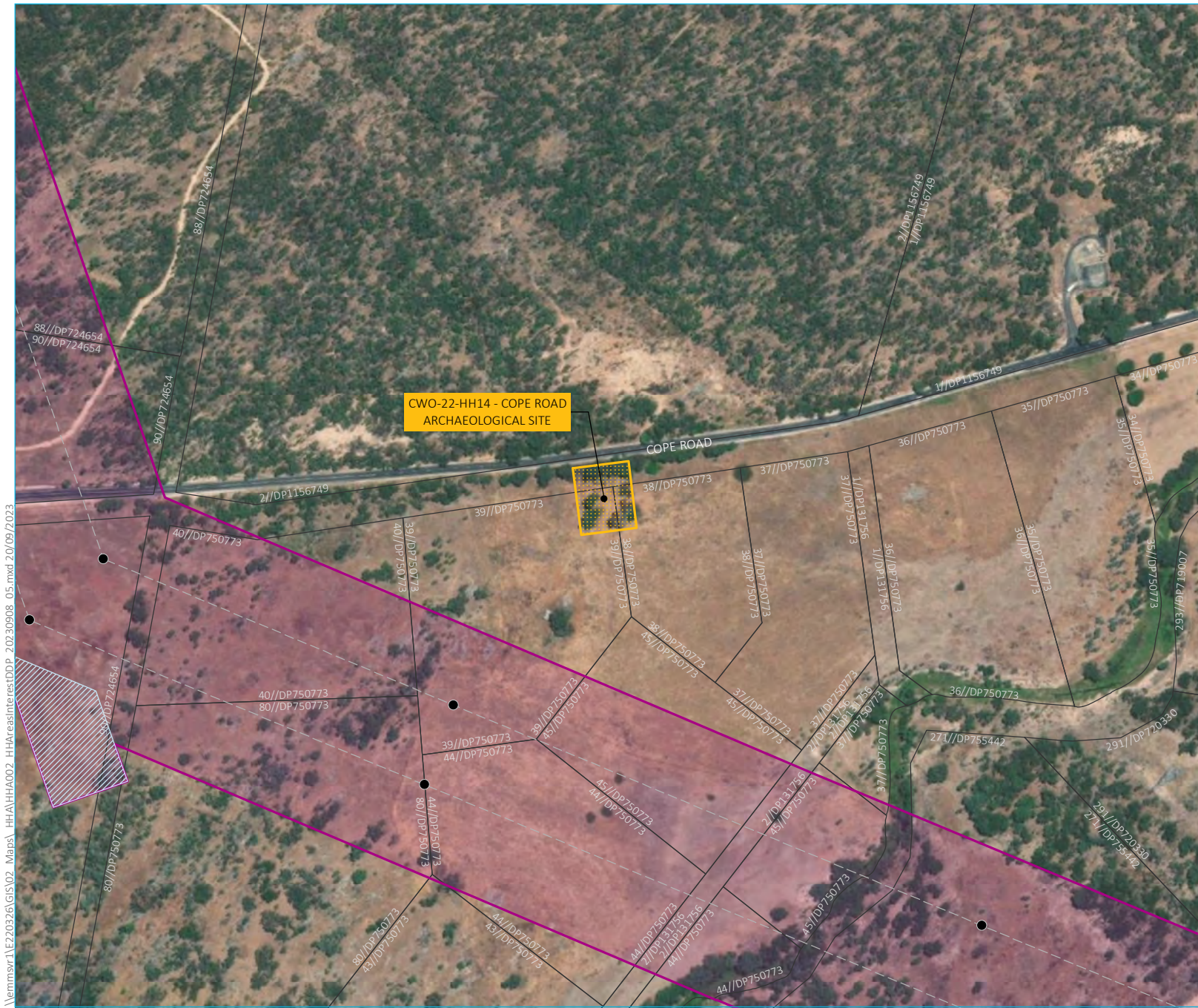
- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH21

Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
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GDA 1994 MGA Zone 55



- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
 - Construction and operational element
 - Proposed tower location
 - Overhead powerline
 - Break and winch site
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

**CWO-22-HH14 - COPE ROAD
ARCHAEOLOGICAL SITE**

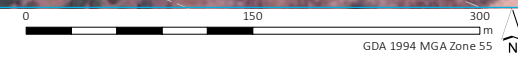
CWO-22-HH14

Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
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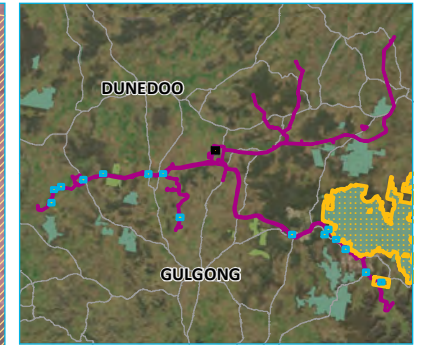
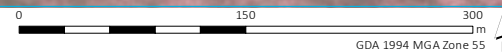


GDA 1994 MGA Zone 55

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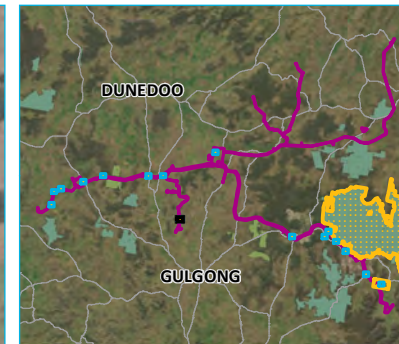


- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
 - Substation design
 - Ancillary facilities
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH13

Central West Orana Renewable Energy Zone transmission Historic Heritage Assessment Appendix B





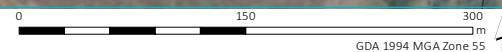
- KEY**
- Construction area
 - Historic heritage area of interest
 - Rail line
 - Named watercourse
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
 - Break and winch site
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH11,
CWO-22-HH12

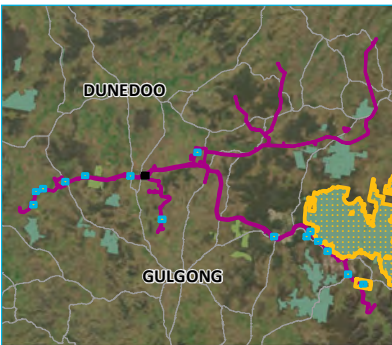
Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



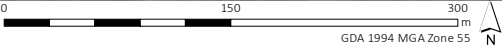
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- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
 - Construction and operational element
 - Proposed tower location
 - - - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



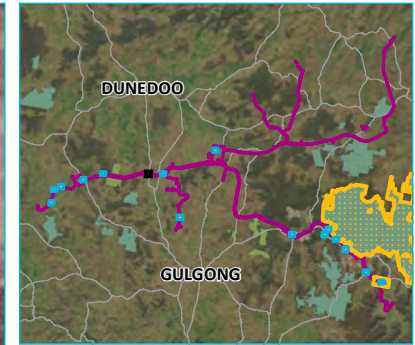
CWO-22-HH10,
CWO-22-HH20

Central West Orana Renewable
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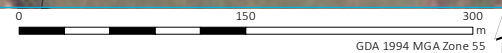
- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
 - Construction and operational element
 - Proposed tower location
 - - - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH08,
CWO-22-HH09A/B/C

Central West Orana Renewable
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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)

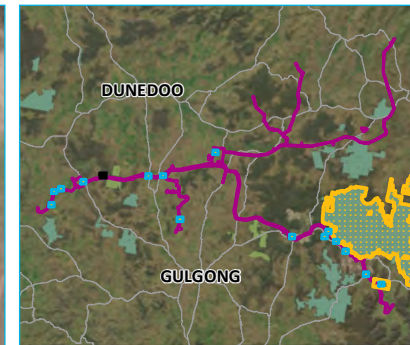


GDA 1994 MGA Zone 55



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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

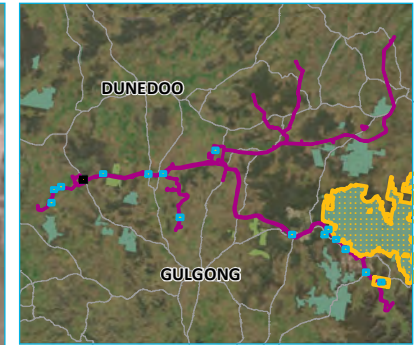
CWO-22-HH07

Central West Orana Renewable
Energy Zone transmission
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GDA 1994 MGA Zone 55

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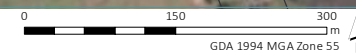
- KEY**
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 - Historic heritage area of interest
 - Named watercourse
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
 - Substation design
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

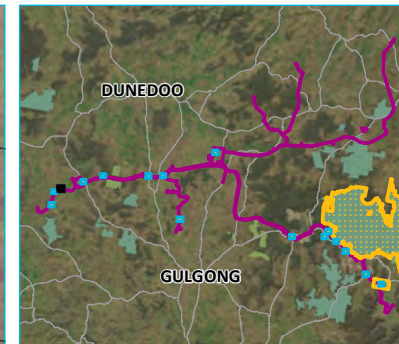
CWO-22-HH05A/B,
CWO-22-HH06

Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
Appendix B



Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)





- KEY**
- Construction area
 - Historic heritage area of interest
 - Named watercourse
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

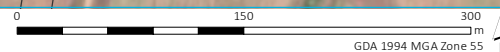
CWO-22-HH01,
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Central West Orana Renewable
Energy Zone transmission
Historic Heritage Assessment
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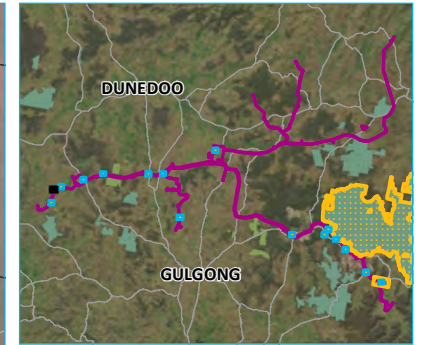


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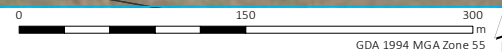
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- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
 - Construction and operational element
 - Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

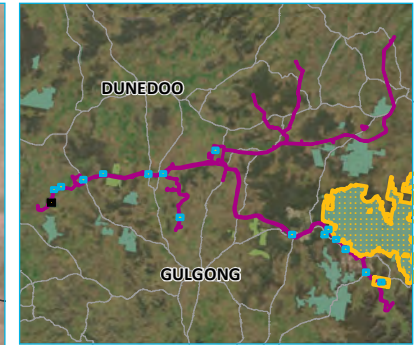
CWO-22-HH03

Central West Orana Renewable
Energy Zone transmission
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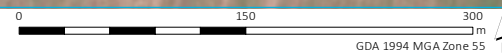


- KEY**
- Construction area
 - Historic heritage area of interest
 - Cadastral boundary
- Construction and operational element**
- Proposed tower location
 - Overhead powerline
- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

CWO-22-HH04

Central West Orana Renewable
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Source: EMM (2023); EnergyCo (2023); DFSI (2017, 2020); ESRI (2022); GA (2011)



GDA 1994 MGA Zone 55



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BRISBANE

Level 1, 87 Wickham Terrace
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15 London Circuit
Canberra City ACT 2601

ADELAIDE

Level 4, 74 Pirie Street
Adelaide SA 5000
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MELBOURNE

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Southbank VIC 3006

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